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The Language of Medicine: Science, Practice and Academia

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Focus on medical communication

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Introduction

1. Investigating medical discourse

The discipline of medicine, as varied as it is, ranging from medical research activities to medicine-related practices, has a markedly practical and utilitarian purpose – i.e. the containment, neutralization and control of illnesses, diseases and deviant behaviours – and is primarily based on objective evidence: the observation of case studies, their interpretation, the abstraction of educated or experimentally established hypotheses or generalization as to the origins and solution of health-related problems. Hence, it tends towards the hard end of the epistemological spectrum, since new knowledge is typically seen as deriving from what is already known. More than other forms of specialized discourse, medical communication is constituted by a variety of heterogeneous and diversified discursive realizations whose main differences are mostly due to the different emphasis attributed to epistemological factors underlying the discipline. This affects, on the one hand, the ways domain-specific notions, activities and roles are conceptualized and rhetorically expressed, and, on the other, the effect or type of response that discipline-related contents are meant to elicit within specific contexts (i.e. research / pedagogical / medication / healthcare information contexts).

In research contexts (*expert to expert*), for instance, where specialized knowledge is co-constructed and negotiated with expert community members for it to be recognized as valid, language is biased by a specific emphasis conferred to given epistemological aspects. These are mainly related to the fact that medical research introduces innovations whose reliability is to be measured against current knowledge. Therefore, from a linguistic standpoint, its

representation should respond to discursive and generic standards accepted by the community. Such settings, where knowledge is dealt with as an ongoing, progressive and incremental phenomenon, are characterized by "a strong sense of making progress and, indeed, a routine expectation of constant momentum", and are mainly concerned with "establishing a plausible representation of consensual knowledge against which an appropriate claim for novelty can be presented" (Hyland 2004: 85). Here language is a vehicle to properly, succinctly and unambiguously refer to the physical world and its transformations, since in expert medical discourse the referential function is primary and predominant, if not exclusive. Instead, attitudinal, affective and persuasive aspects are excluded, both in research articles – which have the function "to put forward claims, based on research investigation" (Carter-Thomas/Rowley-Jolivet 2014: 61) – and in medical editorials – which are instead meant to assess and evaluate such claims, offering "critical commentary on events of shared interest to the medical community, [and pointing to] best practices and suitable references in the literature" (Giannoni 2008: 98).

A different use of communicative resources is to be found in pedagogical settings (*expert to novice* or *expert to future expert*), where trainees in the medical profession acquire competence about disciplinary notions, objects and practices as well as the appropriate ways to present or discuss them. In these contexts, communication or, more properly, metacommunication is highly relevant since "the medical discourse community demands that [doctors] become ever more active members of the discipline in both doing and writing about the research they undertake" (Mazzi 2015: 353; cf. Swales 2004). Trainees in medical schools are expected to become aware of the link existing between the discourse which is typical of the discipline and its epistemological implications (Dahl 2004). They have to learn, on the one hand, how to write about and suggest treatments, how to introduce supporting evidence, and how to frame such activities with respect to the theory, and, on the other hand, they also have to learn to deal with patients and to direct them to comply with certain practices (Gardner 2012).

In medical consultation and healthcare settings (*expert to patient*), language has to adapt to specific contextual requirements for doctor-patient communication to be effective, which have primarily to do with patients' lack of competence with respect to the medical code and its terminology, their condition of physical and psychological vulnerability, together with their "needs of feeling secure" (Lassen 2012: 119). In such contexts, medical professionals need to develop interpretive skills in order to correctly process and disambiguate vagueness, ambiguity and abstractness in patients' symptoms description, so as to minimize misunderstanding and, ultimately, misdiagnosis (Graves *et al.* 2015). At the same time, doctors need to possess those linguistic skills that enable them to transmit specific, unambiguous and transparent information, and adjust their performance to the patients' ability/competence, "providing explanations in the patient's own language" (Lassen 2012: 118), so as to facilitate interpretation and ascertain patients' comprehension and compliance with the prescribed therapy. In this communicative context, another skill professionals in present-day healthcare services have to develop is the ability to express empathy rather than sticking to the 'detached concern' approach, which was the preferred attitude throughout the 20th century (Fox/Lief 1963; Bonvicini *et al.* 2009). As a matter of fact, the expression of empathy "may encourage patients to talk more freely about their conditions" (Pounds 2010: 141). This, in turn, is likely to lead to "clearer diagnosis, higher adherence to treatment regimens and, ultimately, higher patient satisfaction, therapeutic effect and recovery rates" (Pounds 2010: 141).

Healthcare discourse addressed to the lay public (i.e. *expert/ non-expert to non-expert*) generally has a marked informative function and can be distinguished into two main parts on the basis of the type of interest accorded by the recipient to the domain-specific content at issue. On the one hand, the recipient may be seeking information to know what decisions to make, or what are the best decisions in practical health-related contexts (this type of audience is targeted by public information material, self-medication websites, etc.). On the other hand, recipients may be willing to extend their competence on a given subject for purely speculative reasons, for their own interest out of curiosity (this being the case of the audience of scientific publica-

tions meant to disseminate specialized knowledge to the wider public). Both types of discursive realizations are deeply affected by popularization strategies, which are meant not only to adjust and adapt the communication of given contents to the linguistic competence and cognitive ability of the audience, but also to persuade them as to the reliability and validity of such meanings. In public information material (ranging from blood and organ donation to anti-smoking or anti-gambling campaigns), scientific information regarding the conditions and consequences of a given behaviour, or the requisite needed to control or change a given state, is coupled with promotional information (to persuade the recipient to perform a given action) and technical and organizational information (to guide the recipient alongside such procedures). Popularized publications, instead, are aimed at "the transformation of specialized knowledge into 'everyday' or 'lay' knowledge" (Calsamiglia/Van Dijk 2004: 370). Therefore, the specificity of the expert-to-expert discourse is eschewed in favour of a less gate-keeping rhetorical representation of the content – characterized by the frequent resorting to explanations, definitions, and reformulations – which "does not alter the disciplinary content […] as much as its language" (Gotti 2014: 19).

From a pragmatic standpoint, the different representations of medical discourse are used to convey meanings in the most effective and contextually appropriate way, thus adjusting the linguistic representation of the content to the competence, needs and expectations of the receiver. From a Critical Discourse perspective, besides having an informative function, medical language also serves to stigmatize certain behaviours by pathologizing them, that is, by cognitively framing them into symptoms-diagnosis-treatment paradigms, or to either sanction or proscribe given therapies and practices (Conrad/Barker 2010). In this sense medical discourse both reflects and controls the epistemology at the basis of the discipline.

Besides contextual factors, language use in medical settings is also markedly affected by the code and the channel of its communication, that is, on the one hand, the genres and text-types which are typically associated with the transmission of given contents, and, on the other, the medium employed for such communicative events. In the case of computer-mediated communication (blogs, forums, wikis,

social networks, etc.) – irrespective of the content and the authority of the writer (i.e. expert vs. patient/user) – the medium employed presupposes a more participative, dialogic and inclusive way of exchanging specialized information, which is necessarily reflected at both the micro- and macro-linguistic level in the linguistic, terminological, syntactic and rhetorical choices used to express meanings.

2. Contents of the volume

2.1. Focus on medical discourse

This volume investigates how context- and medium-based factors may influence medical communication, both in synchronic and diachronic terms. The first part of the volume focuses on medical discourse and opens with ANNA LOIACONO's contribution, who, from a diachronic perspective, investigates the discourse of fear and how phobia can be rhetorically and discursively constructed and transmitted. Death, plagues, diseases have always been a cause of major concern, panic and terror, as is witnessed by many literary works from the past centuries (Virgil, Boccaccio, Chaucer, Shakespeare and many others wrote about epidemics), which were directly inspired by such powerful feelings. These works evidence the fascination such collective apprehension generates and, at the same time, they contribute to the establishment of given views within a specific culture. Based on the assumption that language can contribute to raising fears, the chapter examines the rhetorical techniques and processes used to construct the expression of fear, first by designing a model which diachronically illustrates the evolution of the interpretation of pandemics over time and the type of fear they generate (accounting for such parameters as 'what is to be feared?' 'how to respond to fear?'), and then by applying it to texts produced over the ages up to the present day.

Another diachronic investigation into the ways language was used in the medical domain in order to shape up notions and frame them into cognitive terms so as to either justify or stigmatize, or

simply understand, their being, is represented by the chapter authored by PAOLA BASEOTTO, which examines the cultural, ideological and ethical dimensions of medical language in Elizabethan and early Stuart treatises about plague. With a special focus placed on the use of given expressions, metaphors and concepts by authors promoting competing views of the nature and significance of epidemics (either aligning with the Church of England's official view or with the Puritan interpretation of the phenomenon), this chapter investigates some crucial dynamics of the ethics of medical communication about plague. The analysis illustrates how different authors – when confronted with devastating epidemics in both economic, demographic and social terms – exploited and manipulated discursive resources to promote either resistance to or compliance with medical treatments and public orders.

The contribution by PAULA DE SANTIAGO GONZÁLEZ focuses on biomedical terminology and shows how terminological variation depends on the situational context. The corpus-based investigation involves the analysis of two English subcorpora: on the one hand an expert-to-expert communication corpus; on the other hand, an expert-semiexpert/non-expert communication corpus. The analysis reveals that the amount and type of biomedical variants employed in each biomedical register is not only dependent upon situational factors, but also upon the writers' intention of the recipients' level of knowledge in each situational context. By examining variants in the two sub-corpora, the author identifies regular semantico-syntactic patterns in variant formation corresponding to each register. For instance, in the expert-to-expert register, the type of variants preferred are acronyms, whereas in the expert-semiexpert/non-expert type of communication, there is greater exploitation of terminological variants implying a re-formulation of terms composed of Greek and Latin roots than bio-medical denominations. This may provide language professionals and experts/semiexperts of a specialized field with awareness of the use of term variants.

In her chapter, SILVIA CAVALIERI explores the role played by images and captions in the popularization of medical discourse. Since new media, especially Internet-based, have an increasingly significant impact on science communication and in the dissemination of medical

issues to lay audiences, it is worthwhile to see how such resources are employed to communicate and recontextualize medical concepts in health and medicine news in electronic science magazines. Based on a corpus collecting material from six electronic magazines in three different languages (i.e. two are written in English, two in French and two in Italian), the chapter provides both a quantitative and a qualitative analysis of the material, first by offering a useful classification of the images (distinguished into scientific/medical illustrations, graphs and tables, photos of people or organisms involved in the study, images dealing with a popularizing approach towards medicine), and then by analyzing the type of relationship between captions and the pictures they are associated with, thus emphasizing the role and usefulness of these elements in the popularization of the medical subject dealt with in the related text. The cross-linguistic nature of the corpus makes it possible to highlight similarities and differences in the use of pictures and captions in the three languages.

In their chapter, FLAVIA CAVALIERE and LUCIA ABBAMONTE discuss the possible problematicity of the translation of medical discourse, in particular when it is used with the aim of testing cognitive and language related abilities, as is the case of the *Test of Pragmatic Language*. Given the increasing importance – for the purpose of detecting and identifying language disorders – acquired by such testing methods, designed to assess the ability on the part of English speaking children to recognize and understand linguistic stimuli (presented in the written form) and elaborate in turn a response which is contextually appropriate and pragmatically effective, this analysis hypothesizes the translation of such texts into Italian, anticipating possible translation problems due to either culture- or language-specific factors, and offering workable solutions. More specifically, using the parameters established by Translation Studies, the chapter evidences when processes of direct translation (i.e. borrowing, calques, literal translation) or oblique translation (i.e. transposition, modulation, equivalence and adaptation) should be employed for the linguistic stimuli in the translated text to be properly understood, for the response to be coherent, and, ultimately, for the test to be effective.

2.2. Focus on medical communication

WILLIAM BROMWICH's chapter, which introduces the second part of the volume, concentrates on the construction of the identity of the potential blood donor in public information (and promotional) materials produced by blood transfusion services in various national settings to persuade people to volunteer. After examining cases of argumentation based on altruism (i.e., life-saving), enlightened self-interest (defined by Bromwich as the fact that "one day donors may need blood donated by others"), and self-interest (that is, the fact that blood donors may receive health benefits, for instance a free health check), the last section of the chapter compares the institutional and media datasets. The results suggest that variations do exist and that they do not merely mirror different national contexts, but rather occur within specific national contexts. Indeed, a profound contrast has been identified between institutionalised discourse, where altruism and enlightened self-interest tend to emerge, and media reports, where self-interest clearly predominates, despite the universal positive quality, in medical term, of the giving blood procedure.

MARELLA MAGRIS and DOLORES ROSS present a pilot study involving people with gender dysphoria and transsexualism from a Translation Studies perspective. In particular, they focus on the texts – the first source of information on this condition – uploaded on Italian, German and Dutch hospital websites and other similar centres, with the purpose of identifying the communicative style employed to deal with such sensitive issues and to detect, if any, cultural differences. Findings indicate variation in style: while the Italian corpus seems monologic and doctor-centred, the German and Dutch ones appear more patient-centred and reader-friendly. This data indicates that efficacious and efficient communication is relevant for promoting health literacy. This calls for a more active presence of the translator in the text, who thus acquires the status "of an information broker with language counselling tasks".

Computer Mediated Medical Communication and on-line counselling are regarded as a new genre in MARIANNA LYA ZUMMO's chapter. The main issue moves from the fact that health 2.0 is regarded as an easy (and controversial) resource of information which

may be trusted and accessed as knowledge without any proper scientific background. The author, therefore, tries to see whether on-line counselling may address new functions. She analyses authentic examples from health forum boards and, by applying a Discourse Analysis approach, she describes how participants construct position and commitment and establish credibility toward advice, opinions and suggestions. As recent research has demonstrated that the extent to which adult people trust online information depends on the topic they are looking for, in the final section Zummo presents a survey to better illustrate if and how credibility affects people's beliefs and behaviour in relation to their health.

The effect of the language barrier on access to and quality of care is the topic described by ASHLEY BENNINK. The study she carries out focuses on the adverse outcomes resulting in health care in the United States when language barriers in doctor-patient communication exist. In particular, this chapter deals with lexical variations used by Latin American immigrants when speaking Spanish in a medical context in the United States, and the negative impact these variants have on the medical interview in terms of miscommunication, the patient´s level of trust in the physician and overall satisfaction with care. Clearly, when these dialect variants are used in cross-communication, if unfamiliar among professionals, they can have a negative impact on care. The author's hope is that research on dialectal variation may raise awareness on how easily health care may be affected and what types of solutions can be sought.

MICHELA GIORDANO analyses medical discourse in criminal cases by studying Old Bailey proceedings. The specific focus of this chapter is on the type of language and the communicative resources employed by medical expert witnesses – professionals with a specialized knowledge, doctors and physicians – who are required to assist and provide their expertise in criminal trials, for the administration of justice. Due to their education and experience, expert witnesses can provide the court with assessments or opinions within their area of competence which would not be available or even accessible to other professionals in court, such as the lawyers and the judge, on the one hand, or to the jury and the public in general, on the other. Investigating a corpus of fourteen trial accounts on infanticide

(covering a time span from 1900 to 1913), the chapter focuses on the narratives involving doctors, pathologists, physicians and practitioners with the specific purpose of finding out how items of the medical jargon are embedded in the legal discourse and used as a medical testimony giving a specialist and authoritative account of the physical examination of the victims and of the murderers themselves.

The chapter by KIM GREGO and ALESSANDRA VICENTINI closes the volume examining how English (in its function of lingua franca) is exploited in multilingual communicative contexts such as Lombardy's public healthcare websites. The analysis stems from the assumption that the English versions of such sites – containing useful information about common infectious diseases or vaccination campaigns – are addressed to foreign-language-speaking users (mostly residents rather than tourists). From a discourse analytical perspective, and via a specific attention paid to how the language is used at a grammatical and lexical level, this chapter examines, on the one hand, the type of information that is provided and the way it is linguistically represented, and, on the other, the way the targeted social groups are represented when English is used to translate or reformulate contents already expressed in the Italian version of the sites. The sample analysis presented here is intended to describe and provide insights as to how international communication is handled in such contexts, providing also suggestions and possible guidelines for multilingual policies in Web communication concerning public health.

3. Closing remarks

The topic of medical discourse is so vast that the authors do not claim to have been able to offer a complete, definitive account of the multifarious discursive practices that are commonly employed in this complex field. However, we hope that the chapters in this volume will provide the opportunity for discussion and collaborative information-sharing, and stimulate debate among all those scholars and practitioners interested in the relationship between health issues and language.

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