Centro di Ricerca sui Linguaggi Specialistici
Research Centre on Languages for Specific Purposes

Maurizio Gotti, Stefania M. Maci
& Michele Sala (eds.)

The Language of Medicine: Science, Practice and Academia

CERLIS Series

Series Editor: Maurizio Gotti

ISSN 2532-2559

Each volume of the series is subjected to a double peer-reviewing process.

CERLIS Series
Volume 5

Maurizio Gotti, Stefania M. Maci, Michele Sala (eds)

The Language of Medicine: Science, Practice and Academia

CELSB
Bergamo

CERLIS SERIES Vol. 5

CERLIS
Centro di Ricerca sui Linguaggi Specialistici
Research Centre on Languages for Specific Purposes
University of Bergamo
www.unibg.it/cerlis

THE LANGUAGE OF MEDICINE:
SCIENCE, PRACTICE AND ACADEMIA
Maurizio Gotti, Stefania Maci, Michele Sala (eds)
ISBN 978-88-89804-28-5
URL: http://hdl.handle.net/10446/35418

Published in Italy by CELSB Libreria Universitaria
Via Pignolo, 113 - 24121, Bergamo, Italy

Contents

Focus on medical communication

MICHELE SALA / STEFANIA M. MACI / MAURIZIO GOTTI

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 subcorpora, 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 reformulation of terms composed of Greek and Latin roots than biomedical 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 Bromwhich 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.

References

Bonvicini, Kathleen / Perlin, Michael / Bylund, Carma / Carroll, Gregory / Rouse, Ruby / Goldstein, Michael 2009. Impact of Communication Training on Physician Expression of Empathy in Patient Encounters. *Patient Education and Counselling* 75, 3-10.

Calsamiglia, Helena / Van Dijk, Teun 2004. Popularization Discourse and Knowledge about the Genome. *Discourse and Society* 15/4, 369-389.

Carter-Thomas, Shirley / Rowley-Jolivet, Elizabeth 2014. A Syntactic Perspective on Rhetorical Purpose: The Example of *if*-Conditionals in Medical Editorials. *Ibérica* 28, 59-82.

Conrad, Peter / Barker, Kristin 2010. The Social Construction of Illness: Key Insights and Policy Implications. *Journal of Health and Social Behavior* 51, 67-79.

Dahl, Trine 2004. Textual Metadiscourse in Research Articles: A Marker of National Culture or of Academic Culture?. *Journal of Pragmatics* 36/10, 1807-1825.

Fox, Renee / Lief, Harold 1963. Training for 'Detached Concern'. In Lief, Harold (ed.) *The Psychological Basis of Medical Practice*. New York: Harper and Row, 12-35.

Gardner, Sheena 2012. A Pedagogic and Professional Case Study Genre and Register Continuum in Business and in Medicine. *Journal of Applied Linguistics and Professional Practice* 9/1, 13-35.

Giannoni, Davide S. 2008. Medical Writing at the Periphery: The Case of Italian Journal Editorials. *Journal of English for Academic Purposes* 7, 97-107.

Gotti, Maurizio 2014. Reformulation and Recontextualization in Popularization Discourse. *Iberica* 27, 15-34.

Gotti, Maurizio / Maci, Stefania / Sala, Michele (eds) 2015. *Insights into Medical Communication*. Bern: Peter Lang.

Graves, Syelle / Burson, Rebecca R. / Torres-Collazo, Victor A. 2015. Dialectal Variation and Miscommunication in Medical Discourse: A Case Study. In Gotti / Maci / Sala (eds), 111-134.

Hyland, Ken 2004. *Disciplinary Discourses. Social Interactions in Academic Writing*. Ann Arbor: The University of Michigan Press.

Lassen, Inger 2012. 'I'm a nurse and I have the responsibility': Human Identity and Non-human Stakeholder Agency in Heathcare Practice. *Journal of Applied Linguistics and Professional Practice* 9/1, 105-126.

Mazzi, Davide 2015. Semantic Sequences and the Pragmatics of Medical Research Article Writing. In Gotti / Maci / Sala (eds), 353-368.

Pounds, Gabrina 2010. Empathy as 'Appraisal': A New Language-based Approach to the Exploration of Clinical Empathy. *Journal of Applied Linguistics and Professional Practice* 7/2, 139-162.

Swales, John 2004. *Research Genres. Explorations and Applications*. Cambridge: Cambridge University Press.

Focus on Medical Discourse

ANNA LOIACONO

The Language of Fear: Pandemics and their Cultural Impact

1. Introduction

While phobias, such as arachnophobia or claustrophobia, are part of mankind's make-up, no phobia has captured society's attention and imagination over the centuries more grippingly than the fear of infection and death from pandemics. Boccaccio's gruesome witticism that the victims of the Black Death often ate lunch with their friends and dinner in Paradise with their ancestors (see Section 2) is a testament to the fact that, far from being a figment of the imagination, pandemics have had a devastating impact on society for hundreds of years, seven being recorded between 1816 and 1975 for cholera alone. The Spanish flu pandemic killed an estimated 75 million people while the 14th century Black Death pandemic is believed to have killed one third of the population of Europe.

If medieval authors, such as Boccaccio and Chaucer, drew inspiration from the Black Death, it is because, together, fact and fiction pack a powerful punch when raising pandemic-linked fears. This has attracted several writers: from Virgil, with his description of an anthrax epizootic (Sternbach 2003: 463-4), to today's epidemic-inspired and ominously-named novels, such as Follett's 2007 *World Without End* and Cook's *Outbreak*. Precisely because of their foundations in historical reality, the popular press (Gwyn 1999; Jen 2008), in particular, has engaged in fear-mongering that plays on these apprehensions. The covers of famous magazines have 'heralded' the new diseases of the 21st century on many occasions (Jen 2008: 181-2). For *Newsweek* these have included 'Fear and the flu: the new age of pandemics' (May 2009) and 'SARS: What you need to know. The

new age of epidemics' (May 2003), and for *Time*: 'SARS Nation. How this epidemic is transforming China' (May 2003); 'Bird Flu. Is Asia hatching the next pandemic?' (February 2004); 'Avian flu: Death Threat. Special report: Inside the global race to avert a pandemic' (September 2005) and 'H_1N_1. As students head back to school this September, swine flu could infect millions. How bad will it get?' (August 2009). While swine and avian flu, by comparison with malaria and HIV, have had little impact in terms of contagion and death, their pulling power on popular imagination, at least in Western media, has been proportionately greater, all evidence of the growth in the global 'healthcare and healthscare stories' market, whose features are increasingly investigated by medical communication specialists in terms of audience health literacy, government monitoring and the 'qualifications' of medical journalists (Hinnant/Len-Ríos 2009, Luther /Zhou 2005, Tanner 2004).

What concerns us in this chapter, however, is the fact that fears of being infected by plagues, and succumbing to them in a very short span of time, are mostly expressed indirectly, eschewing words such as *fear*, *apprehension*, *scare*, *hysteria*, *panic* or lexical equivalents. For example, of the six *Newsweek* and *Time* titles mentioned above, only the first one uses the word *fear*. As a deliberate act of arousing public fear or alarm about a particular issue, fear-mongering is made more effective in terms of newsworthiness and reader impact through indirect reference to the unknown than through specific description of fears or reassuring positive messages. Compare *Time*'s positively-oriented 'Polio' cover (March 1954) about John Salk's 1954 successful field trials of inactivated poliovirus vaccine with *Newsweek*'s negatively-oriented title 'A back door for Ebola: smuggled bushmeat could spark a U.S. epidemic' (August 2014) provoking considerable hue and cry (Al Jazeera 2014) some sixty years later.

How then, as text analysts, do we reconstruct the language of fear? If, as the examples given above show, fear-raising, with its focus on the hypothetical and sensational, is indirect, then the techniques used to reconstruct the expression of fear in English-language texts also need to be indirect. There are other problems, too. As suggested above, changes in culture have modified the way we think about and react to pandemics. This has long been recognised by specialists in

medical communication (Lakoff 2008, Schell 1997, Strassberg 2004, Strong 1990) but calls for models and techniques of text analysis, which, though focused on the contemporary world, are also diachronic in nature, *i.e.* capable of describing our cultural and linguistic inheritance from the past, and explaining why, for example, the Elizabethan view of the Black Death, and Shakespeare's descriptions of it, are significant in relation to threats from pandemics in today's world.

This chapter thus reports on research designed to extend and consolidate our understanding of the language of fear as it pertains to epidemics and pandemics. The first, now completed stage, involved the construction of a model characterising the cultural evolution from the Elizabethan period to the current times in relation both to the changing interpretations of what epidemics and pandemics are, and to the changing nature of the fears they generate (Section 2). The second step involved preliminary small-scale validation of the emergent model by applying it to texts produced by different communities over the ages in their interpretation of the events associated with such terms as Shakespeare's *burning fevers* (*Venus and Adonis* Line 761), and today's *anthrax attack*, *flu pandemic*, *smallpox epidemic*, *MMR scare* and, naturally, *Ebola outbreak* (Section 3). A third stage, still to be implemented, envisages wider corpus-based sampling (Section 4). The tentative conclusion reached is that separating the different and sometimes contradictory strands involved helps shed light on the 'language of fear' and the manipulation of these fears over the centuries by writers in many different English-language text types (Section 5).

2. Developing a cultural model

Given the factual and fictional intertwinings mentioned above, the term *pandemic* might be thought, in the tradition of folk etymology, to be a hybrid term derived from *epidemic* and *pandemonium* that blends their reference to the medical and the fearful. Naturally, this is not the case. Although the latter word *is* a hybrid coined by Milton in 1667 for use in *Paradise Lost* (Allen 1962: 207), the term *pandemic* (Greek

pan- 'all' + *demos* 'people') is modelled on *epidemic*. Significantly, as a term, *epidemic* dates back to Hippocrates but has undergone semantic changes (Martin/Martin-Granel 2006: 976) as medicine, and social perception of it, has evolved:

(1) For Hippocrates, an epidemic meant a collection of syndromes occurring at a given place over a given period, e.g., winter coughs on the island of Kos or summer diarrheas on other islands. Much later, in the Middle Ages, the long and dramatic succession of waves of The Plague enabled physicians of the time to identify this disease with increasing precision and certainty; they began to recognize epidemics of the same, well-characterized disease. Then, with the historic contributions of Louis Pasteur and Robert Koch, epidemics of a characteristic disease could be attributed to the same microbe, which belonged to a given genus and species. The last stage in the semantic evolution of the term epidemic was the progressive acquisition of the notion that most epidemics were due to the expansion of a clone or clonal complex of bacteria or viruses known as the epidemic strain. More recently, microevolution of a clone of a bacterium (the epidemic strain) was shown to occur during an epidemic with person-to-person transmission.

Even so, the hybridity of the term *pandemic* cannot be overlooked. Despite having no etymological connection with *panic* or *pandemonium*, the term is vested with considerable ambiguity: a scientific term in the hands of, for example, epidemiologists and the statistics-oriented texts they produce, but also a fear-provoking term in other texts and contexts such as journalism, novels and films presenting pandemics as out-of-control global epidemics. Specifically, attitudes towards pandemics suggest that a diachronic pathway needs to be traced in terms of how different social layers perceive their fears of disease and communicate them (see Loiacono 2012b for a multi-tier approach to the analysis of medical communication). This 'human approach' to fear of disease, and its interpretation, embraces a complex rational-to-irrational cline, implying various perspectives: the layman's, the doctor's, the politician's, the reporter's and so on (Loiacono 2012b: 83-86). Medicine, itself, straddles these layers and is subject to an uninterrupted cycle of separating and associating scientific and social aspects; all of us, in our different ways, are caught up in the ensuing conflicts and fears that this cycle generates as the following webnews report (Mukpo 2014) dramatically highlights:

(2) According to Nyenswah [Liberia's Assistant Minister of Health], rural belief in *juju* – West African magic – is also contributing to the *challenges* officials face. "Some people believe there is a *curse* that is causing the problem, and that there is nothing called Ebola." Krakue agrees. "People don't know what the sickness is, and they prefer to go to the traditional healers," he says. "They feel that they have been *bewitched*." […] In an interview with VICE News, an MSF [Médecins Sans Frontières] staff member who recently returned from Guinea described a *tense environment* for responders, explaining that the facility was attacked because locals heard a *rumor* that MSF had brought the virus to Guinea. "We were chased out of quite a lot of villages," she says. "President [Alpha Condé] sent a delegation to sensitize the population, to get them to understand that Ebola exists. They were attacked and were evacuated the day after they arrived." The *fear* and anger in communities is to some extent perfectly understandable. "*Ebola works inversely*," the MSF worker explains. "Normally if you have someone who is sick, you take them to the hospital and they get better. With Ebola, you have to negotiate bringing someone to the hospital because *they'll almost certainly die there*." When villagers notice a relative or friend becoming sick, *fear* and the potential for stigma overrides good judgment, and the victim is *hidden* away rather than taken to *containment facilities*, which are viewed as de facto *morgues.* [My italics]

Key fear-related wordings in this health news report, and the texts below, have been italicised to help focus on the process of recording and bridging social and scientific cultural divides. This report, typical of contemporary 'health news' reporting in its expression of multiple and often conflicting fears, describes respectively: the explicitly-mentioned fears of rural communities; doctors' implied fears of being rejected professionally (as well as being physically ejected from their 'workplace'); the fears, euphemistically described as 'challenges', facing West African government health officials who are incapable of containing the epidemic.

One of the implied meanings of this text, and it is not the only one, is 'Who can blame these villagers as regards their fears about medical mismanagement by international organisations who are supposed to be protecting the rich and the poor on an equal footing?' Suspicions about motivation and competence recently led Haitians to bring a class action (Quigley 2014: Chap. 1) against the UN for importing cholera into Haiti. The following report (Pilkington 2014) explains why:

(3) The United Nations is facing a huge new lawsuit over the outbreak of cholera in Haiti that has widely been blamed on its peacekeepers, after 1,500 Haitian victims and their family members sued the international body in a federal court in Brooklyn in a class action. […] Latest figures suggest that more than 9,000 people have died in the outbreak, which has spread from Haiti to Mexico, the Dominican Republic, Cuba and Puerto Rico, with a total of about 700,000 having been sickened.

The susceptibility of the term *pandemic* to varying and contradictory interpretations has become clear in the context of the 2009 swine flu scare. In an age sensitive to political, economic and legal factors associated with pandemics, the science of epidemiology, with its basis in statistics, plays a key role in the culture underpinning pandemics but does not appear to have contributed to its definition or to the reasons for declaring the existence of a pandemic. Doshi (2011) has pointed out that the WHO's three guidelines on pandemic influenza dated 1999, 2005, 2009, while containing no formal definition of an influenza pandemic, did, at least, contain a clear basis for declaring a pandemic, as it identified six risk levels. Hence, on June 11 2009, when Phase 6, "Increased and sustained transmission in the general population", was reached, the WHO declared a pandemic. When the expected devastation did not occur, governments who had spent a fortune in preparing for mass vaccination, were criticised by the public. Governments naturally blamed the WHO, which gave rise to a debate on the need to redefine the term pandemic, with many questions being raised such as: if a pandemic is based on predicted deaths in many countries, what are the predictions based on? Interestingly, Doshi (2011: 534) singles out the cultural origins of the confusion, identifying fear of contagion deriving from virus mutation as the basis for the naïve catastrophic/non-catastrophic dichotomy associated with predicting pandemics:

(4) Virus-centric thinking is also at the bottom of the current practice of dichotomizing influenza into 'pandemic' and 'interpandemic' or 'seasonal' influenza on the basis of genetic mutations in the virus. This approach, however, ignores the fact that the severity and impact of epidemics, whether caused by influenza viruses or other pathogens, occur along a spectrum and not in catastrophic versus non-catastrophic proportions. We need responses that are calibrated to the nature of the threat rather than driven by these rigid categories.

Effectively, Doshi is implying that the 21st century management of pandemics and epidemics (as indicated in Table 1 below) is still 'plagued' by thinking carried over from earlier stages. Thus, among the various implications associated to these events, and the analysis of them performed by Doshi (2011) and others, is the conclusion that outdated cultural models are being adopted, and that a model, which sifts out the various layers of medical, linguistic and cultural evolution, is needed.

The working hypothesis underlying the research reported here is that the co-presence of cultural models in the transmission of fears about pandemic events is, in fact, an empowering factor, provided their co-presence is clearly communicated. In other words, the capacity to represent many points of view explicitly is, as it were, a 'saving grace', which is why, as mentioned above, institutions such as governments over the centuries have invested in reports that give 'both sides of the argument' and continue to do so. Compare, for example, Humphreys (1897) on the Royal Commission's findings on smallpox vaccination with Scottish Executive's MMR findings (MMR Expert Group 2002). Thus, despite criticism, the WHO's *Global Alert and Response* initiative (*www.who.int/csr/en/*) remains an important reference point in the monitoring of pandemics, with a policy that, at least overtly, avoids alarm but encourages preparedness:

(5) Our vision: An integrated global alert and response system for epidemics and other public health emergencies based on strong national public health systems and capacity and an effective international system for coordinated response.

Yet, at the same time, choice of genre and channel of communication weigh in heavily. Highly indicative in this respect is the fact that the 2009 swine flu outbreak was the first flu 'pandemic' to occur in the Web 2.0 era, with the public reacting minute by minute (Chew/ Eysenbach 2010: 10):

(6) More minute changes were also observed and were found to be highly influenced by the media and external events. Examples of this included the large spike in tweets that resulted from the WHO pandemic level 6 announcement.

Mode and form of communication, and not just the content, is thus increasingly significant in medical communication. There are, indeed, considerable grounds for text analysts to draw on separate charts for scientific and social evolution. Tables 1 and 2 thus distinguish between medical and social models for epidemics over time.

	A. First Stage: 1550s-1850	*B. Second Stage: 1850-2000*	*C. Third Stage: 2000>*
1. Power over pandemics lies with:	God/Religion control man's fate and deaths arising from plagues and pestilence. Anti-miasma protection includes posies and nosegays as in '*A ring a ring of roses, A pocket full of posies* [...]'	Science and preventive vaccination against invisible germs. Local authorities and national Public health bodies and onset of the statistical era (which began around 1840 in Britain and the US) Fund-raising *March of Dimes*-type solidarity campaigns begin	Information Society: its preventive preparedness *in* and *across all* its sectors. Global nature and reach of information about preparedness with interacting but competing agents, including the media and public opinion
2. What is feared	Sickness & plagues arising from contagion caused by miasma *i.e.* stench & smell found in the air	Sickness, plagues & epidemics from contagion through person-to-person infection via 'germs'; in later stages, new mutating microbes & biological warfare	Misinterpretation and unpreparedness at all social levels over new infecting agents (viruses, bioterrorism, accidents). Lack of information & education
3. Response to fear	Isolation, Quarantining and Resignation	a) Initial concern but b) physical & psychological protection through vaccination & immunisation c) indifference	Seesaw confidence mixing trust & distrust. Vision of preparedness in wider social contexts: educational, political and economic aspects

Table 1. Three-stage evolution of *pandemic fear* culture.

Table 1 presents a three-stage model of evolution of the culture of fear of pandemics taking three parameters into consideration. Table 2, instead, gives a summary of the medical aspects of infectious diseases that have given rise to the cultural frameworks indicated in Table 1.

(i) *Name of disease*	*(ii)* *First described*	*(iii)* *Cause identified*	*(iv)* *History of vaccine or therapy*	*(v)* *Pandemic [P] Epidemic [E] Outbreak [O]*	*(vi)* *WHO data*
Anthrax	70 BC Virgil 1752 Maret 1769 Fournier	1875 Koch bacterium *Bacillus anthracis*	*Animals* Pasteur 1881 *Humans* 1930/40s USSR; 1950/60s US/ UK 1944 Penicillin	[O] *Inhalation type*: Soviet military facility1979; 79 cases 68 deaths	2001 US 5 deaths 2006 first UK death in 32 years: contact animal hides
Bubonic plague [Black Death; Plague of Justinian]	542 Procopius 1565: Crato pneumonic *vs.* bubonic transmission	1894 Yersin bacterium *Yersinia Pestis*	1897 Haffkine; but antibiotics (*streptomycin & tetracycline*) now preferred	[P] 6th century; 1346–1353 1855-1859 [E] London 1563-1665	1989-2003 38,310 cases (2845 deaths) in 25 countries
Cholera [Blue death]	500 BC Hippocrates; 1848 Snow (transmission)	1883 Koch bacterium *Vibrio cholerae*	1896 Kolle	[P]1816-26; 29-51; 52-60; 63-75; 81-96; 99-1923; 1961-75	WHO estimate 3-5m. cases + 100-120.000 deaths per year
Diphtheria	500 BC Hippocrates 1883 Klebs	1884 Loeffler bacterium *Corynebacterium diphtheria*	1890 antitoxin Kitasato/Behring 1923 toxoid Ramon	[P] 1583-1618; 1855-1863 [E] 1860-1930 20,000 deaths annually in US	1990s WHO reported 157,000 cases and 5,000 deaths in ex-Soviet Union
Ebola [EVD]	1976 Description, isolation and naming of Ebola virus		2014 experimental vaccines (*Zmapp*) and therapies	1976-2013: 1716 confirmed cases	2014: 8,376 cases with 4,024 deaths
HIV/AIDS [HIV 1986; AIDS 1982]	1980 Center for Disease Control USA	1983 Barré-Sinoussi/ 1984 Gallo	1987 AZT 1996 Gallo Combination therapy	[P] *unaids.org*: 30 m. deaths 1981-2011	2013: 35 m. cases. 11.7 m. receiving anti-retrovirals
Polio	1840 Heine	1908 Landsteiner *Poliovirus*	1950 Live Koprowski; 1955 IPV (Inactivated) Salk; 1961 Oral (OPV) Sabin	[E]1880-1955, AU, EU, US, NZ; Russian Federation	99% decrease in 1988-2013 period (406 cases in 2013)
Smallpox	910 Rhazes	1906 Negri filtered *variola virus*	1798 Jenner 1950 Freeze dried vaccinia	[P] 1400-1800 500,000 deaths per year	Last death 1978. Considered eradicated

Table 2. A medical view of infectious diseases.

Although accurate, Table 2 is not intended to be complete: it excludes many diseases that have given rise to epidemics and pandemics such

as elephantiasis, hanta, dengue, legionnaire's, leprosy, malaria, TB, typhus, typhoid fever, Creutzfeldt-Jakob disease and many more. It is intended as background information that guides clarity of understanding by separating medical data from the social and cultural impact that is accounted for in Table 1. Table 2 is based on historical data typically found in medical research articles, often as part of a larger set of tables relating to disease incidence and severity.

The first step in this research postulated the three-stage cultural model outlined in Table 1. Stage 1 in this evolution relates to texts in the 1550-1850 period. The Middle Ages attributed religious or quasi-religious origins to the Black Death: God's punishments for sins; part of an apocalyptic event preceding the second coming of Christ; corruption of the air, sometimes attributed to earthquakes in the Far East that released toxic substances; planetary alignment of Saturn, Jupiter, and Mars; rain of fire in areas between China and Iran; a battle between the sun and the sea in the Indian Ocean (Christakos et al. 2005: 110).

Of these causes, planetary alignment is referred to in Chaucer. In the *Knight's Tale*, Chaucer, well-versed in astrology as his *A Treatise on the Astrolabe* shows, has Saturn declare to his daughter Venus "My lookyng is the fader of pestilence" (Grigsby 2004: 108). Quarantining certainly existed at this time as a response to the Black Death, but was applied successfully only in Milan in the 1347-51 epidemic (Christakos *et al* 2005: 215). Elsewhere in Europe, Italy included, there was nothing doctors could do to prevent its spread. Boccaccio (Rigg 1930) tells us as much in the Decameron, in the Introduction to the First Day:

(7) how many brave men, how many fair ladies, how many gallant youths, whom any physician, were he Galen, Hippocrates, or Æsculapius himself, would have pronounced in the soundest of health, broke fast with their kinsfolk, comrades and friends in the morning, and when evening came, supped with their forefathers in the other world!

The fears associated with causation in the Tudor period to the Black Death epidemics had essentially been restricted to the idea that contagion was caused by miasma, i.e. an infecting stench or smell in the air

(Porter 1999); the notion of containment was much more rigorous than in the 14th or 15th centuries. Shakespeare describes the act of searching out plague victims and quarantining them in *Romeo and Juliet* (Act 5 Scene 2 Lines 7-11), which in typical Elizabethan tradition falls under the Crown's control. Indeed, quarantining was among the plague orders promulgated by Elizabeth I in 1592 (Sloan 1974: 883):

(8) In any town house where a case of plague is found the occupants must be shut in for a period of 6 weeks. In the country they may leave their home to attend to their duties in the fields, but must abstain from company and must carry a white rod at least 3 feet long. A special mark is to be fixed to the door of every infected house.

During the 1592-93 outbreak, the Crown ordered the complete closure of all theatres in London and adopted other measures, still with us, such as the careful handling and burning of clothes.

Stage 2 can be identified roughly with the hundred and fifty years between 1850 and the year 2000. Here science provided social control over invisible germs, following the work of Pasteur, Koch and many others. This period saw the growth of governmental control through Public Health legislation and institutions, and the rise of what can, in Western tradition, be called modern scientific medicine (Gotti/ Salager-Meyer 2006: 10; Garzone/Sarangi 2007). The phenomenon feared was infection from germs (viruses and bacteria) and in the latter part of the 20th century, in particular, the fear of constantly mutating germs, resistance to drugs of diseases such as TB, and new forms of infection: AIDS, Ebola, SARS and prion-based diseases such as mad-cow disease. In this period, infection takes on connotations of something inside us as well as outside us and hence beyond our control other than through the work of doctors. This triggers a three-stage reaction: initial control, followed by psychological vaccination, and a short step away from indifference and overconfidence stimulated by the conviction that an antidote will always be found. A new cultural outlook was predominant as Humphreys (1999) has pointed out in her review of Tomes (1998):

(9) Cleanliness came to be newly conceptualized in America during the four decades with 1900 at their center. This is a book about the transformation of a

> cultural ideal – purity – from a concern for visible tidiness to a preoccupation with unseen but deadly microbes. […] home economists and salesmen of the novel porcelain toilet alike urged American housewives to protect their families from the microscopic menace. Tuberculosis, with its apparent tendency to lurk in dark corners or unaired carpets, was the preeminent source of fear, followed closely by typhoid fever. The latter spurred plumbing reformations that first targeted the dreaded sewer gas, and then led to a preoccupation with keeping the bathroom disinfected and shiny, and with separating the household food supply from germ-carrying flies.

Stage 3 relates to the Information Society and coincides with the world of the Internet and globalization. The focus is on preventive preparedness in, and across, all its sectors. This means that people at all levels, whether in scientific communities, government or the media and so on listen carefully and talk to each other and learn from each other. The phenomenon feared is misrepresentation and misinterpretation of pandemics. Because the focus of fears falls on unpreparedness, a seesaw model of trust and distrust is presented in many genres from research articles to video games (Wright 2009), the latter indicating that preparedness is extended to children. Containment becomes an important factor on a global scale as does awareness of the underlying causes, e.g. factors facilitating diseases in their jump from animal to humans, no longer the preserve of governments or scientists, a lesson learnt in the UK, when government denial of mad cow disease proved costly as Hawa (2013) explains:

(10) On March 20, 1996, Health Minister Stephen Dorrell told a stunned House of Commons that mad cow disease was 'the most likely explanation at present for 10 cases of CJD that have been identified in people aged under 42'. […] In response, Prof. Lacey said 'This is one of the most disgraceful episodes in this country's history' and wanted 'a full and independent inquiry into the conduct of the government and the way it has used and misused scientific advisors [...] the government has been deliberately risking the health of the population for a decade. The reason it didn't take action was that it would be expensive and damaging politically particularly to the farming community who are their supporters [...] we are seeing the beginning of a very large number of people acquiring the disease in the next century'.

3. Applying the model to texts down the ages

The reconstruction of the cultural models and their effects highlights the rival claims of communities about what to fear most in an epidemic or pandemic. The claims are part of a cultural competition for credibility and are usually framed as an interventionist *vs.* rejectionist conflict, in which one community predominates over another in a battle of domination of cultures and communities. This was the case in the 1896 Gloucester smallpox outbreak with 434 deaths, caused by the city's rejection of vaccination, exactly 100 years after Jenner's smallpox vaccination breakthrough in the nearby town of Berkeley (Kotar/ Gessler 2013: 257-261; Hopkins 1983).

The previous section has shown how the culture of fear has changed and suggested that subsequent models include prior models while, of course, prior models cannot include subsequent ones. This section investigates, in a necessarily summary way, how cultural models are expressed in texts. This stage of the research adopted basic keyword searching in online text archives, using the online search capabilities of the MWS-Web tool (Taibi *et al.* forth.) to circumvent the various archives' own limited search facilities; it based searches on the keywords listed in Table 1 such as *sickness*, *plague*, *God*, *religion*, *contagion*, *miasma*, *resignation*, *smell*, *protect* and so on, rather than on words relating directly to fear, as preliminary research pointed to fear of pandemics being constructed in texts without frequent recourse to words such as *fear*, *panic* and *scare*.

Archival searches (www.opensourceshakespeare.org) in relation to the word *contagion*, for which there are seven references in Shakespeare's works, and just one in the *Canterbury Tales*, ("That troubled is by the contagioun" *The Second Nun's Prologue* Line 73, suggest a clear link to miasma theories in the Stage 1 period: "to dare the vile contagion of the night and tempt the rheumy and unpurged air to add unto his sickness" (*Julius Caesar* Act II, Scene 1, Lines 892-3). As predicted in Table 1, in Shakespeare's world, plagues come directly from God; the reaction to them is resignation, as a combined search for *death*, *plague* and *fate* reveals:

> Yet, 'tis the plague of great ones; Prerogatived are they less than the base; 'Tis destiny unshunnable, like death: Even then this forked plague is fated to us. When we do quicken. (*Othello* Act III, Scene 3, Lines 1934-8)

A second port of call was the *Diary of Samuel Pepys* documenting the Black Death epidemic in 1665; the data searched for have been italicised and indicated in the diary entry as (a), (b), (c) and (d):

(11) [June 7th 1665] This day, much against my Will, I did in Drury-lane see two or three houses (a) *marked with a red cross upon the doors*, and (b) *"Lord have mercy upon us" writ there* – which was a sad sight to me, being the first of that kind that to my remembrance I ever saw. It put me into (c) *an ill conception of myself and my smell*, so that I was forced to (d) *buy some roll tobacco to smell to and chaw – which took away the apprehension*. [My italics]

Here, too, the data match the Stage 1 model: the reaction is (a) quarantining against contagion and (b) resignation in the face of God's will; the phenomenon feared is miasma contagion; (c) the power over the pandemic is (b) God's will and (d) tobacco's anti-miasma, stench-reducing powers. The significance of Divine Will as the ultimate cause and consequent resignation is underscored three days later:

(12) To bed, being troubled by sickness, and particularly how to put my things and estates in order, *in case it should please God to call me away*. [My italics]

A major hallmark of Stage 2 is Public Health's fight against disinterest, a matter clearly identified in the Metropolitan Life Insurance Company's 1929 *Lucky Babies* advertisement:

(13) Lucky indeed is the baby who has a mother wise enough to follow the doctor's advice "Bring the baby to me when he is six months old and let me protect him against diphtheria. That is one disease he need never have." Last year more than *100,000 children who were not inoculated had diphtheria*. About 10,000 of them died […]. *Will 10,000 innocents be sacrificed next year* because some doctors have failed to warn mothers or because mothers have forgotten their doctors' warning? Even when diphtheria is not fatal, it frequently leaves victims with weakened hearts, damaged kidneys, ear trouble, or other serious after effects. […] If your child, so far unprotected, has not been stricken by this arch-enemy of childhood, your good fortune is a matter of

> luck – not precaution. If he is more than six months old, take him to your doctor without delay and have him inoculated. [My italics]

With its plea for child protection, and fears about indifference and complacency over vaccination, how culturally different things are now from before. The advert, part of an 85 million document campaign by the company, continues:

(14) This disease has […] disappeared in many cities where the people have backed their health authorities in preventing diphtheria by inoculation with toxin-anti-toxin. But *diphtheria finds its victims* wherever people have been *misled by false* reports as to the alleged danger of inoculation. The Metropolitan Life Insurance Company will gladly cooperate through its local managers, agents and nurses, with State or city authorities to stamp out diphtheria. [My italics]

What is it that distinguishes this 1929 text from the Stage 3 *Brief moment of merriment* text analysed in Table 3 below, part of a health news report by Strudwick (2014)? There are certainly common threads. The 1929 campaign, with its grass roots' appeal, is the forerunner of expressions of solidarity, *e.g.* the historic *March of Dimes* (http://www.marchofdimes.org/), instigated by Roosevelt in 1938 to combat polio, which continue today with charity races and TV fund-raising campaigns for medical research. However, a crucial difference lies in the complex ways in which communities interact or, rather, fail to interact. In the earlier text, two communities are conceived of as interacting directly: a) mothers and babies and b) doctors. Certainly, the question "Will 10,000 innocents be sacrificed next year because some doctors have failed to warn mothers or because mothers have forgotten their doctors' warning?" contains an implicit reference to the need to involve other actors, such as the Metropolitan Insurance Company itself. However, the role attributed is ancillary rather than primary: the reference, in the last line, to co-operation with "State and city authorities" shows how fear of pandemics is contained within and *by* the Stage 2 Public Health framework. Its prevention-is-better-than-cure creed is superseded in the Information Society, as shown by the 2014 *Brief moment* text, and others from Stage 3 quoted in this chapter, by the constant questioning

of the roles, competence and preparedness of the multiple actors involved. Stage 3 thus works outside and sometimes against the conventional frameworks set up by the powers-that-be and hence goes beyond Stage 2's preventive protection by requiring a broader reference framework to be adopted by all levels of society.

STAGE 2: 1. protection 2. statistics 3. indifference	[It was a brief moment of merriment.] 1 Effective treatment might have been *developed in 1996*, 2 but of today's 34 million *sufferers*, only about a third receive it; 3 and in the West there is another disease: apathy.
STAGE 2: 5. indifference	4 Barré-Sinoussi is concerned that 5 *young people are "too relaxed" about HIV*
STAGE 3: 6. & 7. unpreparedness	6 because "the education campaigns are not sufficient, 7 there is *not enough information*".
STAGE 2 9. person-to-person infection via 'germs' 10. protection	8 A 2013 survey in Scotland found that 9 one in 10 pupils think that HIV can be *transmitted through kissing.* 10 "They [young people] feel today that it's easy, *there is a treatment*.
STAGE 3: 11. [doctor's] fear of lack of information	11 They have not heard about *comorbidities* on long-term treatment."
STAGE 3: 12-14. Doctor's and patients' joint realisation of the harm caused by lack of information	12 Eight to 10 per cent of positive people develop cancer or cardiovascular disease. 13 "They look at me and they're like '*Nobody told us that*'." 14 She looks incredulous, *thrusting her hands up in anger* – not at them but at us: the adults.
STAGE 3: 15-18 See-saw trust & distrust in teachers' preparedness 19 & 20 Vision of a wider context	15 She supports legislation to ensure mandatory sex *education in schools*, 16 but also "to make sure that the *education is well done*... 17 if the teachers are not well informed, 18 they will not give the best information to students". 19 Even once sex education is improved, 20 *manifold problems must be overcome*.

Table 3. Clause-by-clause progression in *A brief moment of merriment*. (My italics)

4. Discussion

The texts quoted above can be looked at in other ways. If, for example, we consider Hasan's (1996) Generic Structure Potential model, which identifies optional and obligatory steps and sequencings in meaning-making narratives, for example in bedtime stories, we can begin to see that something similar occurs in accounts of fears about pandemics. When we provide a clause-by-clause analysis of the *Brief moment of merriment* text, we can see how each clause is part of a stepped progression (note the dotted lines between Stages 2 and 3) describing the Stage 2 culture of young people despite their living in a Stage 3 world. Similar progressions from one historically defined cultural tenet to another emerge when other texts, including those quoted, are examined. This provides some validation for the diachronic approach advocated and the hypothesis that the co-presence of cultural models in texts is a sign of their reliability as texts. All this suggests that fears expressed in texts about pandemics can be characterized in terms of their selection of the nine steps (A1 to C3) posited in Table 1.

In turn, this also raises the question as to whether, on the basis of the initial evidence gathered through online searches, the model presented above is concordanceable in terms of obligatory and optional steps and extendable to the five steps-per-disease information (*i*-*v*) provided in Table 2. Such a step opens up the model to further validation and, in particular, quantification in terms of comparative web studies. Accordingly, a search (cf. Table 4 below) was made with the MWS-Web tool for one possible configuration: namely (*i*) (the disease feared: anthrax) + C2 (the phenomenon feared: bioterrorism) + C3 (response to fear: preparedness). Carried out in relation to five websites – the *Lancet*, the *BMJ*, the *CMAJ*, the *BBC* and the *New York Times* – the search produced a substantial number of results, 91 in all, for this combination of words. The results all relate to the 2001 anthrax scare known as *Amerithrax* from its FBI case name (www.fbi.gov/about-us/history/ famous-cases/anthrax-amerithrax). As Table 4 also shows, rather than the usual single column concordance, the *MWS-Web* tool produces multiple-column concordances, in this case three different keywords each with co-texts. This facilitates

tracking of cultural and conceptual progressions, which can be easily perceived thanks to the side-by-side onscreen viewing (presented in Table 4 as three separate rows owing to page limitations). The overlapping co-texts show, for example, the close textual proximity of the words searched for.

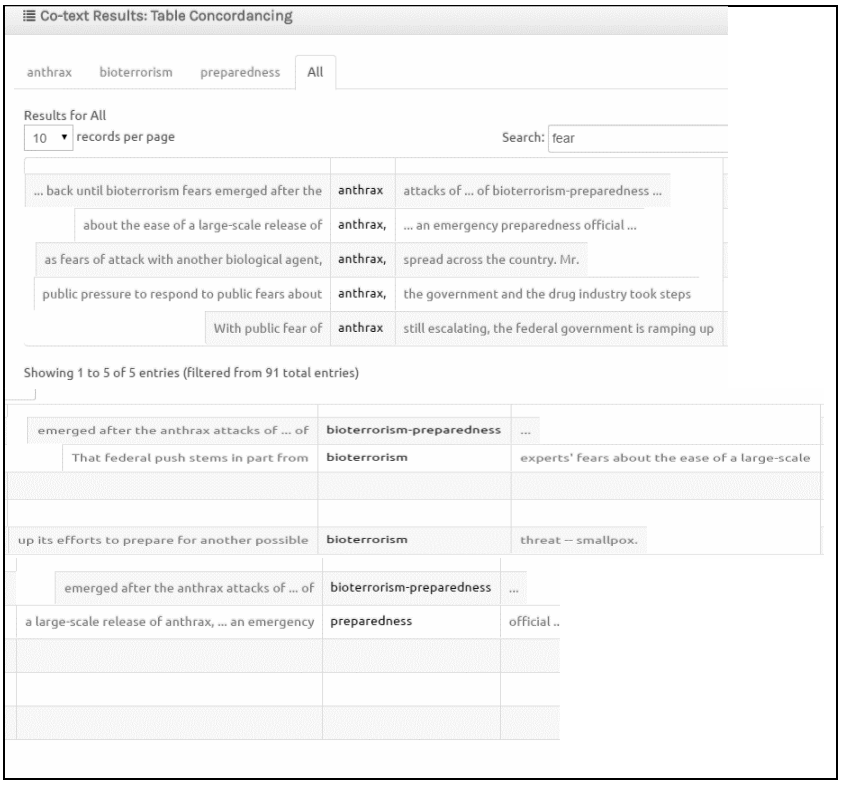


Table 4. Lexical and cultural progressions in fear-related concordances.

While space restrictions make it impossible to reproduce and examine all 91 concordances obtained, the five concordances that are shown in Table 4 indicate this approach's potential in relating cultural to lexical. They are the result of a secondary search within the data set for the word *fear*. They provide empirical confirmation of the relative ab-

sence of fear-related words as postulated in *Section 1* but also show that 'fear' words cluster around the name of the disease, a finding backed up in this data set for words such as *threat*, *panic* and *scare*. How indicative this small sample is of a general trend remains to be seen. Significantly, the foundations for an approach to corpus investigation that integrates cultural and lexical aspects have been laid in a way that facilitates comparison of texts from the past with those of the present.

5. Conclusions

Pandemics are always in the news. Hardly a day goes by without a leading international newspaper announcing the threat of a pandemic. In asserting, in various parts of the chapter, and in particular in Section 1, that fears are linked in varying ways to the commitment in the fight against disease, we are voicing the concerns of society, in general, and those of the medical profession, in particular. However, these concerns are voiced within cultural frameworks with knock-on effects for texts and genres, and consequences for all those working within the vast preserve of text and discourse studies. There are clear implications for specialists in different areas of text and communication studies, for example, for those concerned with cross-cultural communication in a global society or those, like the current author, dealing with the comparison of historical and contemporary texts of medical communication (Loiacono 2012a, 2013). What is special about the language of fear is the unending relationship between the past, the present and the future to be explored in the next stage of this research.

References

Al Jazeera 2014. <http://stream.aljazeera.com/story/201408251305-0024099>.

Allen, Andrew E. 1962. An Individual Vocabulary-Building Device. *The English Journal* 51/3, 205-207.

Chew, Cynthia / Eysenbach, Gunther 2010. Pandemics in the Age of Twitter: Content Analysis of Tweets during the 2009 H_1N_1 Outbreak. *PloS one* 5/1, 1-13.

Christakos, George / Olea, Ricardo A. / Serre, Marc L. / Yu, Hwa-Lung / Wang, Lin-Lin 2005. *Interdisciplinary Public Health Reasoning and Epidemic Modelling: The Case of Black Death.* Berlin: Springer.

Doshi, Peter 2011. The Elusive Definition of Pandemic Influenza. *Bull World Health Organ* 89, 532-38.

Garzone, Giuliana / Sarangi, Srikant 2007. Discourse, Ideology and Specialized Communication: a Critical Introduction. In Garzone, Giuliana / Sarangi, Srikant (eds) *Discourse, Ideology and Specialized Communication.* Bern: Peter Lang, 9-38.

Gotti, Maurizio / Salager-Meyer, Françoise 2006. Introduction. In Gotti, Maurizio / Salager-Meyer, Françoise (eds) *Advances in Medical Discourse Analysis: Oral and Written Contexts*. Bern: Peter Lang, 9-19.

Grigsby, Byron Lee 2004. *Pestilence in Medieval & Early Modern English Literature*. London: Routledge.

Gwyn, Richard 1999. 'Killer bugs', 'silly buggers' and 'politically correct pals': Competing Discourses in Health Scare Reporting. *Health* 3/3, 335–345.

Hasan, Ruqaiya 1996. *Ways of Saying: Ways of Meaning*. London: Cassell.

Hawa, Rehab 2013. Mad Cows and Englishmen: The Globalisation of Disease. TWN: Third World Network <www.twnside.org.sg/title/mad.htm>.

Hinnant, Amanda / Len-Ríos, María E. 2009. Tacit Understandings of Health Literacy Interview and Survey Research with Health Journalists. *Science Communication* 31/1, 84-115.

Hopkins, Donald R. 1983. *Princes and Peasants. Smallpox in History*. Chicago: University of Chicago Press.

Humphreys, Margaret 1999. Book review: The Gospel of Germs: Men, Women, and the Microbe. *American Life Bulletin of the History of Medicine* 73/1, 164-165.

Humphreys, Noel 1897. English Vaccination and Small-Pox Statistics; with Special Reference to the Report of the Royal Commission, and to Recent Small-Pox Epidemics. *Journal of the Royal Statistical Society* 60/3, 503-551.

Jen, Clare 2008. *SARS Discourse Analysis: Technoscientific Race-Nation-Gender Formations in Public Health Discourse*. Ann Arbor: ProQuest.

Kotar S.L. / Gessler J.E. 2013. *Smallpox: A History*. Jefferson (NC): Mcfarland.

Lakoff, Andrew 2008. The Generic Biothreat, or, How we Became Unprepared. *Cultural Anthropology* 23, 399-428.

Loiacono, Anna 2012a. *Medical Communication*. Como: Ibis.

Loiacono, Anna 2012b. Medical Genres in Socio-Political Communication: Overcoming Gaps. In Cambria, Mariavita / Arizzi, Cristina / Coccetta, Francesca (eds) *Web Genres and Web Tools: With Contributions from the Living Knowledge Project*. Como: IBIS, 81-100.

Loiacono, Anna 2013. *The Medical Alphabet, Vol. 1*. Andria: Matarrese.

Luther Catherine / Zhou, Xiang 2005. Within the Boundaries of Politics: News Framing of Sars in China and the United States. *Journalism & Mass Communication Quarterly* 82/4, 857-872.

Martin, Paul / Martin-Granel, Estelle 2006. 2,500-year Evolution of the Term 'Epidemic'. *Emerging Infectious Diseases* 12.6, 976.

Metropolitan Life Insurance Company 1929. Lucky Babies. *Boy's Life*, November 1929: 32.

MMR Expert Group 2002. *Report of the Expert Group Established by the Scottish Executive*. Edinburgh: Scottish Executive. <www.scotland.gov.uk/ resource/doc/46905/0014171.pdf>.

Mukpo, Ashoka 2104. Why don't West Africans believe Ebola is real? Vice News: <https://news.vice.com/article/why-dont-west-africans-believe-ebola-is-real>.

Pilkington, Ed 2014. Plaintiffs Hold UN Responsible for Outbreak of Disease, Which they Say was Carried into Haiti by Peacekeepers from Nepal. *The Guardian*. <www.theguardian.com/world/ 2014/mar/11/ haiti-cholera-un-deaths-lawsuit>.

Porter, Roy 1999. *The Greatest Benefit to Mankind: A Medical History of Humanity*. New York: Norton.

Quigley, Fran 2014. *How Human Rights Can Build Haiti: Activists, Lawyers, and the Grassroots Campaign.* Nashville: Vanderbilt University Press.

Rigg, James 1930. *The Decameron of Giovanni Boccaccio.* London: Dent.

Schell, Heather 1997. Outburst! A Chilling True Story about Emerging-virus Narratives and Pandemic Social Change. *Configurations* 5/1, 93-133.

Sloan, A.W. 1974. Plague in London under the Early Stuarts. *South African Medical Journal* 48/20, 882-888.

Sternbach George 2003. The History of Anthrax. *The Journal of Emergency Medicine* 24/4, 463-46.

Strassberg, Barbara 2004. A Pandemic of Terror and Terror of a Pandemic: American Cultural Responses to HIV/AIDS and Bioterrorism. *Zygon* 39/2, 435-463.

Strong, Philip 1990. Epidemic Psychology: a Model. *Sociology of Health & Illness* 12/3, 249-259.

Strudwick, Patrick 2014. Françoise Barré-Sinoussi. A Life Dedicated to Beating Aids. <www.independent.co.uk/life-style/health-and-families/ features/franoise-barrsinoussi-a-life-dedicated-to-beating-aids-9441110. html.>

Taibi, Davide *et al.* Forthcoming. Access to Web Archives: the MWS-Web Tool's Contribution to Text Analysis. In Baldry, Anthony / Taylor, Chris / Vasta, Nicoletta (eds) *Readings in Intersemiosis and Multimedia: Volume II. The ACT Project and Other Papers*. Como: Ibis.

Tanner, Andrea H. 2004. Agenda Building, Source Selection, and Health News at Local Television Stations: A Nationwide Survey of Local

Television Health Reporters. *Science Communication* 25/4, 350-363.

Tomes, Nancy 1998. *The Gospel of Germs: Men, Women, and the Microbe in American Life*. Cambridge: Harvard University Press.

Wright, Mic 2009. A Sick Game to Play. Games Based on Swine Flu have Spread Rapidly Online. Are they in Bad Taste, or do they Fulfil a Cathartic Role? <www.theguardian.com/technology/2009/may/14/games-swine-flu>.

PAOLA BASEOTTO

Ideological Uses of Medical Discourses in Early Modern English Plague Writings

> Death […] hath pitcht his tents, (being nothing but a heape of winding sheetes tackt together) in the sinfully-polluted Suburbes: the Plague is Muster-maister and marshall of the field […]. The maine Army consisting (like *Dunkirke*) of a mingle-mangle, viz. dumpish Mourners, merry Sextons, hungry Coffin-sellers, scrubbing Bearers, and nastie Graue-makers […]. No parley will be graunted. (Dekker 1603: D)

1. Introduction

From the Black Death of 1348-9 to the Great Plague of London in 1665, England experienced a series of plague epidemics characterized by very high mortality which caused depopulation and economic disasters for families and communities.[1] The dominant perception which emerges from written testimonies of all kinds ─ personal, devotional, medical ─ is that of an endless, exhausting war. Consideration of the abundant early modern English literature on plague shows how various texts, or various sections in the same text, inflect specific streams of the general, grand metaphor of war: some writings focus on the epidemiological element of conflict, and stress the helplessness of people at war with a sanguinary and invincible enemy, a disease of unknown origin and exceptional morbidity; others emphasize views of plague as a punishment meted out by a furious God at war with sin-

1 For a comprehensive study of the demographic, social and economic contours of recurrent plague epidemics in England, see Shrewsbury (1970).

ners; the rest call attention to a more subtle conflict of diverging ideas regarding the origin of plague and its remedies.

As Ranger and Slack (1992: 3) suggest, epidemics "support, test, undermine or reshape religious, social and political assumptions and attitudes". My study sets out to examine an important aspect concerning the process of shaping of ideologies and mentalities in Elizabethan and Stuart England by analyzing the co-existence, clash and partial accommodation in miscellaneous writings of competing notions of plague entailing varying degrees of compliance with official policies of cure and containment of the disease.[2] In particular, the focus of my attention is upon distinctive uses of medical language and the reception, adaptation and manipulation of current medical notions for ideological purposes.

Early modern English literature on plague is vast and varied.[3] Its abundance and wide circulation across the sixteenth and seventeenth centuries signify the magnitude of the impact of epidemics on England and the English. The fact that the majority of such works were intended for a middle-class audience more than a cultural or social élite seems to point to a general demand for this type of literature and to a sustained effort to offer tentative and often ideologically oriented answers to people's questions, along with consolation and practical instructions. The majority of plague writing is in the form of sermons or religious tracts and medical handbooks by lay or clerical physicians. A large number of pamphlets, broadsides and bills of mortality with records of weekly burials also survive. Of great relevance considering their universal propagation are official collections of specific prayers for use in every church and household, as well as Privy Council's public orders posted in every market and church throughout the country.

---

2 Although I have examined hundreds of plague writings by a large number of authors, my quotations are taken from a restricted group of individuals. This is due partly to authors' influence, as in the case of Bishop Hooper, and partly to the superior rhetorical gifts of some of them like Thomas Pullein.

3 For information on the impressive number of Elizabethan and early Stuart plague texts, see Healy (2001: 54) and Slack (1985: 23-24). Significantly, as Slack (1985: 23) points out, "the very first printed work on medicine in English was a *Little Book* on plague" of 1486.

The leitmotif in plague writings across genres and decades is the notion of plague as a product of divine wrath. While the role of miasma, humoral unbalance or celestial influences receives varying degrees of attention according to the specific standpoint of the author and the purpose of the work, all texts, whether medical, devotional or lay, invariably indicate God's anger as the primary source of pestilences. This shared view is clearly a legacy of Hebrew and classical conceptions of plague as God's punishment for human transgressions (Healy 2001: Gilman 2009). The Bible in particular, from Genesis to Psalms and in the prophetic voices of Jeremiah, Zechariah and Hosea, includes abundant and varied references to God's promise to punish human disobedience with plague visitations. A typical example of the medical endorsement of this discourse is found in a health manual penned by surgeon William Boraston who describes plague as a "whip, which GOD out of his indignation useth to chastice men for their transgressions, as it is written in the 28. of Deut." (1630: 1).[4] As regards governmental documents, in a letter to the Archbishop of Canterbury prefacing the July 1563 edition of official plague prayers and orders for public fasting, Queen Elizabeth remarks that "it hath pleased the most highest, for thamendment [sic] of us and our people, to visite cartaine places of our Realme with more contagious sicknesse then lately hath ben" (Church of England 1563: A1^{v}). Particularly felicitous is the use of a doctrinal metaphor by the nonconformist preacher Henoch Clapham who specifies that "famine, sword and pestilence, are a Trinitie of punishments prepared of the Lord, for consuming a people that haue sinned against him" (1603: C1^{v}). Authors often underline how plague's unique terribility derives from its more direct correlation with divine wrath: "the plague is more immediately from God, than any other Sicknesse or Disease for it is the immediate stroke of God" (Brooks 1666: A3v).

All texts invariably construct the discourse of human culpability and active agency in connection with God's pestilential punishment by for example reiterating references to human 'wilful consenting' to

4 I have not modernized the spelling in my quotations from early texts or corrected any printing mistakes. Emphases are in the original unless otherwise stated.

Satan (Grindal 1563: 480) and enlarging on the numerosity and hatefulness of the transgressions that have fuelled divine wrath. This seems, I think, to serve two main purposes. The first is to further prayer and repentance: writings which elaborate on wilful sinning aim to stimulate energetic personal initiatives towards reformation. Another aim of the discourse of human culpability may be to chase any suspicion of divine unfairness or cruelty to humans. Indeed, great care is always taken to associate descriptions of plague as God's scourge with accents on its quality as a just and deserved retribution, a pestilential visitation sent by a just God to his creatures who have 'justly deserved' it (Grindal 1563: 484). A text of exceptional persuasive character and capillary dissemination, the collection of plague prayers published in 1563 by the Bishop of London Edmund Grindal for use in each English church and household, includes this invocation: "turn away from us this his plague and punishment, most justly poured upon us for our sins and unthankfulness" (1563: 78).

The discourse of divine clemency and fairness in association with open or implied references to human culpability is furthered by stress on divine patience: God has repeatedly forgiven sinners and has urged repentance; only "at length" has he begun "to stretch forth his punishing hande" (Pullein 1608: D2^{v}). In this light, texts abound in allusions to God's anger and indignation at human deafness to his warnings. Other writings propose the same notion of a merciful God by presenting plague as the product of divine love: "God most mercifully chastiseth his Children for their sinnes […] that they might […] flee vnto him for help" (I. W. 1603: A3).

2. Semantic fields in the discourse of plague

Within the discourse of plague as punishment, two semantic fields – one concerning communication, the other law – are worth noting. As regards the first, the disease is frequently presented as God's means of communication with his disobedient creatures, as a sort of "messen-

ger" (Hooper 1553: A2). An evocative treatment of this function of pestilence is found in the first-hand account of the great London epidemic of 1665 by the nonconforming preacher Thomas Vincent. His work, which bears the expressive title *God's Terrible Voice in the City*, includes a forceful metaphor of plague as God's means of communication. In a passage characterized by a didactic and pedantic tone, the London minister points out that "God being a Spirit, hath no Mouth nor Tongue properly as men have, […] therefore his way of speaking is not like ours"; indeed, he speaks "by terrible things" and his voice is "loud and full of terrour". "When God lifteth up his hand and strikes," Vincent argues, "he openeth his mouth also and speaks": ergo, plague is a "*speaking* Judgment" (1667: 3, 23, 9-10).

Concerning the semantic field of law, equations of plague with a judgment recur throughout writings. As if reading a list of charges in court, authors compile long and detailed catalogues of sins which have occasioned an "awakening judgment" (Vincent 1667: 21), a "fearfull iudgement of the Lord" (Pullein 1608: E) in the form of a pestilential visitation.[5] Metaphors used to describe plague often include terms from the judicial area: plague is an "extra ordinary magistrate to reforme and punish […] synne" (Hooper 1553: B3^{v}) and a "Nimble executioner of the Diuine *Iustice*" (Dekker 1630: A4^{v}).

While all texts, in connection with characterizations of plague as punishment, refer to some extent to divine wrath, some writings inflect this theme and depict the terrible image of a pitiless, bloodthirsty God at war with humanity. As with the discourse of human culpability discussed above, emphases on God's fearfulness are generally more numerous and forceful in texts designed, by rousing terror, to convince people of the extreme virulence of the present epidemic requiring an extraordinary effort in terms of universal prayer and fasting, or in writings, especially by nonconformist ministers, which lay stress exclusively or predominantly on the supernatural origin of plague.

I suggest that frequent and often particularly vehement references to God's cruelty and fearfulness may also function as more or

5 Interesting lists are found in Vincent (1667: 51) and Church of England (1603: C3^{v}).

less conscious attempts at making sense or at least mitigate the psychological impact of a disease of unknown origin and unparalleled virulence by accounting for it in familiar terms. In this light, plague's characters of ferocity and mercilessness are attributed to a rightly furious and exasperated God. Drawing inspiration from and at the same time adding to a repertoire of scriptural images, numerous plague writings lay stress on God's bellicose attitude. Hence, the epidemiological weaponry of the pestilential bacillus ─ the intensity of pain, the horror of signs, the rapid demise of victims ─ is transfigured in depictions of God's weapons: sharp arrows, for a precise, mortal wound, a sword, a rod. These arm God's hand which is typically mentioned in connection with the attribute *punishing* as for example in Pullein 1608, D2^{v} quoted above. The semantic field of military operations is evoked by frequent occurrences of expressions within the *battle* domain: thus God is cast as a "furious enemy" (Vincent 1667: 176) who negotiates "the retrait from the battell" (Pullein 1608: E) with his afflicted creatures. The terrifying sounds of the battlefield echo in plague writings which often include mentions of the "drum of God's wrath" and the "Trumpet vnto the Lord's battels" (Pullein 1608: E). This image of a bellicose God is a commonplace of all texts, including those by lay authors, like Kellwaye, a "Gentleman" writing for "the loue and benefit of his fellow countrymen", who warns that God "hath determined to strike vs at the quicke" (1593: A3). Plague writings seem to document a general attempt to make sense of the enormity of the calamity in recognizable and acceptable terms as a no quarter war declared by God who typically *destroys*, *smites*, *strikes*, *slaughters*, *slays* and *kills*. He is an invincible enemy whose records on the battlefield include the annihilation of thousands in just three days with a pestilential visitation in response to David's trespasses as Bishop Grindal reminds the English people (1563: 479).

Military vocabulary and imagery extend to God's ministers: since their vehement urgings to repent and hence parry the divine blow have fallen on deaf ears, they have joined the exterminating army: "now must you heare vs strike vp the drum of God's wrath, and sound out the Trumpet vnto the Lords battels" (Pullein 1608: E). In addition to these volunteer drummers and trumpeters, God's army in-

cludes redoubtable fighters like "venimous Aspes, and bloodie Lyons, Sathan and his wicked spirites" (Holland 1603: 53).

The discourse of God's enmity and bellicosity had universal currency, conveyed as it was not just through repeated elaborations in sermons and miscellaneous texts on Scriptural warnings that "the arrowes of the Lord are drunke with blood and his sword doth not cease deuoring of mans flesh" (Pullein 1608: E), but also in the iconographical apparatus of widely circulated broadsheets and bills of mortality which was characterized by a version of the medieval *danse macabre*: God's angel brandishes a sword and hovers from a pestilential cloud over cities and villages while a triumphant Death with his usual attributes, the hourglass and dart, is surrounded by coffins and corpses.

3. The origin of plague: natural vs. supernatural explanations

While divine wrath was universally indicated as plague's "chiefest cause" (Boraston 1630: 1), the epidemiological reality of the disease, the evidence of its contagious nature and the fact of its inclination to spread in specific environmental and climatic contexts required additional tentative explications. As Sheils points out: "explanations of disease in terms of God's will to punish and in terms of natural phenomena could be reconciled by theories of primary and secondary causation" (1982: 89). Unsurprisingly, the balance between supernatural and natural explanations fluctuates in a remarkable way according to the characters and purposes of texts. Hence surgeon William Boraston, after a prefatory mention of sin as plague's primary cause, first enlarges on the secondary means used by God to infect villages and cities, "astrall Impression", "the coniunction of Saturne and Mars", "Eclipses", then alerts readers on the role of "the breath, heat, sweat, smell, habitation, and garments from the sicke" in contagion (1630: 1-3). Bishop Hooper, on the other hand, while allowing for causes

"naturall and consonaunte to reason" (1553: A3^{v}) like corrupt air which generates pestilential vapours from water or unbalance of the four humours, lays great stress on the supernatural origin of plague when he admonishes that "yuell humors" cannot be "engendered of any meates, were not the man that useth them corrupte and first infected with sinne; […] and soo altereth not by chaunce, nor by the influence of starres, the holesomnes of the ayer intoo pestylente and contagyouse infectyon" but because of "synne and contempte of gooddes holye woorde" (1553: B3, B3^{v}).

Some writings transcend the discourse of primary and secondary causes by postulating the existence of two kinds of plague, one utterly supernatural, the other entirely natural. The first proceeds directly from God's blow and therefore is not infectious, the other is spread by natural means like corrupt air and contact with victims. Widely read physicians enlarge on this view in their handbooks. Hence for instance Bradwell subtly distinguishes a "simple" kind of plague deriving from the "immediate stroke of Gods punishing Angell" and entailing no "distemper of Blood, putrifaction of Humors, or influence of Starres" and a "putrid" kind (1636: 2). In their endorsements of this thesis some influential churchmen went as far as to argue that "wilfull sinners" catch the supernatural kind of plague, an "incurable […] pestilence" against which no medicine is effective (Hooper 1553: C1). This theory must have roused confusion and is likely to have encouraged resistance to plague-control measures. Because the idea of a wholly supernatural type of the disease implied inefficacy of natural remedies, a compromise was found to allow for both supernatural and natural salves: the two kinds of plague, often occurring at the same time and in the same geographical area, were generally declared to be hardly distinguishable one from the other.

While official writings like plague orders by the Privy Council and specific forms of prayers by Church of England authorities accommodate both natural and supernatural explanations allowing for natural and supernatural remedies ─ medicaments and quarantine, prayers and fasts respectively ─ other texts, especially by nonconforming preachers, are markedly biased in favour of the supernatural element and further a providential and predestinarian view of plague. This view encouraged fatalistic attitudes and presented medi-

cal and governmental measures as ineffective and ungodly: "they see many preserued in the midst of the plague, who haue vsed no phisicall meanes. What will they make the cause of their deliuerance? No other thing, but the diuine pleasure of God" (Clapham 1603: B2^{v}). Typical of such writings are general pronouncements which depict epidemics as a matter-of-fact divine initiative requiring godly submission, rather than resistance: "that so many thousands dies [sic] […] of pestilence, it is fore-ordained in heaven. The hand of the Lord is in all" (Brooks 1666: 55). The randomness of the disease, which wiped out whole households and spared their neighbours, devastated some geographical areas and was absent or hardly present in others, is also frequently referred to as proof of its providential nature.

Worth careful note are interpretations and descriptions of the physiological marks of plague in spiritual terms aimed at propagating the notion of the utterly supernatural quality of the disease requiring spiritual salves only. Recalling the etymology of plague from Latin *plaga*, a stroke or blow, and offering a literal reading of Scriptural metaphors, some passages describe buboes as marks left by God's sword or arrows, as the visible tokens of sin which is the source of infection.[6] Clapham reports that many "so smitten, haue felt and heard the noyse of a blow and some of them haue upon such a blow found the plain print of a blew hand left behind upon the flesh". His account closes with a telling cause-and-effect statement: "the Angels stroke so is the Cause, the plague-sores and marks arising and appearing are the effect" (1603: B^{v}). Oxford vicar Thomas Pullein proposes a paradigmatic example of spiritual understandings of the evolution of the disease. Drawing on the dominant metaphor used in connection with plague, that of war, he typifies it as a victorious "Captaine" or "Tyraunt" who "displayes his Ensignes on the Wals of our bodies" (1608: E4). Pullein goes on to describe with scientific accuracy the swift transformation of the buboes, the captain's ensigns, from their

6 "Our word plague is derived from the Latin word *plaga*, which originally meant a blow or a stroke, but which acquired in late Latin the additional meaning of pestilence, because a pestilence – irrespective of its nature – was regarded by the pagan Romans as a blow from the gods and by the Christianized Romans as a stroke expressive of the divine wrath" (Shrewsbury 1970: 1).

first appearance to the moment of the victim's death: at first these swellings are red "shewing his cruelty", then they turn blue, "shewing death to approach" and finally they grow black, "whereby wee are put in mind of those horrible torments that followe after death in the fire of hel" (1608: E4).[7] Other expressive spiritual readings of the epidemiological realities of plague include transcriptions of public orders regarding burial of victims at night with "no neighbours nor friends […] to accompany the Coarse" (Royal College of Physicians 1636: H2) in order to prevent the spread of contagion, as retribution for sin. Capitalizing on well-established fears of anomalous and dishonourable burial, some authors in their exhortations to repentance invite people to visualize their own funeral: "Which of your neighbors will accompany your corpes to the graue?" The implied answer is "none" and the explanation follows. "thus, by the iust iudgement of GOD, those that haue sinned wilfully, are buried shamefully." (Pullein 1608: E4).

4. Views on medicine and official policies of epidemics containment

Some writings by the champions of providential attitudes to plague include noteworthy uses of language illustrative of conflicting views. Binary oppositions of terms in the *natural* and *supernatural* fields, less frequently in the *terrestrial* and *celestial* fields, are of particular interest. Significant examples are found in the *Epistle* of the Calvinist divine Henoch Clapham who served a prison term for his vehement attacks on the 1603 plague orders. Elaborating on the "two-fold consideration" of plague, "the first *Supernaturall*, the second *Naturall*", Clapham interestingly equates "atheists" with "naturians", suggesting that notions of the natural origin of plague entail ignorance and lack of faith: "Atheists, meere Naturians and other ignorant persons, do hold

7 A powerfully imaginative description of buboes as marks of divine punishment is found in Dekker: "the purple whip of vengeance" (1609: B).

it to be a natural disease" (1603: B3, A4^{v}). The syntactic coordination of "atheists", "naturians" and "ignorant persons" is expressive of Clapham's contempt of supporters of the natural or Galenic theory of plague. The hyphen in his description of plague as a "super-naturall stroke" (B1^{v}) renders explicit the limits of natural interpretations. The opposition *Galenist/Christian* in Clapham's warning that "To speake and act in such cases, as sole Naturians, is of Christian to become *Galenists*, and of spirituall to become carnall" (A3) points to his open challenge of the official stand of mainstream Anglicanism which stressed God's blessing of medical practices. His contempt of medicine is conveyed by the verb *to creepe* in the following quotation: "we should not creepe on the earth herein with Galen, Hippocrates and such" (B^{v}). Clapham's use of the verb *to creepe*, by evoking creatures from the lower section of the great chain of being, dehumanizes Galen, Hippocrates and their followers. While the repulsiveness generally associated with creeping creatures like worms and snakes is clearly implied, the verb is also suggestive, I think, of the serpentiform Satan of Genesis.

Whereas frontal attacks like that of Clapham were uncommon, critical views of reliance on medical help are variously expressed in some writings. The supporters of the providential notion of plague usually dared not challenge openly the official stand of the national Church on the divine sanction of medical practices. Instead, exploiting the universal awareness of extraordinary mortality rates during epidemics, they often insinuated suspicion of medical regimens' efficacy and suggested that survivors owed their lives to spiritual medicine and God's inscrutable will since: "when God shoots these arrows […] none can pull them out but God himself". (Brooks 1666: 2). Writings by people holding these views are characterized by frequent recourse to terms within the semantic field of *inscrutable* events and *incurable* or *inescapable* scourges. Some distinctive features of plague, like the rapidity of its spread and the swiftness of death after contagion, are also used in connection to discourses of medical impotence and people's helplessness.[8] Hence variations of *sudden* and *unexpected*

8 As Boeckl (2000: 12) points out, the incubation period of septicemic and pneumonic forms of plague "lasts only a few hours. […] Both forms of plague

recur in some texts. In his reminder that "the Plague usually killeth within a few daies; sometimes within a few hours after its first approach", Vincent admonishes: "suddenly the arrow is shot which woundeth unto the heart, so it gives little time of preparation before it brings to the Grave" (1667: 10-11). There is no time to take medicaments or repent of sins. Vincent turns into account Scriptural descriptions of plague as the "Terrour by night, Psalm 91.5.6" (1667: 10) which exploit people's instinctive fear of the dark to lay stress on the uncertainty about the means of transmission of the disease which, as a thief or murderer, attacks suddenly under cover of darkness. Pullein warns that the young and healthy should not feel out of danger, since it is for all to see "how men and Women, that were lusty and strong are suddenly laide along in the dust of the earth" (1608: E3^{v}).

Another rhetorical strategy employed to subtly criticize current policies for public health while avoiding open criticism is a highly emotional and suggestive rendering of the human cost and social consequences of the official strategies of containment of the epidemic through quarantine of the infected enforced by local authorities with full backing by the Church.[9] Vincent is perhaps the most gifted author of such narratives: his depiction of the despair of segregated people "crying and roaring at their windows" (1667: 38) is powerful. I think that the verb *to roar*, apart from being suggestive of anguish, in view of its relation to wild, dangerous beasts, performs two additional functions: it points to the dehumanizing character of a policy entailing segregation of human beings like beasts in cages and rejects medical notions of the life-threatening character of contact with the infected. Vincent adds to the current uses discussed above of the metaphor of war in connection to plague (humans versus disease and God versus sinners) by suggesting that quarantine sparks off a conflict between the healthy and the diseased: people cast a fearful look at infected

---

can kill patients within a day, causing apparently healthy persons to collapse suddenly".

9 Healy rightly argues that the mainstream Anglican approach in this respect was characterized by "wide consent on the fact that people, primarily, spread disease and so had a moral, Christian obligation to isolate themselves if knowingly infected" (2001: 54).

houses marked by red crosses, "as if they had been lined with enemies in ambush, that waited to destroy them" (1667: 32).

Alarm about disruption of affective and social ties because of fear of contagion ─ people "begin to fear whom they converse with and deal withall, […] least they should have come out of infected places" (Vincent 1667: 31) ─ and the segregation of whole families is often associated in the writings of critics of official policies with stern censure of another strategy of containment of epidemics: flight from infected areas. The issue of the ethical legitimacy and epidemiological efficacy of flight is a major topic in most plague writings which resonate with questions of this kind: since plague is a well deserved divine punishment, is it morally acceptable to evade it? Do decisions to flee denounce lack of faith and trust in Grace? Totaro (2005: 39) puts the moral dilemma into focus:

> No one could determine whether God wanted people to remain within a plague-infested city and have faith in his protection or whether God wanted people to care for their bodies and families by fleeing from the infection.

The topic must have been in the forefront of people's mind if physicians like Cogan often devote space in their widely read health manuals to the debate on "whether it be lawefull to flie from the plague" (1584: 266); notably, the adjective *lawful* in this context is used with reference to ethics, not laws. One party endorsed Galen's teaching regarding the crucial role of miasma in plague epidemics and the efficacy of flight to avoid infection, the other recalled Moses' warning "flee whether thou wylte, in case thou take with thee the contempt of god and breache of his commaundement, god shall fynde thee out" (Hooper 1553: C1) and stressed providential and predestinarian views: "If it bee Gods will, you shall bee safe any where, if it be not Gods will, you shall be safe no where" (Pullein 1608: F2).

Besides signalling a lack of faith, its opponents argued, flight denounced also a lack of charity. Some texts aim to rouse sympathy for the abandoned diseased, as does the following passage which censures the behaviour of those who flee infected areas. Fear of contagion

> Hath rased out of their hearts, for the while, all affections of love and pity to their nearest Relations and dearest Friends; so that when the Disease hath first seized upon them, and they have had the greatest need of succour, they have left their friends in distress, and flown away from them, as if they had been their Enemies (Vincent 1667: 12).

The official stand was that churchmen and magistrates should stay at their posts during epidemics, although they should not risk their lives by visiting the sick. Hooper's warning that "bishops, vicars, curates" who abandon the sick "flee from goddes people into god's high indignation" (1553: C2) seems reflective of the fact that clergymen in the Church of England very often fled (see Totaro 2005: 46). It is worth noting, as Wallis suggests (2006: 15), that on the occasion of outbreaks of plague many nonconformist clergymen who had been ejected from their parishes after the Restoration stayed in plague-infected areas to assist the diseased and preach, thus circumventing the statutory prohibition of public preaching by the dissenting clergy.

The tone of the many references to the stands of nonconforming preachers in official documents by the Privy Council and Church of England authorities seems to indicate a deep preoccupation with their impact on common people's acceptance of medical care and compliance with government plague-control measures. The plague orders issued in 1603, which replicate those promulgated by Queen Elizabeth in 1578, are eloquent in this regard:

> If there be any person Ecclesiasticall or Lay, that shall hold and publish any opinions (as in some places report is made) that it is a vain thing to forbeare to resort to the Infected, or that it is not charitable to forbid the same, pretending that no person shall die but at their time prefixed, these persons shall be not only reprehended, but by order of the Bishop, if they be Ecclesiasticall, shall be forbidden to preach, and being Lay, shall also be enioyned to forbear to utter such dangerous opinions upon pain of imprisonment. (*Orders* 1603: G2^{v}).

The correspondence between Bishop Grindal and Lord William Cecil, Queen Elizabeth's Secretary of State, attests to a common worry and effort at opposing such views (1563: 270). Indeed, the official stand of the national Church in this respect was clear, as was its backing of public health policies. While nonconformists tended to inflect passa-

ges of the Bible which seemed to endorse their predestinarian and providential views and laid great stress on extrapolations from Calvin's wider teaching like "it is only in his hand to apoint lyfe or death: and therefore thys mater ought onely to be refferred to hys wil" (1561: F6), the mainstream Church of England clergy emphasized the abundant Scriptural evidence regarding the divine sanction of medical practices and recalled Calvin's numerous and unambiguous references to it.[10] An obligatory element of their plague writings (as of those, it should be noted, by medical and lay authors) is a reminder of the reiteration throughout the Bible of God's blessing on healing plants and remedies used by physicians who thus function as instruments of divine mercy. All authors quoted from Ecclesiasticus (Book of Sirach) 38 which opens with the exhortation "Honour the physician for the need thou hast of him: for the most High hath created him" then specifies that "all healing is from God. […] The most High hath created medicines out of the earth, and a wise man will not abhor them". Vehement attacks on preachers holding the opposite view are penned by influential churchmen like John Sanford who admonishes that those who trust only in "God's protection" and "neglect the good meanes of [their] preseruation" become "homicides and willfull murtherers" of themselves (1604: 50). The inclusion and prominence of such warnings in the various editions of official prayers for universal reading and repetition endow them with the quality of expressions of the official stand of the national Church. The tone of these pronouncements is often harsh and lapidary as in a reference to the attitude of those who refuse medicaments and stay in infected places trusting that their faith will save them: "this is not faith in God, but a grosse, ignorant, and foole-hardy presumption" (Church of England 1603: D1^{v}).

While, as Slack notes (1985: 230), Nowell's homily in the first edition of the official plague prayers urged godly submission to God's will and endorsed ─ at least partly ─ providential interpretations of and attitudes to plague, the "Exhortation" in the third edition of 1603 stressed the role of contagion requiring containment measures and offered a particularly forceful statement of ecclesiastical energetic back-

10 On Calvin's and more generally the Anglican Church's endorsement of medical practices see Harley (1993).

ing of governmental policies and stern censure of criticism of the same. A general reference to the efficacy and legitimacy of compliance with health regulations, "the good use of ordinarie meanes, and the wary and carefull carriage of our selues out of the danger of contagion" is followed by exposure of the ungodliness of opposite approaches: "the desperate securitie of those, that seeme neither to feare, nor to flie from this infection, is but a tempting and prouoking of the iudgement of God". Their behaviour makes them guilty of "willfull murder both of themselues, their children, their families, and neighbours, which hatefull crueltie against their owne kind, Turkes and infidels would abhorre." The good Christian instead complies with "those good and wholesome orders, and decrees already published for preuenting the further infection of this calamities" and uses "all good meanes, and medicinable helpe made knowne unto us for our better preseruation" (Church of England 1603: D2, D2^{v}).

5. Concluding remarks

The synergic effort of the national Church and the English government in containment of plague seems to mark a turning point in the shaping of a mentality that prepared breeding ground for a new attention to human nature in its relation to the physical world. Plague epidemics in sixteenth- and seventeenth-century England sparked off a conflict of opposed ideological views regarding the efficacy and legitimacy of human initiative on the occasion of medical emergencies. Faced with a universal, collective catastrophe of apocalyptic proportion, the vigorous endorsement of health regulations by the mainstream Anglican authorities and their inclusion of instruction for the preparation of plague medicaments in official prayers had a great impact on containment of the disease. It also produced a less easily documentable but no less crucial effect on developments of a new scientific understanding of the human body and its environment as a subject worth study and experiment not despite theology and its view

of the pre-eminence of the spiritual or immaterial component of human nature, but in harmony with it.

References

Boeckl, Christine 2000. *Images of Plague and Pestilence: Iconography and Iconology*. Kirksville, Mo: Truman State University Press.

Boraston, William 1630. *A Necessarie and Briefe Treatise of the Contagious Disease of the Pestilence, with the Causes, Signes, and Cures of the Same*. London.

Bradwell, Stephen 1636. *Physick for the Sicknesse Commonly Called the Plague.* London.

Brooks, Thomas 1666. *A Heavenly Cordial for all those Servants of the Lord that have Had the PLAGUE (and are Recovered) or that now Have it.* London.

Calvin, Jean 1561. *Four Godlye Sermons*. London.

Church of England 1563. *A Fourme to be Used in Common Prayer Twyse a Weke, and also an Order of Publique Fast, to be Used Euery Wednesday in the Weeke, Durynge this Tyme of Mortalitie, and Other Afflictions, Wherewith the Realme at this Present is Visited*. London.

Church of England 1603. *Certaine Prayers Collected out of a Forme of Godly Meditations, Set forth by his Maiesties Authoritie: And most Necessary to be Vsed at this Time in the Present Visitation of Gods Heauy Hand for our Manifold Sinnes*. London.

Clapham, Henoch 1603. *An Epistle Discoursing vpon the Present Pestilence*. London.

Cogan, Thomas 1584. *The Haven of Health*. London.

Dekker, Thomas 1630. *London Looke Backe, at that Year of Yeares 1625. And Looke Forward vpon this Yeare, 1630*. London.

Dekker, Thomas 1609. *Worke for Armorours: Or, The Peace Broken*. London.

Dekker, Thomas 1603. *The Wonderfull Yeare. Wherein is Shewed the Picture of London, Lying Sicke of the Plague*. London.

Gilman, Ernest B. 2009. *Plague Writing in Early Modern England*. Chicago: University of Chicago Press.

Grindal, Edmund 1563. A Forme of Meditation, very meete to be daylye used of house holders in their houses, in this dangerous and contagious time. In Nicholson, William (ed.) 1843. *The Remains of Edmund Grindal*. Parker Society. Cambridge: Cambridge University Press.

Harley, David 1993. Spiritual Physic, Providence and English Medicine, 1560-1640. In Grell, Ole P. / Cunningham, Andrew (eds) *Medicine and the Reformation*. London: Routledge, 101-116.

Healy, Margaret 2001. *Fictions of Disease in Early Modern England: Bodies, Plagues and Politics*. London: Palgrave.

Holland, Henry 1603. *Spirituall Preservatives against the Pestilence*. London.

Hooper, John 1553. *An Homelye to be read in the tyme of the Pestilence and a moste Presente Remedye for the Same*. Worcester.

I. W. 1603. *A Briefe Treatise of the Plague*. London.

Kellwaye, Simon 1593. *A Defensative against the Plague*. London.

Orders thought Meete by his Maiestie and his Priuie Councell, to be Executed throughout the Counties of this Realme, in such Townes, Villages and other Places as are, or may be hereafter Infected with the Plague, for the Stay of Further Increase of the Same. 1603. London.

Pullein, Thomas 1608. *Ieremiahs Teares*. London.

Ranger, Terence / Slack, Paul (eds) 1992. *Epidemics and Ideas: Essays on the Historical Perception of Pestilence*. Cambridge: Cambridge University Press.

Royal College of Physicians 1636. *Certain Necessary Directions, as well for the Cure of the Plague as for Preuenting the Infection; with many Easie Medicines of Small Charge, Very Profitable to His Maiesties Subiects; Set Downe by the Colledge of Physicians by the Kings Maiesties Speciall Command; with Sundry Orders Thought Meet by His Maiestie, and his Priuie Councell, to be Carefully Executed for Preuention of the Plague*. London.

Sanford, John 1604. *God's Arrowe of the Pestilence*. Oxford.

Sheils, William (ed.) 1982. *The Church and Healing*. Oxford: Blackwell.

Shrewsbury, John F.D. 1970. *A History of Bubonic Plague in the British Isles*. Cambridge: Cambridge University Press.

Slack, Paul 1985. *The Impact of Plague in Tudor and Stuart England*. London: Routledge.

Totaro, Rebecca C. N. 2005. *Suffering in Paradise: The Bubonic Plague in English Literature from More to Milton*. Pittsburgh, Pa: Duquesne University Press.

Vincent, Thomas 1667. *God's Terrible Voice in the City*. London.

Wallis, Patrick 2006. Morality and the Place of Medicine in Early Modern England. *The English Historical Review* 121/490, 1-24.

PAULA DE SANTIAGO GONZÁLEZ

Formation Patterns of Denominative Variants in Biomedicine

1. Introduction

Concepts may be designated by several lexical units. According to Hatim and Mason's model of language variation (1990: 46), two dimensions may be distinguished: language user and language use. Language user refers to the aspects related to the user that participates in a language event such as geographical, temporal, idiolectal, social aspects, etc. Language use refers to the functional use of language or register, which is notably concerned with lexis. According to Biber et al. (1998: 135) *register* is "the cover term for varieties defined by their situational characteristics".

This study focuses on the description of variation as a result of language use. Our starting point is the general agreement on the part of several linguists (Firth 1935: 67; Gregory/Caroll 1978: 64; Halliday 1978:77; Biber/Finegan 1994: 33) regarding the importance of the co-relational nature of the situational characteristics (field, tenor and mode) and the linguistic expressions, so that recurrent situational characteristics may determine the selection of linguistic expressions and the latter may correspondingly shape the situation. This use-related framework for the description of language variation aims to uncover the general principles that lead to variation in situation types, so that it is possible to identify "what situational factors determine what linguistic features" (Halliday 1978: 32).

In the 1980's and, above all, in the 1990's, many scholars supporting descriptive theories of terminology adapted these ideas to specialized languages as opposed to the ideas of the

prescriptive school of terminology, which were based on a fixed concept-designation relation:

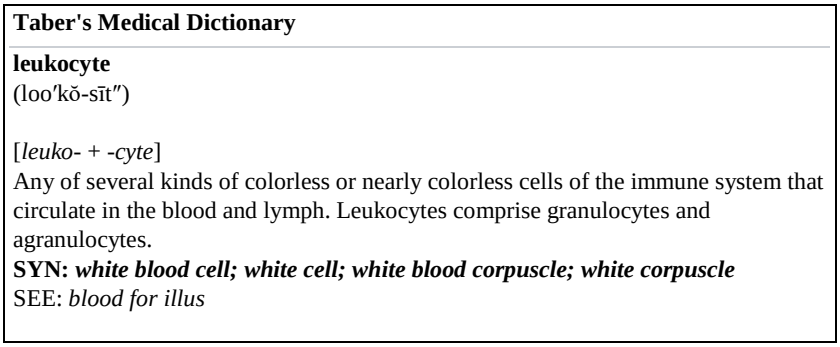
> The recognition that terms occur in various linguistic contexts and that they have variants which are frequently context-conditioned shatters the idealized view that there can or should be only one designation for a concept and vice versa […] one concept can have as many linguistic representations as there are distinct communicative situations which require different forms. (Sager 1990: 58)

Guespin (1990) and Gaudin (1990) paid special attention to the link between sociolinguistics and terminology, whose combination resulted in Socioterminology. This theory takes into account the social dimension of terms and their variation in context. This school of thought supports synonymy within the description of terms as a result of the different levels of knowledge. According to Gaudin (1990: 631) popularization provokes a blurred frontier between general and specialized language.

Popularization has been defined in detail later on by Calsamiglia and Van Dijk (2004: 370) as "a vast class of various types of communicative events or genres that involve the transformation of specialized knowledge into 'everyday' or 'lay' knowledge […]". According to these authors, the lay versions of specialized knowledge can be achieved through different strategies, such as explanations, definitions or denominative variants.

The present work is based on the study of denominative variants (Faulstich 1998/1999, 2002; Freixa 2003; Suárez 2004; Daille 2005; Bowker/Hawkins 2006) in the biomedical field in two different communicative settings: expert to expert, and expert/semi-expert to non-expert. The first aim, then, is to identify denominative variants in each register, the former representing scientific communication between experts in the field and the latter representing popular science communication written by experts or scientific journalists and addressed to educated people or patients. According to Sager (1997: 25), the formation and selection of alternative denominations for each concept is a conscious activity because the main purpose of terms is to facilitate specialized communication and knowledge transfer; there-

fore we expect different denominations in each register as their use should depend on the degree of knowledge of the users in the communicative setting. The second aim of this study is to identify semantico-syntactic patterns for each register in order to help experts and semi-experts of a specialized field decide what term is more appropriate in each situation. Although it has been appreciated that linguistic variance or synonymy has been included in some recent medical dictionaries (e.g. Taber 2013, cf. Figure 1), there is no guidance on where and why one should use these variants (Bowker/ Hawkins 2006: 80).



Taber's Medical Dictionary

leukocyte
(loo′kŏ-sīt″)

[*leuko-* + *-cyte*]
Any of several kinds of colorless or nearly colorless cells of the immune system that circulate in the blood and lymph. Leukocytes comprise granulocytes and agranulocytes.
SYN: *white blood cell; white cell; white blood corpuscle; white corpuscle*
SEE: *blood for illus*

Figure 1. Screenshot extracted from the online Taber's Medical Dictionary.

From our point of view, pragmatic information on variants is essential to enhance writers and translators' sociolinguistic competence. Bowker (2010: 157) supports this idea by emphasizing that terms can only be employed within the specialized discourse they are embedded in and, thus, cannot be examined out of it.

2. Methodology

For the detection and the analysis of variants, we will count on a 1,010,999 tokens English monolingual corpus made up of two sub-

corpora of similar size. Different genres have been used to represent different registers in each subcorpus: subcorpus 1 (S1) is made up of research articles whose writers and recipients have the greatest level of knowledge of the field; subcorpus 2 (S2) is composed of popular science articles, whose recipients' level of knowledge is usually low (e.g. educated people, patients, etc.).

English monolingual corpus		
Subcorpora	**Subcorpus 1**	**Subcorpus 2**
Communicative situation types	Expert to expert communication	Expert/semi-expert to non-expert communication
Genres	100 Research articles	481 popular science articles
Sources	Journals: *Nature, Cell, Cancer Cell, Developmental Cell, The New England Journal of Medicine, International Journal of Cardiology, Circulation, Circulation Research, Journal of American College of Cardiology, Neurology*	Popular science magazines: *New Scientist, Scientific American, Popular Science, Discover, American Scientist, Science News, The Scientist, Science Now, Nature News, Science Daily, Access Science, Neurology Now, Learn genetics.* Science section of newspapers: *The Saturday Evening Post, American Spectator, Time, Newsweek, USA Today magazine, The Globe and the Mail, New York Times, Chicago Tribune, CNN, ABC news, Harvard Magazine.* National institutions: *National Institutes of Health, American Heart Association, National Academies, National Cancer Institute*
Size	505.010 tokens	505.989 tokens

Table 1. Corpus design criteria.

In order to search for variants in different registers it is necessary to select the most standardized terms. For this purpose, a first selection of candidates has gone through three filters: grammatical category, frequency and lexicon. Candidate terms have been selected according

to nominal category, frequency (20 occurrences), distribution (5 texts) and topic relevance (stem cell types) in subcorpus 1, where expert to expert communication takes place. We have focused on nouns because it is the most frequent grammatical category in specialized languages:

> Nominal groups are the most appropriate vehicles of condensed linguistic expression for scientists and technologists who are trained to perceive and consequently to speak about the physical world in terms of concepts, processes and quantifiable units. (Sager et al. 1980: 219)

The minimum frequency and distribution were set according to the results found in the corpus. We noticed that 15% of the words in the corpus exceeded the frequency limit and that, below it, other non-relevant words started to appear more and more frequently. Besides, we considered it important that candidate terms were used in several texts written by different authors.

The reason for focusing on the semantic set of stem cell types is due to the advances in the field and the need for disseminating new discoveries to all type of recipients. We have noticed that many classificatory denominations in the field are reduced, extended or substituted for meeting the different writers' intentions, which are linked to the recipient's degree of knowledge.

Using these criteria, the wordlist function from the lexical analysis software WordSmith Tools 6.0 (WST 6.0, Scott 2008) has been used to select candidate terms. It can be pointed out that in the very beginning, stem cell types were searched by checking *cell* or *stem cell* in concordances provided by means of the WST 6.0 function Concord, but then we realized that this search was not enough as many cells have monolexematic denomination as Greek and Latin roots have been used in their formation (e.g. *cardiomyocyte, hepatocyte* etc.).

Secondly, the resulting candidate terms from S1 were checked against specialized glossaries. Terms were identified by their inclusion in at least one specialized glossary published by specialized associations, universities or well-known journals; for example, we can cite the glossaries elaborated by the International Society for Stem Cell Research (ISSSCR), Harvard Stem Cell Institute (HSCI), Natio-

nal Institute of Health (NIH), George Town University (GTU), and Nature (N). These terms are considered by the medical community the most standardized units for concepts referring to cell types. These terms are the bases for identifying variants, which may be more or less terminologized upon use in each register.

Thirdly, variants have been identified in concordances through reformulative discourse markers placed around terms. The resulting variants from the reformulation of terms have been called *explicit variants* in previous studies (Freixa 2001, 2003; Suárez 2004). Reformulation allows setting semantic equivalence, in different degrees, between terms and variants (Cruse 1986; Bach et al. 2003; De Santiago 2013).

In order to find explicit variants, concordance lines of terms have been observed through the Concord function of WST 6.0.

Figure 2. Screenshot of Concord function (WST 6.0): concordance lines.

Some examples might be helpful for understanding the method to identify explicit variants. Concordance lines using *hematopoietic stem cell** as the *key word* in context has provided interesting results:

(1) Blood stem cells, known as hematopoietic stem cells, reside primarily in marrow, spongy interior of bones. (National Cancer Institute)

(2) The stem cells that form blood and immune cells are known as hematopoietic stem cells (**HSCs**). (National Institute of Health)

(3) With more than 50 years of experience studying **blood-forming stem cells** called hematopoietic stem cells, scientists have developed sufficient understanding to actually use them as a therapy. (National Institute of Health)

According to the examples of use of *hematopoietic stem cell*, it is possible to observe three variants (e.g. *blood stem cell, HSC, blood forming stem cell)* linked to the term through different reformulative discourse markers of metalinguistic (e.g. *known as, called*) and typographic (e.g. parenthesis) type.

Finally, from the observation of variants, semantico-syntactic patterns and their reasons for using them will be defined. This final aim is probably the most important in terms of application; however, from our point of view, this cannot be achieved without the previously cited steps. According to Bowker and Hawkins (2006: 87) many available resources on medical terminology do include variants; although relevant, this information can sometimes be misleading for users because they should be provided with the different circumstances in which those variants should or could be used and why. The choice of variants is not arbitrary; it results from situational characteristics to fulfill a specific purpose. Temmerman (2000: 151) also highlights the problematic use of synonyms as they are not always interchangeable in all contexts. The selection of the appropriate lexis in each context is essential as it is one of the conventions that facilitate the construction of textual models: textual genres.

3. Results

35 candidate terms with a frequency between 2,185 occurrences (e.g. *stem cell*) and 20 occurrences (e.g. *epithelial cell*) were selected from S1:

CANDIDATE TERMS	FREQUENCY
1 stem cell	2,185
2 cardiomyocyte	697
3 T cell	339
4 hematopoietic stem cell	231
6 satellite cell	222
….	…
33 neutrophil	31
34 inner cell mass	22
35 cardiac stem cell	22
37 epithelial cell	20

Table 2. Candidate terms in S1.

Then, terms were obtained by checking the presence of candidate terms in at least one renowned specialized glossary. The following table includes the 21 actual terms:

TERMS (S1)	ISSCR	HSCI	NIH	GTU	N
1. stem cell		√	√	√	√
2. cardiomyocyte	√			√	
3. T cell				√	
4. hematopoietic stem cell	√	√		√	
5. mesenchymal stem cell	√		√	√	
6. fibroblast	√			√	
7. endothelial cell				√	
8. embryonic stem cell	√	√	√	√	√
9. cancer stem cell		√			√
10. iPS cell		√			
11. neuron	√				
12. germ cell			√	√	
13. somatic cell	√	√	√		
14. osteoblast	√				
15. hepatocyte	√			√	
16. astrocyte			√	√	
17. neural stem cell	√		√		
18. lymphocyte				√	
19. natural killer cell				√	
20. adipocyte	√				
21. inner cell mass		√	√	√	

Table 3. Checking terms selected from S1 across specialized glossaries.

With the help of different subcorpora, it has been possible to find variants for terms in different registers. Using each term as the search pattern has made it possible to retrieve all occurrences and its immediate context. Each context provided by concordance lines has been the source for identifying explicit variants, that is variants linked to terms by means of reformulative discourse markers (cf. Table 4). As opposed to Daille (2005: 183) who considers that term variants are noun phrases composed of a head noun and a nominal or adjectival modifier, in this study all nominal syntagmatic units, including acronyms, have been taken into account.

TERMS	EXPLICIT VARIANTS (S1)	EXPLICIT VARIANTS (S2)
1. stem cell		mother cell, body's master cells, nature's master cell, unspecialized cell, therapeutic cell, veritable fountain of youth, dividing cell, primitive cell
2. cardiomyocyte		heart muscle cell, heart cell, heart repairing cell
3. T cell		thymus-derived lymphocytes
4. hematopoietic stem cell	HSC	blood stem cell, blood cell, HSC, blood-forming cell; basic building blocks of blood, blood-forming stem cells in bone marrow, blood-making cell, blood-producing stem cell
5. mesenchymal stem cell	MSC, bone-marrow stromal stem cell, bone marrow stromal cell, skeletal stem cell, bone marrow-derived stromal cell	MSC, bone marrow cell, precursor of bone, muscle and many other tissue types, bone marrow stromal cell
6. fibroblast		skin cell, loose arrangement of cells, connective tissue cell
7. endothelial cell	EC	blood vessel cell
8. embryonic stem cell	ESC, ES cell	ES cell, ESC, building blocks of life, undifferentiated precursor for other cell types
9.iPS cell		induced pluripotent stem cell
10. neuron		nerve cell
11. germ cell	pole cell	reproductive cell

12. somatic cell		adult cell, adult stem cell, non-reproductive cell, adult tissue cell
13. osteoblast		bone-forming cell, bone stem cell
14. hepatocyte		liver cell
15. neural stem cell	NSC	
16. lymphocyte		white blood cell
17. natural killer cell	NK cell	
18. adipocyte		fat cell, fat stem cell, adipose derived stem cell, adipose fat stem cell, adipose fat cell, adipose derived regenerative cell, fat-derived stem cell
19. inner cell mass	ICM	ICM, cluster of cells on the interior (of the blastocyst)

Table 4. Explicit variants in S1 and in S2.

19 terms out of 21 have explicit variants in S1 and/or in S2. A different number and type of explicit variants have been found in S1 and in S2. While 8 terms (40%) in S1 have explicit variants, 17 terms (85%) in S2 have them. Furthermore, as can be observed in Table 5, each term has a different number of variants: terms in S1 have from 1 to 5 variants while terms in S2 have from 1 to 8 variants. These data evidence that a greater number of terms in S2 have explicit variants and that a greater number of variants in S2 are assigned to a term.

	CASES IN S1	% IN S1	CASES IN S2	% IN S2
1 variant	6 cases	30%	7 cases	35%
2 variants	1 case	5%	2 cases	10%
3 variants	0	0	2 cases	10%
4 variants	0	0	3 cases	15%
5 variants	1 case	5%	0	
6 variants	0	0	0	0
7 variants	0	0	2 cases	10%
8 variants	0	0	1 case	5%

Table 5. Number of explicit variants in S1 and in S2.

The total amount of variants in S2 is 52 while in S1 it is only 13. Their analyses have offered interesting results. Syntactically, the majority of

variants in S2 have been formed by composition (90%) and only a few by truncation[1] (10%). For example, the term *embryonic stem cell* has produced both syntactic variant types: *building blocks of life* and *ESC*. On the contrary, the majority of variants in S1 are truncated (70%) and the rest are compounds (30%). It should be highlighted that all the compound variants – *bone-marrow stromal stem cell, bone marrow stromal cell, skeletal stem cell, bone marrow-derived stromal cell* – in S1 are assigned to the same term *mesenchymal stem cell*.

The truncated forms in both subcorpora correspond to fully reduced forms (e.g. *embryonic stem cell* > *ESC*) and partially reduced forms of key terms (e.g. *embryonic stem cell* > *ES cell*). The main difference between the truncated forms in S1 and in S2 is that most truncated forms in S2 belong to most known types of cells as they are hyperonyms of many other specific types (e.g. *hematopoietic stem cell* > *HSC*; *mesenchymal stem cell* > *MSC*) and truncated forms in S1 also correspond to specific types of cells (e.g. *natural killer cell* > *NK cell*).

Semantically, truncated forms do not imply change in meaning as they are simply reducing the corresponding complete form; however. many compounds do change or add meaning as new words are being used to refer to the same notion. All the compounds from the resulting data have been further subclassified according to the process terms have gone through to result in alternative denominations. The greatest number of compounds has been found in S2 (47), and therefore they have been described in the first place:

- 18 variants out of 52 (34%) reproduce compounds built from Greek or Latin roots in the English language (e.g. *cardiomyocyte* > *heart muscle cell*). They do not lead to semantic differences but they are a sign of a change in register. These English counterparts appear sometimes in reduced forms (e.g. *cardiomyocyte* > *heart muscle cell* > *heart cell*).
- 23 variants (44%) are paraphrases (e.g. *inner cell mass* > cluster of cell on the interior of the blastocyst; *cardiomyocyte* > *heart repairing cell*). These variants are restatements of words that clarify or simplify the underlying concept. Different words are

1 In this study, truncation is understood as a formal means by which a lexematic unit is reduced to an acronym or an abbreviated form.

introduced so that concepts are easier to be retained by the reader. Paraphrastic variants imply a slight change in meaning as some semantic aspect of the key term is highlighted.

- 6 variants (12%) are figurative expressions. These variants present creative ways to describe different cell types. Metaphors (e.g. *stem cell > veritable fountain of youth*), hyperboles (e.g. *stem cell > nature's master cell*) and similes (e.g. *embryonic stem cell > building blocks of life*) have been found. These expressions facilitate the understanding of concepts while readers move into familiar grounds. Although there is still semantic equivalence between the key term and the variant, differences in meaning are the most notable.

In S1, only four compounds were identified as variants of one term out of the selected 19; all of them are paraphrastic variants (e.g. *mesenchymal stem cell > bone marrow-derived stromal cells*).

4. Discussion

In agreement with already cited authors such as Gaudin (1990), Sager (1990), Bowker and Hawkins (2006), neither terms nor their variants are context free. The amount of variants and the type of variants used in each register show that biomedical language is determined by situational factors. Specifically, variants in these registers are triggered by the intention of the writers and the level of knowledge of the recipients in each situation type. In return, the use of variants is a contribution to the building of specific textual genres. Variants are much more frequent in media discourse than in expert-expert communication. Based on the results extracted from our corpus it seems to be possible to infer regular patterns of variation and the specific motivations behind term choice.

The number of variants in S2 (52) is six times greater than the one in S1 (8). Scientific popularization implies a reformulation process in which most Greco-Latin terms have at least an alternative

expression. Terms composed of Greek or Latin roots are difficult to be understood by lay people and therefore are replaced by more comprehensive lexical units. In this sense, Gotti (2014: 19) states that popularization "does not alter the disciplinary content […] as much as its language, which needs to be remodeled to suit a new target audience". The aim of experts and semi-experts writing for a lay audience is that recipients can continue reading without finding conceptual barriers and that they overall understand the message. In order to achieve their aim, they use above all paraphrases; secondly they use English counterparts which sometimes strictly follow the order of Greco-Latin roots of terms, and others are reduced forms. With certain frequency they also use figurative expressions to provide readers with images and analogies that facilitate the understanding of notions. Finally they use a few acronyms for the most frequent and broadly known terms as they are hyperonyms.

The most common type of variant in S1 consists of acronyms. The reason for their use lies in the characteristic linguistic economy of expert to expert communication. They are effective if users are familiarized with them. In this regard Sager et al. (1980: 16) state:

> In special communication economy can be maximally achieved because of the prior agreement in a relatively small group, the confined subject areas involved and the frequency of occurrence of certain messages and lexical items.

5. Conclusion

Terminology is used at all levels of specialized communication. The difference is on the means that convey specialized knowledge. The description of variants in this study shows hints of the appropriateness of variants in certain settings characterized by different users and a particular purpose. The methodology carried out in this study can be applied to other specialized languages and the resulting variants can contribute to the improvement of terminology-oriented applications:

specialized dictionaries, computer-assisted translations, etc. From our point of view, variants and information on them, such as the context where they tend to appear, the semantico-syntactic patterns, etc. have a reasoned position in future resources for helping language professionals or other users that need to take advantage of the dynamism of a specialized language such as the biomedical one.

References

Bach, Carme / Freixa, Judit / Suárez, Mercedes 2003. Equivalencia conceptual y reformulación parafrástica en terminología. In Correia, Margarita (ed) *Terminología e industria da língua*. Lisboa: ILTEC, 173-184.

Biber, Douglas / Conrad, Susan / Reppen, Randi 1998. *Corpus Linguistics: Investigating Language Structure and Use*. Cambridge: Cambridge University Press.

Biber, Douglas / Finegan, Edward 1994. *Sociolinguistic Perspectives on Register*. Oxford: Oxford University Press.

Bowker, Lynne 2010. The Contribution of Corpus Linguistics to the Development of Specialized Dictionaries for Learners. In Fuertes, Pedro (ed.) *Specialized Dictionaries for Learners.* Tübingen: Max Niemeyer, 155-168.

Bowker, Lynne / Hawkins, Shane 2006. Variation in the Organization of Medical Terms: Exploring some Motivations for Term Choice. *Terminology* 12/2, 79-110.

Calsamiglia, Helena / Van Dijk, Teun 2004. Popularization Discourse and Knowledge about the Genome. *Discourse and Society* 15/4, 369-389.

Cruse, Alan 1986. *Lexical Semantics*. Cambridge: Cambridge University Press.

Daille, Béatrice 2005. Variations and Application-oriented Terminology Engineering. *Terminology* 11/1, 181-197.

De Santiago, Paula 2013. *Estudio intra e intralingüístico de la variación denominativa en el lenguaje de la biomedicina: las células madre*. Valladolid: Universidad de Valladolid.

Faulstich, Enilde 1998/1999. Principes formels et fonctionnels de la variation en terminologie. *Terminology* 5/1, 93-106.

Faulstich, Enilde 2002. Variação em terminología. Aspectos de socioterminología. In Guerrero, Gloria / Pérez, Manuel (eds) *Panorama actual de la terminología*. Granada: Comares, 65-91.

Firth, John 1935. The Technique of Semantics. *Transactions of the Philological Society*, 36-72.

Freixa, Judit 2001. Reconocimiento de unidades denominativas: incidencia de la variación en el reconocimiento de las unidades terminológicas. In Cabré, María Teresa / Feliu, Judit (eds) *La terminología científico-técnica: reconocimiento, análisis y extracción de información formal y semántica.* Barcelona: Universitat Pompeu Fabra. 57-65.

Freixa, Judit 2003. *La variació terminològica: anàlisi de la variació denominativa en textos de diferent grau d'especialització de l'àrea de medi ambient*. Barcelona: Universitat Pompeu Fabra.

Gaudin, François 1990. Socioterminology and Expert Discourses. In Czap, Hans / Nedobity, Wolfgang (eds) *TKE'90: Terminology and Knowledge Engineering*. Frankfurt: Indeks, 631-641.

Gotti, Maurizio 2014. Reformulation and Recontextualization in Popularization discourse. *Iberica* 27, 15-34.

Gregory, Michael / Carroll, Susanne 1978. *Language and Situation: Language Varieties and their Social Contexts.* London: Routledge & Kegan Paul.

Guespin, Louis 1990. Socioterminology Facing Problems in Standardization. In Czap, Hans / Nedobity, Wolfgang (eds) *TKE'90: Terminology and Knowledge Engineering*. Frankfurt: Indeks, 642-648.

Halliday, Michael 1978. *Language as a Social Semiotic. The Social Interpretation of Language and Meaning.* London: Arnold.

Hatim, Basil / Mason, Ian 1990. *Discourse and the Translator*. London: Longman.

Sager, Juan 1990. *A Practical Course in Terminology Processing*. Amsterdam: John Benjamins.

Sager, Juan 1997. Text Types and Translation. In Trosborg, Anna (ed.) *Text Typology and Translation*. Amsterdam: John Benjamins, 30-45.

Sager, Juan / Dungworth, David / McDonald, Peter 1980. *English Special Languages: Principles and Practice in Science and Technology*. Wiesbaden: Brandstetter.

Scott, Mike 2008. Developing WordSmith. *International Journal of English Studies* 8/1,153-172.

Suárez, Mercedes 2004. *Análisis contrastivo de la variación denominativa en textos especializados: del texto original al texto meta.* Available at : <http://www.tesisenred.net/TESIS_UPF/AVAILABLE/TDX-0217105-130025//tmst1de1.pdf> Accessed 15 February 2014.

Taber, *Cyclopedic Medical Dictionary*, 2013 online edition. Philadelphia: F.A. Davis Company. Available at: <http://www.tabers.-com/tabersonline/>. Accessed 24 March 2014.

Temmerman, Rita 2000. *Towards New Ways of Terminology Description: the Sociocognitive Approach*. Amsterdam: John Benjamins.

Appendix 1: Description of explicit variants in S1

EXPLICIT VARIANTS (S1)	Formal pattern	Semantic pattern
1. HSC	Truncation	
2. MSC	Truncation	
3. bone-marrow stromal stem cells	Composition	Paraphrasis
4. bone marrow stromal cell	Composition	Paraphrasis
5. skeletal stem cells	Composition	Paraphrasis
6. bone marrow-derived stromal cells	Composition	Paraphrasis
7. EC	Truncation	
8. ESC	Truncation	
9. ES cell	Truncation	
10. pole cells	Composition	
11. NSC	Truncation	
12. NK cell	Truncation	
13. ICM	Truncation	

Appendix 2: Description of explicit variants in S2

EXPLICIT VARIANTS (S2)	Formal pattern	Semantic pattern
1. mother cell	Composition	Paraphrasis
2. body's master cells	Composition	Figurative expression
3. nature's master cell	Composition	Figurative expression
4. unspecialized cell	Composition	Paraphrasis
5. therapeutic cell	Composition	Paraphrasis
6. veritable fountain of youth	Composition	Figurative expression
7. dividing cell	Composition	Paraphasis
8. primitive cell	Composition	Paraphrasis
9. heart cell	Composition	English reduced counterpart
10. heart muscle cell	Composition	English counterpart
11. heart repairing cell	Composition	Paraphrasis
12. thymus-derived lymphocytes	Composition	English counterpart
13. blood stem cell	Composition	English counterpart
14. blood cell	Composition	English reduced counterpart
15. HSC	Truncation	
16. blood-forming cell	Composition	Paraphrasis

17. basic building blocks of blood	Composition	Figurative expression
18. blood-forming stem cells in bone marrow	Composition	Paraphrasis
19. blood-making cell	Composition	Paraphrasis
20. blood- producing stem cell	Composition	Paraphrasis
21. MSC	Truncation	
22. bone marrow cell	Composition	English counterpart
23. precursor of bone muscle and many other tissue types	Composition	Paraphrasis
24. bone marrow stromal cell	Composition	Paraphrasis
25. skin cell	Composition	English counterpart
26. loose arrangement of cells	Composition	Figurative expression
27. connective tissue cell	Composition	English counterpart
28. blood vessel cell	Composition	English counterpart
29. ES cell	Truncation	
30. ESC	Truncation	
31. undifferentiated precursor for other cell types	Composition	Paraphrasis
32. building blocks of life	Composition	Figurative expression
33. induced pluripotent stem cell	Composition	English counterpart
34. nerve cell	Composition	English counterpart
35. reproductive cell	Composition	Paraphrasis
36. adult cell	Composition	English reduced counterpart
37. adult stem cell	Composition	English counterpart
38. non-reproductive cell	Composition	Paraphrasis
39. adult tissue cell	Composition	Paraphrasis
40. bone-forming cell,	Composition	Paraphrasis
41. bone stem cell	Composition	English counterpart
42. liver cell	Composition	English counterpart
43. white blood cell	Composition	English counterpart
44. fat cell	Composition	English reduced counterpart
45. fat stem cell	Composition	English counterpart
46. adipose derived stem cell	Composition	Paraphrasis
47. adipose fat stem cell	Composition	Paraphrasis
48. adipose fat cell	Composition	Paraphrasis
49. adipose derived regenerative cell	Composition	Paraphrasis
50. fat-derived stem cell	Composition	Paraphrasis
51. ICM	Truncation	
52. cluster of cells on the interior (of the blastocyst)	Composition	Paraphrasis

SILVIA CAVALIERI

Popularizing Medical Discourse: The Role of Captions

1. Introduction

In the last decades, several studies have been concerned with the analysis of the discourse of popularization (see for example Shinn/ Whitley 1985; Gregory/Miller 1998; Myers 1997, 2003; Ciapuscio 2003; Calsamiglia/Van Dijk 2004). Many scholars have been interested in the language adopted by journalists and media professionals when dealing with scientific research articles and have focused in particular on the linguistic features of popularizing texts. This line of research has often analysed journalists' products in comparison with the original research articles in scientific journals, pointing out several differences at various levels, such as textual, syntactic and rhetorical levels (Myers 1990, 1991, 1994; Calsamiglia 2003). Furthermore, particular interest has been placed on those linguistic strategies enacted in order to enhance lay readers' comprehension such as the use of metaphors (Gülich 2003) and other expressive functions (e.g. definition, denomination, description, exemplification, generalization, paraphrase or reformulation; cf. Calsamiglia/Van Dijk 2004; Garzone 2006).

As far as the definition of popularization is concerned, this process has often been identified as a 'social operation' aimed at communicating lay versions of scientific knowledge among the public at large (Jacobi 1999; Calsamiglia/Van Dijk 2004). The discourse of popularization is a pluricode discourse in which text, images, stylesheets and colours semantically interact (Lemke 1998; Miller 1998) through a multimodal approach (Gotti 2013). As Bontems (2013: 103) argues, images are fundamental to the construction of scientific knowledge for a lay audience since they influence the reader's sensitivity, thus

enhancing comprehension. The journalist is the mediator between science and its popularization and he/she chooses the right images and, in the case of complex technical ones, he/she adapts them to the supposed background knowledge of their public (Jacobi 1999; Bontems 2013).

Even though in the last years many studies have claimed the importance of images in the field of science popularization (see among others Jacobi 1999; Bontems 2013; Dondero 2013; Lathene-Da Cunha 2013), little attention has been paid to the role of captions in the process of conveying specialist knowledge for a wider audience of non-specialists (Myers 1997). In order to fill this gap in the literature, the present work aims at providing an introductory description of captions in the discourse of medicine through the media, focusing in particular on three comparable corpora of news collected from the medicine sections of French, English and Italian online magazines of science popularization. To be more specific, the study deals with the popularizing strategies used in the captions and their relation with the news and the image they refer to. Moreover, the use of captions is compared in the three languages to highlight similarities or differences in their use in order to see what strategies are typical of popularization discourse in different cultures

As for the organization of the chapter, the first part will focus on the materials and methods used for the analysis, the second will deal with the findings deriving from an in-depth observation of corpus data and, in the final section, results will be discussed and conclusions will be drawn in the light of the previous analysis.

2. Materials and Methods

The present study has focused on scientific popularization discourse (Calsamiglia/Van Dijk 2004; Desmet 2005) aimed at transferring general medical information to a target public of educated laymen interested in the latest science news. The articles chosen are texts adapted

to the editorial board policies by journalists, in which the presence of graphs, images and illustrations is pervasive. More specifically, the analysis was carried out on three comparable corpora of science news articles collected from the medicine sections of six online magazines of science popularization, namely *Futura-Sciences* and *Science et avenir* for the French corpus, *Le Scienze* and *Focus* for the Italian corpus, and *Scientific American* and *Science Daily* for the English corpus. To have a representative sample for the analysis, the three corpora were gathered in a time span of one month, i.e. October 2013. As for the number of articles published, data show a sharp difference among the various online magazines and, in particular, between the Italian ones and the others. In fact, both *Le Scienze* and *Focus* publish less than one third of the articles printed in English and French magazines. Moreover, it is worth noting a difference in the number of images used: English magazines tend to use one image per article while in French and Italian magazines we find an average of two images. Table 1 gives an overview of these first quantitative differences:

	Scientific American	*Science Daily*	*Futura-Science*	*Science et avenir*	*Le Scienze*	*Focus*	TOTAL
No. of texts	29	143	81	49	21	5	**328**
No. of images	29	143	173	70	26	7	**448**
No. of captions	17	143	173	62	21	4	**420**
Average no. of tokens (per text)	1,000	700	700	400	550	300	
Average no. of images (per text)	1	1	2.13	1.41	1.2	1.4	

Table 1. The corpus.

The images found in the corpus are mainly of two types:

1) direct representations of the object described in the article, in which the similarity between the *representamen* and the object relies on simple qualities or properties (Lathene-Da Cunha 2013);

2) diagrams and graphs, i.e. images in which the similarity between the *representamen* and the object is based on an analogy of their contents, which becomes accessible only through an interpretation of the relationship among the terms implied (Lathene-Da Cunha 2013).

The methodology adopted for this study proposes an integration of corpus and discourse perspectives. According to Myers (1997: 98) in scientific popularization articles "the text directs us to the picture, which leads us back to the caption, which leads to the picture, which leads back to the text". So, first of all, we decided to consider the relationship between the captions, the image and the article and we identified what part of the article the caption anchors to. Secondly, we tried to make a functional classification of all the captions in our corpus adapting Myers' typology to suit the needs of our data. By analysing the linguistic elements in the captions, we distinguished six main categories of captions in our corpus:

1) *descriptive captions*, i.e. captions describing the picture in its simple qualities or properties;
2) *summarizing captions*, i.e. captions summing up the content of the article;
3) *summarizing + descriptive captions*, i.e. captions both involved in giving a brief summary of what is written in the news, as well as in describing the images they refer to;
4) *captions using a paragraph*, i.e. captions directly taking one or more sentences from the article;
5) *captions using a title*, i.e. captions adopting the same title of the news in which we find it;
6) *captions using quotations*, i.e. captions in which we find a citation reported in the article.

Thirdly, we analysed the most frequent popularizing strategies employed in the captions in order to enhance readers' comprehension of the scientific knowledge reported following the framework proposed by Garzone (2006). Finally, a contrastive analysis of the use of captions in the three languages selected is provided and differences and similarities are outlined and discussed.

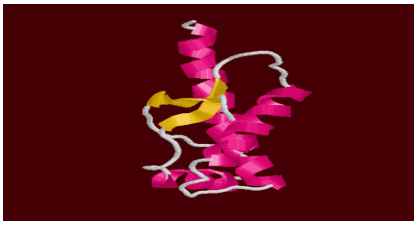
3. Results

The results section is sub-divided into three main parts. In the first section, the classification of the captions of the three corpora is presented and examples in the different languages are provided. The second section considers the issue of the popularizing strategies involved. In the third section, emphasis is laid on differences in the use of captions in the three corpora, i.e. French, Italian and English.

3.1. A classification of captions in comparable corpora of science popularization news

Considering the quantitative presence of captions in comparable corpora, a first interesting observation that can be made concerns the fact that only 28 images out of 448 do not present captions. Thus, captions are devices pervasively used in science popularization magazines. As regards the typology outlined in Section 2, data show that the most frequent category of captions found in the three corpora is the *summarizing* one (197 out of 448). Examples (1-3) provide an instance of this type of captions in the three languages.

(1)



Le prion **est une protéine** infectieuse de la maladie de Creutzfeldt-Jakol **Certains spécialistes pensent** que l'impact des prions va au-delà de cet pathologie**. Des études suggèrent** par exemple qu'ils auraient un rôle dans développement d'autres maladies neurologiques, comme Alzheimer.
(© student.biology.arizona.edu, *Futura -Sciences*)

(2)

Polyphenols are naturally occurring compounds found largely in fruits, vegetables, coffee, tea, nuts, legumes and cereals. **More than 8,000 different phenolic compounds have been identified** in plants, and have antioxidant, antiinflammatory, and anticarcinogenic effects. (© neillockhart/Fotolia, *Science Daily*)

(3)

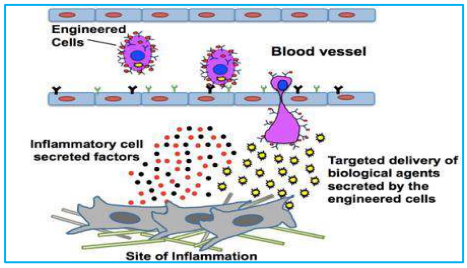
Allattamento, il latte materno venduto online negli Usa **è pericoloso** (© Lisa B./Corbis) (*Focus*)

As is possible to observe in the examples above, both images and captions give an overview of the topic reported in the news. The three captions provide a definition of the element discussed in the article (*Le prion* ***est une protéine*** *infectieuse* […]; ***Polyphenols are naturally occurring compounds*** *found largely in fruits* […]) and present a brief summary of its content (***Certains spécialistes pensent*** *que l'impact des prions va au-delà de cette pathologie.* ***Des études suggèrent*** *par exemple* […]; *More than 8,000 different* ***phenolic compounds have been***

identified […]). The Italian caption of *Focus* is the most summarized one, since it begins with a nominalization (*allattamento*) to introduce the main topic and then gives only the main gist of what the text is about (*il latte materno* […] *è pericoloso*)

The second most frequent category of captions identified in the three corpora is that of *descriptive captions* (109 out of 448). *Descriptive captions* are directly linked to the picture they refer to and they provide a description of the element depicted in the picture or of the data represented in a graph. The following extracts, taken from the three corpora, are representative examples of this type of captions in the different languages:

(4)

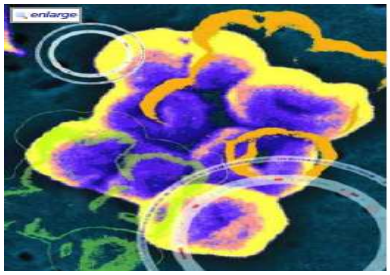


Ce schéma explique les mécanismes en jeu dans cette expérience. Les CSM génétiquement modifiées **(engineered Cells)** se fixent au niveau des récepteurs des vaisseaux sanguins, à proximité des régions en situation d'inflammation. Les CSM traversent la paroi et sécrètent l'IL-10 **(en jaune)** qui contrecarre les effets des facteurs inflammatoires sécrétés (inflammatory cell secreted factors). (© Jeffrey Karp, *Futura-Sciences*)

(5)

Miniatura tratta da un manoscritto svizzero del 1411 che **illustra** l'epidemia di peste. (© Corbis, *Le Scienze*)

(6)

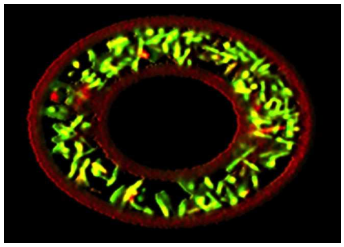


Scanning electron **microscope image** of A.baumannii, with maps of its genome **(outer circle)** and alien island sequences **(inner circle - red)**. (© J.Carr/ CDC; T.Gianoulis and D.Massa/Yale, *Science Daily*)

As we can see in the examples above, the captions signal the relation with the described picture through textual metadiscursive devices ('endophoric markers', Hyland 2005) such as *ce schema* (*Futura-Sciences*), *miniature* (*Le Scienze*), *microscope image* (*Science Daily*). Moreover, the descriptive function of the captions is also displayed by the mention of colours of the picture (e.g. *en jaune* (*Futura-Sciences*); *inner circle – red* (Science Daily) and by the use of descriptive verbs as, for instance, *illustra* in the Italian example.

Moving on to the third most preferred category of captions, what emerges from the three corpora is a hybrid type of caption merging the two previous categories, i.e. *descriptive + summarizing captions.* They are characterized by a first part that anchors the explanation to the pictorial representation by means of a description and, then, by a second part in which the content of the science popularization article is presented. Examples (7-9) show instances of this type of resources found in the three corpora:

(7)



On peut **apercevoir** des bactéries **(en vert)** emprisonnées dans une cage en **forme de donut (en rouge).** Cette expérience, loin d'être farfelue, devrait permettre de mieux comprendre comment les communautés microbiennes communiquent au sein des environnements et développent des infections. (© Jodi Connell, université du Texas à Austin, *Futura-Sciences*)

(8)

Un laboratorio con livello di biosicurezza 4. Solo centri dotati di queste strutture sono abilitati a ospitare e studiare virus altamente letali come quello di Ebola (© Christian Charisius/dpa/Corbis, *Le Scienze*)

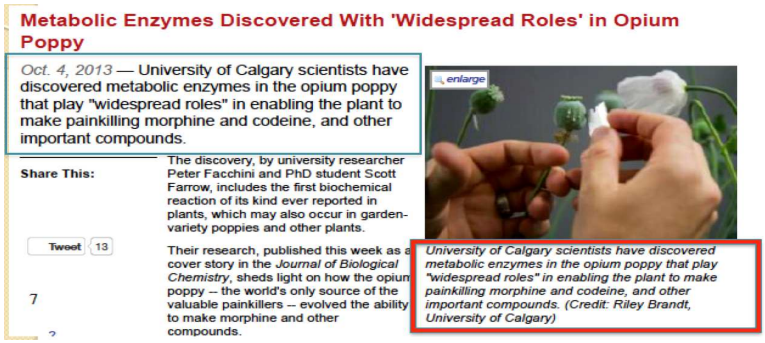
(9)

Minamata Bay at Dusk: From 1932 to 1968, Chisso Corp. dumped methylmercury into the bay, poisoning the city's food supply. (© Hideaki Nakatani/ Flickr, *Scientific American*)

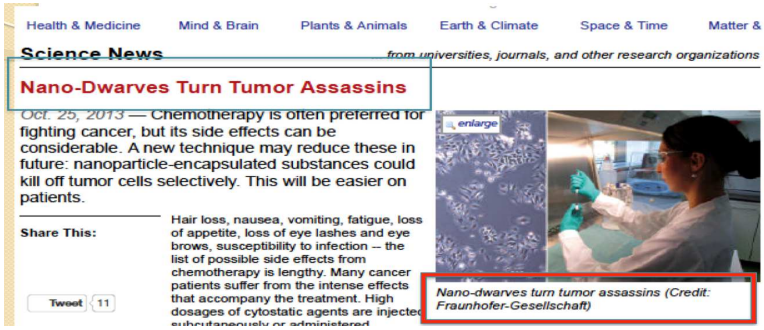
The three extracts above illustrate the regular pattern of this type of captions. First of all, we find a descriptive introduction in which the elements of the image/photograph are presented (e.g. *Minamata Bay at Dusk*; *Un laboratorio con livello di biosicurezza 4*) often by making reference to physical characteristics such as colours and forms and by using verbs of perception (e.g. *On peut* ***apercevoir*** *des bactéries* ***(en vert)*** *emprisonnées dans une cage en* ***forme de donut (en rouge)***). Secondly, an outline of the main topic is provided in the subsequent sentence (e.g. *Chisso Corp. dumped methylmercury into the bay, poisoning the city's food supply*).

Another frequent strategy employed in the realization of science popularization captions is the use of part of the original texts. In fact, in our corpora we found: 1) *captions using a paragraph* (24 out of 448), 2) *captions using the news' title* (15 out of 448), and 3) *captions using quotations from the article* (16 out of 448). The extracts in (10-12) and the subsequent figures exemplify these three categories:

(10)



(11)



(12)

> "We've struggled to improve Haiti's overall public health for decades," **he added**. "Now we arrive at a critical juncture where from the depths of a terrible epidemic there is an opportunity for Haiti to rise up to a new level of protecttion against infectious diseases," **said Jon Andrus**, MD, deputy director of the Pan American Health Organization. (© iStockphoto, *Science Daily*)

A closer observation of our data shows that, as regards *captions using paragraphs*, in 80% of cases journalists/editors employ the lead to give a title to pictures. As for *captions using quotations*, on the other hand, direct quotations (as in examples 10-12) are the most used (ten out of 16) followed by indirect ones (four out of 16).

3.2. Popularizing strategies used in captions

According to the data of our corpora, captions align with the strategies of popularization typical of popularized science text, i.e. denomination, definition, description, exemplification, generalization, analogies (comparison and metaphor), use of quotations (cf. Calsamiglia/Van Dijk 2004; Garzone 2006). However, some strategies seem to be preferred in captions, namely *generalization*, *description*, and *use of quotations*. As concerns the categories of captions identified above, it is possible to say that *summarizing captions* generally involve a process of *generalization* (44% of all captions). In fact, they usually give a general overview of the topic without going into specific details. This strategy is exemplified below:

(13) MS patients generally often have problems with fading out what is unimportant. The attention system is too highly activated and also notices – for example when watching the television or when talking to someone – completely unimportant extraneous noises. Because of this, concentrating on what is important is completely impossible or only possible to a limited extent. (*Science Daily*)

(14) Les cellules souches mésenchymateuses sont capables de se différencier en plusieurs types de cellules associés au squelette. Très peu nombreuses, elles pourraient jouer à l'avenir un grand rôle dans la fabrication et la délivrance de molécules thérapeutiques. (© Ghanson, Wikipédia, *Futura-Sciences*)

(15) L'analisi di un dente di paraconodonte ha permesso di mettere in evidenza le fasi di crescita della struttura, che si sono dimostrate diverse da quelle caratteristiche dei veri denti. (® DJE MurdockØNature, *Le Scienze*)

Regarding *description*, it is a typical strategy employed in *descriptive captions* (24.4%). As a matter of fact, by providing a description of the picture, captions also give an explanation of a specific process that is highlighted in the article it refers to. The following examples are instances of descriptions in the three languages:

(16) The Bielefeld chemist Michael Schwake and his colleagues have discovered a new protein fold. At its head (the red helices), this protein can bind enzymes

and viruses. The tunnel in the protein structure is colored yellow. (© Nature, *Science Daily*)

(17) Rappresentazione artistica del flusso sanguigno, il veicolo con cui le cellule tumorali (in bianco-azzurro) possono diffondersi nell'organismo, dando origine alle metastasi. (© Springer, *Le Scienze*)

(18) La célèbre bactérie Escherichia coli, modèle si souvent utilisé par la recherche, a fait progresser la génétique d'un cran supplémentaire en devenant le premier organisme entier génétiquement recodé. Après les OGM, voici peut-être venue l'heure des OGR. (© Mattosaurus, Wikipédia, DP, *Futura-Sciences*)

One last frequent popularizing strategy employed in captions is the use of quotations, namely in the category *captions using quotations* (10%). By means of this linguistic device, the journalist 'attributes' statements to researchers, scholars, scientist, experts, etc. (Garzone 2006: 98). Recourse to quotations in captions help contribute to emphasizing authoritativeness of the sources of the article, and at the same time, it serves as a form of hedging, limiting the journalist's responsibility since he/she simply reports something stated by someone else. This strategy is shown in the subsequent example from the English corpus:

(19) "Our research confirms past claims that coffee is good for your health, and particularly the liver," said Carlo La Vecchia, MD. (© volff/Fotolia, *Science Daily*)

3.3. Contrastive remarks on the use of captions

Our data show interesting differences per language as far as captions are concerned. Table 2 gives an overview of the quantitative disparities in the presence of captions per typology in the three corpora.

	ENGLISH CORPUS		*FRENCH CORPUS*		*ITALIAN CORPUS*		
	Scientific American	*Science Daily*	*Futura-Science*	*Science et avenir*	*Le Scienze*	*Focus*	**TOTAL**
Descriptive	\	46	22	27	12	2	**109**
Summarizing	15	31	122	25	3	11	**207**
Descriptive + Summarizing	1	31	15	\	2	1	**50**
Using Title	\	2	8	5	\	\	**15**
Using Paragraph	\	20	4	\	\	\	**24**
Using Quotations	1 *indirect*	13 *7 direct 4 indirect 2 inserted*	3	\	\	\	**17**
No captions	12	\	\	8	5	3	**28**

Table 2. Presence of captions in the corpora.

As is possible to observe in the table, French magazines tend to use more *summarizing captions* (147 instances), whereas English magazines show an equal preference for *descriptive* and *summarizing captions* (46 occurrences for both categories). Italian magazines, on the other hand, have *descriptive captions* as a preferred pattern (14 instances). Moreover, Italian magazines employ only *summarizing* and *descriptive captions* or the third category in which they are merged, i.e. *descriptive + summarizing captions.* French magazines, conversely, are almost the only ones (apart from two instances in *Science Daily*) in which it is possible to find the category *captions using title* (13 occurrences). Similarly, the classes *captions using paragraphs* and *using quotations* are nearly exclusively adopted in English science popularization magazines (20 and 13 instances respectively).

4. Conclusions

The results of our analysis show that even though there are differences between corpora which might be due to culture-based (in terms of nationality) ways of dealing with science and of using popularizing resources, there are also some striking similarities in terms of function, which seem to be distinctive of the popularization of medical-scientific discourse. In fact, captions of science popularization magazines generally have a thematic function. Indeed, the analysis suggests that they are mainly used to summarize what the article deals with (*summarizing captions).* They introduce the reader to the topic by making some generalizations or by giving some preliminary definitions. In this way, captions serve to anticipate the content of the text and they allow the potential audience to have a better understanding of the phenomena described in the articles.

A second important function of captions that our evidence indicates is the descriptive one (*descriptive captions)* since they explain the main physical characteristics of the elements depicted in the image they are linked to. *Descriptive captions* are typical of diagrams, graphs or photographs of subjects potentially unknown to a lay audience. Hence, they enhance the reader's comprehension by means of simple references to the image, explaining what cannot be drawn from an intuitive mental process.

Moreover, a third function of captions identified in our data is anchoring the image to a specific part of the article (*captions using title, paragraphs* or *quotations*). Results show that captions act as "pointers in the text that tells us what kind of statement the text is making" (Myers 1997: 98). This type of caption assists the reader in finding the most important information in the text they make reference to. At the same time, they provide a means for journalists to present legitimation of their work.

To conclude, it is possible to confirm our initial hypothesis that images and captions offer invaluable help in the construction of strategies of science popularization even though they have been scarcely considered by the literature. In fact, they provide important cognitive

guidelines, interpretive framework as to how to correctly and effectively process the information contained in the whole article.

Acknowledgements

This research has been carried out in collaboration with Dr Alida Maria Silletti (Università degli studi di Bari "Aldo Moro") for the collection of the corpus as well as for the analysis of French and Italian data.

References

Banks, David (ed.) 2013. *L'image dans le texte scientifique*. Paris: L'Harmattan

Bontems, Vincent 2013. Le rôle des images des nanotechnologies (à l'intérieur et hors du champ scientifique). In Banks (ed.), 103-118.

Calsamiglia, Helena 2003. Popularization Discourse. *Discourse Studies* 5/2 139-146.

Calsamiglia, Helena / Van Dijk, Teun A. 2004. Popularization Discourse and Knowledge about the Genome. *Discourse & Society* 15/4, 369-389.

Ciapuscio, Guiomar Elena 2003. *Textos especializados y terminología*. Barcelona: Universitat Pompeu Fabra.

Desmet, Isabel 2005. Variabilité et variation en terminologie et langues spécialisées: discours, textes et contextes, <http://perso.univ-lyon2.fr/~thoiron/JS%20LTT%202005/pdf/Desmet.pdf>, 29.04.2014.

Dondero, Maria G. 2013. Le rapport entre texte et image dans la littérature de l'astrophysique. Le cas des trous noirs, in Banks (ed.),

83-102.
Garzone Giuliana 2006. *Perspectives on ESP and Popularizaiton*. Milano: CUEM.
Gotti Maurizio 2013. The Analysis of Popularization Discourse: Conceptual Changes and Methodological Evolutions In Kermas, Susan / Christiansen, Thomas (eds) *The Popularization of Specialized Discourse and Knowledge across Communities and Cultures*. Bari: Edipuglia, 9-32.
Gregory, Jane / Miller, Steven 2000. *Science in Public*. Basic Books.
Gülich, Elisabeth 2003. Conversational Techniques used in Transferring Knowledge between Medical Experts and Non-experts. *Discourse Studies* 5/2, 235-263.
Hyland, Ken 2005. *Metadiscourse*. London: Continuum.
Jacobi, Daniel 1984. Figures et figurabilité de la science dans les revues de vulgarisation. *Langue française* 70, 23-41.
Jacobi, Daniel 1999. *La communication scientifique: discours, figures, modèles.* Grenoble : Presses Universitaires de Grenoble.
Lathene-Da Cunha, A. 2013. L'image de vulgarisation scientifique: essai de typologie. In Banks (ed.), 133-152.
Lemke, Jay L. 1998. Multiplying Meaning: Visual and Verbal Semiotics in Scientific Text. In J.R. Martin / R. Veel (eds) *Reading Science*. London: Routledge. 87-113.
Miller, Thomas 1998. Visual Persuasion: A Comparison of Visuals in Academic Texts and the Popular Press. *English for Specific Purposes* 17, 29-46.
Myers, Gregory 1990. Writing Biology: Texts in the Social Construction of Scientific Knowledge. Madison: University of Wisconsin Press
Myers, Gregory 1991. Lexical Cohesion and Specialized Knowledge in Science and Popular Science Texts. *Discourse Processes* 14/1, 1-26.
Myers, Gregory 1994. Narratives of Science and Nature in Popularizing Molecular Genetics. In Coulthard, Malcom (ed.) *Advances in Written Text Analysis*. London: Routledge, 179-190.
Myers, Gregory 1997. Words and Pictures in a Biology Textbook. In T. Miller (ed.) *Functional Approaches to Written Text: Classroom Applications.* Washington, D.C.: United States Informa-

tion Agency.
Myers, Gregory 2003. Discourse Studies of Scientific Popularization: Questioning the Boundaries. *Discourse Studies* 5/2, 265-279.
Shinn, Terry / Whitley, Richard (eds) 1985. *Expository Science: Forms and Functions of Popularisation*. Dordrecht: Reidel.

Primary sources

Focus, <www.focus.it> 31.05.2014
Futura-Sciences, <www.futurasciences.fr>. 31.05.2014.
Le Scienze, <www.lescienze.it>. 31.05.2014.
Sciences et avenir, <www.sciencesetavenir.fr>.31.05.2014.
ScienceDaily, <www.sciencedaily.com>, 31.05.2014
Scientific American, <www.scientificamerican.com>, 31.05.2014

LUCIA ABBAMONTE / FLAVIA CAVALIERE

Translating Tests of Pragmatic Language: A Culturally Sensitive Issue

1. Introduction

Recent years have seen a growing interest in the application of pragmatic aspects of communication in the area of research into language disorders. This has led to the development of a range of different methods of screening to investigate the subjects' abilities to understand and produce different types of communicative acts in order to assess the presence and extent of pragmatic language disorders (PLDs) in children and young adults. According to the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition (DSM-IV), the disorders exhibiting pragmatic language difficulties are autism, Asperger syndrome, semantic pragmatic communication disability, nonverbal learning disability, hyperlexia, fragile X syndrome, Rhett syndrome, attention-deficit/hyperactivity disorder, auditory processing disorder, schizoid personality disorder, social emotional processing disorder, epilepsy, trauma, head injuries and strokes. However, while PLDs remain difficult to diagnose, an early diagnosis in children can significantly facilitate the identification of language problems that could severely interfere with learning, unless specifically treated from their onset. Since the major deficits in pragmatic communication refer to qualitative impairments in social communication, standardized measures may not be appropriate for all racial and ethnic populations:

> To deny the validity of the notion of culture-specific […] patterns (including 'Anglo' cultural patterns) is to place the values of political correctness above the interests of socially disadvantaged individuals and groups. It would also be a conclusion denying the subjective experience of immigrants, and […] one going against their vital interests (Wierzbicka 2003: 14).

Hence, the impact of culture(s) with respect to diagnosing this language disorder cannot be ignored: the kind of behaviour typically associated with the disorder may in fact vary from culture to culture. To apply the same criteria to every child would not only be a culturally insensitive choice, but could also result in serious misclassification of symptoms, since the way a child does or does not respond to specific social situations may very well be mediated by cultural factors. Yet, to date, research on the usability and translatability of tests themselves is scant (Alduais *et al.* 2012), and the dearth of information on cultural differences in the diagnosis and perception of these language disorders (whatever their etiology) does not allow for easy assessment of symptoms for children of different cultures. Accordingly, the present study intends to address this gap from a broad critical discourse analysis perspective and within the domain of Applied Descriptive Translation Studies (Snell-Hornby 2006). Our investigation aims at gauging how cross-cultural differences may impact on the perception of PLDs, with a focus on the (un)translatability of one of the most widely used assessment tools, i.e. the *Test of Pragmatic Language*, second edition (TOPL-2). Designed in the USA in 2007, TOPL-2[1] was intended for use by speech-language pathologists and special educators, and has already been translated into Arabic, though as yet not into Italian, nor, to our best knowledge, into other languages. Given the paucity of updated pragmatic language disorder assessment tools in Italian, the translation of TOPL-2 is currently being considered.[2]

1 The TOPL-2 kit consists in: Examiner's manual, Examiner Record Booklets, Picture Book.

2 There is an ongoing research project at the Second University of Naples, Department of Psychology, 'Translating TOPL-2 for Italian Schools', coordinated by professor Massimiliano Conson (members: Prof. Lucia Abbamonte, Prof. Flavia Cavaliere, Dr. Alessandro Frolli, Dr. Gabriella Santangelo).

2. Background

Pragmatics plays a critical role in day-to-day communication: speakers who cannot adapt language to the needs of interlocutor(s) and/or the context of the situation nor follow socio-culturally shared rules for conversations and storytelling are penalized in conversation (Vaughan 2008). Accordingly, both behavioural and cognitive pragmatic skills should be taken into account when first identifying and then assessing PLDs – which is no easy task. Such skills are not static but, rather, dynamic and interdependent abilities. However, accurate evaluation is necessary to provide a comprehensive social view of PLD-affected people, where cross-cultural variation is not to be undervalued.

More specifically, the behavioural abilities include turn-taking, reciprocity and topic maintenance in conversation, as well as providing the necessary background information and clarification. The abilities to initiate interactions, maintain eye contact and interpret facial expressions and body language are also important, in addition to sharing skills and sportsmanship. As regards socio-cognitive pragmatic aspects, not only are the *abilities* to take a variety of perspectives entailed (e.g. being flexible with other people's opinions, topics and interests), but also a sufficient knowledge of unwritten 'codes of conduct' (e.g. *greetings*, *informing*, etc.). Furthermore, persons endowed with effective social self-awareness are able to adjust personal pragmatic behaviour (e.g. *demanding*, *promising*, *requesting*) and to socially 'filter' inappropriate responses, also through understanding peers' hidden intentions. Other crucial socio-cognitive skills include the abilities to make inferences and understand non-literal language, together with the competence to independently analyze social problems and arrive at solution options rapidly, also by envisioning multiple interpretations of situations (Ketelaars 2010). Moreover, people with PLDs display varying degrees of difficulty in using/ decoding para-linguistic (tone of voice, facial expressions, proximity, eye contact) and prosodic features (pitch, intonation, stress, speed, volume), humour/sarcasm (Cavaliere 2008), and in constructing coherent narratives. Overall, PLD-affected people tend to be verbose and

over-literal (Botting/Conti-Ramsden 1999), and have difficulties in understanding figurative language and metaphors, which are necessarily included in any PLD tests, since metaphors mirror our ordinary conceptual system and function as conventionalized cognitive structures (Black 1979; Lakoff/Johnson 2003; Lakoff/Nunez 2000).

However, pragmatics alone cannot be used to diagnose a disorder; many people who show PLDs can either fit in more than one pathology, or in none, and PLDs can also be caused by abuse, neglect, prolonged hospitalization, lack of stimulation or learned helplessness. Early diagnosis is thus both difficult and essential since the development of abnormal language skills in children can be reduced and clinically treated if addressed from the outset; otherwise symptoms may more severely interfere with learning and social interaction. Hence, the need to develop efficient tools, especially for screening the youth population, is increasingly felt, as well as the need to account for the impact of cultural differences in the communicative performances of the subjects. Indeed, in order to make more focused diagnoses, it is essential to develop specialized, culture-sensitive assessment tools, and, also, to utilize culturally sensitive strategies when it is deemed necessary to translate PLD tests.

3. Aims and purposes

Whatever their etiology, to gauge the extent of PLDs requires reliable standardized formal measures of pragmatic language, which are mainly in English. Since the need for using them in other countries has been (and is still) strong, some of them had to be translated into several languages. However, the question of the usability of the same assessment tools across different cultures has not been satisfyingly investigated yet, and the present study attempts to address this challenging issue, which entails taking into account the incidence of lingua-cultural hurdles, in particular in the translational process. Hence, the main thrust of this chapter is to assess the translatability of

TOPL-2 – one of the most significant assessment tools in use – from a pragmatic cross-cultural perspective. Indeed, especially if using parents' reports to screen children showing signs of PLDs, it is imperative to consider how cultural differences may impact their responses, and the emerging disparities must be incorporated both in the implementation of a screening measure, and in their translations into other languages. This would assure more focused (early) diagnoses and better treatment plans for all prospective patients.

In particular, we hypothesize that TOPL-2 Italian translation would need some 'domestication', and we also hypothesize that, along a translational continuum, the renderings of the United States-born TOPL-2 would require some form of domestication according to the different lingua-cultural contexts. Our major focus is on TOPL-2 translatability into Italian, whereas a critical research question is whether TOPL-2 could be successfully used in non-western countries. To better evaluate such issues from a cross-cultural perspective we also investigated the choices made by Arabic researchers in rendering TOPL-2 into Arabic (see Alduais *et al.* 2012).

4. Methodology

In the culturally-sensitive, and 'function/skopos oriented' (Holmes 1972; Toury 1995; Munday 2001; Vermeer 1989/2000) process of translation/adaptation of the instruments for the assessment of PLDs, it is necessary to keep a variety of factors in mind, such as age, gender, race/ethnicity, linguistic identity and socio-cultural context, including parent education level. From an applied translation studies perspective, an additional difficulty is the lack of consistent terminology and variability in both criteria and procedures to identify prospective patients. This requires a multi-step translational procedure. As recommended by the World Health Organization, the translation/ adaptation of any instrument (either psychological or neurological, or psychiatric) is expected to produce different language versions of

> the instrument [which] should be equally natural and acceptable and should practically perform in the same way [in the target lingua-cultural contexts]. The focus is on cross-cultural and conceptual, rather than on linguistic/literal equivalence. A well-established method to achieve this goal is to use forward-translations and back-translations. (Process of translation and adaptation of instruments 2014)[3]

Accordingly, the procedure should include the following steps:

i. Two *forward* translations (by two translators whose native language is the Target Language);
ii. A 'reconciled' final version that must be conceptually (rather than literally) equivalent;
iii. Expert panel *back*-translation (experts whose native language is the Source Language);
iv. Test authors' check for occasional discrepancies;
v. Pre-testing and cognitive interviewing with a focus on the impact;
vi. The final version.

4.1. Our procedure

Taking our trajectory from these guidelines, the optimal forward translational procedure we identified was to move along a cline ranging from borrowing to adaptation (i.e., borrowing, calque, literal translation, transposition, modulation, equivalence and adaptation), broadly following Vinay and Darbelnet's (1995) taxonomy.

4.2. Domestication vs. Foreignization: a translational choice

Moving within the domain of the culturally-sensitive process of the adaptation of PLD instruments, our approach needs to entail both pragmatic and translational notions, in particular, the domestication and foreignization binomial:

---

3 <http://www.who.int/substance_abuse/research_tools/translation/en/>.

> In any translation project, the initial decision between domesticating and foreignizing strategies affects the whole translation process, leading either to a target text that is easily recognizable and thus readily accessible to the readers, or to a text that constantly reminds them of cultural difference. (Lindfors 2001)

In more detail, domestication refers to an "ethnocentric reduction of the foreign text to target-language cultural values" (Venuti 1995: 20). In domestication, foreign elements are assimilated into the target culture, thus rendering the translated text more palatable to the target audience. Viceversa, foreignization is "an ethno-deviant pressure on those (cultural) values to register the linguistic and cultural difference of the foreign text, sending the reader abroad" (Venuti 1995: 20). Accordingly, the translated text does not feign to be an original (as happens with domestication), so that "the crucial role of the source culture is stressed, foreign identity highlighted and the influence of the target culture minimised" (Szarkowska 2005).

In brief, translational choices move along the two opposite ends of the domestication-foreignization continuum, according to the intended audience's needs and identities. In the present case, since both the needs of the test practitioners and the potential end-users' identities must be kept in full view, domestication has to be the main thrust. Indeed, it is essential to gauge the extent of PLDs in the context of the socio-cognitive cultural context of the people possibly affected by such disorders, so as to avoid communication-impeding lingua-cultural hurdles, thus providing more focused diagnoses.

4.3. Translating non-literal language and metaphors

Since a major difficulty experienced by people with PLDs is coping with non-literal language – mainly humour and metaphors – instantiations of these culture-bound communicative modes are necessarily included in PLD tests, and require fine-tuned translation strategies. In particular, a good resource for investigations in mapping the thought-language relationship is provided by metaphors. Metaphors are both

grounded in our bodily experience, or embodied cognition (Varela/ Thompson/Rosch 1991; Pfeifer/Bongard 2006), and imaginatively structured. We may reasonably hypothesize that some metaphors are 'primary metaphors' (Grady/Johnson 2002), such as some sensorimotor experiences (e.g., moving around and jumping up when one is joyful). These metaphors are tendentially universal and offer significant examples of 'embodied' experience, while others are more culture-specific.[4] Metaphors may vary because the cognitive processes we utilize for the creation of abstract thought also vary. Indeed, the physical environment, cultural context and communicative situation play a foreground role for a given (sub-)culture or cultural group by permeating general domains of their experience, thus generating culturally-bound ways of conceptualizing experience, which are referred to as 'cultural conceptualizations' (Sharifian 2003). A common and feasible taxonomy for classifying culture-bound metaphors can be found in Kövecses' classification in congruent metaphors, alternative

4 For example, the similarity between the English and Iraqi Arabic metaphorical expressions show that the universality of orientational metaphors (i.e., referring to movements in space) may be a reality as they are based on the hypothesis of embodiment. The most comprehensive explanation of 'embodiment' and 'embodied mind' in Cognitive Linguistics can be found in Lakoff/Johnson (1999: 4): "Reason is not disembodied, as the tradition has largely held, but arises from the nature of our brains, bodies, and bodily experience: […] the very structure of reason itself comes from the details of our embodiment. The same neural and cognitive mechanisms that allow us to perceive and move around also create our conceptual systems and modes of reason. […] In summary, reason is not, in any way, a transcendent feature of the universe or of disembodied mind. Instead, it is shaped crucially by the peculiarities of our human bodies, by the remarkable details of the neural structure of our brains, and the specifics of our everyday functioning in the world." Accordingly, our conceptual system is mirrored in language patterns, such as the systematic use of metaphor (Lakoff/Johnson 1980, 1999). In gist, every kind of human behaviour can be seen as the interaction and movements (i.e., up and down) of a body in an environment. Hence, every human experience is embodied. as shown in the following Iraqi Arabic/English instantiations (Hassan 2010): رتفعت معنوياتي [My spirits rose]; معنوياتك اليوم عاليه [Your spirits are high today]; شو إنت اليوم طاير من الفرح [You are flying with happiness today?]; من گتله الخبر گام يگمز من الفرح [When I told him the news he began to jump with happiness]; أخبارك هبطت معنوياتى [Your news lowered my spirits].

metaphors and metaphors unique to a given culture (2006:155-158), which are the most challenging for translators, as will be illustrated in our examples.

As regards humour, each form of humour is inextricably embedded in the cultural cradle in which it was born (Solomon 1997; Chiaro 2005). To translate most verbally expressed humour, the ability to switch frames of reference is required, which implies that careful attention must be paid to the 'cultural turn' (Attardo 2002; Cavaliere 2008; Bassnett 2014).

4.4. Materials

The most utilized tools to assess/identify pragmatic language impairment(s) in children and adolescents are the following:

- Test of Pragmatic Language (TOPL-2) – 1999, 2007;
- Clinical Evaluation of Language Fundamentals (CELF-4) – 2003;
- Pragmatic Language Skills Inventory (PLSI) – 2006;
- Children's Communication Checklist (CCC-2) – 2006;
- Test of Language Development-Intermediate (TOLD-1: 3) – 1988;
- Comprehensive Assessment of Spoken Language (CASL**)** – 1999.

As for the Italian scenario, the following are the most frequently utilized:

- Pragmatica TPL – Scala comunicativa e pragmatica 1-3 anni – 1995;
- APL Medea – Abilità pragmatiche nel linguaggio 5-14 anni – 2009;
- PVCM – Prove di Valutazione della Comprensione Metalinguistica 8-11 anni – 2010.

Among the various options, TOPL-2 designed for use by speech-language pathologists, is the most significant and widely appreciated tool, since it provides important information to school team members

(school psychologists, counselors, special educators, and clinical psychologists) about social skills and conflict resolution. For this reason we decided to focus our attention on this test, especially as regards its (un)translatability into Italian and into Arabic.

TOPL-2 targets children and adolescents between the ages of 8 and 18 and aims to identify individuals with pragmatic language deficits, to determine their strengths and weaknesses (so as to treat them accordingly), and to document their progress. In particular, the evaluation focuses on the students' ability to monitor and appraise the effectiveness of the response to resolve the social problem situation. TOPL-2 measures the ability to use language in social interactions in terms of six criteria:

- physical setting
- audience
- topic
- purpose (speech acts)
- visual-gestural cues
- abstraction.

TOPL-2 was standardized on a sample of 1,016 children residing in 21 states (USA), using gender, residence, race, geographic region and ethnicity as variables (spelling and common wording/phrasing were adapted). It consists in Examiner's Record Booklets (25 copies for each kit), a Picture Book and an Examiner's Manual.

Picture 1. The TOPL-2 kit.

The time needed to administer the test amounts to 60-70 minutes approximately, and the procedure is as follows: each item is slowly read by the counselor/special educator to the perspective patient/student: if s/he does not respond in 15 seconds, the item may be repeated but not altered, nor abbreviated. The examiner may point at the character depicted in the pictures as the item is read. No other assistance can be provided. The Examiner's Record Booklet is the component which needs to be translated, since it contains 43 verbally expressed questions (i.e. 'stimuli', which also refer to the picture book) to be asked to the participants. 'Correct response guidelines' are included for the examiner, and on some items a rationale for the solutions is provided (PE-Pragmatic Evaluation).

5. Linguistic data

For some of the items to be effectively translated in a different language, some shifts at the lexical level are required, and different strategies will be necessary, corresponding to higher-lower degrees of complexity.

5.1. Lexical shifts

In the following item, we note that a lexical shift for 'skateboard' would not be necessary in current translations, since skateboards can now be found in every Italian playground, and they are designated with the original English term, whereas 20 years ago translators would have used *monopattino*. A simple borrowing will now suffice.

Item	*Stimulus*	*Correct Response Guidelines*
9	**Picture Book Page 9 – 'Talking to the Teacher'** Matt was telling his teacher a story about the beach and a sailboat. In the	The response must indicate that topic maintenance and appropriate topic change are necessary for successful

	middle of the story, he suddenly started talking about his new tennis shoes. Then he began talking about Chad's new **skateboard,** and suddenly he asked about the math test. The teacher said, "Stop." Matt knew something had gone wrong. What went wrong in this story? **PE:** How can he tell better stories?	conversation. A story must be explained well and completed before a new one begins. **PE:** The student is able to indicate that a good story requires topic maintenance and that there needs to be a smooth way to switch from one topic to another.

Table 1. Borrowing.

Although borrowings are increasingly used in contemporary translations, yet they cannot always overcome linguistic lacunae. Hence, other translational shifts – i.e., any changes that are caused by the different features of the source and target languages, which trained translators regularly do to create the target text (Catford 1965, Newmark 1982, Toury 1995) – are required. In translating the following item, lexical shifts are deemed necessary:

Item	*Stimulus*	*Correct Response Guidelines*
16	**Picture Book Page 16 – 'The Slumber Party'** **Cindy** was having a **slumber** party with 2 of her friends. It was very, very late and they were laughing and talking. Her dad came in and said it was time to go to sleep, but Cindy and her friends wanted to stay up a little longer. Her dad seemed tired and angry. What can Cindy say so that he will let them stay up a little later? **PE:** How do you know that what Cindy says might work?	The response must reflect a consideration of her father's tired, frustrated or angry mood and politely persuade/negotiate a way to get to stay up a little later. **PE:** The student is able to express that a positive outcome may result from the use of persuasion and politeness, which respects dad's mood and tiredness.

Table 2. Translational shift.

The 'slumber party' situation is a recent one in Italy, where it is the traditional cultural practice for children to sleep in their home, and inferior distances between the Italian homes (usually flats/apartments) make 'sleep overs' less necessary. However, TV series and films have

made 'slumber parties' known and trendy in Italy as well. So, for a 2014 rendering, the items could be translated with a light 'domestication' process: one lexical shift (slumber → *pigiama*), and one name change (Cindy →*Martina*).

In the following item an equivalence[5] will be necessary: 'peanut butter' is an unfamiliar spread for Italian kids, while the Italian hazelnut spread Nutella could be a more palatable choice.

Item	*Stimulus*	*Correct Response Guidelines*
22.	**Picture Book Page 19 – 'The Sandwiches'** Matt was passing out sandwiches. Kate asked for **peanut butter**. Matt gave her a cheese sandwich and forgot to tell her that they were out of peanut butter. Kate got angry and told Matt that he was being mean. How can Matt fix things between them? **PE:** How do you know that what Matt said will work?	The response must include an effort to repair the communicative breakdown through the use of a polite apology and an explanation that he forgot to tell her that they were out of peanut butter. **PE:** The student is able to express that an apology and an explanation are effective ways to repair the communication breakdown.

Table 3. Equivalence.

In the same vein, in the next situation, while US kids usually wish to play a baseball game, Italian boys do not. An adaptation will thus be necessary since soccer is by far the most common Italian game (baseball→*calcio*).

Item	*Stimulus*	*Correct Response Guidelines*
11.	**Picture Book Page 11 – 'The Baseball Game'** Brad was watching some older kids start to play a **baseball game.** He wanted to play too, but he was not sure they would let him play with them. He looked at all the kids. What did Brad see and what did he	The response must gauge the welcoming, positive mood of the two waiting boys or the group as a whole, making some reference to one or both, and use a polite request to play with them. **PE:** The response reflects a recognition that certain efforts

5 Or, from a wider perspective, an adaptation, which Vinay and Darbelnet (1995: 135) describe as "a special kind of equivalence, a situational equivalence". Indeed, some degree of overlapping among categories is inevitable.

	say? **PE:** What makes him think the older kids will let him play?	(politeness and/or evaluating the audience) can result in a successful outcome.

Table 4. Adaptation.

5.2. Anglo-saxon or universal irony?

Among the cultural elements which are specific to given societies, irony and humorous allusions can be the most difficult to render, as we will presently see. With the next stimuli, we are moving to a more abstract and less literal communicative level:

Item	*Stimulus*	*Correct Response Guidelines*
6.	**Picture Book Page 6 – 'Picking Up Kate'** Mom was supposed to pick up Kate at 4:00. Mom waited a long time and Kate was very late. When Kate finally got there, Mom said, "Thanks a lot for being on time." What did Mom really mean when she said that? **PE:** Why did she say it that way?	The response must address that Mom introduced her message by using indirect language and expressed her annoyance or anger at Kate's lateness by using indirect language. **PE:** The student is able to express that mother is using humor or sarcasm to alert Kate to the fact that she is late.
19.	**Picture Book Page 18 – 'Wet Cement'** Chad and Matt were walking. The sidewalk was being fixed and there was wet cement. Matt wasn't paying attention to the sidewalk. Chad said, "I guess you like walking in wet cement". What did he really mean when he said that? **PE:** Why did he say it that way?	The response must refer to the way that Chad used indirect language to warn/suggest that Matt watch where he was walking. **PE:** The student is able to express that Chad is using humor or sarcasm to alert his friend to the wet cement.

Table 5. Instances of irony in the TOPL2.

Since American and Italian humour/irony are non-coincident, the possible Italian patients could be misled. A basic question can be: How would the 'humorous' mode shaping the 'Picking up Kate' and 'Wet

Cement' stimuli be interpreted in Italian context by both PLD affected and non-affected participants? Apart from insights from scientific linguistic literature, in our increasingly multi-cultural societies, practical suggestions as to how to handle and gauge humour come from popular manuals for cross-cultural training for educators, such as, for example:

> **Humour in the classroom lightens things up, but it takes care and practice to get it right.** […] nothing is more cultural than humour. A hilarious joke in one culture is insulting, puerile or inane in another. While some cultures find jokes about body parts and functions funny, for example, others find them disgusting. […]
> **Word-play based humour relies on linguistic skills.** While situational humour translates well, word plays often use a high level of language; using words with more than one meaning, playing with homophones or complex constructions. Some is based on social or political events and incomprehensible to newcomers.[6]

A culture-sensitive translational choice (for the Italian target text) might be to shift from irony and sarcasm to a mixture of comicality and warning, which is not simple.

5.3. In/congruent metaphors

As regards the following stimuli (the numbers refer to the items in the TOPL-2), we have only one congruent metaphor out of seven 'alternative' metaphors (excerpted from the corresponding stimuli):

20	You cannot judge a book by its cover [said by a father to his son while discussing on an apparently mean teacher].
23	Into each life some rain must fall [said by a coach after losing a game]
26	You have to crawl before you can walk [said by a counsellor]
29	Too many queen bees and not enough worker bees [said by a teacher to quarrelling students]
40	Looks to me like you're shooting yourself in the foot [said by a teacher to an unruly student]
42	All that glitters is not gold (congruent metaphor) [said by a girl referring to a

6 Teaching tolerance: <http://www.culturesintheclassroom.com/5_paralinguistics.shtml> (last accessed 10 April 2014).

	new girl at school]
43	A strong tree bends in the wind [said by a father to his discouraged child]

The Italian rendering of metaphor 42 is *Non è tutt'oro quello che luccica*, while for the other alternative metaphors appropriate translations need to be found, such as for example, *l'abito non fa il monaco* (20).

5.4. Appropriate telling

Appropriate telling (AT) is a strong, shared value in Anglo-Saxon cultures and, to varying extents, across cultures. In TOPL a total of 5 out of 43 items focus on the lack of AT, i.e., the speaker is not making his/her story clear enough, mainly because s/he does not provide the relevant information when necessary, or gives useless details (as explained in the 'Correct Response Guidelines'), such as:

- Topic maintenance: (Item 9) 'Talking to the Teacher' (see 5.1.) ; (Item 24) 'Talking to the Counselor'; (Item 30) 'Talking about a Friend'; (Item 31) 'Talking about Summer Vacation'
- (over-)Detailed narration (verbosity): (Item 25) 'The Sailboat Race'

Essential for meaningful communication in an Anglo-Saxon context is the mastering of the above mentioned skills, as can be seen from the following items.

Item	*Stimulus*	*Correct Response Guidelines*
24.	**Picture Book Page 20 – 'Talking to the Counselor'** Cindy was telling the counselor about a problem with another girl. She said that "things kept happening" and she was mad. She said that "the other girl said it too" and "so did that boy". The counselor did not understand what had happened, why Cindy was mad, and who the other girl and boy were. What went wrong and how can Cindy tell her story so that the counselor can help her?	The response must indicate that the given-new (shared information) base is ignored and that the use of informing (explaining or describing) is needed.
30.	**Picture Book Page 24 – 'Talking about a Friend'** Matt talked and talked about his friend. Ben asked who the friend was. Matt just kept on talking about the friend and a game they had won. Ben did not know who the friend was or what the game was. He was very mixed up. He asked, "Who is your friend and what game are you talking about?" Matt said, " Stop interrupting me. I hate that." Matt was mad. Ben was mad now too. They both walked away angry. What went wrong? **PE:** How could things be fixed between the boys?	The response must include some indication that the given-new (shared information) base is ignored and there is a need for an appropriate telling of the story in order for the topic to be introduced, followed and understood. **PE:** The student is able to express that an apology is needed to repair the problem, and that in the future, Matt needs to attend to topic introduction and the given-new base in order to successfully communicate.
31.	**Picture Book Page 24 – 'Talking about Summer Vacation'** Chad started talking about his summer vacation. He talked on and on about his trip. He talked about things he did and people he met. Cindy did not know who or what he was talking about. She kept asking who he was talking about or what he was talking about. Chad got mad and said she was not a good listener. What went wrong? **PE:** How can Chad tell his story so	The response must make reference to the fact that given-new base has been ignored (more story details are needed) and that the topic is not introduced well, as indicated by Cindy's unfamiliarity with it. **PE:** The student is able to explain the speaker's need to monitor audience and topic factors in order to be sure that the story is clear, as well as attend to the audience and answer questions in

	that Cindy can understand?	order to help their understanding.

Table 6. Appropriate telling.

Apparently, discrepancies in information levels are found to be communication-impeding in the narratives mentioned above. As explained in the 'Correct Response Guidelines' above, a physiological English-speaking communicator should be able to understand and explain that the 'given-new base' is ignored. However, it is not easy to elicit this perception of communication failure in the Italian lingua-cultural context. Such difficulties are more consistent in the following situation:

Item	*Stimulus*	*Correct Response Guidelines*
25.	**Picture Book Page 21- 'The Sailboat Race'** Brad told Matt about the sailboat races he had seen. He talked on and on about the winning sailboat. He told about his color, its length, how wide it was, the people in it, what people in it were wearing, a scratch he saw on the side of the boat, and something someone in the crowd said about the boat. He told every single thing he could think of about the boat**.** Finally, Matt said, That's enough about the boat" and walked away. What went wrong?	The response must indicate that the topic content is far too detailed and tedious and that the story must have less details to be successful.

Table 7. Instances of over-detailed narration.

Indeed, would such over-detailed descriptions be considered as 'inappropriate' in Italian as they are in English? Could 'verbosity' be as serious a drawback in Italy as it is apparently in English speaking countries? Interestingly enough, some recent research in the domain of comparative translation studies (Morini/Zacchi 2002) seems to undermine the 'universality' of such 'verbosity-opposing' prescriptions, typically labelled as 'appropriate telling'. Indeed, especially computer-assisted studies of bilingual corpora, i.e. English source texts and their translations in Italian, highlight systemic differences, including

the lower sentence and word number and the inferior mean sentence length of the English source texts (Ianich 2006: 8-9). It could be inferred that the greater 'conciseness' of the English texts as compared to the over-detailed explicitation of the Italian texts can be mainly explained in terms of the Italian preference for more complex syntactic formulations. Hence, to provide a valid Italian translation of such items, 'verbosity' should be exaggerated or differently framed.

5.5. Turn-taking and interrupting

Turn-taking and interrupting are also included in TOPL-2 stimuli: 'The Interruption' (13), and 'Hanging up Pictures' (35) respectively. Informal verbal interaction is the matrix for human social life and heavily relies on a system of turn-taking. However, relatively little is known about culture-specific variation, though differences are found across the languages, especially from the anthropological perspective. Apparently, cultures differ radically in the timing of conversational turn-taking (Stivers et al. 2009). Comparative studies of English and Italian highlight consistent differences in styles of verbal interactions, especially as regards turn-taking, which, in gist, is less strictly observed in Italian as compared to Anglo-Saxon contexts. Such tendency is also found in parents-children interactions (Maroni *et al.* 2008). However, for the purposes of this study on PLD test translatability, apart from scientific literature, interesting observations also come from manuals for teachers' cross-cultural training, as can be seen in the excerpts below:

> **Interruptions are part of conversation.** They are an irritating part of dialogue, but the level of 'rudeness' assigned to them varies from culture to culture. What constitutes an interruption also depends on the language group. In hierarchical societies, it depends on the status of the conversation partners.
> **Students from other cultures have internalized different sets of 'interruption' rules.** In some countries students interrupt teachers with questions or to challenge something that's been said, but in others it is very rude to interrupt even if the class has gone overtime, the teacher's made a mistake, or students haven't understood.

> **In multicultural classes 'turn-taking' is an issue.** Some students politely wait their turn and don't get to say anything, while others dominate the conversation, jumping in at every opportunity, or interrupting. Although this is an issue in any classroom, cultural differences exacerbate the problem. (Crosscultural Training for Educators)[7]

Hence, un-British turn-taking and conversation style in some students need not necessarily denote them as either unruly/rude, or signal them as 'typical', potential PLDs patients, as the inclusion of the following stimuli imply.

Item	*Stimulus*	*Correct Response Guidelines*
13	**Picture Book Page 13 – 'The Interruption'** Matt was hanging up his poster. He wanted everyone to see it. Cindy and Kate were busy talking about a very important problem they had. Matt yelled at them, "Hey, look." Then he yelled, "Hey, I'm talking to you!" This interruption made the girls angry. What did Cindy say to him?	The response must include a reference to turn taking and effort to inform/explain turn taking to Matt.
35.	**Picture Book Page 29 – 'Hanging Up Pictures'** Cindy was hanging up pictures on the wall at school. She needed help, but she knew that the teacher was very, very busy grading papers and did not want to be disturbed. Cindy did not want the teacher to be upset or angry about being disturbed. She tried to think of a way to ask the busy teacher for help. How did she ask the teacher for help?	The response must include recognition that the teacher is occupied with her task and may not be open to interruption, so that use of a polite, formal excuse for interrupting is needed, along with a request for help.

Table 8. Turn-taking and Interrupting.

7 < http://www.culturesintheclassroom.com/5_paralinguistics.shtml>.

Again, to fully convey the inadequacy of such behaviour in Italian is no easy task: overlapping in conversation and 'controversial' turn-taking is not infrequent in Italian verbal interactions.

5.6. Situational shifts

By the same token, the method of adaptation is utilized to cope with source culture situations which are unfamiliar in the target culture, as in the domain of Sportsmanship. In TOPL-2 we have a total of 7 out of 43 items focusing on sports and competition, as can be easily inferred from the titles of the stimuli themselves:

- (item 10) 'Playing and Wrestling'
- (item 11) 'The Baseball Game' (see above)
- (item 14) 'The Game'
- (item 23) 'Your team lost an important game'
- (item 25) 'The Sailboat Race' (see above)
- (item 27) 'The new Rollerblades'
- (item 30) 'Talking about a Friend [and a game]' (see 5.4.).

Thus, in translating such stimuli into Italian, it should be taken into account that while sportsmanship is apparently a basic component of successful and fully-rounded communication in Anglo-Saxon cultures, this is not so in Italy. By and large, to be able to practice and discuss at least a few sports is not required for a successful school and social life in Italy. Whereas in Italy sports are not an essential part of schools curricula (only a generic discipline – 'physical education/*educazione fisica*' – for two hours per week is included), and even less of universities curricula, in U.S. colleges and universities usually award scholarships to *student-athletes*, essentially based on their abilities to play a sport. Athletic scholarships, which are so common in the U.S., in many countries, such as Italy, are rare or non-existing. Hence, such focus on sports may be excessive for Italian adolescents – perhaps some family/friends-centred situations would be more familiar for them, such as, for example, a family gathering for Sunday lunch, which is still a strong tradition in Italy. Furthermore, Italian young people tend to stay more in the family of origin and, by and large,

relationship with the parents, also in their old age, are closer. Elderly people still provide support to the younger generations and in many cases grandparents take care of grandchildren.

Overall, the general attitude towards children (and adolescents) is (over-)protective; they are virtually never left on their own, nor trusted with potentially dangerous tool. From this perspective, the following TOPL-2 stimulus is another clear example of how some situations would be unacceptable in Italian contexts:

Item	*Stimulus*	*Correct Response Guidelines*
32.	**Picture Book Page 26 – 'The Neighbor's Tools'** Kate was building a doghouse. She needed a hammer and a saw. Her neighbor had tools. She knows he does not like for people to borrow his tools, but Kate asked anyway. The neighbor said he was not sure he wanted to lend the tools. How can Kate 'talk him into it'?	The response may directly refer to the neighbor's mood, or be indirect (unspoken) but evidenced by the use of polite, formal requesting and persuasion in the form of promising to take good care of the tools and returning them promptly.

Table 9. Situational shift.

Firstly, owing to different housing organizations and life style, it is not common in Italy to build a dog house. 'Do-it-yourself' is not a favourite option with Italians, who typically prefer more refined final products. Secondly, anybody lending such dangerous tools as a hammer and a saw to minors would be liable for a criminal offence if they should harm themselves. So a different kind of object should be chosen, say some harmless kitchen tools, which rightly belong to Italian cooking culture. A quite drastic modification is thus necessary.

As shown above, then, a fair amount of change is necessary when translating TOPL-2 for Italy, i.e., a European country, broadly sharing the same socio-legal-cultural context as other western democracies. Hence, a question arises – what amount of change will be necessary when translating TOPL-2 for non-western countries?

5.7. The question of the usability of an Arabic version of TOPL-2

A case in point is provided by the work of some Arab researchers (Alduais *et al.* 2012). Some of the translational choices did not require complicated strategies; for example, items indicating proverbs and sayings were replaced with equivalents from the Arabic language, and foreign names were replaced by Arabic names to make it easier to administer the test to the Arab participants of this study (e.g. Cindy was replaced by Fatima, Matt by Mohammed, Kate by Aisha, etc.). Some others raised more concern. Firstly, since in the TOPL-2 picture book girls are dressed in a style that is not common in Arab countries, the participants in their study, particularly children, were not able to recognize the persons in the pictures as girls. Therefore the Arab researchers chose to consider them as boys, especially those with short hair, since (reportedly) it was impossible to explain to the children − and even the adolescents − how a boy and girl could become friends and socialize. As the Arab researchers explained, such situations are not common in Arab countries, so they drastically simplified the stimuli by *'translating'* the situations of friendship or gatherings of boys and girls into all-males situations. The clothing style helped them, since trousers, T-shirts, and short hair styles are not at all common among female members of Saudi society (Alduais *et al.* 2012). We think that the Arabic researchers underestimated the potential ambiguity of this 'same-sex domestication' of situations based on a variety of girl-boy interactions (teasing, quarrelling and making peace, making plans, sharing). Simple as it may appear, we feel that the solution of uniforming the gender of the protagonists of these situations may be a misleading solution: let us consider for example the following situation.

Item	*Stimulus*	*Correct Response Guidelines*
8.	**Picture Book Page 8 – 'The Friends'** Cindy was teasing Matt every day. He got mad. They had been good friends for a long time. Now Matt is so mad that he won't call Cindy or visit at her house. What can Cindy say to get Matt to be friends again? **PE:** How do you know that what Cindy says might work?	The response should include some indication that Cindy is aware that she has hurt Matt by her teasing, owes him an apology, and must persuade him to give her a chance to be friends again. **PE:** The student is able to express that an apology for being hurtful and a request for continued friendship (as well as a promise to stop being hurtful in the future) are effective ways to repair problems.

Table 10. Instances of teasing/flirting.

Wouldn't a boy-teasing-a-boy situation suggest a different kind of interaction? The Arab researchers did not appear to be aware of the potential incongruity of some situations. For example, to what extent would the following situation ('The Restaurant') be compatible with the Saudi Arabia norms of human interaction?

Item	*Stimulus*	*Correct Response Guidelines*
3.	**Picture Book Page 3 – "The Restaurant'** Here is a picture of a lady eating in a restaurant. Look at the lady carefully. What is she saying to the waiter and how do you know this?	The response must make a reference to the setting and/or the food; must be logical and make sense; and must make a reference to the facial expressions, gestures, and/or body language of the woman.

Table 11. Translational gender hurdle.

Overall, limitations in gauging the gender-egalitarian and western culture-specific attitudes and values entailed in TOPL-2 situations may inhibit its effective usability in societies whose norms reflect different cultural attitudes.

6. Concluding remarks

On the whole, there are many points in favour of the practice of translating TOPL-2 by domesticating/adapting it to target lingua-cultural contexts. In the study of cross-cultural pragmatics, Wierzbicka (2003) made clear how supposedly universal maxims and principles of politeness were indeed rooted in Anglophone culture, but were not common to all European countries, not to mention non-western countries. It became increasingly apparent that it is not easy to describe in terms of universal politeness or 'appropriateness' the communicative realities of multi-race families, as well as of millions of refugees, immigrants and the children of immigrants, and their (pragma-)linguistic difficulties when striving to survive socially in the milieu of a different language.

Eventually, the notion that norms of human interaction mirror different attitudes, grammars and ethnographies of speaking (Hymes 1962) – which is essential for the evaluation of PLDs – has come to the foreground. Raising awareness of the pervading presence of 'cultural scripts' subject to socio-diatopic variation could facilitate inter-cultural understanding (Abbamonte 2012), while at the same time taking into account significant differences. When assessing PLDs, notions such as 'appropriate telling', 'topic maintenance', 'verbosity', 'turn-taking' and 'interruptions' should be considered from a comparative perspective and the corresponding items should be translated by adapting them to different culture-specific contexts. In particular, as our analysis has shown, a variety of translational strategies, ranging from borrowing to adaptation, would be necessary to adapt the USA-developed TOPL-2 for Italian perspective PLDs patients: i.e. a considerable amount of domestication, mainly adaptations, would be necessary.

A controversial question therefore arises – how much domestication would be necessary for translations in non-western countries? More precisely, can the drastic 'domestication/adaptations' of the Arab researchers be considered as instantiations of successful translation? Or do they alter the 'script' beyond the boundary of effective

usability? In particular, the differences between same-gender and girl-boy (non/)verbal interactions across cultures are not easily overvalued, and by ignoring/minimizing them, the efficacy of any psychological assessment tool (such as TOPL-2) is predictably undermined. Therefore, we wonder whether these culturally-sensitive but misleading translational choices may inhibit the effective usability of TOPL-2 in the Arab countries.

References

Abbamonte, Lucia 2012. *Integrated Methodology for Emotion Talk in Socio-legal Exchanges*. Napoli: ESI.

Alduais, Ahmed / Fayza Saleh, Al-Hammadi / Rasha Mohammed A. Shoeib,/ Khalid Hassan, Al-Malki/ Farah Hameid, Alenezi 2012. Testing the Usability of an Arabic Version of TOPL-2 in Measuring Pragmatic Language Impairment in Children and Adolescents with Developmental Dysphasia. *International Journal of Linguistics* 4/2, 193-214.

Attardo, Salvatore 2002. Translation and Humour. In Vandaele, Jeroen (ed.) *Translating Humour*. Special Issue of *The Translator* 8, 173-194.

Bassnett, Susan 2014. *Translation*. London: Routledge.

Black, Max 1979 ^{2}(1993). More about Metaphor. In Ortony, Andrew (ed.) *Metaphor and Thought*. Cambridge: Cambridge University Press.

Botting, Nicola / Conti-Ramsden, Gina 1999. Pragmatic Language Impairment without Autism. *SAGE Publications and The National Autistic Society* 3/4, 371-396.

Catford, John Cunnison 1965. *A Linguistic Theory of Translation*. Oxford: Oxford University Press.

Cavaliere, Flavia 2008. Can Culture-specific Humour Really 'Cross the Border'? In Chiaro, Delia / Norrick, Neil (eds) *Exploring*

Humo(u)r, Laughter, Language and Culture. Special issue of *Textus* 21/1, 65-78.

Chiaro, Delia (ed.) 2005. Humor and Translation. *Humor*. Special Issue of *International Journal of Humor Research* 18/2.

Directory of Speech-Language Pathology Assessment Instruments Introduction.<http://www.asha.org/SLP/assessment/Assessment -Introduction/>.

Grady, Joseph / Johnson, Christopher 2002. Converging Evidence for the Notions of Subscene and Primary Scene. In Dirven, René (ed.) *Metaphor and Metonymy in Comparison and Contrast*, Berlin: Mouton de Gruyter. 533-554.

Hassan, Safaa Issa 2010. A Comparative Analysis of Conceptual Metaphors in English and Iraqi Arabic. *Journal of Missan Researches* 7 /13, 325-350. <http://www.iasj.net/iasj?func=fulltext&aId=14292>

Holmes, James S. 1972/[2]2008. The Name and Nature of Translation Studies. In Venuti, Lawrence (ed.) *The Translation Studies Reader*. London: Routledge,180-193.

Hymes, Dell 1962. The Ethnography of Speaking. In Gladwin, Thomas (ed) *Anthropology and Human Behavior*. Washington, DC: Anthropology Society of Washington, 13-53

Ianich, Erica 2006. Analisi di un corpus parallelo inglese-italiano di pubblicazioni dell'OMS. *Rivista internazionale di tecnica della traduzione / International Journal of Translation* 9, 99-121.

Ketelaars, Mieke P. 2010. *The Nature of Pragmatic Language Impairment.* <http://hdl.handle.net/2066/76512>.

Kövecses, Zoltan 2006. *Language, Mind and Culture.* Oxford: Oxford University Press.

Lakoff, George / Johnson, Mark. 1980 (2003). *Metaphors We Live By*. Chicago: University of Chicago Press.

Lakoff, George / Johnson, Mark 1999. *Philosophy in the Flesh. The Embodied Mind and its Challenge to Western Thought*. New York: Basic Books.

Lakoff, George / Núñez, Rafael E. 2000. *Where Mathematics Comes From: How the Embodied Mind Brings Mathematics Into Being*. New York: Basic Books.

Lindfors, Anne 2001. Respect or Ridicule: Translation Strategies and the Images of a Foreign culture. <http://www.eng.helsinki.fi/hes/translation/respect_or_ridicule1.htm>.

Maroni, Barbara / Gnisci, Augusto / Pontecorvo, Clotilde 2008. Turn-Taking in Classroom Interactions: Overlapping, Interruptions and Pauses in Primary School. *European Journal of Psychology of Education* 23 /1, 59-76.

Morini, Massimiliano / Zacchi, Romana (eds) 2002. *Manuale di traduzioni dall'inglese*. Milano: Pearson Italia.

Munday, Jeremy 2001. *Introducing Translation Studies.* London: Routledge.

Newmark, Peter 1982. *Approaches to Translation*. Oxford: Pergamon.

Pfeifer, Rolf / Bongard, Josh 2006. *How the Body Shapes the Way we Think*. Cambridge MA: The MIT Press.

Sharifian, Farzad 2003. On Cultural Conceptualisations. *Journal of Cognition and Culture* 3/3, 187-207.

Snell-Hornby, Mary 2006. *The Turns of Translation Studies*. Amsterdam: John Benjamins.

Solomon, Robert 1997. Racist Humor: Notes Toward a Cross-Cultural Understanding. In Benitez, Eugenio (ed.) *Proceedings of the Pacific Rim Conference in Transcultural Aesthetics University of Sydney*, Sydney: University of Sydney, 204-212.

Stivers, Tanya *et al.* 2009. Universals and Cultural Variation in Turn-taking in Conversation. *Proceedings of the National Academy of Sciences of the United States of America* 106/26, 10587-10592.

Szarkowska, Agnieszka 2005. On Teaching Forms of Address in Translation. *Translation Journal* 9/2. <http://accurapid.com/journal/33address.htm>.

Toury Gideon 1995. *Descriptive Translation Studies and beyond*. Amsterdam: John Benjamins.

Varela, Francisco / Thompson, Evan / Rosch, Eleanor 1991. *The Embodied Mind: Cognitive Science and Human Experience*, Cambridge, MA: The MIT Press.

Vaughan, Elaine 2008. Got a Date or Something?: An Analysis of the Role of Humour and Laughter in the Workplace Discourse of English Language Teachers. In Ädel, Annelie (ed.) *Corpora*

and Discourse: The Challenge of Different Settings, Amsterdam: John Benjamins, 95-115.

Venuti, Lawrence 1995/2004. *The Translator's Invisibility: A History of Translation*. London: Routledge.

Vermeer, Hans 1989/2000. Skopos and Commission in Translational Action. In Venuti, Lawrence (ed.) *The Translation Studies Reader*, London: Routledge, ^{2}2008, 221-32.

Vinay, Jean Paul / Darbelnet, Jean 1995. A Methodology for Translation. In Venuti, Lawrence (ed.) *The Translation Studies Reader*, London: Routledge, ^{2}2008, 128-138.

Wierzbicka Anna 2003.*Cross-cultural Pragmatics: The Semantics of Human Interaction*, New York: Walter de Gruyter.

Focus on Medical Communication

WILLIAM BROMWICH*

The Gift Relationship: Cultural Variation in Blood Donor Discourse

1. Framing the issue

In recent years by a process of interdiscursivity (Bhatia 2005) the rhetoric of the market has encroached into areas of professional discourse that were once immune to the characterisation of social interaction primarily in terms of the sale of goods and services. Whereas members of the public travelling by plane or train were once referred to as 'passengers', today they are increasingly 'customers'; whereas hospitals once focused exclusively on 'patient care', they now have to rate the quality of 'customer services'; whereas undergraduates were once 'members of a college', with the commodification of higher education they increasingly see themselves as 'consumers' who are required to tick boxes to indicate the level of satisfaction with the services provided. Against the backdrop of this shift in public and institutional discourse, this chapter examines the discourse of blood donation, an institutional practice that would appear to be an emblematic form of altruism (Piliavin/Callero 1991) rather than being subject to and dominated by market forces, as argued in the seminal study by Richard Titmuss, *The Gift Relationship: From Human Blood to Social Policy* (1970). In his historical overview, he underlined the cultural importance of human blood as a symbol:

* The author wishes to thank the Marco Biagi Foundation at the University of Modena and Reggio Emilia for support for the present study, and the participants at the CERLIS conference on *The Language of Medicine: Science, Practice and Academia* at the University of Bergamo in June 2014 for their perceptive comments.

> Symbolically and functionally, blood is deeply embedded in religious doctrine; in the psychology of human relationships; and in theories and concepts of race, kinship, ancestor worship and the family. From time immemorial it has symbolized qualities of fortitude, vigour, nobility, purity and fertility. (Titmuss 1970: 15-16).

In Renaissance times blood transfusion emerged as a concept, though pioneering experiments were hampered by the lack of any scientific understanding of blood groups:

> Some historians believe that the first transfusion was performed in 1490 in Rome on Pope Innocent VIII who lay dying of old age. It was proposed to rejuvenate him by injecting the blood from three young, healthy boys in his veins. […] The boys died, the Pope died, and the doctor fled the country (Titmuss 1970: 17).

In advocating the need to study twentieth-century blood donor discourse, Titmuss (1970: 13) outlined his case as follows:

> We believe this sector to be one of the most sensitive universal social indicators which, within limits, is measurable, and one which tells us something about the quality of relationships and of human values prevailing in a society.

Titmuss argued cogently that voluntary donation (the British model) produces blood supplies of better quality than blood collected in exchange for payment in response to market forces (the 'paid donor' model adopted in the US at the time, but now largely superseded). His study had a major influence on thinking about blood transfusion services. The impact of Titmuss's work was acknowledged by Healy (2000: 1637), who noted that "There has been essentially no commercial collection of whole blood in the United States since 1974, a policy change brought about in large part by the book itself". In addition, Healy (2000: 1653-4) outlined the specificities of the altruism intrinsic to blood donation:

> It is easy to see why blood donation is thought of as an exemplary act of altruism. What could be more selfless than giving away one's own blood to a stranger in need? [...] With the exception of Titmuss's pioneering effort of 30

> years ago, the role of institutions in producing volunteer donors has not been studied comparatively.

In the present study the focus will be on the construction of the identity of the (putative) blood donor in the public information materials produced by blood transfusion services in various national settings, in their attempt to persuade members of the public to volunteer to provide a good that is essential for positive health outcomes in a plethora of treatments. Suspicions about the risks for the donor may be an obstacle to voluntary blood donation, and popular beliefs have been documented in a study of public health in China (Adams/Erwin/Le 2009) but this topic will not be further pursued here.

This study of blood donor discourse takes as its starting point Bhatia's (1993, 2004) genre-oriented perspective. This perspective considers institutional settings when attempting an analysis of a particular genre:

> Non-literary genre analysis is the study of situated linguistic behaviour in institutionalized academic or professional settings. Genre theory tends to give a grounded or what sociologists call a 'thick' description of language use rather than a surface-level description of statistically significant features of language, which has been very typical of much of register analysis. (Bhatia 1996: 40)

Although in strictly anatomical terms blood donation appears to have universal characteristics, the profile of the (putative) blood donors in the public information and institutional discourse displays significant cultural variations across specific national contexts, and this study seeks to cast light on the encoding of these variations.

In methodological terms, the study will consist of a qualitative analysis of a corpus of public information material. The material in the corpus was posted online primarily in countries where English is the official language, one of the official languages, or the lingua franca, and it was collected by means of the search terms 'Reasons for giving blood' and 'Why give blood', from the sources listed in Appendix 1. A selection of articles from the media addressing the same issues is listed in Appendix 2, in order to cast light on differences between the institutional discourse and the media discourse. Whereas Bhatia's

(2005: 46) work on philanthropic fundraising analysed letters sent out for charitable causes, this study focuses on another form of philanthropy, blood donation, and the discursive resources used to promote it.

The blood donation discourse of the institutional actors, in particular organisations such as the Red Cross, Red Crescent, Magen David Adom, national and regional blood transfusion services, health ministries, information departments and international bodies such as the World Health Organization and the European Blood Alliance, is instantiated in multimedia texts with a variety of rhetorical purposes:

- PROMOTIONAL: argumentative texts to recruit new donors;
- ORGANISATIONAL: logistical details;
- TECHNICAL: eligibility and deferral criteria;
- SCIENTIFIC: donor/recipient blood group compatibility.

For present purposes the focus will be on the promotional materials, though a selection of texts relating to the remaining three rhetorical purposes will also be considered where relevant. The study is structured as follows. Section 2 examines cases of argumentation based on altruism. Section 3 considers enlightened self-interest, while Section 4 examines self-interest. Section 5 brings together the various strands of argumentation, using matrix diagrams to compare the institutional and media datasets. Section 6 concludes the analysis.

2. Altruism

The institutional materials in the present study are characterised prevalently, though not exclusively, by an appeal to altruism. The study started from the preconception that altruism would in all probability be the sole argumentative strategy, but a systematic analysis of the data does not support this hypothesis. In many cases the authors of the material opt for a judicious mix of altruism, self-interest and enlightened self-interest, reflecting their own perception of public opinion, but in the institutional discourse in most of the national cases

under examination an appeal to altruism prevails, albeit not as the only discursive resource employed by professional healthcare writers. A brief overview of elements of altruism in the various national settings will now be given, with the references for each of the excerpts listed in Appendix 1.

The Australian Red Cross, with a dialogic question-and-answer format, foregrounds altruism while providing scientific and technical information, including the fact that blood products are used not just for transfusion but also for the production of life-saving immunisations, thus including an oblique reference to enlightened self-interest, as the potential donor is also the potential beneficiary of vaccinations. The use of the first person pronoun is evidently intended to involve the reader as an active participant and as a potential donor capable of empathy towards those in need of a blood transfusion:

(1) **Why should I give blood?**
Blood is vital to life and for many people blood donors are their lifeline. Currently only 1 in 30 people give blood, but 1 in 3 people will need blood in their lifetime. (Australia)

On the other hand, the Bangladesh Red Crescent begins with an appeal to national identity ("Across Bangladesh…") but then widens the frame of reference by mentioning "your contribution to humanity":

(2) **Across Bangladesh**, every day there remains an urgent need for all types of blood groups. […]. Your donation can save the lives of many, make a difference or simply make you feel great about your contribution to humanity. (Bangladesh)

In the Finnish Blood Bank public information material, altruism does not predominate but reference is made to:

(3) People who genuinely wish to help patients. (Finland)

The Hong Kong Red Cross attaches great importance to altruistic motives in appealing for blood donors to come forward:

(4) There is no substitute for blood. In order to provide fresh blood products for treatments of patients with chronic diseases or in need of surgery because of illness or accident, we entirely count on the generosity of our blood donors to donate on a continuous basis. (Hong Kong)

In the case of Iceland, as in Finland, altruism is not promoted explicitly, but it is implicit in the rather understated tone of the factual information, mentioning donors and donation:

(5) There are about 7-8.000 donors who donate blood at least once a year. Almost 2.5 per cent of the population in Iceland are registered donors. (Iceland)

In India the appeal to altruism is explicit, accompanied by a tone of urgency:

(6) Universally, 'Blood' is recognized as the most precious element that sustains life. It saves innumerable lives across the world in a variety of conditions. Once in every 2 seconds, someone, somewhere is desperately in need of blood. […] We positively believe this tool can overcome most of these challenges by effectively connecting the blood donors with the recipients lives. (India)

The 'Find-a-Donor' function and reference to "connecting the blood donors with the recipients" imply that this is not classic altruism by which: "The recipient is in almost all cases not personally known to the donor: there can, therefore, be no personal expression of gratitude or other sentiments" (Titmuss 1970: 74). The Blood Bank India Recent Updates section highlights this distinction: M.A.I., [B+], is listed as a donor available for donations and the search function allows visitors to Find More Donors.[1] None of the other blood banks in this study provide a matching service, that seems to detract from Titmuss's principles of altruism.

In the case of Ireland, altruism is the overarching principle, though the mention of "our hospitals" (inclusive *we*) and the various factors giving rise to the need for transfusions could be interpreted as enlightened self-interest, with altruism being tempered by self-preservation:

1 < http://www.bloodbankindia.net/index.php>, 10 October 2014.

(7) **Irish Blood Transfusion Service**
Giving blood makes it possible for many people to lead normal healthy lives. Every year thousands of patients require blood transfusions in our hospitals, because they are undergoing surgery, recovering from cancer or have been in a serious accident. (Ireland)

In the case of Israel the appeal to altruism is aimed at international visitors:

(8) **Give Blood in Israel.**
ARE YOU PLANNING ON VISITING ISRAEL?
THE GREATEST GIFT YOU CAN GIVE IS THE GIFT YOU LEAVE BEHIND.
GIVE THE GIFT OF YOUR BLOOD WHEN YOU VISIT! (Israel)

In the case of Malta a factsheet is provided, including some statistical information, such as the fact that a normal donation is one unit of blood, though altruistic reasons clearly predominate:

(9) These are few blood facts, why people with an altruistic attitude might want to become blood donors.
- A large number of people depend on the continued generosity of others who are healthy.
- For the sick person who needs transfusion, blood may be the difference between life and death.
- Maltese blood donors are enough to cater for the local requests, help us keep it this way.
- If you started donating at 17 years of age and donated 3 times a year up to the age of 68, you would have donated over 69 litres of blood.
- Donors do it out of a sense of duty, and don't expect anything back.
- Blood is needed every day.
- Donating blood saves lives. (Malta)

In the case of New Zealand, altruism sets the tone. The donor will provide a gift that is a lifesaver, saving up to three lives with one donation and making a difference in the community, while connecting with fellow 'Kiwis':

(10) **Why should I donate blood**

> It isn't every day you can do something to save someone's life - but that's exactly what you do every time you donate blood. Blood is a priceless gift - a lifesaver.
> Even the best trained medical personnel, using the most advanced equipment can become helpless in the event a patient needs blood. […]
> - Help save the life of up to 3 people with a single donation of blood
> - Make a difference in your community by helping others
> - Develop a sense of commitment to and connection with your fellow Kiwis. (New Zealand)

Singapore also places the accent on altruistic motives, in a text interspersed with statistical, technical and scientific information:

(11) Blood contains many life-saving components that can help to treat different illnesses and injuries. For many people, blood donors are their life-line. Your blood donation could help save the life of an accident victim, a patient with severe anaemia, a person undergoing major surgery or even a newborn baby. […] And with an aging population and more sophisticated medical procedures, the demand of blood is increasing. (Singapore)

None of the argumentation in the Singapore text makes reference to self-interest: the emphasis is entirely on altruism. In the case of South Africa, altruism again comes to the fore, but the appeal is reinforced by reference to the fact that the number of blood donors is insufficient:

(12) Whether you're AB+ or O-, we need your blood.
1. **Blood saves lives.**
   Every unit of blood donated can be separated into its constituent parts and used to enhance the lives of up to four recipients.
2. **There's no substitute.**
   Unfortunately, there is no known substitute for blood and it cannot be replicated due to its complexity. Only real blood will do.
3. **Blood is in short supply.**
   Because the need for blood is so unpredictable […]. (South Africa)

Sri Lanka is particularly significant, as it was selected by the World Health Organization (WHO) to promote World Blood Donor Day 2014, promoting 'Safe Blood for Saving Mothers'. The text in the corpus of institutional materials was produced by the WHO, which plays an important institutional role in promoting blood donation. Altruism is key to blood donation efforts in Sri Lanka, a particular kind

of altruism associated in the official discourse with Buddhist values, particularly generosity. Donation is construed primarily as a collective act timed to coincide with and celebrate Full Moon Day, an annual religious holiday, rather than conceptualised as an individual medical procedure as in Western countries. Sri Lanka has eliminated the practice of collecting from what Titmuss called 'paid donors': all blood donations now come from voluntary donors:

(13) Sri Lankans attach special importance to the act of blood donation. "Because most Sri Lankans follow Buddhism, blood donation is religiously and culturally accepted and very much a valued concept," says Dr Namal Bandara, Senior Registrar of the National Blood Transfusion Service. This year, Sri Lanka is the host country for the global event of World Blood Donor Day. The day also coincides with Poson Poya (Full Moon Day), an annual religious holiday that marks the arrival of Buddhism in Sri Lanka and is a time for generosity and celebration. Sri Lanka has already established a tradition of encouraging people to give blood every month when the moon is full. Social groups organize blood donation sessions on this day on their own premises – often temples, schools or universities. […]
In just 10 years, Sri Lanka has achieved remarkable success in reaching a self-sufficient blood supply. […] The safest source of blood is from regular, voluntary unpaid donors whose blood is screened for infections. WHO calls for all countries to obtain 100% of their supplies of blood […] from voluntary unpaid blood donors by 2020. (Sri Lanka)

In Sweden, as in the cases of Finland and Iceland, the appeal to altruism is not explicit, but implicit. One possible explanation for the almost complete lack of argumentative discourse and the prevalence of informational content is that Sweden has managed to recruit five per cent of the adult population as donors, that compares extremely well with other countries (the figure for Iceland is 2.5 per cent), suggesting that the authorities seem to take it as given that members of the public will act in an altruistic fashion, reflecting high levels of reciprocal trust, a form of social capital in Swedish society (on social capital theory, see Putnam 1995, 2000 and Putnam, Social Capital Measurement and Consequences).[2]

2 Robert Putnam <http://www.oecd.org/innovation/research/1825848.pdf>, 14 October 2014.

(14) Blood Donation in Sweden
You are visiting Geblod.nu (Giveblood.now) which is the Swedish Blood Centre´s official website. […] Sweden is self sufficient in blood products, but new blood donors are always welcome. […]. Almost five per cent of the population are registered donors. (Sweden)

In contrast, Blood UK takes pains to make explicit the altruistic motives for giving blood, with regular donors helping to save lives:

(15) **Why give blood?**
Donated blood is a lifeline for many people needing long-term treatments, not just in emergencies […] Ever since a national blood service was first created in 1946, we have relied on the generosity of blood donors […]. We are indebted to our regular donors for their role in helping us to save lives. (UK)

Moreover, Blood UK personalises the discourse with a collection of Amazing Stories or testimonials told by both donors and recipients, all of whom are identified by name and with a colour photograph.

With regard to the blood donor discourse from US institutional sources (excerpts 16-29), altruism does play a role, but it is part of a judicious mix of motives, and not always the predominant one. In addressing the question 'Why Donate Blood?' the American Red Cross outlines the following motives, but the predominant theme is not altruism. A 'special reason' may be an oblique reference to altruism, but potential donors are not required to donate for altruistic reasons, as other reasons will do just as well. The important thing is that 'you'll feel good' and there will be health benefits – for the donor:

(16) **You don't need a special reason to give blood.**
You just need your own reason.
Some of us give blood because we were asked by a friend.
Some know that a family member or a friend might need blood some day.
Some believe it is the right thing we do.
Whatever your reason, the need is constant and your contribution is important for a healthy and reliable blood supply. And you'll feel good knowing you've helped change a life
SOME HEALTH BENEFITS
You will receive a mini physical […]. (US American Red Cross)

As in the case of the UK, testimonials are included, accompanied by photographs portraying (real or fictional) donors rather than potential beneficiaries. With limited space given to altruistic motives, the psychological benefits for the donor are a recurrent theme:

(17) I'm a Red Cross blood donor that won't give up. […] I love donating blood. The thought of being able to help save three people's lives every time I go makes me feel like a better person. (US American Red Cross Testimonials)

The US Armed Services Blood Program adopts the slogan 'Give to the Red, White and Blue'. Totally separate from the American Red Cross, the Program collects donations from US civilians to support the armed services. The website does not discuss altruistic motives, presumably because it is evident to donors that their blood will be allocated to the armed services. Hence the discourse focuses on practical matters:

(18) CAN I DONATE?
Most healthy adults are eligible to give blood, however, there are some reasons a person may be deferred from donating temporarily, indefinitely, or permanently. (US Armed Services Blood Program)

The mission of the Boston Children's Hospital is clearly of a totally different nature and the discourse is shaped by this fact, with altruistic motives coming to the fore:

(19) ONE pint helps FOUR children
Less than 5% of the population donates
It takes 30 minutes to donate, platelets take a little longer
Our patients need your help
We are nearby in your neighbourhood
There is no substitute for human blood and platelets
Platelets from A-positive donors are acceptable for 100 per cent of the population
There are always shortages of blood and platelets, especially during the summer and winter holidays
More than 24,000 patients need blood at BCH each year
It's a great way to give back. (Boston Children's Hospital)

The Florida Blood Centers adopt a mix of altruistic and non-altruistic motives in the blood donor discourse, with altruism as the leitmotiv. Demographics are mentioned in connection with 'our growing and aging population' and unusually there is a reference to generational change:

(20) For decades this nation relied on a large pool of blood donors from 'The Greatest Generation', the heroic World War II veterans who considered blood donation to be an on-going patriotic duty. Sadly, that generation is fast disappearing. (Florida)

The US Give Spot Give Blood website specifies ten reasons to give blood, but only the last of these reflect altruistic considerations:

(21) You will be someone's hero – you may give a newborn, a child, a mother or a father, a brother, or a sister another chance at life. In fact, you may help save up to three lives with just one donation. (US Give Spot)

The US Indiana Blood Center also lists ten reasons to give blood, all reflecting altruism, except for the mini-physical:

(22) **Top 10 Reasons to Donate Blood:**

1. Donating blood saves lives.
2. It is a good way to give back to your community.
3. The act of giving is selfless.
4. You receive a free mini-physical.
5. Every two seconds someone needs blood.
6. The blood supply needs constant replenishment.
7. One pint can help up to three people.
8. Most people are eligible to donate blood.
9. There is no substitute for human blood.
10. You will have someone's undying gratitude.

However, US Knoji lists eight reasons, only two of which may be said to be truly altruistic:

(23) If You're a Universal Donor, You Owe It To World To Donate Blood
Donating Blood Is Healthy
Donating Blood Is Personally Rewarding
Donating Blood=Incentives

Donating Blood Saves Lives
Donating Blood Increases Your Own Awareness of Cholesterol Levels
Donating Blood is Free
Donating Blood Makes You A Stronger Person (US Knoji)

In the same vein the US Lee Memorial Blood Center lists five reasons for giving blood but altruism is not at the top. In fourth place on the list, saving lives appears to be just one motive among many others:

(24) Giving Blood is Safe.
Giving Blood is Easy.
Giving Blood is Fast.
Giving Blood Saves Lives.
Giving Blood Helps Your Community. (US Lee Memorial)

The New York Blood Centers give pride of place to altruistic motives, starting with somebody enjoying good health after 50 transfusions:

(25) Thousands of men, women, and children need donated blood products each day, and this need could not be met without the dedication of volunteer blood donors. Current processing techniques allow a single blood donation, when separated into components, to help save at least three lives.
Your blood donations help treat cancer patients, traumatic accident and burn victims, newborn babies and mothers delivering babies, patients undergoing surgery, and many more. (New York Blood Centers)

The Ohio Community Blood Center highlights altruism, using the rather unusual terms *responsibility* and *caring* to characterise the relationship between the individual and the community:

(26) Blood donation is a community responsibility […]. About one in seven people entering hospital needs blood. Our blood supply comes from caring donors like you. […] It takes about one hour of your time. When you give blood, it gives someone another smile, another hug, another chance. It is the gift of life. (Ohio)

Stanford provides a list of reasons for giving blood without attempting to develop the topic of altruism that appears as one of several possible motives:

(27) **Can my one little donation really help?**
YES! Each individual donation can be separated into blood components (packed cells, plasma, cryoprecipitate) that can benefit multiple patients. Your donation helps save lives. (Stanford)

The US Military Blood Program, that collects blood from members of the military, unlike the US Armed Services Blood Program, that collects blood from civilians for the military, does not deal at length with altruism, but it is briefly mentioned:

(28) **Donors can**:
Save up to three lives with a single donation!
Give blood every 8 weeks or give platelets up to 24 times per year.
Help a fellow service member when they need it most.
(US Military Blood Program)

Rather than focus on motives, the US Military Blood Program provides organisational, scientific and technical information about blood groups, compatibility criteria, eligibility and deferral criteria, due to the fact that the blood donor discourse is a reflection of the specific institutional setting. In the military, it seems to be taken for granted that service personnel will donate blood as part of the ethos or community of practice. There is no reason to explain the need to come forward as a blood donor, since the entire military population potentially falls into this category. This lends further weight to Bhatia's argument

that to achieve an adequate characterisation of a particular genre, the institutional setting should be taken into account.

The University of Maryland Medical Center (UMMC) lists five reasons for giving blood, most of them altruistic:

(29) **Top 5 Reasons to Give Blood**
Your donation could save up to three lives.
Someone needs blood in the U.S. every two seconds.
A single car accident victim can require up to 100 units of blood.
It is the right thing to do, and will make you walk a little taller.
UMMC uses more than 36,000 units of blood a year. (US Maryland)

Finally mention should be made of the blood donor discourse of WHO, where the emphasis is on altruistic reasons:

(30) **Why should I donate blood?**
Blood is the most precious gift that anyone can give to another person – the gift of life. A decision to donate your blood can save a life, or even several if your blood is separated into its components – red cells, platelets and plasma – which can be used individually for patients with specific conditions. (WHO)

Concluding this overview of altruistic reasons in blood donor discourse, the focus now turns to argumentation based on enlightened self-interest.

3. Enlightened self-interest

In a number of cases there is an appeal to potential donors to reflect on the fact that one day they themselves may need blood donated by others. This should be distinguished from autologous donation, in which patients give blood for their own use in elective surgery. Enlightened self-interest features prominently in the South African appeal:

(31) **You could be next**
It's not a nice thing to consider, but the fact is that you, a close friend, or a family member could well be the next car accident victim or surgery candidate requiring a transfusion. Wouldn't it be good to know that our stock levels are adequate? (South Africa)

At the Lee Memorial Blood Center in the US, potential donors are informed that their blood is for the benefit of those within the Lee Memorial Community. Unlike blood donated to the Red Cross or the Armed Services, it is not allocated to a national blood bank:

(32) **Giving Blood Saves Lives**
Your donation will help ensure an adequate supply for both children and adults who are patients within Lee Memorial Health System.
Giving Blood Helps Your Community.
All donated blood stays to help the patients within Lee Memorial Health System. (US Lee Memorial)

An appeal to enlightened self-interest is to be found also in the case of a British donor who needed a life-saving transfusion following an accident. Here the line between donors and recipients is blurred: they are no longer conceptualised as separate categories but as a fuzzy set (Lakoff 1987: 22), since donors may themselves need donations in the future.

(33) Blood donor Doug Collier first donated at the young age of 17. In April 2012, Doug's lorry overturned and he was rushed to Wigan Infirmary where doctors battled for ten hours to save his life. (UK)

In Israel, enlightened self-interest is institutionalised in the MDA-Blood Insurance Program, with blood donors receiving a written guarantee that they and their family will receive blood when necessary, as Family Credit Donors (Titmuss 1970: 82):

(34) FOR ISRAEL RESIDENTS ONLY: All volunteer blood donors are offered the MDA-Blood-Insurance program, which grants further credit of blood for the donor and his/her immediate family members for one year following the donation. (Israel)

It is possible to characterise this as a gift relationship, as part of a mutual aid arrangement, based on the insurance principle, by which those who benefit from the system make a contribution. This brings to mind Malinowski's (1922: 167) observation about gifts and counter-gifts in the Western Pacific as "one of the main instruments of social organisation […] and the bonds of kinship".

4. Self-interest

It was initially expected that the institutional discourse would focus entirely on an appeal to altruism but this expectation was not confirmed by the data. As noted above, one strand of blood donor discourse deals with health benefits – for the donor, who receives a free health check. This is developed at great length on a number of blood donor websites, especially in the US. The following list of reasons to give blood begins with the offer of free juice and cookies, and continues with other supposed benefits such as the chance to lose weight and to be excused from heavy lifting, before reaching the point where the donor is placed "on an equal footing with the rich and famous". Paradoxically, an act that seems to be emblematic of altruism is motivated by a long list of self-centred considerations:

(35) **Top 10 Reasons to Give Blood**

The American Red Cross is constantly encouraging people to donate blood. That's why they came up with this list of the Top 10 reasons to give blood**.** Read their motivations, and see if any of them resonate with you.

1. You will get free juice and cookies.
2. You will weigh less – one pint less than when you leave than when you came in.
3. It's easy and convenient – it only takes about an hour and you can make the donation at a donor center, or at one of the many Red Cross mobile blood drives.
4. It's something you can spare – most people have blood to spare... yet, there is still not enough to go around.

5. Nobody can ask you to do any heavy lifting as long as you have the bandage on. You can wear it for as long as you like. It's your badge of honor.
6. You will walk a little taller afterwards – you will feel good about yourself.

[…]

8. It's something you can do on equal footing with the rich and famous – blood is something money can't buy. Only something one person can give to another. […] (US Give Spot).

The same line of reasoning appears on the Knoji Blood Donation website:

(36) **Donating Blood Is Healthy**
From a health standpoint, I can't think of a better way for people with high blood pressure, migraines, or high cholesterol to let go of some waste. I do it to help with my blood pressure and migraines, as unloading two pints of blood [sic] is the best way for me to relieve pressure in my brain and my body. Furthermore, donating blood changes the iron levels in your body, thus helping, and sometimes preventing, heart disease. […] Giving blood is one of the safest and easiest ways to reduce levels of iron to healthy levels. Also, giving blood decreases the risk for heart attacks in men. (US Knoji)

In genre theory terms, the Give Spot and Knoji texts display a degree of genre mixing between institutional discourse and media reports, so they may be considered of marginal interest here.

In addition to the institutional sources, this study also considered a selection of media reports that were found to focus overwhelmingly on self-interest, regardless of country of origin, as shown below:

(37) **Donating blood is as good for YOUR health as it is for the receiver**
Research discovered donating blood can help reduce the risk of heart attacks and cancer.
It has this effect by reducing iron levels which can thicken blood and increase free-radical damage.
Beneficial for weight watchers too as people burn 650 calories with every pint donated. (Media-6 Daily Mail UK)

(38) **Eight Benefits of Donating Blood. That You May Not Know About**
Blood donation is good for your health. It reduces the amount of iron in the body and reduces the risk of heart disease. According to studies published in the *American Journal of Epidemiology*, blood donors are 88% less likely to

suffer a heart attack. This is simply because when someone gives blood, iron is being removed from their system, which can significantly cut the risk of heart disease. (Media-1 Life Hack USA).

(39) **Donate blood regularly to stay healthy: Harsh Vardhan**
New Delhi, June 16: People can safeguard themselves against cancer and heart attacks by donating blood regularly. Union Health Minister Harsh Vardhan said at an event here Saturday on the occasion of the World Blood Donation Day. Urging people to donate blood more often, Harsh Vardhan said: "Regular blood donors, according to medical researchers, are 80 per cent less prone to diseases like heart attack, cancer, etc." (Media-11 India).

5. Strands of argumentation in the discourse

In each of the institutional appeals an attempt was made to identify the predominant strand of argumentation and the results are set out in the following matrix diagram. Although the discourse of altruism (upper left-hand quadrant) is predominant, the discourse of self-interest (upper right-hand quadrant) also plays a significant role, and enlightened self-interest (lower left-hand quadrant) is also well represented, along with a strand focusing on organisational, scientific and technical issues (lower right-hand quadrant).

ALTRUISM	**SELF-INTEREST**
Australia Bangladesh Hong Kong India Ireland Malta New Zealand Singapore Sri Lanka UK US Boston US Florida US Indiana US New York US Ohio US Maryland WHO	US American Red Cross US Red Cross Profiles US Give Spot US Knoji
ENLIGHTENED SELF-INTEREST	**ORGANISATIONAL / SCIENTIFIC / TECHNICAL ISSUES**
Israel South Africa US Lee Memorial	Finland Iceland Sweden US Armed US Military US Stanford

Figure 1. Primary focus of blood donor discourse in institutional texts.

Figure 2 shows the distribution of the various strands of argumentation in the media reports, revealing a sharp contrast with the institutional discourse. Whereas in the institutional discourse there was a focus on altruism as the main motivation for blood donors, with some attention to enlightened self-interest and organisational, scientific and technical information, in the media reports the focus was primarily on self-interest, mainly considering the health benefits for the donor rather than the recipient.

ALTRUISM	**SELF-INTEREST**
Media-9 Hull Daily Mail Media-12 Jamaican Gleaner	Media-1/ Media 2 Life Hack Media-3 Health.com Media-4 Health24.com Media-5 360 Blog Net Media-6 Daily Mail Media-7 Guest Blogger Matt Media-8 Dr Mercola Media-11 One India
ENLIGHTENED SELF-INTEREST	**ORGANISATIONAL / SCIENTIFIC / TECHNICAL ISSUES**
(None in this sample)	Media-10 Nigeria Daily Times

Figure 2. Primary focus of blood donor discourse in media reports.

6. Concluding remarks

This study investigated aspects of argumentation in the institutional blood donor discourse of a number of English-speaking countries and states, examining the strands of discourse based on altruism, enlightened self-interest and self-interest. Institutional and cultural variations were identified, not simply reflecting different national contexts, as in some instances cultural variation was identified also within the same national context. A stark contrast was evident between on the

one hand the discourse of the institutional actors, in which altruism tends to prevail, along with elements of enlightened self-interest, and on the other hand the media reports, where self-interest clearly predominates.

Healthcare professionals seeking to identify a judicious mix between the various motives to persuade blood donors to come forward to become regular donors might wish to compare their discursive practices with those characteristic of media reports as some mutual learning appears to be possible. Regardless of the specific approaches in the various national contexts, it is evident that public health information professionals need to continue to pay close attention to blood donor issues, also exploring the possibilities afforded by social media.[3] To conclude, the ongoing need for effective public health information is evident in this quotation from the Yelp review by a San Diego blood donor who was 'weirded out' not by the needles or the blood, but by the ignorance of potential donors:

(40) I gave blood on one of their busses today. It was clean. Staff were funny and friendly. [...] They give you juice and cookies after your blood donation. What weirded me out as I filled out the questionnaire, people were stopping by and asking HOW MUCH THEY'D GET PAID TO DONATE BLOOD, then walking away when they learned what donating meant. Donating means helping others in need because you're a good person and you want to make a difference, whether it's by GIVING your time, money or even blood. I don't know if it's true or just marketing, but the blood bank always says it has a blood shortage. So make a difference and donate blood today.[4]

3 Such as <https://www.facebook.com/nbts.srilanka>, 15 October 2014.

4 <http://www.yelp.com/biz/san-diego-blood-bank-san-diego5?osq=Blood+Donation> 14 October 2015.

References

Adams, Vincanne / Erwin, Kathleen / Le, Phuoc V. 2009. Public Health Works: Blood Donation in Urban China. *Social Science & Medicine* 68/3, 410-418.

Bhatia, Vijay K. 1993. *Analysing Genre: Language Use in Professional Settings*. London: Longman.

Bhatia, Vijay K. 1996. Methodological Issues in Genre Analysis. *Hermes, Journal of Linguistics* 16, 39-59.

Bhatia, Vijay K. 2004. *Worlds of Written Discourse: A Genre-based Approach*. London: Continuum.

Bhatia, Vijay K. 2005. Interdiscursivity in Business Letters. In Gillaerts Paul / Gotti, Maurizio (eds) *Genre Variations in Business Letters*. Bern: Peter Lang, 31-54.

Healy, Kieran 2000. Blood Collection Regimes and the European Union's Donor Population. *American Journal of Sociology* 105/6, 1633-1657.

Lakoff, George 1987. *Women, Fire and Dangerous Things. What Categories Reveal about the Mind.* Chicago: University of Chicago Press.

Malinowski, Bronislaw 1922. *Argonauts of the Western Pacific.* London: Routledge.

Piliavin, Jane Allyn / Callero, Peter L. 1991. *Giving Blood: The Development of an Altruistic Identity.* Baltimore: Johns Hopkins University Press.

Putnam, Robert 1995. Bowling Alone: America's Declining Social Capital. *Journal of Democracy* 6/1, 65-78.

Putnam, Robert 2000. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster.

Titmuss, Richard 1970. *The Gift Relationship: From Human Blood to Social Policy*. London: George Allen & Unwin.

Appendix 1. Source Texts (10 October 2014)

1. AUSTRALIA Australian Red Cross Blood Service <http://www.donateblood.com.au/why-donate/faq#faq_312>
2. BANGLADESH Bangladesh Red Crescent Society <http://www.bdrcs.org/donate-blood>
3. FINLAND Finnish Red Cross Blood Service <http://www.veripalvelu.fi/www/blood_donation>
4. HONG KONG Hong Kong Red Cross http://www5.ha.org.hk/rcbts/enarticle.asp?bid=9&MenuID=3#.U58pvPmSwx4>
5. ICELAND Blodbankinn <http://www.blodbankinn.is/blodgjafar/english/>
6. INDIA Blood Bank India <http://www.bloodbankindia.net/about_us.php>
7. IRELAND Irish Blood Transfusion Service <http://www.giveblood.ie/Become_a_Donor/Give_Blood/Why_Give_Blood/>
8. ISRAEL Magen David Adom <https://www.magendavidadom.org.au/support-mda/give-blood-in-israel/>
9. MALTA Ministry of Health <https://ehealth.gov.mt/HealthPortal/health_institutions/units/nbts/become_a_donor/why_should_i_donate_blood.aspx>
10. NEW ZEALAND New Zealand Blood Service / Te Ratonga Toto O Aotearoa <http://www.nzblood.co.nz/give-blood/donating/why-should-i-donate-blood/#.U58oRPmSwx4>
11. SINGAPORE Health Sciences Authority <http://www.hsa.gov.sg/publish/hsaportal/en/health_services/blood_donation/why_donate.html>
12. SOUTH AFRICA Blood Transfusion Service <http://www.wpblood.org.za/?q=tidbit/7-good-reasons-donate-blood>
13. SRI LANKA World Health Organization <http://www.who.int/features/2014/world-blood-donor-day/en/>
14. SWEDEN Geblud Nu <http://geblod.nu/blodgivning-in-sweden/>
15. UNITED KINGDOM Blood UK <http://www.blood.co.uk/giving-blood/why-give-blood/>
16. US AMERICAN RED CROSS <http://www.redcrossblood.org/donating-blood/why-donate-blood>
17. US AMERICAN RED CROSS TESTIMONIALS <http://www.redcrossblood.org/donating-blood/donor-community/donor-stories>
18. US ARMED SERVICES BLOOD PROGRAM

<http://www.militaryblood.dod.mil/Donors/can_i_donate.aspx
19. US BOSTON CHILDREN'S HOSPITAL <http://www.childrenshospital.org/~/media/About%20Us/Blood%20Donor%20Center/BCH_Walk_Pcard_2013_Back.ashx
20. US FLORIDA BLOOD CENTERS <http://www.wftv.com/news/news/9-reasons-for-donating-blood/nFCPF/>
21. US GIVE SPOT <http://www.givespot.com/lists/giveblood.htm>
22. US INDIANA <http://raiseyoursleeve.org/2011/06/16/top-10-reasons-to-donate-blood/>
23. US KNOJI <http://blood-blood-donation.knoji.com/why-donate-blood-8-reasons-why-you-should-give-blood/>
24. US LEE MEMORIAL BLOOD CENTER <http://www.leememorial.org/bloodcenter/reasons.asp>
25. US NEW YORK BLOOD CENTER <http://nybloodcenter.org/donate-blood/become-donor/>
26. US OHIO COMMUNITY BLOOD CENTER <http://givingblood.org/donate-blood/where-to-donate.aspx>
27. US STANFORD BLOOD CENTER <http://bloodcenter.stanford.edu/donate/faqs.html>
28. US UNITED STATES MILITARY BLOOD PROGRAM <http://www.militaryblood.dod.mil/Donors/about_blood.aspx
29. US UNIVERSITY OF MARYLAND MEDICAL CENTER <http://umm.edu/about/blood-drives/top-5-reasons-to-give-blood>
30. WORLD HEALTH ORGANIZATION <http://www.who.int/features/qa/61/en/>

Appendix 2. Media Reports on Blood Donation (10 October 2014)

1- Bradbury, Amanda. Eight Benefits of Donating Blood <http://www.lifehack.org/articles/lifestyle/8-benefits-donating-blood-that-you-may-not-knowabout.html?utm_source=post&utm_medium=blooddonationis good foryourhealth&utm_campaign=innerlink>
2- Abialbon, Paul. Five Health Benefits of Donating Blood <http://www.lifehack.org/articles/lifestyle/5-health-benefits-donating-blood.html>

3- Swalin, Rachel, 4 Unexpected Benefits of Donating Blood <http://news.health.com/2014/06/13/4-unexpected-benefits-of-donating-blood/>
4- Cabuco, Janelle. The Health Benefits of Donating Blood <http://www.health24.com/Lifestyle/Your-Blood/The-health-benefits-of-donating-blood-20140610>
5- Sarajean. Ten Reasons to Give Blood <http://360blog.net/article/10-reasons-give-blood>
6- Robertson, Emma. Donating blood is as good for YOUR health as it is for the receiver. *Daily Mail.* <http://www.dailymail.co.uk/health/article-2333882/Donating-blood-good-YOUR-health-receiver.html >
7- Guest Blogger Matt. 3 Big Reasons to Donate Blood <http://staywellblog.walgreens.com/medicines-pharmacy/blood-donation/>
8- Dr Mercola. The 'Selfish' Reason to Donate Your Blood <http://articles.mercola.com/sites/articles/archive/2012/09/01/too-much-iron.aspx>
9- Wright, Emma. New Year's Resolution. *Hull Daily Mail.* <http://www.hulldailymail.co.uk/Make-New-Year-s-Resolution-blood-like-supergran/story-20371300-detail/story.html>
10- Adejoro, Lara. Why Do Blacks Not Donate Blood? *Nigeria Daily Times*, 25 May 2014. http://www.dailytimes.com.ng/article/why-do-blacks-not-donate-blood
11- Vardhan, Harsh. Donate Blood Regularly to Stay Healthy http://news.oneindia.in/health/donate-blood-regularly-to-stay-healthy-harsh-vardhan-1466583.html
12- The Gleaner. Give Blood, Save a Life. *Jamaica Gleaner*. 11 June 2014. <http://jamaica-gleaner.com/gleaner/20140611/lead/lead4.html>

MARELLA MAGRIS / DOLORES ROSS*

Gender Dysphoria: How do Specialized Centers Communicate to Potential Patients?

1. Introduction

In the last two decades, Applied Linguistics and Translation Studies can be said to have experienced a similar shift: both disciplines have increasingly extended their focus of attention on social questions. It is true that the purpose of Applied Linguistics has always been "to solve or at least ameliorate social problems involving language" (Davies 1999: 1): but it is especially with the relatively new branch of Critical Applied Linguistics that issues such as identity, sexuality and power have become central questions to be addressed (Pennycook 2004: 785). Similarly, also Translation Studies have been more and more concerned with social factors involved in translation, with the translator's social responsibility and issues of translation ethics (see for instance Pym 2006, Baker/Maier 2011). The 'ethics of difference' (Venuti 1998) has become a fundamental concept which has opened up many new lines of enquiry and has also influenced the authors of the present chapter. Being particularly interested in matters concerning human rights and vulnerable subjects, we have recently started to investigate communication to disabled people in three languages, i.e. Italian, Dutch, and German (see Magris forth.; Magris/ Ross forth. a, b). In this chapter, we will present a new pilot study involving another group of subjects, i.e. people with gender dysphoria and transsexualism. More precisely, we will focus on texts published

* The introduction and conclusion were written jointly by both authors. In the remaining sections, Marella Magris was responsible for the observations on Italian and German, Dolores Ross for those on Dutch.

on the websites of Italian, German and Dutch hospitals and other specialized centers, which are meant as a first source of information on this condition and on the range of possible treatments. The aim of the analysis is to identify possible cultural differences in the communicative styles employed to deal with such sensitive matters.

While in the past, society only recognized the binary distinction between two sexes, it is now gradually accepting the variety that exists in real life. However, there is still a long way to go, and people who do not conform to the traditional categories often continue to face stigma and discrimination. Communication is an important factor in the struggle for social acceptance. Moreover, this is one of the cases where language does not only express or reflect one's identity as a particular kind of social subject, but also contributes to constitute it (Pennycook 2004: 393). Against this background, translators, language experts, and other professional communicators may play a fundamental role in identifying and helping to spread the best linguistic and communicative practices. In the field of medical translation and interpreting, the ethical question has been highlighted, among other authors, by Montalt-Resurrecció/González Davies (2007) and by Angelelli (2004), who wrote the first study on the role of medical interpreters in hospital settings. In particular, we share the view of Montalt-Resurrecció and González Davies (2007: 22- 23) that one of the ethical priorities of the medical translator should be to promote understanding, respect and empathy towards specific groups of patients, and towards different cultural views on health.

2. Terminological issues

Before turning to the presentation of the analysis, some terminological clarification is necessary. As an area both characterized by medical progress and interdisciplinarity (psychology, medicine, psychiatry, social assistance, etc.) and affected by social change, the field of gender dysphoria provides a perfect example of rapidly evolving

terminology, with many neologisms, variation and controversial terms. As will be seen, the key term itself, *gender dysphoria*, is still open to debate. But first of all, a look will be taken at some basic concepts and their respective designations in the three languages of this study, Italian, German and Dutch. The starting point will be English terminology, as many of the reference works, guidelines and other documents have originated in English-speaking countries or are written in English. Here, reference will be made to the definitions contained in the guidelines of the American Psychological Association (2011):

> **Sex** refers to a person's biological status and is typically categorized as male, female, or intersex (i.e., atypical combinations of features that usually distinguish male from female). There are a number of indicators of biological sex, including sex chromosomes, gonads, internal reproductive organs, and external genitalia.
> **Gender** refers to the attitudes, feelings, and behaviors that a given culture associates with a person's biological sex. […]
> **Gender identity** refers to 'one's sense of oneself as male, female, or transgender' […].
> **Gender expression** refers to the 'way in which a person acts to communicate gender within a given culture; for example, in terms of clothing, communication patterns and interests. […]'
> **Sexual orientation** refers to the sex of those to whom one is sexually and romantically attracted. Categories of sexual orientation typically have included attraction to members of one's own sex (gay men or lesbians), attraction to members of the other sex (heterosexuals), and attraction to members of both sexes (bisexuals).

In Italian, these concepts are expressed by the terms *sesso, genere, identità di genere, ruolo di genere* and *orientamento sessuale*. English and Italian thus seem to show a significant terminological overlap: the only remarkable difference concerns the rendering of the concept of *gender expression* with *ruolo di genere* in Italian, which is defined as "tutto ciò che una persona fa o dice per indicare agli altri e a se stesso la propria connotazione sessuale: il grado della propria femminilità,

mascolinità o ambivalenza",[1] and which is used much more frequently than *espressione di genere*. In English, on the contrary, a further subdivision has been introduced, with *gender role* designating "the social expectation of how an individual should act, think and feel upon one's assigned gender" (LGBT Resource Center). This distinction is only gradually gaining ground in Italy; for the time being, *ruolo di genere* is generally used with the above-mentioned meaning, and not as a direct equivalent of *gender role*.

The German and Dutch terminologies are more complicated. In German, there are not two different words to distinguish between sex and gender: *Geschlecht* is widely used to express both concepts, although the loan word *Gender* has been introduced to designate the social aspect. In the compound nouns referring to identity and role, both elements – *Geschlecht* and *Gender* – are used, with the more 'ambiguous' terms, *Geschlechtsidentität* and *Geschlechtsrolle*, being much more widespread than the more precise hybrid forms *Genderidentität* and *Genderrolle*. Other possible alternative terms, such as *Genus-Identität*, are very seldom used (25 occurrences on Google.de): the word *Genus*, in fact, is mainly restricted to the grammatical domain. The concept of sexual orientation is expressed by *sexuelle Orientierung*, *Sexualorientierung or Geschlechtsorientierung*.

Dutch uses the words *sekse* or *geslacht* to refer to the biological differences between man and woman and, more recently, the loan word *gender* to refer to the social, psychological and cultural aspects related to being man or woman. This term also appears in many compounds such as *genderchirurgie*, *genderteam*, *genderkliniek*, *genderkenniscentrum*, *genderzorg*. Obviously, the new term *gender* has not been systematically introduced as there existed already several compounds with *geslacht*. Therefore, as in German, the distinction between the two concepts becomes sometimes blurred in compound nouns, where *geslacht* is used to express not only the biological sex, as in *geslachtshormonen* and *geslachtsaanpassende behandeling*, but also the cultural and psychological aspects, as in *geslachtsidentiteit.*

1 Everything that someone does or says in order to show to others and to themselves their specific sexual nature: the degree of their femaleness, maleness or ambivalence, <http://www.agedocuneo.it/comprendere-per-rispettare>.

At any rate, the importance of the concept of gender in the Netherlands is also demonstrated by the replacement, in the Nineties, of most academic *vrouwenstudies* (women's studies) by *gender studies*. As for other 'synonyms', in legal language the term *kunne* is also used, which is an old word for *sekse***.** Finally, like German, Dutch has the term *genus*, but this is not really a viable alternative, as it is usually restricted to its grammatical or biological sense. G*enderrol* and the less common *geslachtsrol* are the equivalents of *gender expression*, whereas *seksuele geaardheid* and – less frequently – *seksuele oriëntatie* designate the concept of sexual orientation.

The combination of the above mentioned factors (sex, gender identity etc.) can give rise to a wide range of possible situations. Here we will focus on the cases when one's gender identity and biological sex are not congruent, and we will refer to these situations of 'mismatch' as *gender dysphoria*. This is the term adopted in the latest (5th) edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM, the standard reference work in this field, APA 2013), which replaces the older term, *gender identity disorder*, used in the 3rd and 4th editions.

This change is by no means casual and aims to avoid stigmatizing effects. Indeed, the term *gender identity disorder* is often considered offensive, as it labels affected people as 'disordered', as 'mentally ill'. One could argue, of course, that the choice of keeping these conditions in a manual of mental disorders is per se stigmatizing. However, as the members of the Sexual and Gender Identity Disorders Work Group of the manual have pointed out, removing the condition as a psychiatric diagnosis altogether could jeopardize access to treatment (see Lescher 2013): the diagnosis is necessary for affected people to claim coverage for surgery, counseling and other treatments on their private or public health cover. So, while the term *gender identity disorder* stresses the incongruence between biological sex and gender identity, the new one emphasizes the discomfort, the distress as necessary feature to diagnose the condition: in fact, dysphoria originally means "a state of unease or generalized dissatisfaction with life" (OED). It must be noted, however, that *gender dysphoria* is not uncontroversial either. First of all, it is not a new word: as a matter of fact, it was introduced in 1973 by Norman Fisk and is now considered

'obsolete' by some authors (Motmans *et al.* 2009: 26). The DSM has therefore not coined a neologism, but has rather recycled an existing word. Secondly, this term also has been criticized for not being neutral, already before the release of the 5th edition. The World Professional Association for Transgender Health (WPATH) has begun to stigmatize this term, arguing that it contributes to pathologizing the phenomenon: what actually is a difference, is considered as a disease or disorder. The term *dysphoria*, in other words, is not respectful for the transgender otherness (Motmans *et al.* 2009: 24). However, the DSM work group chose this word exactly because it helps to make clear that the incongruence is not in itself a disorder: the crucial element to make such a diagnosis is the presence of clinically relevant distress associated with it.

The Italian (APA 2014a) and Dutch (APA 2014b)[2] translations of the manual use the terms *disforia di genere* and *genderdysforie*, respectively; while the German translation introduces *Geschlechtsdysphorie*. At present, it is too soon to evaluate the success of the DSM terminological proposal. For the time being, we can only observe that the three languages seem to have reacted differently to the new terms, at least as far as their use in web communication is concerned. As our analysis has shown, in Italian the terms *disturbi dell'identità di genere* (with the corresponding initials *DIG*) and *disforia di genere* are now often used as synonyms, sometimes in the same text, and most of the time without conceptual differentiation. See for instance the following excerpt, taken from a report on a symposium on the subject:

(1) Disturbo dell'Identità di Genere: la Disforia di Genere è una patologia dall'eziologia, dall'inquadramento e dalla valutazione estremamente complessi.[3]

In German, *Geschlechtsdysphorie* has not caught on very much, at least so far, and is considered a controversial term by some people.

2 The Dutch translation of the 5th edition of the DSM manual, published in 2014, is the first translation of the handbook for a Dutch public.

3 Gender Identity Disorder: Gender Dysphoria is a disorder whose etiology, classification and assessment are extremely complex, <http://www.stateofmind.it/tag/disturbo-dellidentita-di-genere-disforia-di-genere/>

One of the reasons is that in the German-speaking area the term *Dysphorie* has long been used to designate a condition of bad mood[4] and is associated with strong pessimism, a tendency to overcriticize and to isolate oneself (see for instance Nieder *et al.* 2013: 376).

In Dutch, on the contrary, the term *dysforie* has become very common, at least in specialized information. This is also demonstrated by the existence of compounds such as *genderdysforiepatienten* and by the creation of the corresponding adjective, as in *genderdysfore kinderen*. In explanations of the term, however, the older synonym *genderidentiteitsstoornis* is often used. The compound *geslachts-dysforie* is another, uncommon, synonym for *genderdysforie*.

Other two terms that need some clarification are *transgender* and *transsexual*. *Transgender* is usually considered the hyperonym, an umbrella term for all people who identify with or express a gender different than the one they were assigned at birth, for whom therefore gender incongruence applies. Along with *gender diversity* and *gender variance*, *transgenderism* is considered a neutral and appropriate designation. *Transsexual* or *trans people* are persons within this broad category who have a persistent desire to live according to their gender identity, rather than their biological sex. Transsexualism is sometimes seen as the 'most extreme form' of transgenderism. Transsexual people often undergo some kind of treatment (surgical, pharmacological etc.) to change their bodies in order to make them more consistent with their gender identity. Although this distinction is also drawn in the DSM, some people keep the two terms clearly separate and do not consider one as a superordinate of the other. Also for this word pair, therefore, a definite consensus has yet to be reached.

Both Italian and German use the loan word *transgender* and the loan translations *transsessuale – transsexuell*. German, however, has also coined other terms, exploiting its ample possibilities of composition. The words *Transidentität* and *Transident*, for instance, foreground the aspect of gender identity and make clear that transsexualism is not a matter of sexuality. But these terms are not

4 The *Roche Lexikon Medizin* defines the term as "die banale Alltagsverstimmung. Aber auch krankhafte Stimmungen bei hirnorganischen Erkrankungen".

universally accepted either: some people prefer another neologism, *Transgeschlechtlichkeit*, while others propose *Trans** (pronounced *Trans Sternchen* when read aloud) as an umbrella word covering all forms of gender variance (cf. Nieder *et al.* 2013: 374-375). In Dutch *transseksueel and transgender* are very common. The latter is also used as first term in compounds (*transgendertraject*) or as an attribute in noun groups (*transgender personen*) and can be combined with the suffixes *-isme* and *-ist* (*transgenderisme*, *transgenderist*). Shortened forms such as German *Trans** do not seem to be used, whereas *transman* and *transvrouw* are very common. Dutch has created the neologism *transidentiteit* as well, but this term seems to have a lower frequency than in German.

3. The study: communicative styles in three countries

The first step in order to investigate communication directed to people with gender dysphoria was the selection of websites of Italian, German and Dutch hospitals and clinics specialized in the treatment of this condition. As the therapeutic options can vary depending on the individual needs of the subjects, it was decided to focus on the major centers offering the complete range of treatments, including sex reassignment surgery (SRS), i.e. procedures that change a person's external genital organs from one sex to another. This surgery is called *riassegnazione* or *riattribuzione chirurgica del sesso* (*RCS*) in Italian, *geschlechtsangleichende*/*geschlechtsanpassende Operation* (*GAOP*) in German, and *geslachtsaanpassende behandeling* (*GAB*) or, more specifically, *geslachtsaanpassende operatie* (GAO) in Dutch. Of course the protocols are different depending on the type of surgical intervention (male-to-female or female-to-male) and vary from hospital to hospital, but on the whole they mostly follow the guidelines developed by international and national bodies (see for instance the WPATH Standards of Care for the Health of Transsexual, Transgender and Gender-Nonconforming People, as well as the

national guidelines issued in Italy by the Osservatorio Nazionale sull'Identità di Genere [ONIG] and in Germany by the Deutsche Gesellschaft für Sexualforschung, the Akademie für Sexualmedizin and the Gesellschaft für Sexualwissenschaft; the Netherlands follow the international treatment protocol established by WPATH, with some minor adaptations by the Dutch Health Council).[5] Medical treatment, as defined by the Standards of Care, is focused on reducing distress caused by gender dysphoria, not on attempts to modify gender identity (Motmans *et al.* 2009: 24). Broadly speaking, most protocols are subdivided into four phases:

- Psychological/psychiatric assessment. During this phase, the suitability of the treatment for the individual patient is evaluated taking into consideration his or her history and specific condition. Not in every country a psychiatric assessment is required: in the Netherlands, for instance, psychological counseling will suffice in several cases;
- Hormone therapy and real life experience. During this phase, cross-sex hormones are administered and the patient gets acquainted with the new gender role, with the assistance of social workers;
- Sex reassignment surgery;
- Follow-up.

Italy is considered one of the leading countries in Europe in the field of sex reassignment surgery,[6] with approximately a dozen hospitals providing this kind of treatment. However, when it comes to communication, at least to online communication to the public, the picture changes. Our search for dedicated websites yielded very limited results: only three public clinics (Bari, Bologna and Rome) offer some kind of information to potential patients, while the others can only be contacted by phone or e-mail.

---

5 Gezondheidsraad, <http://tonderzoek.files.wordpress.com/2007/02/factsheet-transgender-van-paul-vennix.pdf>.

6 <http://www.italiasalute.it/3620/Italia-all'avanguardia-per-chirurgia-transessuale.html>.

In Germany there is approximately the same number of hospitals and clinics providing sex reassignment surgery. Starting from some lists available on the Internet, 13 centers (both public and private) were identified. But again, the consultation of the websites led to rather similar findings as for Italy: only four of them include detailed information, while six hospitals just mention *geschlechtsangleichende Operationen* or similar terms among their treatments; in the remaining three cases, no mention at all can be found. In Italy and Germany, therefore, this field of medical intervention still appears to be covered by taboos or at least affected by lack of communication.

In the Netherlands there are only two public clinics and information centers: this is in line with the growing tendency to concentrate highly specialized medical assistance in few centers of excellence. The most important clinic is the Centre for Knowledge and Health Assistance on Gender Dysphoria, belonging to the VUmc (Medical Centre Free University of Amsterdam). There is also a smaller gender unit belonging to the University Medical Center of Groningen (UMCG).[7] In both clinics the whole process of diagnosis, assistance and treatment is performed by a gender team, i.e. a group of professionals from various disciplines: psychologists, psychiatrists, endocrinologists, plastic surgeons, gynaecologists and specialists from other medical fields.

The VUmc website is very detailed and information is well structured. The site has on its left side eleven clickable titles (including 'FAQs and waiting time', 'what is gender dysphoria', 'diagnostics', 'operations', 'patient brochures') and also gives a short overview of the site contents:

(2) Op deze website vindt u:
- algemene informatie over diverse begrippen, zoals bijvoorbeeld genderdysforie en transseksualiteit
- informatie over de teams binnen het Kennis- en Zorgcentrum voor Genderdysforie
- informatie over de werkwijze van het Kennis- en Zorgcentrum voor Genderdysforie

7 See: www.umcg.nl, click on 'organisatie' and then on 'specialismen', 'genderteam'.

- informatie over de behandelrichtlijnen en behandelmethoden van het Kennis-en Zorgcentrum voor Genderdysforie[8]

The site presents ten patient brochures, varying in length from 10 to 20 pages, some of which with a glossary, and there is also a completely electronic brochure. It must be kept in mind that the VUmc gender clinic is a 'Kennis-en Zorgcentrum', a center not only for health care but also for knowledge transmission. In the past twenty-five years the Netherlands have seen an enormous increase in the number of knowledge centers. They are government-funded and their aim is to gather and disseminate information and knowledge in different social and economic sectors, such as health, education, environment. The principal deliverable of these knowledge centers is the creation and continuous update of a website (Ketting 2002: 10).

The site of the UMCG gender team (Groningen) is less elaborate, with less information than the website of the Amsterdam gender clinic, but it has a detailed and easy-to-read 18 page brochure, and the overall information seems to be satisfactory.

These first findings can already give a hint about cultural differences in the perception of transsexualism and other forms of gender variance in the three countries involved, and also about different perspectives on communication. So, in spite of the limited number of websites, it was decided to go on with the analysis of the texts in order to collect some preliminary data, to be verified in the future by contacting the hospitals and examining other text types. In this first phase, the analysis was focused on the collected texts, and did not cover other aspects, such as layout, images, audiovisual material etc., which will be dealt with in a second stage of the study.

---

8 On this website you find:
- general information on different concepts including gender dysphoria and transsexuality
- information on the teams working in the Centre for Knowledge and Health Assistance for Gender Dysphoria
- information on the working procedures of the Centre for Knowledge and Health Assistance for Gender Dysphoria
- information on treatment methods and protocols of the Centre for Knowledge and Health Assistance on Gender Dysphoria

The text analysis has indeed revealed a number of features that can be attributed to different communicative approaches, and that seem to confirm the results of our previous studies in the health sector (see Magris/Ross 2012, Ross/Magris 2012). The Italian texts are characterized by a high degree of technicality and can be described as doctor- rather than patient-centered. They focus mainly on the transmission of factual information without showing awareness of the different cultural and technical background of the potential readers; much less attention is paid to interpersonal interaction. The German and Dutch texts, on the contrary, are more geared towards their potential readers and are probably the result of an intra-linguistic translation and/or adaptation of more complex texts.

In the Italian texts, many descriptions show a high density of terms, typical of a communication between experts and not suitable for informing potential patients. The following excerpts, where we have underlined the more technical terms, exemplify this point:

(3) Il lembo, di forma rettangolare, viene successivamente tubulizzato per formare il neo-fallo e trapiantarlo in regione pubica dove viene inserito sopra un piccolo lembo cutaneo di forma triangolare creato sul pube per allargare la base di impianto. Come il lembo prelevato dall'avambraccio, anche questo viene trasferito con tecnica microchirurgica eseguendo microanastomosi arteriose, venose e nervose. (Azienda Ospedaliera San Camillo-Forlanini, Roma)

(4) Intervento chirurgico in soggetti ginoandroidi: L'intervento di adeguamento prevede due fasi fondamentali. La prima consiste nell'intervento di mastoplastica, attraverso il quale si ottiene il rimodellamento del torace, con l'eliminazione delle ghiandole mammarie e dei seni. Successivamente l'intervento sui genitali, detta istereannessectomia prevede l'asportazione di utero ed ovaie, alla quale seguirà la fase ricostruttiva. Per ciò che concerne il modellamento del neofallo, esistono differenti opzioni, la fallo plastica con lembo infraombelicale, come la fallo plastica con lembo antibrachiale, e nuove tecniche, prevedono il confezionamento del neofallo a seguito dell'asportazione di un lembo di tessuto irrorato da addome, braccio o ultimamente anche coscia. (Policlinico Giovanni XIII, Bari)

Although these two passages do include some explanations, they cannot be considered really easy to understand for a non-specialist. First of all, they are highly characterized by a nominal style, which

does not seem particularly user-friendly. Moreover, several terms, especially the multi-affixed forms, lack any transparency for non-expert readers. Just consider the verb *tubulizzare* or the noun *micro-anastomosi* in example (3), and the adjectives *infraombelicale* and *antibrachiale* in (4). Another possible source of comprehension problems is the title of (4), *Intervento chirurgico in soggetti gino-androidi*. To express this key concept, i.e. the 'direction' of surgical reassignment, the Italian language uses either the (Greek-Latin) adjectives *ginoandroide/androginoide* or the English abbreviations *FtM/MtF*, and has not created – at least so far – clear and simple labels, as the two Germanic languages have done (German: *Mann-zu-Frau-* and *Frau-zu-Mann-Operationen*; Dutch: *man-naar-vrouw operatie* and *vrouw-naar-man operatie*). As discourse specialist Renkema puts it, "a text can fail on the comprehensibility dimension when a writer puts too little effort into adjusting to the reader's knowledge level" (2004: 183). The Italian texts seem to remain stuck in the horizontal dimension of specialist communication and do not exploit the vertical stratification of LSP.

For other concepts as well, the Italian texts use abbreviations, acronyms and English loan words without providing the full forms or an Italian equivalent. In one website, for instance, mention is made of an *intervento di SRS*. Acronyms and shortened forms are typical for communication between experts, but they are not quite recommendable for communication with laymen. Moreover, the decodification of the initials is further complicated by the foreign origin of the term.

In the German and Dutch texts, on the contrary, many instances of de-terminologisation can be found, that is "the process of recontextualisation and reformulation of specialized terms aiming at making the concepts they designate relevant to and understandable by a lay audience" (Montalt/Shuttleworth 2012: 16). Traditional terminology of Greek and Latin origin is not completely avoided, as it can be even useful for educational purposes, which are an important feature of patient brochures (Montalt-Resurrecció/González Davies 2007: 31), but it is often accompanied by detailed and understandable explanations. In the following examples in German, terms of Latin and Greek origin are preceded by paraphrases (5), and the reader is also provided with an explanation of the adjective *frei* in its technical meaning (6):

(5) Dieser Eingriff dauert etwa sieben bis neun Stunden und beinhaltet:
- die Entfernung der Brüste (Mastektomie)
- die Entfernung der Gebärmutter (Hysterektomie)
- die Entfernung der Eierstöcke und Eileiter (Ovarektomie, Adnektomie)
- die Entfernung der Scheide (Kolpektomie) (Klinik Sanssouci Potsdam)

(6) Operationsschritt zur Penoidkonstruktion:
- Aus freiem Unterarmlappen oder
- aus freiem Unterschenkellappen mit Anteilen des Wadenbeins zur Versteifung mit eigenem Gewebe (Fibula-Knochen)

Frei bedeutet, dass das Gewebe vom Unterarm oder vom Unterschenkel bei der Operation unter dem Operationsmikroskop an die Blutgefäße in der Leiste angeschlossen werden muss. (Praxisklinik München)

Another widely used strategy is to combine erudite terms with their more popular synonyms. This is a field where the Germanic languages have a long tradition, having largely borrowed from Latin in the course of their history. As a matter of fact, both Romance and Germanic languages preserve in their lexicon "a multi-layered record of historical contacts" (Green 1990: 118). But the lexis of the Germanic languages has been enriched with extensive loanwords from Latin, with an admixture from Greek, either directly transmitted or through the influence of French and English (Hawkins 1990: 75, Finegan 1990: 81, Kooij 1990: 140), thus creating a fairly remarkable split in the vocabulary of these languages between popular and learned words. This is also clear in our corpus. Compared to Italian, the two Germanic languages clearly exploit their double-layered terminology: in German, for instance, almost every term of Latin or Greek origin has a synonym of vernacular origin (Puato 2011: 119), which is often built by substituting the erudite roots, prefixes and/or suffixes with their 'inherited' counterparts. In communicating with patients, the use of these 'doublets' can enhance comprehension and have an educational effect: "Die Arterien (Schlagadern) und Venen (Blutadern) […]", "Faszien (Bindegewebshüllen)", "Urethra (Harnröhre)" are just a few examples from the analyzed websites. In other cases, the term of Latin or Greek origin is directly replaced by its more understandable synonym. The following sentence, for instance, avoids *Urethra* altogether and uses only *Harnröhre:* "Häufig kann das Prob-

lem mit einem durch die Harnröhre geführten endoskopischen Eingriff beseitigt werden".

The Dutch texts show even greater efforts towards ease of comprehension and educational style. The following excerpt from a patient brochure on laparoscopic surgery contains very short sentences with simple syntax, word repetitions and explanations of terms in plain language.

(7) De gynaecoloog voert een laparoscopische operatie uit via kleine sneetjes van ongeveer één centimeter in de buikwand. Door een van deze sneetjes wordt een laparoscoop in de buik gebracht: dat is een lange dunne buis waar men doorheen kan kijken. Het beeld wordt meestal weergegeven op een beeldscherm, de monitor. Via de andere sneetjes worden instrumenten ingebracht waarmee geopereerd wordt. De operatie is voor de medewerkers op de monitor te volgen. Er bestaan verschillende redenen om een laparoscopische operatie te adviseren. De meest voorkomende worden in deze brochure besproken. (VUmc)[9]

Example (8) as well is geared towards informing and educating lay readers. See for instance the explanation of the term *hormones* in this excerpt:

(8) Behandeling met geslachtshormonen
Hormonen zijn stoffen die op een bepaalde plaats in het lichaam worden gemaakt (de hormoonklier), aan het bloed worden afgegeven en elders in het lichaam hun effect uitoefenen. De geslachtshormonen zijn testosteron en oestradiol. Zij worden zo genoemd, omdat zij in de geslachtsorganen worden gemaakt en verantwoordelijk zijn voor de ontwikkeling van het lichaam in mannelijke of vrouwelijke richting. (VUmc)[10]

---

9 The gynaecologist performs a laparoscopic operation by making small incisions of about 1 cm in the abdomen. Through one of these small incisions a laparoscope is introduced into the abdomen: this is a long, thin tube enabling the doctor to look into the abdomen. The image is mostly projected on a screen, on the monitor. Through the other incisions instruments are inserted for surgical purposes. The operation can be followed on the monitor by the team members. There are several reasons why laparoscopic surgery could be advised. The most important ones are discussed in this brochure.

10 Treatment with sex hormones.
Hormones are substances produced in a particular place in the body (hormone gland), they are released into the blood and have an effect elsewhere in the

There are only one Italian and one German website providing glossaries of key terms. These glossaries, however, do not cover all specialized terms contained in the texts, they force the reader to interrupt the reading process and definitely do not represent a reader-friendly alternative to lexical clarity of texts. We think that greater attention should be paid to terminological issues, as the terminology of this specific domain includes many neologisms and – as already seen – controversial terms. The Dutch sites seem more aware of the need for efficient communication with the lay public and potential clients. Some of the VUmc patient brochures include glossaries of difficult terms, but the descriptions given in the text are already quite clear in themselves and difficult terms are systematically explained. We have the impression that the authors of the site have made special efforts to guarantee proper communication, as this subject touches on quite delicate questions.

Other substantial differences regard the interpersonal function of the examined texts. The Italian texts are quite impersonal: they never directly address potential readers and refer to them in the third person as *persona, soggetto* and the like. Sometimes their style shows a tendency towards 'officialese': *il paziente viene preso in carico* is just an example. Moreover, they often tend to emphasize possible practical difficulties and negative consequences, as shown by the following passages. Example (9) highlights the difficult and long procedures necessary to gain access to SRS and to obtain the necessary authorization by the Court.

(9) Il transessuale deve percorrere un iter medico legale molto lungo e faticoso prima di essere candidato all'intervento di riassegnazione chirurgica del sesso che prevede l'interazione con diversi specialisti quali urologi, ginecologi, endocrinologi, chirurghi plastici, psicologi ed ovviamente l'autorità giudiziaria che autorizza il cambio di identità e quindi l'intervento chirurgico. (Università di Bologna)[11]

---

body. Sex hormones are testosterone and estradiol. They are so called, because they are produced in the sex organs and are responsible for the development of the body in the male or female direction.

11 Before being eligible for sex reassignment surgery, the transsexual must undergo a very long and difficult medico-legal procedure, which involves

It must be pointed out, however, that these difficulties are specific to the Italian situation. In Germany and the Netherlands, no court judgment is needed: in Germany two psychological assessments are required, while in the Netherlands the decision is taken by the gender team, which includes physicians from different specialities as well as a psychiatrist. The absence of similar passages in the Dutch and German texts, therefore, might be due not only to differences in communicative style, but also (and perhaps more prominently) to the legal context of the surgical intervention.

The next Italian example, on the contrary, is not related to any national specificity, as it points to the side effects, stressing that they can be minor, but also very serious and even life-threatening. Of course, it is fundamental to inform the reader about risks and complications, but not necessarily in such a way as to discourage potential patients.

(10) Alcuni effetti collaterali, sia psichici che fisici, possono essere di scarsa rilevanza mentre altri possono essere gravi sino a mettere in pericolo la vita stessa della persona (p.es. depressione, tromboembolia polmonare). (Azienda Ospedaliera San Camillo-Forlanini, Roma)[12]

The German and Dutch texts are more personal and almost seem to be written in a dialogical style. They quite often address the readers with the polite pronouns *Sie* and *u*, respectively. While in German *Sie* corresponds to the standard form used in web communication, in Dutch *u* might seem a formal choice, as in most contexts the second person singular pronoun *jij/je* is used, but it may have been chosen to express respect towards people with this condition.

(11) Wir bevorzugen es, wenn Sie sich an unserer Klinik ambulant vorstellen. Dies ermöglicht, die Details der Operation ausführlich persönlich zu besprechen.

---

interaction with various specialists, such as urologists, gynaecologists, endocrinologists, plastic surgeons, psychologists, and of course with the court authority responsible for approving the gender reassignment procedure and the surgical intervention.

12 Some side effects, both psychological and physical, can be minor, while others can be serious and even life threatening (e.g. depression, pulmonary embolism).

Sie können sich umfassend informieren und wir Ihre Fragen beantworten. (Markus-Krankenhaus Frankfurt)

(12) Na een zorgvuldige en uitvoerige overweging neemt het Genderteam de beslissing of u voor een geslachtsaanpassing in aanmerking komt. Uw lichamelijke geslacht kan in een driejarig traject (achttien maanden preoperatief en achttien maanden postoperatief) worden aangepast aan uw genderidentiteit. (UMCG)[13]

The German and Dutch texts also tend to be much more empathetic, not only in their communication mode but also through their identification with the patients' experiences: the German text passage in (13), for instance, describes the intervention as an important contribution to overcoming the ill fate of gender mismatch. In the Dutch excerpt in (14), the authors show a deep understanding of the many individual experiences of being transsexual and of the difficulty of coping with it.

(13) Bei gesicherter Diagnose und Indikationsstellung kann die Operation so einen wichtigen Beitrag zur individuellen Bewältigung dieses schweren Schicksals leisten. (Klinik München-Bogenhausen)

(14) Tenslotte heeft u vele jaren geleefd in een voor u ondraaglijke situatie en heeft u zich in tal van bochten moeten wringen om u staande te houden in uw leven. Enerzijds zien we dat patiënten vaak jarenlang vermijdingsgedrag hebben laten zien en niet in staat zijn om diepgaande contacten te onderhouden met andere mensen. Anderzijds zien we patiënten die soms zo hard proberen zich aan te passen aan het biologische geslacht, dat zij kenmerken van extreem gedrag vertonen. Elke patiënt heeft zijn/haar eigen specifieke geschiedenis ten aanzien van de rol van genderdysforie. (UMCG)[14]

---

13 After long and careful consideration, the Gender team decides if you are eligible for sex reassignment treatment. Your biological sex can be adapted to your gender identity in a 3-year process (with an eighteen-month preoperative and an eighteen-month postoperative phase).

14 You have been living for many years an intolerable situation going to great pains to stand upright in life. On the one hand, we see patients who have shown avoidance behavior for many years, not being able to enter in real contact with other people. On the other hand, we see patients who sometimes try so hard to come to terms with their biological sex, that they show features

Another common trait of German and Dutch texts is that they appear to be much more reassuring than the Italian ones. In German, emphasis is often placed on the possibility of achieving good, sometimes even excellent, results, thanks to well-tested surgical techniques:

(15) Mann-zu-Frau-Operationen sind inzwischen zu standardisierten Eingriffen herangereift, die bei sorgfältiger Indikationsstellung und guter Vorbereitung in mehr als 80 Prozent der Fälle nach ein oder zwei Operationen zu guten funktionellen und kosmetischen Ergebnissen führen. (Markus-Krankenhaus Frankfurt)

(16) Operative Geschlechtsangleichungen bilden heute einen legitimen Bestandteil der urogenitalen und plastisch-rekonstruktiven Chirurgie und können sowohl bei Mann-zu-Frau- als auch bei Frau-zu-Mann-Transsexualität mit kosmetisch und funktional hervorragendem Ergebnis ausgeführt werden. (Klinik München-Bogenhausen)

The Dutch texts put special emphasis on the competence and multidisciplinary composition of the staff, as well as the intense collaboration between its members. They convey the idea that the patient will be 'in safe hands' and will get the most adequate treatment:

(17) Het Genderteam van het UMCG bestaat uit een coördinator, een psychiater, een gynaecoloog/endocrinoloog, een maatschappelijk werker, twee plastisch chirurgen, een uroloog, een KNO-arts en een logopedist. Door de samenstelling van dit team is de nodige deskundigheid van verschillende disciplines aanwezig. Afhankelijk van de fase in het traject zult u te maken krijgen met een of meerdere specialisten. Er is regelmatig onderling overleg. (UMCG)[15]

(18) Eine operative Geschlechtsangleichung ist eine enorme medizinische Herausforderung: Plastische Chirurgen, Gynäkologen, Urologen sowie Gefäß- und Nervenchirurgen müssen Hand in Hand arbeiten, um Ergebnisse zu erzielen,

---

of extreme behavior. Every patient has his/her own specific history with respect to gender dysphoria.

15 The UMCG Gender Team is formed by a coordinator, a psychiatrist, a gynaecologist/endocrinologist, a social assistant, two plastic surgeons, an urologist, an ENT specialist and a logopedist. This team composition assures expertise of different specialities. Depending on the phase you are in, you will come in contact with one or more specialists. There is regular consultation between the team members.

> die funktional und optisch den verständlicherweise hohen Erwartungen der transsexuellen Patienten gerecht werden. Dies erfordert viel Erfahrung eines auf Transsexualität hoch spezialisierten Ärzteteams, welches in der Klinik Sanssouci Potsdam fester Bestandteil der transsexuellen Chirurgie ist. (Klinik Sanssouci Potsdam)

The German text in (18) almost turns into self-promotion when describing the clinic's expertise. And indeed, it cannot be ruled out that some of the positive attitudes traced in the texts are also linked to economic factors. As already said, the Italian selected websites are run by public centers, and the same goes for the two Dutch clinics, whereas the German corpus includes some private clinics as well. Moreover, in Italy the sex reassignment surgery is covered by the National Health System (provided that there is a court judgment allowing it), whereas in Germany and the Netherlands it is refunded by health insurance companies. In these two countries, therefore, there could be the need to 'promote' this kind of surgical intervention and also the clinics performing it, and this could have influenced the wording of the texts. Be as it may, a more empathetic and encouraging approach certainly helps to build a sense of trust between the reader and the medical staff.

4. Conclusion

These are in short the first findings of our study, which seem to point to some significant differences between the three countries and languages. As far as communication policies are concerned, while the Italian and German clinics seem to prefer more 'private' channels, which imply a direct contact by phone or email, the Dutch clinics attach great importance to online information, aware of the fact that web-mediated communication "has qualified as a powerful strategic resource in healthcare settings", creating a "new type of self-informed patient" (Vicentini 2013: 53, 54). When considering textual strategies, however, the distinction should be drawn rather between Italy, on the one hand, and Germany and the Netherlands, on the other. The Italian

texts appear to be heavily doctor-centered and monological, they present many instances of opacity of medical communication and are definitely not in line with the main functions of patient brochures, i.e. information and education. On the contrary, the German and Dutch websites demonstrate to be aware of the fact that patient brochures are typically used to bridge communication gaps (Montalt-Resurrecció/ González Davies 2007: 59). Their texts are clearly patient-centered, dialogical and reader-friendly. They show multiple efforts to compensate mismatches of knowledge, through simple syntax, the frequent use of explanations and paraphrases, the combination of specialized and popular terms. Their communication style is more comprehensible for potential patients, and thus more efficient – although comprehensibility is not the only yardstick for measuring the effectiveness of a text (Renkema 2004: 180). Website communication is a very fast-moving phenomenon and a key instrument in the field of healthcare. The ability to communicate efficiently and effectively is particularly important for promoting health literacy. This seems to be the background against which the German and Dutch texts have been produced, and it is in line with what we already observed in the field of vaccination programs, where the two language communities have been demonstrated to give much more consideration than the Italian health sector to proper communication for the sake of health literacy and social inclusion (Ross/Magris 2012: 147).

In the present study we have also observed that the German and Dutch texts show more empathy with potential patients and adopt a more positive attitude when describing the surgical treatment, often emphasizing the competence of the medical staff and the high success rate of surgery. The Italian texts, on the contrary, tend to highlight possible difficulties and negative consequences, often failing – at least in our opinion – to strike the right balance between the necessary caution in informing the patients and due consideration of the emotional impact of this information.

Against the background of social acceptance and human rights, translators and other language experts could play an important role in disseminating the best communicative approaches. On the one hand, Critical Applied Linguistics turns out to be

> far more than the addition of a critical dimension to applied linguistics, but rather opens up a whole new array of questions and concerns, issues such as identity, sexuality, access, ethics, disparity, difference, desire, or the reproduction of Otherness that have hitherto not been considered as concerns related to applied linguistics. (Pennycook 2004: 803-804)

On the other hand, recent developments in Translation Studies, such as sociological approaches (Buzelin 2013) and issues of translation ethics have gained considerable visibility (Van Wyke 2013), acknowledging the translators' role in society (Wolff 2010: 341).

In particular two factors might justify the increasing role of translators in the communication sector, especially medical communication. First of all, an important step in the translation process is the mastering of drafting techniques, and translators are commonly required to be familiar with "different types of target readers, their motivations, their expectations and their purposes in written medical communication" (Montalt-Resurrecció/González Davies 2007: 37). As a consequence, translators are moving rapidly in the direction of interlinguistic and intercultural experts.

Secondly, these developments are also related to the fact that, generally speaking, the translators' operating environments "are significantly shifting, giving rise to new ways of working" (O'Hagan 2011: 21). In this new context, the translators' traditionally invisible role is not realistic anymore, giving way to a different status: that of an information broker with language counselling tasks. The development of technologies has changed the ways of producing, translating and distributing texts, with far reaching consequences for the integrity of the source text, which is increasingly a product of "multiple authoring" (Jiménez-Crespo 2013: 51, 53). In the translation of website information, user interaction is becoming an important parameter of communicative success, at the detriment of linguistic accuracy (Pym 2011: 424). With their terminological, interlinguistic and intercultural competences, translators can become active participants in the communication process instead of silent mediators, performing the language counselling functions which are increasingly required by modern society. A public service translator capable of handling various text types and facilitating communication between public

services and persons may offer promising perspectives in the field of medical translation, particularly in the sector of patient information.

It is our intention to collect and analyze other texts, such as informative material not directly available on line. Should the second stage of analysis confirm the first results, translators and other language experts could indeed play an important role in disseminating best practices, as mastering communicative skills constitutes communicative – and social – capital.

References

Angelelli, Claudia V. 2004. *Medical Interpreting and Cross-cultural Communication*. Cambridge: Cambridge University Press.

American Psychological Association 2011. Practice Guidelines for LGB Clients. Guidelines for Psychological Practice with Lesbian, Gay, and Bisexual Clients, <http://www.apa.org/pi/lgbt/resources/guidelines.aspx?item=2>.

APA [5]2013. *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5). Arlington VA: American Psychiatric Association.

APA 2014a. *Manuale diagnostico e statistico dei disturbi mentali. DSM-5*. Milano: Cortina Editore.

APA 2014b. *Handboek voor de classificatie van psychische stoornissen. DSM-5*. Meppel: Boom.

Baker, Mona / Maier, Carol 2011. Ethics in Interpreter & Translator Training. Critical Perspectives. *The Interpreter and Translator Trainer* 5/1, 1-14.

Buzelin, Hélène 2013. Sociology and Translation Studies. In Millán, Carmen / Bartrina, Francesca (eds) *The Routledge Handbook of Translation Studies*. London: Routledge, 186-200.

Davies, Alan 1999. *An Introduction to Applied Linguistics*. Edinburgh: Edinburgh University Press.

Deutsche Gesellschaft für Sexualforschung / Akademie für Sexualmedizin / Gesellschaft für Sexualwissenschaft. Standards der

Behandlung und Begutachtung von Transsexuellen, <http:// www.transsexuelle-heidelberg.de/docs/StandardsTS.pd f>.

Finegan, Edward 1990. English. In Comrie, Bernard (ed.) *The World's Major Languages*. London: Routledge, 77-109.

Green, John N. 1990. Spanish. In Harris, Martin / Vincent, Nigel (eds) *The Romance Languages*. London: Routledge, 79-130.

Hawkins, John A. 1990. Germanic languages, In Comrie, Bernard (ed.) *The World's Major Languages*. London: Routledge, 68-76.

Jiménez-Crespo, Miguel A. 2013. *Translation and Web Localization*. London: Routledge.

Ketting, Evert 2002. *Kenniscentra in Nederland*. Den Haag: SCP.

Kooij, Jan G. 1990. In Comrie, Bernard (ed.) *The World's Major Languages*. London: Routledge, 139-156.

Lescher, Rachel K. 2013. Gender Dysphoria in Childhood and Adolescence. All Alaska Pediatric Symposium, <http:// a2p2.com/wp-content/uploads/2013/10/Gender%20Dysphoria%20_Rachel, Lescher2.pdf>.

LGBT Resource Center. Gender/Sex, <http://www.lgbtrc.uci.edu/resource-library/unfinished/13faq/Gender-Sex.pdf>.

Magris, Marella Forthcoming. The translator as social agent: the case of the UN Convention on the Rights of Persons with Disabilities. *Representing and Mediating Otherness. Language, Translation, Media and Local-global Reception*. Berlin: Frank & Timme.

Magris, Marella / Ross, Dolores 2012. Die Kommunikation im Bereich der Assistierten Reproduktion: Ein Vergleich zwischen Deutsch, Niederlandisch und Italienisch. In Di Meola, Claudio / Hornung, Antonie / Rega, Lorenza (eds) *Perspektiven Vier. Akten der 4. Tagung Deutsche Sprachwissenschaft in Italien*. Frankfurt a.M.: Peter Lang, 243-255.

Magris, Marella / Ross, Dolores Forthcoming a. Barrierefreiheit auf Webseiten von Gebietskörperschaften: ein Vergleich zwischen Deutsch, Italienisch und Niederländisch. Paper presented at GAL 2014 (Angewandte Linguistik in der Lehre, Angewandte Linguistik lehren), 16/09-19/09/2014, Marburg.

Magris, Marella / Ross, Dolores Forthcoming b. E-accessibilità e traduzione. *Rivista Internazionale di Tecnica della Traduzione*.

Montalt-Resurrecció, Vicent / González Davies, Maria 2007. *Medical Translation Step by Step: Learning by Drafting*. Manchester: St. Jerome.

Montalt, Vicent / Shuttleworth, Mark 2012. Research in Translation and Knowledge Mediation in Medical and Healthcare Settings. *LANS* 11, 9-29.

Motmans, Joz / de Biolley, Inès / Debunne, Sandrine 2009. *Leven als transgender in Belgie*. Brussel: Instituut voor de gelijkheid van mannen en vrouwen.

Nieder, Timo O / Briken, Peer / Richter-Appelt, Herta 2013. Transgender, Transsexualität und Geschlechtsdysphorie: Aktuelle Entwicklungen in Diagnostik und Therapie. *PSYC up2date* 7/06, 373-388.

OED, Oxford English Dictionary, <http://www.oxforddictionaries.com>.

O'Hagan, Minako 2011. Community Translation: Translation as a Social Activity and its Possible Consequences in the Advent of Web 2.0 and Beyond. *LANS* 10, 11-23.

Osservatorio Nazionale sull'Identità di Genere (ONIG). Standard of Care (Linee Guida) Standard sui percorsi di adeguamento nel disturbo dell'identità di genere (DIG), <http://www.onig.it/drupal/?q=node/4>.

Pennycook, Alastair 2004. Critical Applied Linguistics. In Davies, Alan / Elder, Catherine (eds) *The Handbook of Applied Linguistics*. Malden: Blackwell, 784-807.

Puato, Daniela 2011. Lessico medico e traduzione. Considerazioni contrastive per il tedesco e l'italiano. *RITT* 13, 117-128.

Pym, Anthony 2006. On the Social and Cultural in Translation Studies. In Pym, Anthony / Shlesinger, Miriam / Jettmarová, Zuzana (eds) *Sociocultural Aspects of Translating and Interpreting*. Amsterdam: John Benjamins, 1-10.

Pym, Anthony 2011. Website Localization. In Malmkjær, Kirsten / Windle, Kevin (eds) *The Oxford Handbook of Translation Studies*. Oxford: Oxford University Press, 410-424.

Roche Lexikon Medizin, 5. Auflage. München/Jena: Elsevier/Urban & Fischer, <http://www.roche.de/lexikon/index.htm?loc=www.roche.de>.

Renkema, Jan 2004. *Introduction to Discourse Studies*. Amsterdam: Benjamins.

Ross, Dolores / Magris, Marella 2012. The Role of Communication and Knowledge Management as Evidenced by HCP Vaccination Programs in the Netherlands, Germany and Italy: Possible Suggestions for Medical Translators. *LANS* 11, 133-150.

Van Wyke, Ben 2013. Translation and Ethics. In Millán, Carmen / Bartrina, Francesca (eds) *The Routledge Handbook of Translation Studies*. London: Routledge, 548-560.

Venuti, Lawrence 1998. *The Scandals of Translation: Towards an Ethics of Difference*. London: Routledge.

Vicentini, Alessandra 2013. Institutional Healthcare E-Brochures and Multilingualism. In Way, Catherine / Vandepitte, Sonia / Meylaerts, Reine / Bariomieijczyk, Magdalena (eds) *Tracks and Treks in Translation Studies*. Amsterdam: Benjamins, 53-76.

Wolff, Michaela 2010. Sociology of translation. In Gambier, Yves / van Doorslaer, Luc (eds) *Handbook of Translation Studies*, vol. 1. Amsterdam: Benjamins, 337-343.

World Professional Association for Transgender Health (WPATH) 2012. Standards of Care (SOC) for the Health of Transsexual, Transgender, and Gender Nonconforming People, Version 7, <http://admin.associationsonline.com/uploaded_files/140/files/Standards%20of%20Care,%20V7%20Full%20Book.pdf>.

Analyzed websites

Italy

Azienda Ospedaliera San Camillo-Forlanini, Roma, http://www.scamilloforlanini. rm. it/saifip/opuscolo.pdf>.

Policlinico Giovanni XIII, Bari, <http://www.identitadigenere.com/index.php?mod=pagina&ida=18>.

Università di Bologna, <http://www.urologia.unibo.it/Urologia/AttivitaClinica/Patologie/Idisturbidellidentitadigenere.htm>.

Germany

Klinik München-Bogenhausen, <http://www.chkmb.de/urologie/geschlechtsangleichende-operationen/transsexualitaet-uebersicht.html>.
Klinik Sansouci Potsdam, <http://www.kliniksanssouci.de/de/transsexuelle-chirurgie/>
Markus-Krankenhaus Frankfurt, <http://tgd.transgender-germany.de/daten/Geschlechtsangleichung%20FzM/Operation%20FzM%20und%20MzF%20bei%20Dr.%20Sohn.pdf>.
Praxisklinik München, <http://genitalchirurgie.com/index.html>.

The Netherlands

UMCG Groningen, <https://www.umcg.nl/NL/UMCG/AFDELINGEN/VERLOSKUNDE_GYNAECOLOGIE/GYNAECOLOGIE/GENDERTEAM/Pages/default.aspx>.
VUmc Amsterdam, <http://www.vumc.nl/afdelingen/zorgcentrum-voor-gender/>.

MARIANNA LYA ZUMMO

Credibility and Responsibility in User-generated Health Posts: Towards a Co-construction of Quality Knowledge?

In the context of the growing number of sites related to health issues and online conversation, statistical research tends to confirm that communication through health message boards has a significant role to play in the era of online counseling (Eysenbach/Diepgen 1999; Mulholland 1999; Anderson *et al.* 2003; Gooden/Winefield 2007; Kim/Yoon 2011). Previous studies have explored how people discussing health issues use health-related online communities or doctor-answer support facilities to access information and support. In fact, one of the main worries concerning these spaces has been the uncontrolled information that is provided by users with no defined roles and who do not/cannot take responsibility for what they say.

This research questions whether health forums may represent a new means of co-construction (Fage-Butler/Nisbeth Jensen 2013, 2014) and self-appropriation of (quality) knowledge based on credibility. Authentic examples from health forum boards are analysed by means of Discourse Analysis in order to understand how participants construct attitude and commitment toward advice, opinions and suggestions (Bybee et al. 1994; Van der Auwera/Plungian 1998; Nuyts 2001; Hyland 2002; Marín Arrese 2004; Cornillie 2009) and establish credibility. Finally, a survey is undertaken in order to understand whether this credibility works, and if so how it affects people's beliefs and behaviour in relation to their health.

1. Health 2.0: A controversial resource

Health forums are public forums for asynchronous one-to-many dialogue, and they can be accessed whenever users choose to log on. In general, these pages are associated with what has been called Health 2.0, which concerns RSS Feed, podcasts, blogs, wikis, social networks (Facebook and Twitter among others) and online health communities. This participatory web phenomenon has emerged so quickly and widely that research has generally focused much more on various features, user responses, and design characteristics than on theoretical explanations for the causes and effects associated with their use. Broadly speaking, efficiency, effectiveness and enjoyment are the reasons why these websites are used. In particular, forum benefits include providing support, understanding, praise, and reinforcement as well as a place to find intervention options, negotiating plans, and/or general assistance.

Although it is unlikely to supplant the role of trusted healthcare-providers, the Internet has found an important place in people's repertory of health information sources. The Internet offers confidential and convenient access to an unprecedented level of information about a diverse range of subjects, and over time its perceived credibility has increased. Moreover, online health communication has the potential to reach large audiences, with the additional advantage that it is available at all times. It represents low cost and increased convenience for users as well as overcoming isolation of users and stigma reduction.

From a different perspective, pervasive Internet use makes alternative data collection methods feasible (e.g., online surveys), and information technology can be used to enhance health promotion programs and media campaigns (Bleakley et al. 2004). Initial studies show that up to 60% of adults with Internet access have searched for health or medical information (Brodie et al. 2000) and this percentage seems destined to rise (Timimi 2012). The Internet is definitely the new resource for health information and this is true for users of all different ages. Unsurprisingly, children and adolescents also use the

Internet as a resource for health information (Borzekowski/Rickert 2001), since the Internet enables users to explore topics (like sexual health) in a confidential and anonymous manner, which is an additional comfort for them. Basically information is obtained through doctor/patient facilities in health sites and health forums.

A doctor/patient exchange in Health 2.0 may be found on health-site sub-pages, which can be accessed by clicking the link on the side or top of the homepage. On these pages, users can ask a doctor for information about a specific health issue and get a personal response. Behind the label 'doctor', there is either an individual person with a medical training or a group of general practitioners/specialists, who run these pages and offer their help in response to users' posts. The net works as a source for a new medical support system, in which health-care professionals help with the translation of codified information, the validation of self-care practices and with biosocial symptoms. Doctors certainly still need to see and speak with the patient in order to diagnose or prescribe remedies, but the medical support is evolving into a different model on the net, represented by a mutually respectful one-to-many discourse.

The forum is a space in which users obtain medical information and clarify health doubts. It promotes discussion and encourages readers to participate in the process. Although every site has its own aesthetics, rules and codes, its content contains repeating specific communicative goals and discoursal resources. Forums provide advice, exempla (when presenting personal history to illustrate a point), interpretations (in the case of re-description of others' narratives, and possible (self-) diagnosis), recommendations and medical questions/requests for help. Participation varies between one-to-one, one-to-many and many-to-many structures, which are mostly public although there is a high degree of nicknames that guarantee anonymity. The number of active participants is lower than the number of people viewing the message (according to the number of visitors). Participant characteristics are not always identifiable, especially demographic data. People participating in these communities generally have very heterogeneous roles and statuses in real life, but it is very rare for participants to introduce themselves or

talk about their job in real life, unless it is specifically asked or they need it to support their claim ("since I'm a nurse", "I'm a registered nurse"). Even the purpose of the groups varies. Most participants tend to socialise when the goal of their interaction is seeking support, but when the goal is seeking information, they use the site in a very personal way, and once they have obtained it there is no further active participation. A friendly and cooperative tone is used in casual exchanges, but it becomes more serious when dealing with feelings or urgent health questions. In this way, the activity evolves from information exchange to problem solving, and it is regulated with norms established by moderators, who ensure language appropriateness and balance in participants' behaviour. The language takes a dialogic form although the audience is unknown to the writer. Forums are always text-based but style is not affected by formality and editing.

Giving information is the primary activity of people who post messages within an online community. There are essentially two reasons for visiting healthcare forums. One of the main aims of these online health communities is to offer empathic support to patients. In his study of online groups dealing with disabilities, Finn (1999) divided posts into two domains: socio-emotional messages (including expression of feelings, provision of support, and friendship) and task-orientated messages (including requests for or provision of information, and problem solving). The research produced controversial results in terms of what is predominantly found (Braithwaite et al. 1999, for emotional support; Eysenbach/Diepgen 1999; LaCoursiere et al. 2005; Gooden/ Winefield 2007; Meier et al. 2007; Chung/Kim 2008; Kim/Yoon 2011, for health-related information and advice). Results for Computer Mediated Medical Communication (CMMC) reveal that participants give their personal opinions and advice on a wide variety of subjects regarding health issues, including the efficacy of medicines, statistics, experimental treatments, medical insurance, and research studies. Personal narratives are used as life exempla, to prove the efficacy of a treatment as well as to show sympathy by relating familiar experiences. Another common theme is searching for information on treatment options, clinical trials, side effects, alternative therapies, and other issue-related information. The other

two most commonly occurring themes are patients offering messages of encouragement and emotional support, and patients expressing gratitude to the members of the community. In addition, there are also administrative posts and comments expressing anger and reproach toward other members. Most people who post messages are seeking Information (75.71% in Zummo 2014); only a few relate personal narratives (5.71%) or seek emotional support (2.86%) and only on rare occasions do they express gratitude (1.43%).

1.1. Bias and critics

In health forums people form support groups to share experiences and feelings, and they are able to recount their success stories and failures according to a 'gather, share and learn' paradigm. Knowledge communication is practiced in communities in which knowledge and experience are shared to create new knowledge (Wenger 1999). In forums, groups of users co-construct knowledge since individual members contribute to a specific subject matter. The collaborative process of health forums has several implications. Web authoring involves multiple identities (user/viewer/reader) which challenge the concept of authority and of expert-on-the-field. One of the main worries concerning these spaces has been the unmonitored information provided by users who do not have any medical training and do not/cannot take responsibility for the use of their posts.

Information is often communicated by laypersons rather than experts or professionals. These user-generated statements may offer new insights and supplementary information, but some of the sources may also be less reliable (Winter/Krämer 2012: 80). In addition, participants do not have any guarantee of the validity of those with whom they share information. Culver et al. (1997) examined an online bulletin board for people with painful hand and arm conditions. They found that there were messages on medical topics from people without any medical training, suggesting unconventional treatments and solutions.

Issues related to health care information systems include questions of ownership, integrity, availability, source control and errors/

omissions. As with some of the studies of online support groups, analysis of web pages raises significant questions about the relevance, coverage, and legitimacy of a lot of Internet health information (Rice/Katz 2001: 31). Concerns about the quality of the information include inexpensive and easy publishing, anonymity and speed since news breaks so quickly that publishers are less rigorous with their fact checking (Rice/Katz 2001: 57).

However, health forums are compiled and organized by active users, not passive ones, who are trying to contribute to their own health. Considering the credibility that is attributed to these forums, it is necessary to avoid any form of speculative interest, damaging behaviour or misleading information. In fact, critics question the quality of online health information, and its biomedical accuracy (Lewis 2006; Deshpande/Jadad 2009), and a sort of unease is expressed about the shift from a doctor-to-patient to a users-to-users framework, in terms of authorship of and responsibility for statements, since the Internet influences health beliefs and behaviour.

1.2. A different perspective: biomedical knowledge and experiential function

A different perspective is now emerging in the latest studies dealing with health posts. Indeed, research characterizes the online health-site as a Web 2.0-style popularization tool (Anesa/Fage-Butler 2014), in which the forum is a place of extensive sharing of biomedical knowledge reflecting the democratisation of expertise amongst e-patients (Fage-Butler/Nisbeth Jensen 2013). Even though avoiding medical terminology when communicating with patients has been recommended, in patient forums for various chronic illnesses, a widespread use of expert biomedical terminology and acronyms is found (Fage-Butler/Nisbeth Jensen 2013; Zummo 2014). The terminology is used without glossing, suggesting that in the context of forums, acronyms and specialist terms are not considered beyond other patients' grasp.

Furthermore, a study by Fage-Butler and Nisbeth Jensen (2013) on informational and relational aspects of patient-patient (p-p) communication illustrates how this communication has striking

similarities with aspects of doctor-patient (d-p) communication as it includes the sharing of biomedical knowledge on diagnosis, managing illness and treatment. P-p communication also clearly comprises aspects that cannot be met in traditional d-p communication as it incorporates experiential knowledge, empathetic support drawing from common experience and 'we-ness' or group solidarity. In particular, a significant finding of their analysis is that respondents often possess considerable biomedical knowledge, which is acquired from sources such as doctors, other patients and journal articles, and which is evident in the way they use very specialised terminology and acronyms. They also found several examples where respondents adopt a role similar to that of the doctor in a clinical situation: they ask clarifying questions, request further information and suggest treatment. In doing so, users appear to abandon the traditional role of patient and adopt that of medical practitioner. Such statements however, are often modified by the use of disclaimers, which underline the respondents' lay status. As suggested, "the patient forum facilitates the sharing of experiential knowledge, a function which is not fulfilled in clinical encounters where doctors lack the knowledge that is derived from having and experiencing the condition concerned" (Fage-Butler/Nisbeth Jensen 2013: 35), and "patients may be better historians of their illnesses and so their rich and accurate accounts of symptoms can make a difference to the quality of health care delivery" (Sarangi 2001: 5).

On the basis of these two different perspectives on the role of forums, this study investigates whether health posts can be associated with credibility and whether they co-construct knowledge that may be perceived as 'quality', at least in its practical use.

2. Material and theoretical references

Forums (migrainepage.forumotion.net; healingwell.com; healthcentral.com; forums.about.com) were selected in order of appearance on a common search engine and only those conceding

permission to enter freely were used. The corpus for this study contains a total of 547 posts (total words: 83,423), which were selected from four threads. The threads were chosen on the basis of the total number of views/replies at the time of analysis. The initial threads and the corresponding replies were selected and analysed. The text analysed does not take into account user nicknames, date/time of logging, personal notes and text used as signatures, which were all removed. The language used in these forums is English and the sites are from English-speaking countries (Canada, the USA, the UK).

The simplicity of acquiring and publishing online information raises serious questions about users' ability to discern (credibility) and produce (responsibility) quality online information. This study examines two sources of credibility, namely the origin of the information and the way people express authority in their posts, which legitimize the participant in the role of respondent. Furthermore, in order to assess forum impact on readers, a survey on the use of health forums in a group of Italian people is examined. In order to study authority, the level of commitment is analysed. Following the study of this area, the dimension of epistemic modality (involving the writer in a marked commitment to the truth of the proposition), the evidentiary validity and in particular the degree of certainty, are analysed. Chafe (1986) identifies four areas within the evidential system: the reliability of information, the probability of its truth, the modes of knowledge, and the source, thus including epistemic modals as markers of judgments. Within the domain of judgements, Bybee et al. (1994) indicate markers of epistemic modality as concerned with the level of commitment by the speaker to the truth of the proposition. The degree to which the speaker has a commitment to the validity of the information as well as inferential or personal experiences classify different epistemological stance (Mushin 2001). These studies were among those which strongly contributed to the analysis of evidential and epistemic modal qualification, which foreground speaker's assessments and commitment to the truth of the utterance expressed. Following De Haan (2001), direct/indirect and first hand/second hand sources of information are detected.

The expression of authorial stance (the ways in which an author or speaker overtly expresses attitudes, feelings, judgements, or

commitment, according to Biber/Finegan 1993) is studied on the basis of an analysis of pronominal self-reference items, adjectives and grading adverbs.

Finally, a small-scale survey of people in Italy aged 18-33, examining young adults' beliefs about the credibility of information available on Italian health forums and the reason why they choose to evaluate information as credible is presented. The survey involves 121 participants in an academic course, who have been considered to be representative of young adults between the ages of 18 and 33 years.

3. Assessing credibility

The aspect of knowledge and information diffusion offered by online health pages is of paramount importance to individuals who want to find possible reasons and solutions for their health issues. By reading patients' complaints about similar health issues, users gain reassurance and information that would otherwise be neglected without a face-to-face medical encounter. Therefore, posts are reading material for those searching for information concerning their health or caring for someone. It follows that users must learn to critically analyse and distinguish reliable information from chitchat, superstitions and home made diagnoses and remedies. On participatory websites such as blogs, forums, or wikis, one increasingly finds information that has been communicated by laypersons rather than experts or professional journalists.

Winter and Krämer (2012) investigate several factors that influence readers' selection of user-generated content on participatory websites, adapting research on persuasion. A two-sided summary, which indicates that both positions on a controversial issue are being considered, may appear more attractive to readers who are motivated to reach an informed position. This may be particularly true in the context of health-related topics, which are often characterized by conflicting positions. Readers may also be attracted to user-generated

information based on other factors, such as the writer's source. The attributes of a message source are relevant when assessing the credibility of a post. In addition, posters' credibility, or the reputation of the writer, influence readers' beliefs and attitudes. These sources of credibility are the posters' legitimization of role, the way they express their posts and their source (mediated data).

3.1. Construction and legitimization of roles in online health communities

In d/p sites' framework, the interaction of net users (willing to show and tell their health issues) and doctors (with their sympathetic authority), as well as the silent readers (those who read the posts without actually participating in the discussion) have a relationship in which net users contribute to the formation of medical knowledge and forge a modern sense of appropriation of health information and of doctor/patient exchange.

In laymen-to-laymen forums, knowledge communication is practiced in communities in which knowledge and experience are shared to create new knowledge (Wenger 1999). Such digital environments allow people to play the roles of both information source and receiver, as they give, share and critique the content of forum posts. This game has profound implications for how people construct and evaluate credibility, in particular when it comes to their limited ability to discern quality information due to a stressed emotional state, which is often the background to an online health fact search. Users need to convince their readers that they not only have a right to contribute but also that their answers should be believed.

Credibility is based on what is relevant for an info-receiver, that is the importance of the information for a specific need. Quite often, relevant information is given by someone who is believed to be an expert, or who has assumed an air of authority. Authority relies on audience assessment and implies an expertise infused with experience and wisdom (Segal/Richardson 2003: 138). According to Fage-Butler and Nisbeth Jensen (2014), in online health forums p-p communication has striking similarities with aspects of d-p

communication, as it includes the sharing of biomedical information on diagnosis, suggesting treatment action and giving treatment advice. In fact, forum respondents demonstrate considerable medical knowledge, which is evident as a result of their unexplained biomedical terminology. In a post, authentic use of medical slang and specialised language may be a good indicator of credibility. See for example:

(1) 1st User: [asks for some details]
2nd User: […] strong vasoconstrictors and not to anything that regulates neuronal excitability or neurotransmitters, they think nortriptyline worked only because serotonin is a vasoconstrictor […];
Moderator: Hi, Christine, and welcome! I don't think there's a whole lot I can add to Teri's excellent post [...].

People rely on these forums because they tend to link the level of knowledge that is expressed in there to their credibility.

(2) M
y GP is looking into this and I've been searching the internet about it, but I haven't really found anything yet. There are so many **knowledgeable** people here that I thought I'd ask and see if anyone knew.

In addition, people also take up position towards their utterances and in extreme case they even question doctors' treatments:

(3) Macca, 100 mg a day was your starting dose? This was prescribed by a neurologist? Sorry, but that's an extremely high for a starting dose. Not to play doctor, but the usual starting dose is 25 mg, to be increased in 25 mg increments every 1-2 weeks or even longer depending on patient tolerance. Going up to higher doses than that quicker than that has been associated with much more severe side-effects. I would seriously question your doctor on that dose, or get a 2nd opinion.

However, the study also illustrates that respondents use disclaimers which are expressed when acknowledging lay status and which, in a way, downgrade their position to semi-experts. However, if authority implies expertise *and* experience, the forum respondents may increase their credibility, since "patient-patient communication clearly com-

prises aspects that cannot be found in traditional doctor-patient communication, as it incorporates experiential knowledge, empathetic support drawn from common experience and 'we-ness' or group solidarity" (Fage-Butler/Nisbeth Jensen 2013: 35).

3.2. Responsibility in the communication of information

The legitimization of the role of the writer, when assessing credibility in a forum post, comes from their perceived expertise, which means the way they express certainty (and commitment) in their posts. The expression of authorial stance is studied on the basis of an analysis of pronominal self-reference items, adjectives and grading adverbs. Authorial stance is the author's point of view on the material to which they are referring (Hyland 2002). Biber and Finegan (1993) define it as the ways in which an author or speaker overtly expresses attitudes, feelings, judgements, or commitment. Assuming that the use of the first person pronoun expresses credibility (as a role marker of authorial presence and investment to personally get behind the statements) and helps the writer to establish commitment to their words, the frequency and role of first person pronouns *I* and *we* in their various forms (subject, object and possessive) are studied as role markers and authorial presence, together with adjectives and grading adverbs. Adjectives are used to express evaluation and grading adverbs are used with adjectives to show that something or someone has more or less of a quality. It is questioned whether or not writers take up positions about the information or evaluations provided in their posts. Writers point to the use of *I* as critical to meaning and credibility. The use of the personal pronoun also helps writers to establish a commitment to their words and to set up a relationship with their readers. The analysis on health forums revealed that writer visibility was mainly expressed by the first person singular pronoun (92.71%), in particular in its subject form (72.61%), possessive form (10.92%) and object form (9.18%). Writer visibility in exchanges is mostly concerned with the function of stating sympathy whereas functions related to the expression of commitment toward information have very low percentage values. The categorisation of discourse

functions of personal pronouns in healthcare forum exchanges shows an increasing loss of authority expressed by the authorial presence. In other words, it seems that comment users adopt their own visibility for the purpose of sharing personal stories and show sympathy without using themselves as references to influence or persuade their readers. Despite a prominent tendency to create a relationship between reader and writer, writers generally do not construct a leading authorial visibility. It could be hypothesized that the writers of the posts choose not to adopt authorial stances because they are conscious of a lack of expertise and of a reluctance to commit themselves explicitly to their claims. On the other hand, it is true that elaborating a sentence without explicitly expressing the subject, increases the perception of the neutral objective truth of the utterance (Gotti 2011). Results suggest that users know the limitations of their own medical knowledge and may perceive the importance of their suggestions when offering help, limiting the expression of authorship and certainty, as in these comments:

(4) As for the meds and their side effects you're experiencing, perhaps you might talk to your doctor about ramping the dose up a bit more slowly. I know **from my experience** with meds of all kinds that as I adjust to a med over time, then dose increases become a lot easier. [...] If I was in your place right now, that's what I'd be asking my doctor to do.

(5) **This is just some information** you may wish to research further on your own and ask your gynecologist and/or migraine specialist more about. Every person is different, obviously, and you need to figure out what is best for you and your health with the advice of your doctors.

(6) I'd love to help you, **but it's really not safe for any of us to answer this question for you.** Answering it safely requires knowledge of all medications you take, both prescription and over-the-counter, as well as your complete medical history. Please check with your doctor on this.

(7) All of this knowledge is, of course, important. It is, however, just as important to keep it all in perspective. **Thus, my post about side effects being POTENTIAL side effects**.

3.3 Source of information

To ascertain the type of source used by the addresser to assess the reliability of their utterance, evidentiality markers are used. Following Marín Arrese (2004), direct evidence (perceptual markers and beliefs) and indirect evidence (inference and reasoning) jointly express the speaker's commitment to the truth of the utterance, both cognitively and perceptually, since references to sources of information have been linked closely to references to reliability of knowledge (Dendale/ Tasmowski 2001) Evidentiality markers are considered to be 'perceptual' (expressed by verbs such as *hear, see*, etc.), when the utterer has direct sensory access to the truth, or information can be inferred, whereas markers are considered to be of a 'cognitive' nature when information is given by mental processes such as deduction, or is based on a cognitive source, a belief or general knowledge (expressed by verbs such as *assume*, *remember*, *know*). Another subdivision is provided by De Haan (2001), who puts forward the classifications of direct/indirect and first hand / second hand evidence, where indirect evidence incorporates that which is quoted, while inferential refers to personal but indirect access to information. Evidentiary validity and degree of certainty are two parameters to be analysed in order to find the dimension of author commitment to the validity of the information. Epistemic modality (Nuyts 2001) refers to the possibility or necessity of the truth of the utterance, and consequently indicates the speaker's degree of commitment to his/her proposition in relation to his/her knowledge or belief within a high degree of certainty (one possible conclusion to be drawn from facts), and a low degree of certainty (facts lead to speculation). Markers of possibility are found in utterances like: "All of the symptoms you have *could* be a migraine"; markers of certainty can be found in expressions such as: "I'd *definitely* suggest […]". The results indicate that users offer suggestions that are drawn from mental processes and general knowledge, as in the following examples:

(8) I actually read once that B vitamins should be taken as a balanced thing, so if you're taking one, you could balance it by taking a B-complex with it, so you get some of each.

(9) I assume there is a trigger in your food or combinations of food that combined with body rhythms trigger the migraines.

Very often mediated data is reported ("my doctor said/suggests/thinks"; "a study confirms/indicates" etc. with doctors, chiropractors and neurologists occurring 66.92%; unknown people, 21.80%, and anonymous friends 3%; studies or scientific articles, 8.27%). In some (rare) occasions, in fact, the members report information obtained by their own doctors for other users' specific health problem:

(10) User1: I've read somewhere that the hormones in birth control pills mimic early pregnancy hormones. Did anyone notice migraines worsening or improving in early pregnancy?

User2: Just FYI - I asked my neurologist about a hysterectomy with or without ovary removal [...]. He said that multiple studies show that while natural menopause can make migraines either better or worse (just like estrogen-containing birth control) surgical menopause in 99% of the cases makes migraines much, much worse.

As suggested by Fitneva (2001), cognitive resources cannot provide a solid certain background, so users tend towards a dimension based on possibility and probability. In this study, expressions of possibility (92.48 %) outweigh those of certainty (7.52%) both for verbal and non-verbal markers.

3.4. Use of health forums and negotiation of trust

Health forums are a particularly intriguing space to consider with regard to information and source credibility, for several reasons. Although net users may be comfortable with technology and good at using it, they may lack the tools and abilities needed to effectively evaluate medical information. Whether adults believe information they find online depends on the type of topic and the context. According to Metzeger/ Flanagin (2013), people use information

processing strategies to evaluate information. Such strategies are 'analytic' (people analyse information carefully), 'heuristic' (they use a more intuitive approach), or 'social' (they ask their social circle for advice). Research indicates that as people engage more with the Internet, they develop a healthy scepticism. Websites have a powerful persuasive potential and can affect readers' attitude, since these posts influence the decision-making process. This section presents the findings of a small-scale survey of people in Italy aged 18-33 examining young adults' beliefs about the credibility of information available on Italian health forums, and the reason why they choose to evaluate information as credible.

The participation in the survey has involved a group of 121 young adults between the ages of 18 and 33. 75% of the respondents are female and 25% male. Their average age is 25, and they come from several different countries in Europe. First, they were asked what kind of activity they use the Internet for and what they expect to find. Respondents were on average more likely to use the Internet to chat or to search for information (see Table 1).

USE OF INTERNET		*EXPECTATION OF SEARCH RESULTS*	
Chat	22%	Info	82.6%
Learning Activities	17.7%	Support	9.3%
Social Networks	15.29%	Advice	5.3%
Shopping	11.62%	Treatments	1.3%
Watching/downloading	9.17%	Sharing emotions	1.3%
Reading	8.86%	Comments	0.2%
Socialising	7.64%		
Games	7.33%		
Administration	0.39%		

Table 1. Use of Internet and expectation of search results.

The next question was related to the use of health forums in particular and about credibility of information. Findings for the second research

question indicate that 75% of respondents use health forums but, among them, only 14.95% think the information is believable. Among those who do not trust health forums, 10.8% say that the information is not credible but they use these sites as a source of information anyway (Table 2).

Use of health forum	Do I trust them?
Yes: 75%	Yes: 14,9%
No: 25%	No: 85,1%

Table 2. Use of health forums and credibility of information.

When asked why they do not trust information they find on health forums, 75% of young adults reported doubts about the source of the information (Table 3). It could be hypothesised that the recipients of these posts behave according to what the post expresses. In other words, as the analysis of these posts shows, the authorial presence is expressed only for support and is limited when expressing certainty and authority. Posts' writers are reluctant to commit themselves explicitly and there are no strategies to influence or persuade the reader. Mental processes and general background knowledge, as well as mediated data, do not constitute a solid certain background on which the information may be expressed. At the same time the dimension of possibility decreases authorship and credibility of information. Thus, it comes as no surprise that young adults report doubts about the source of the information. The last question was related to the effects of reading health forums. Results indicate that people mostly feel scared by what they read but also get advice, support and second opinions about their questions (Table 3).

Reason of mistrust		*Effects of health forums use*	
Source	76%	Fear	23.4%
Individuality of diagnosis	7%	Advice	21.28%
F2f	6%	Support	21.28%

Source	5%	Second opinion	19,15%
Anonymity	5%	Homemade remedies	8.51%
Too much info	1%	Alarm	4.25%
		Solution	2.13%

Table 3. Reason for mistrust and effects of health forums use.

The findings on the percentage of use are controversial if compared to the tendency and the statistics reported in the introduction to this study. Indeed, although 75% of participants use health forums, only 15% of them think the information is believable. These data confirm that "as people engage more with the Internet, they develop a healthy scepticism" (Metzger/Flanagin 2013: 160). To validate this, when people were asked why they do not trust information they find on health forums, 75% of young adults reported doubts about the source of the information. It follows that the Italian readership is fully aware of the danger of online information and is concerned with credibility issues. On the other hand, findings suggest that people gather data not only from their own database but also from their online environment.

4. Final considerations

The Internet offers confidential and convenient access to an unprecedented level of information about a diverse range of subjects, and over time it has increased its perceived credibility. However, analysis of web pages raises significant questions about the relevance, coverage, and legitimacy of a lot of Internet health information (Rice/ Katz 2001: 31). Although content providers are expected to take steps to help control the most extreme content (Williams/Calow/Lee 2011), user agreements in the form of 'terms of use' are treated as membership contracts and in fact only protect one side's rights, without assuming any responsibility for the content, for which the

users assume all the risk (Sözeri 2013). In healthcare environments, there is also concern that anonymity makes people likely to engage in antisocial behaviour and may promote misinformation and advice that runs contrary to clinical research. As suggested by Metzger and Flanagin (2013), the vast amount of information available online makes the origin of information, its quality, and its veracity less clear than ever before, shifting the burden on individual users to assess the credibility of information. For information to turn into knowledge the content must be transmitted properly and the source must be credible. Information must be differentiated into non-usable data and correct data, categorized and stored so that it can be transferred at a later date. In a time continuum that goes from temporary to permanent, information is positioned on the temporary side, whereas knowledge is situated on the verge of permanent. Health 2.0 is considered a controversial resource because it not only constitutes the first easy access to medical information but it stores information that if transmitted properly and trusted may be construed as knowledge that is accessible every time it is needed without a proper information background. Participating websites have a powerful persuasive potential and can affect readers' attitude. As Harvey and Koteyko (2013) have pointed out, the more active role of cyber-surfing patients introduces new challenges in terms of credibility. Despite their ignorance of the exact meanings of words, laypersons can 'borrow' concepts from experts to sound more credible. Ignorance of the exact meanings of words does not necessarily prevent a successful plausible account of what is being discussed. Thus, laypersons' talk about issues of which they have very limited knowledge may have dramatic consequences if it affects readers' beliefs. Users engaged in online exchanges have to rely solely on words, which provide them with information and establish the relationship. On the other hand, research has shown that the degree to which adults believe information they find online varies according to the type or topic of information which they are searching for, and that assessments of credibility are related to the context in which the information is found (Flanagin/Metzger 2007; Hargittai et al. 2010). For example, people are less likely to find commercial information or information from special interest groups to be credible, probably because they recognize that these sources have a strong potential for

bias (Flanagin/Metzger 2007). Research indicates that as people engage more, and more deeply, with the Internet, they may develop a healthy scepticism toward the believability of online information (Metzger/Flanagin 2013). In addition, Internet users know how to differentiate between the types of people they encounter online, even though those people are represented online by text (Lea/Spears 1992; Walther/Jang 2012). Today, websites offer a better opportunity to improve knowledge and enable a conscious use of the medium by users. Forums represent p-p health communication, which increases patient awareness of their condition and the sense of together-ness of a group. According to Fage-Butler and Nisbeth Jensen (2013), many posts have disclaimers, which underline that the advice given should not be deemed to be expert, and recommend that website users "see a qualified doctor before acting on any of the information on the forum" (2013: 27). Although previous studies show that the reader will change behaviour according to what is suggested online, it seems that a negotiation of trust is at play. In fact, a small-scale survey of Italian people aged 18-33 shows young adults' beliefs about the credibility of information available on Italian health forums and the reason why they choose to evaluate information as credible. Findings report that although 75% of participants use health forums, only 14.9% of them think information is believable, confirming scepticism towards online environments, in particular with regard to sources. It follows that the Italian readership is fully aware of the danger of online information and is concerned with credibility issues.

References

Anesa, Patrizia / Fage-Butler, Antoinette M. 2014. Popularizing Biomedical Information on an Online Health Forum. *Paper presented at the Cerlis2014 International Conference.* Abstract retrieved from <http://dinamico.unibg.it/cerlis/public/CERLIS%202014_ book%20of%20abstracts%20web.pdf>.

Anderson, James G. / Rainey, Michelle R. / Eysembach, Gunther 2003. The Impact of CyberHealthcare on the Doctor-Patient Relationship. *Journal of Medical Systems* 27/1, 67-84.

Biber, Douglas / Finegan, Edward 1993. Styles of Stance in English: Lexical and Grammatical Marking of Evidentiality and Affect. *Text* 9/1, 124-148.

Bleakley Amy / Merzel Cheryl / VanDevanter Nancy / Messeri, Peter 2004. Computer Access and Internet Use Among Urban Youths. *American Journal Public Health* 94/5, 744-746.

Borzekowski, Dina / Rickert, Vaughn 2001. Adolescent Cybersurfing for Health Information: a New Resource that Crosses Barriers. *Archives Pediatrics Adolescent Medicine* 155, 813-817.

Braithwaite, Dawn / Waldron, Vincent / Finn, Judith 1999. Communication of Social Support in Computer-mediated Groups for People with Disabilities. *Health Communication* 11/2, 123-151.

Brodie, Mollyann / Flournoy, Rebecca / Altman, Drew / Blendon, Robert /Rosenbaum, Marcus 2000. Health Information, the Internet, and the Digital Divide. *Health Affairs* 19, 255-265.

Bybee, Joan / Perkins, Revere / Pagliuca William 1994. *The Evolution of Grammar: Tense, Aspect, and Modality in the Languages of the World.* Chicago: The University of Chicago Press.

Chafe, Wallace 1986. Evidentiality in English Conversation and Academic Writing. In Chafe, Wallace / Nichols, Johanna (eds) *Evidentiality: The Linguistic Coding of Epistemology*, Norwood, NJ: Ablex, 261-272.

Chung, Deborah Sujing / Sujing, Kim, 2008. Blogging Activity among Cancer Patients and their Companions: Uses, Gratifications, and Predictors of Outcomes. *Journal of the*

American Society for Information Science and Technology 59/2, 297-306.

Cornillie Bert 2009. Evidentiality and Epistemic Modality: On the Close Relationship of two Different Categories. *Functions of Language* 16/1, 44-32.

Culver, Jean / Gerr, Fredric / Frumkin, Howard 1997. Medical Information on the Internet: A Study of an Electronic Bulletin Board. *Journal of General Internal Medicine* 12/8, 466-470.

Dendale, Patrick / Tasmowski, Liliane 2001. Introduction: Evidentiality and Related Notions. *Journal of Pragmatics* 33, 339-348.

De Haan, Ferdinand 2001. The Relation between Modality and Evidentiality. In Müller, Reimar / Reis, Marga (eds) *Modalität und Modalverben im Deutschen*. Linguistische Berichte, Sonderheft 9. Hamburg: H. Buske. <http://www.u.arizona.edu/ ~fdehaan/ papers/lb01.pdf>.

Deshpande, Amol /Jadad, Alejandro 2009. Trying to Measure the Quality of Health Information on the Internet: Is It Time to Move On? *Journal of Rheumatoly* 36, 1-3.

Eysenbach, Gunther / Diepgen, Thomas L. 1999. Patients Looking for Information on the Internet and Seeking Teleadvice: Motivation, Expectations, and Misconceptions as Expressed in E-mails Sent to Physicians. *Archives of Dermatology* 135/2, 151-156.

Fage-Butler, Antoinette M. / Nisbeth Jensen, Matilde 2013. The Interpersonal Dimension of Online Patient Forums: How Patients Manage Informational and Relational Aspects in Response to Posted Questions. *Hermes – Journal of Language and Communication in Business* 51, 21-38.

Fage-Butler, Antoinette M. / Nisbeth Jensen, Matilde 2014. 'I bet if your FT-4 went up a bit your TSH would drop': Medical Terminology in Patient-Patient Communication". Paper presented at the Cerlis 2014 International Conference. Abstract retrieved from <http://dinamico.unibg.it/cerlis/public/CERLIS%202 014_ book%20of%20abstracts%20web.pdf>.

Finn, Judith 1999. An Exploration of Helping Processes in an Online Self-help Group Focusing on Issues of Disability. *Health and Social Work* 24, 220-232.

Fitneva, Stanka A. 2001. Epistemic Marking and Reliability Judgements: Evidence from Bulgarian. *Journal of Pragmatics* 33, 401-420.

Flanagin Andrew / Metzger Miriam 2007. The Role of Site Features, User Attributes, and Information Verification Behaviors on the Perceived Credibility of Web-based Information. *New Media & Society* 9/2, 319-342.

Gooden, Rebecca / Winefield Helen R. 2007. Breast and Prostate Cancer Online Discussion Boards – A Thematic Analysis of Gender Differences and Similarities. *Journal of Health Psychology* 12/1, 103-114.

Gotti, Maurizio [3]2011 *Investigating Specialized Discourse*. Bern: Peter Lang.

Hargittai, Eszter / Fullerton, Lindsay / Menchen-Trevino, Ericka / Thomas, Kristin 2010. Trust Online: Young adults' Evaluation of Web Content. *International Journal of Communication* 4, 468-494.

Harvey, Kevin / Koteyko, Neila 2013. *Exploring Health Communication: Language in Action*. London: Routledge.

Hyland, Ken 2002. Authority and Invisibility: Authorial Identity in Academic Writing. *Journal of Pragmatics* 34, 1091-1112.

Kim, Soojung / Yoon, Jongwon 2011. The Use of an Online Forum for Health Information by Married Korean Women in the U.S. *Information Research* 17/2, paper 514. Available at <http://Informa tionR.net/ir/17-2/paper513.html>.

LaCoursiere, Sheryl / Knobf, M. Tish / McCorkle, Ruth 2005. Cancer Patients' Self-reported Attitudes about the Internet . *Journal Of Medical Internet Research*, 7/3, e22. Available at <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1550663/>.

Lea, Martin / Spears, Russell 1992. Paralanguage and Social Perception in Computer-mediated Communication. *Journal of Organizational Computing* 2, 321-342.

Lewis, Tania 2006. Seeking Health Information on the Internet: Lifestyle Choice or Bad Attack of Cyberchondria? *Media, Culture & Society* 28, 521-539.

Marín Arrese, Juana 2004. Evidential and Epistemic Qualifications in the Discourse of Fact and Opinion: a Comparable Corpus Study. In Marín Arrese Juana (ed.) *Perspectives on Evidentiality and Modality* , Madrid: Editorial Complutense, 153-184.

Meier, Andrea/ Lyons, Elizabeth / Frydman, Gilles / Forlenza, Michael / Rimer, Barbara 2007. How Cancer Survivors Provide Support on Cancer-related Internet Mailing lLsts. *Journal of Medical Internet Research*, 9/2, e12. Available at <http://www.ncbi.nlm. nih.gov/pmc/articles/PMC1874721/>, doi: 10.2196/jmir.9.2.e12.

Metzger, Miriam / Flanagin, Andrew J. 2013, The Special Case of Youth and Digital Information Credibility. In Folk Moe and Shawn Apostel (eds) *Online Credibility and Digital Ethos: Evaluating Computer-Mediated Communication,* IG Global: Hershey, 148-168.

Mulholland, Joan 1999. E-mail: Uses, Issues and Problems in an Institutional Setting. In Bargiela-Chiappini, Francesca / Nickerson, Catherine (eds) *Writing Business*. London: Longman, 57-84.

Mushin, Ilana 2001. *Evidentiality and Epistemological Stance. Narrative Retelling.* Amsterdam: John Benjamin.

Nuyts Jan 2001. *Epistemic Modality, Language, and Conceptualization: a Cognitive-pragmatic Perspective.* Amsterdam: John Benjamin.

Rice, Ronald E. / Katz, James 2001. *The Internet and Health Communication. Experience and expectations.* Thousand Oaks: Sage.

Sarangi, Srikant 2001. Editorial: On Demarcating the Space between 'Lay Expertise' and 'Expert Laity'. *Text – Interdisciplinary Journal for the Study of Discourse* 21, 3-11.

Segal, Judy / Richardson, Alan 2003. Introduction. Scientific Ethos: Authority, Authorship, and Trust in the Sciences. *Configurations* 11/2, 137-144.

Sözeri, Ceren 2013. Ethical Challenges for User-Generated Content Publishing: Comparing Public Service Media and Commercial

Media. In Folk Moe / Shawn Apostel (eds) *Online Credibility and Digital Ethos: Evaluating Computer-Mediated Communication.* IG Global: Hershey, 302-315.

Timimi, Farris K. 2012. Medicine, Morality and Health Care Social Media. *BMC Medicine* 10, 83.

Van der Auwera, Johan / Plungian, Vladimir 1998. Modality's Semantic Map. *Linguistic Typolology* 2, 79-124.

Walther, Joseph / Jang, Jeong-woo 2012. Communication Processes in Participatory Websites. *Journal of Computer-Mediated Communication* 18, 2-15.

Wenger, Etienne 1999. Communities of Practice: The key to a Knowledge Strategy. *Knowledge Directions* 1, 2-10.

Williams, Alan / Calow, Duncan / Lee, Andrew 2011. *Digital Media Contracts*. Oxford: Oxford Univerity Press.

Winter, Stephan / Krämer, Nicole 2012. Selecting Science Information in Web 2.0: How Source Cues, Message Sidedness, and Need for Cognition Influence Users' Exposure to Blog Posts. *Journal of Computer-Mediated Communication* 18, 80-96.

Zummo, Marianna L. 2014. The Web Participatory Environment: A New Genre in Health Exchange. In Chiavetta, Eleonora / Sciarrino, Silvana / Williams, Christopher (eds) *Popularization and the Media*, Bari: Edipuglia, 99-115.

ASHLEY BENNINK

Dialect Variation and its Consequences on In-Clinic Communication

1. Introduction

In the past two decades, the United States has experienced a rapid growth in the Hispanic population – increasing 233% since 1980 to reach a total of 37 million Spanish-speakers by 2012. For some regions, such as North Carolina, Arkansas and Tennessee, this growth rate has reached almost 1000% (US Census Bureau). A logical effect of this increase in population has been an increase in the use of Spanish in every service industry, of which health and human services is no exception. This has led to a surge in demand for medical Spanish courses in order to effectively communicate with the rising number of Latino patients.

However, despite the significant diversity found inherent to this incoming population – which represents various countries, regions and backgrounds – many of the medical Spanish courses treat these immigrants as a homogeneous group. Indeed, oftentimes in these courses, and in much of the learning and reference materials, the colloquial register, which is not only the most common language register but also the one that takes into account this diversity, is absent. In contrast to the abundant information available on both standard and technical Spanish in the medical setting, it is quite difficult to find any materials that include or describe Latin American dialect variants. Nonetheless, these variants have an important presence in the clinic setting and can have a negative impact on doctor-patient communication.

In this chapter, the variants that arise in the clinic setting and the impact that these can have on doctor-patient communication will

be described. Then, the communicative competence necessary to converse effectively in the medical interview given the appearance of these terms will be outlined along with a discussion of the challenges that they present to the attainment of this quality communication. However, it should be noted that the intention in this chapter is not to offer solutions to these problems but instead to create awareness around the issue of Spanish lexical variants in the United States medical setting.

2. Spanish lexical variants in the United States medical setting

In 2013, a preliminary study was conducted by Bennink (2013a) to research the presence and frequency of Spanish lexical variants in the medical setting in southeastern United States. The study was inspired, on one side, by her previous work with Latinos and with other bilingual professionals in healthcare clinics within that region and, on the other, by the fact that, prior to that study, there were no lists of frequent variants in the field of health and wellness. With the goal of starting to fill that gap, questionnaires were sent to clinics and medical interpreter organizations in order to collect data on which variants were encountered and at what frequency. It should be noted that in that study the denomination *lexical variant* was used to refer to words or phrases used by patients that were neither the technical term nor the 'standard'.

The responses received not only confirmed the extent to which lexical variants are employed in the healthcare setting, recovering a list of around 242 distinct variants, but also demonstrated a surprising diversity in terms of origin. The variants recorded in the survey by respondents as 'lexical variants' included ones with origins in other languages, including indigenous languages – such as *cuate* from the Nahua *cóatl*, meaning 'twin' – or the English language – for example, *raite* to mean 'a ride as a form of transportation and *rifill* to mean a

'medication refill'. Other origins can be traced to the archaic peninsular Spanish – e.g. *sopapo* for a 'slap', pronunciation variations – for example, *salpullido* from the Cuban pronunciation of the term *sarpullido* ('rash'), the influence of the cultural beliefs – such as *mal de ojo*, euphemisms – *mis partes* ('private parts'), vulgarisms – *pito* ('penis') – and regionalism – *ándale* (which can equate, at times, to an exclamation or affirmation similar to 'exactly', 'that's it' or 'you've got it right').

However, it should be noted that most diatopic variants were found to be from Mexico, with high numbers also from El Salvador, Guatemala and parts of South America (Colombia and Peru). This concentration of variants from a handful of countries seems to reflect the composition of the non-English speaking Latino population in that region, which seems to logically imply that the variants most frequently employed are determined, in part, by the most common countries of origin for the Hispanic population in that region, leading us to hypothesize that care should be taken in generalizing these results to other sectors of the United States.

3. Impact on care

Given the presence and diversity of these variants in the clinic setting, the question is then raised as to if they have any impact on care. In early 2014, I met with groups of Spanish for healthcare professors, Spanish-speaking medical professionals and medical interpreters while conducting part of a larger study. Almost all of them affirmed medically related dialect variants as a key aspect in the promotion of good communication and care. Nevertheless, in terms of specific studies, there is no known research that looks specifically at Latin American variants in cross-lingual communication in the medical context. However, there are studies showing ample evidence of the noxious effect of dialect variation between medical professionals and patients who share a common maternal tongue (Wolfram/Cavendar

1992, for example) as well as from anecdotal evidence (Bennink 2013b) and other related studies on the language barrier (including Yeo 2004 and Timmins 2002, among others), which both reveal the considerable impact dialect can have on doctor-patient interaction in terms of misunderstandings, patient dissatisfaction, physician frustration and loss of time dedicated to patient care. Below, these studies and how they relate to the topic at hand will be further explained.

In terms of studies regarding same language communication in the medical context, it has been well-confirmed by researchers such as Mishler (1984) and Woods (2006), to name two, that differences in language usage between doctors and patients who share a native tongue can result in miscommunications. For example, Mishler (1984), describes two main categories of language in medical discourse: the voice of medicine and the voice of the *lifeworld*. This *lifeworld* language is the everyday language used by those unfamiliar or uncomfortable with medical terminology and includes aspects such as dialect variants, and euphemisms and even different definitions for technical medical terms (such as the difference between the lay definition of *depression* and the technical one). Though in this case, while the doctor is likely to understand the patient, the patient may not always be familiar with the medical language of the doctor. Woods describes this as a problematic gap between technical language and common language in which much information can be lost. As a result, Mishler (1984) explains the need for the doctor to act as a translator between the *lifeworld* and the medical language.

However monolingual English-speakers may also encounter communication difficulties on top of those arising from the lifeworld-medical language dichotomy. In conversations with medical professionals, many have cited their difficulties in understanding certain regional dialects or the African American vernacular. Wolfram and Cavendar (1992) discuss the substantial range of variants produced in the Appalachian region. Hoejke (2011: 11) affirms: “Monolingual English speakers from one geographic area of the United States also may not understand the local expressions and pronunciation of the patient population where they do their residencies”. For that reason, there are, as she mentions, some residency programs that offer acculturation

courses to their first year residents even though they are native to the United States. The language taught in the course includes words and phrases used by the local patient community regarding various topics such as parts of the body, symptoms, sicknesses, etc.

In this case, as opposed to the first monolingual scenario described, the physician's role as an interpreter would no longer be sufficient to attain understanding, as he or she is now the one confronted with an unfamiliar language use. Nevertheless, since they still share the same base language and similar cultural backgrounds (at least in comparison with foreigners and speakers of another language), it is still not quite the same as the situation that we are confronting. Instead, dialect variants can represent an even more crucial factor when considering the communication between speakers who do *not* share a native language and thus have fewer resources available to them to resolve misunderstandings. An example of a cultural difference that can complicate the process would be the value of *respeto*, which can lead patients to show agreement with the medical professional even if they do not agree or do not understand. For example, one Latino patient at the clinic where I previously worked who spoke no English nodded "yes" to the medical professional when asked "do you speak English?". It was only after speaking with the patient another five minutes in English that the physician realized that the patient was constantly nodding along to what the medical professional said or asked but actually had no idea what the physician was saying.[1]

Other cultural factors that can impede linguistic communication may include differing beliefs on origins of illness, how care should be carried out, effective treatments, etc. Additionally, the stress of not knowing how to act in a setting that is not their own as well as being ill can make it harder for patients to think through their word choice and also can lead them to revert back to their native language or dialect (Marcos Marín/Gómez 2008). Thus some *patients* who are unable to reword what they wish to say, instead may respond to the

1 This tendency is also noted by other researchers such as Calzada *et al*. (2010) and Carteret (2011).

question "what do you mean by that?" or "please say that in another way" by repeating the same response again and again.[2]

Aggravating this, in the case of the United States, is that courses and manuals have focused on teaching doctors and interpreters the technical and standard terminology required to communicate with Latino patients while maintaining the formal register characteristic of the medical setting. Nevertheless, these terms may not be known nor familiar to the Spanish-speaking patients whose *lifeworld* language may differ greatly from the standard. Additionally, these patients may use language and terminology from their *lifeworld* language or linguistic repertoire that is likely to be unfamiliar to a Spanish as a second language learner. The resulting effect is an increase in misunderstandings and frustration, and decreased patient satisfaction and compliance – all of which impact quality of care and outcomes and all of which are further exacerbated by time constraints placed on patient care (Bennink 2014).

An anecdotal example of how misunderstandings arising from differences between lifeworld and technical language can impact care would be the phrase commonly used in the city where I worked as a medical interpreter in North Carolina: *mi esposo me cuida*. Latino patients often employed this phrase when asked what form of birth control method they use. Many times they were unwilling (or unable) to further clarify when asked what they meant by this expression. For professionals unfamiliar with the phrase, it was generally taken to mean that her husband uses a condom. However, it actually refers to the use of the withdrawal method (that is, when the man cares to). In contrast, the phrase *mi esposo se cuida* is the one used to refer to condom use. This knowledge changed, in some cases, the doctor-patient communication, inciting a conversation regarding more reliable forms of birth control in the first case rather than assuming an adequate method was being used. Thus it can be seen how, in some cases, variants can have a direct impact on care.

Up to this point, the focus has been on the impact lexical variants have on care in terms of misunderstandings. Nevertheless, in

2 For more information on factors that give rise to higher variant use in the clinic setting, see Bennink (2014).

addition to misunderstandings, lexical variants can have other possible consequences, including physician frustration and loss of patient satisfaction. In the previous example, it was mentioned that some Latino patients are reticent (or at times unable) to offer an explanation for a term they used when it is not understood and, instead, tend to simply repeat the term or phrase.[3] This repetition and difficulty to resolve what the patient wishes to express can be frustrating for the medical professional who does not always understand the difficulty in explaining something in another way and also feels the pressure of limited patient care time. Additionally other studies, such as those by Timmins (2002), Yeo (2004) and David/Rhee (1998) note that when a patient feels misunderstood their levels of satisfaction and trust in their provider decrease and, in turn, this often results in poor patient compliance and, consequently, less positive health outcomes.

Lastly, patient care time is a scarce resource in the clinic setting and these variants can lead to a significant loss of that commodity. A recent study published in the *Journal of Internal Medicine* affirmed that doctors in the United States have only about eight minutes per patient (Block *et al.* 2013). Also, given that medical interviews with speakers of another language generally take longer than a standard interview, providers often feel pressured from the start. Thus, the use of dialect variants and the time required to come to an understanding is all the more problematic. Moreover, the relative lack of these terms in bilingual dictionaries and reference materials (Bennink 2013a) exacerbates the situation and leaves the doctor without the needed support to help him/her quickly resolve the situation. An additional concern regarding the loss of patient care time is that, if the doctor has to spend more time resolving an unfamiliar term, he/she may feel rushed, which could give rise to more errors and/or a decrease in quality of care.

3 Studies show that those with a lower education level and socioeconomic status have more difficulties resolving misunderstandings than their more educated, higher socioeconomic level counterparts (Washington/Craig 1998, Wieling *et al.* 2013, Williams/Kerswill 1999).

4. Necessary communicative competence

Given the appearance of dialect variants in clinic and their impact on communication and care, the communicative competence necessary for this setting will now be examined. Effective communicative competence on the part of the medical professional would, first, imply not only a knowledge of technical terminology but also an ability to communicate with the patient on a more *human* level that reduces the social distance as well as using language that allows the patient to understand the information the doctor wishes to explain. This would allow for more patient centered care (Mishler 1984). This is the *productive* element of the communicative competence, that is, the linguistic ability to produce certain lexicon during the medical interview and to carry out an effective and appropriate dialog. Second, medical professionals would need the *receptive* capacity to understand variants used by patients as well as a practical knowledge of techniques that could be implemented to resolve a misunderstanding in the case that one should occur. Thus, specifically in terms of lexicon, the medical professional needs to produce the appropriate standard and technical terminology while at the same time understand the variants used by patients or at least be equipped with the skills to help attain a level of understanding with the patient (Bennink 2013a). Unfortunately, though in theory this concept is fairly basic, there are various challenges to its practical implementation that arise from diverse factors including the patient himself/herself, the inherent characteristics of the variants and the availability of materials and education.

In the above description of communicative competence, the onus of fostering adequate communication is placed solely on the medical provider, a considerable burden for a single person who interacts with people of various backgrounds on a daily basis. However, when considering the patient's ability to take on that burden, the difficulties are clear. Firstly, the patient typically uses a given variant as opposed to a more standard term because that is the one he/she has within his/her language repertoire. Secondly, the

patient, in most cases, will have a lower ability to resolve misunderstandings than the medical professsional due to a couple of factors. For one, it has been demonstrated that people with a low educational level and socioeconomic status tend to have more difficulties in resolving misunderstandings or finding other ways to explain a word or a phrase. Within the Spanish-speaking population in the United States, many of those who are Spanish-only speakers fall within this category. Another is the fact that patients typically visit the clinic when they are ill. Illness, tiredness and stress greatly impair one´s ability to reason, making it difficult to find another way to explain something. This may result in the patient's inability to play an active role in the resolution of misunderstandings leaving the responsibility on the medical provider, who then has to learn to effectively resolve these situations with each patient from diverse backgrounds and countries of origin. This is no simple feat.[4]

Compounding the difficulty of this task is the quantity and diversity of the variants that occur in clinic, as briefly alluded to in the description of the variants. For that reason, it is extremely difficult, if not impossible, to learn all of them. Nonetheless, even if it could be done, the nature of the variants themselves complicates their use. First, variants change over time, moving into disuse or becoming part of standard language, requiring continuous learning to stay current. Second, due to the fact that many variants are region specific and informal in nature, though it would be useful to learn them in order to understand the patient, they are not as readily useful in terms of productive language. Many times, the patient's country of origin is unknown and, additionally, it is nearly impossible to know which terms are familiar to that particular patient. Inserting dialect variants with the hope of making the patient feel more comfortable and more likely to understand the medical professional without knowing more about them could actually result in the opposite effect – a distancing of the patient or even an offense. Finally, given that some variants are due to pronunciation differences or interferences from English, the

4 For more information on factors which give rise to higher variant use among patients and which inhibit the patient's participation in the resolution of misunderstandings, please see Bennink (2014).

provider would also need an understanding of phonetic variations between different countries and regions as well as an understanding of language interference. This represents a linguistic understanding that is far too demanding for most physicians who are already setting aside part of their all too scarce time to learn Spanish.

Lastly, even if the medical professional had the desire to learn some of the dialect variants or turn to reference materials such as dictionaries when they do not understand a term or phrase, they may be surprised to discover a great absence of variants in both of these resources. During the aforementioned study carried out by Bennink in 2013, there was also an analysis of the inclusion of dialect variants in Spanish for medical professionals courses and manuals used within the studied region as well as in some dictionaries used as reference. The results obtained revealed a severe dearth of variants in all three areas. It was found that many courses do not teach any variants or only teach those familiar to teachers. The manuals, for the most part, only include technical terminology and, those that do include variants, offer very few.[5] Finally, in terms of the dictionaries, the analysis of the *Diccionario de la Lengua Española* from the Real Academia Española (2001), the *Diccionario del Español Usual de México* (Fernando Lara 2000), the *Southwestern Medical* (Artschwager Kay 2001), and a later comparison with the *Diccionario de Americanismos* (Asociación de Academias de la Lengua Española 2010) confirmed that each one is missing some of the variants found to be frequent in the medical setting. Furthermore, some frequent variants were not included in any of these. This absence leaves the medical professionals without the education or reference materials to deal with unfamiliar variants when they arise.

5 For a list of courses and manuals analyzed, see Bennink (2013a).

5. Conclusion

As has been illustrated, dialect variants in cross-lingual medical communication are not only prevalent but also, when unfamiliar to the medical professional, can potentially have a negative impact on care. However, when seeking to integrate them into the communicative competence of the healthcare professionals, various challenges are confronted, including the patient's communication skills, the quantity and diversity of variants and the lack of educational and resource materials that incorporate dialectal terms. Though the intention in this chapter is not to give an answer for each of these challenges, it should be mentioned that Bennink and those at the Universidad de Oviedo are currently conducting research that aspires to address this need. The hope is to create a repertoire of Spanish dialect variants that arise frequently in the medical setting. The final goal of this repertoire will be its use as a resource in clinic and as the basis for the creation of material for Spanish for medical professionals courses. It is hoped that this research will be a first step in the search for solutions to the challenges that have been presented in this chapter.

References

Artschwager Kay, Margarita ^{2}2001. *Southwestern Medical Dictionary*. Tucson: University of Arizona Press.

Asociación de Academias de la Lengua Española. 2010. *Diccionario de americanismos*. Madrid: Santillana.

Bennink, Ashley 2013a. Variaciones dialectales sobre la salud y la enfermedad. Propuesta para la enseñanza de español en el ámbito de la medicina. Trabajo Fin de Máster. Universidad de Oviedo.

<http://digibuo.uniovi.es/dspace/bitstream/10651/17813/6/TFM_Ashley%20Bennink.pdf>

Bennink, Ashley 2013b. Salud e inmigración: Retos de la variación dialectal en la enseñanza del español destinado a los médicos. *Segundas Lenguas e Inmigración* 8. [Submitted]

Bennink, Ashley 2014. Searching for understanding in the medical consultation: Language accommodation and the use of dialect variants among Latino patients in Murawska, Magdalena / Szczepaniak-Kozak, Anna / Wasikiewicz-Firlej, Emilia (eds) *Discourse in Co(n)text – The Many Faces of Specialized Discourse.* Newcastle-upon-Tyne: Cambridge Scholars. [Submitted]

Block, Lauren / Habicht, Robert / Wu, Albert W. / Desai, Sanjay V. / Wang, Kevin / Novello Silva, Kathryn / Niessen, Timothy / Oliver, Nora / Feldman, Leonard 2013. In the Wake of the 2003 and 2011 Duty Hours Regulations, How do Internal Medicine Interns Spend their Time? *Journal of General Internal Medicine* 28/8, 1042-1047.

Calzada, Esther J. / Fernández, Yenny / Cortés, Dharma E. 2010. Incorporating the Cultural Value of *Respeto* Into a Framework of Latino Parenting. *Cultural Diversity and Ethnic Minority Psychology* 16/1, 77-86.

Carteret, M. 2011. Cultural Values of Latino Patients and Families. Dimensions of Cultural: Cross-Cultural Communications for Healthcare Professionals. < http://www.dimensionsofculture.com /2011/03/cultural-values-of-latino-patients-and-families/.>

David, Rand A. / Rhee, Michelle 1998. The Impact of Language as a Barrier to Effective Healthcare in an Underserved urban Hispanic Community. *Language and Effective Healthcare* 5 & 6/65, 393-397.

Fernando Lara, Luis (dir.) 2000. *Diccionario del español usual en México*. Biblioteca Virtual Miguel de Cervantes. 23 April 2013. <http://www.cervantesvirtual.com/servlet/SirveObras/45737575101825028299979/index.htm>

Hoejke, Barbara 2011. International Medical Graduates in U.S. Higher Education: An Overview of Issues for ESP and Applied Linguistics in Hoejke, Barbara / Tipton, Sara (eds) *English*

Language and the Medical Profession: Instructing and Assessing the Communication Skills of International Physicians. Bingley: Emerald Group Publishing.

Marcos Marín, Francisco / Gómez, Domingo 2008. Servicios Médicos y Hospitalarios. *Enciclopedia del Español en los Estados Unidos Anuario del Instituto de Cervantes XIV*: 978-86. 5 February 2013 <http://cvc.cervantes.es/lengua/anuario/anuario_08/pdf/servicios02.pdf.>

Mishler, Elliot G. 1984. *The Discourse of Medicine. Dialectics of Medical Interviews*. New Jersey: Ablex Publishing Corporation.

Real Academia Española [22]2001. *Diccionario de la lengua española*, Madrid: Espasa-Calpe. 4 March 2012. <http://www.rae.es/rae.html>

Timmins, Caraway 2002. The Impact of Language Barriers on the Health Care of Latinos in the United States: A Review of the Literature and Guidelines for Practice. *Journal of Midwifery and Women's Health* 47/2, 80-96.

US Census Bureau. 2012. American FactFinder. 29 December 2014. <http://factfinder2.census.gov/>

Washington, Julie A. / Craig, Holly K. 1998. Socioeconomic Status and Gender Influences on Children´s Dialectal Variations. *Journal of Speech and Hearing Research* 41, 618-626.

Wieling, Martijn / Montemagni, Simonetta / Nerbonne, John / Baayen, R. Harald 2013. Lexical Differences Between Tuscan Dialects and Standard Italian: A Sociolinguistic Analysis Using Generalized Additive Mixing Model. *Language and Speech*. [Submitted]

Williams, Ann / Kerswill, Paul 1999. Dialect Levelling: Change and Continuity in Milton Keynes, Reading and Hull. In Foulkes, Paul / Docherty, Gerard (eds) *Urban voices. Accent studies in the British Isles*. London: Arnold, 141–162.

Woods, Nicola 2006. *Describing Discourse: A Practical Guide to Discourse Analysis*. London: Hodder Education.

Wolfram, Walt / Cavendar, Anthony 1992. Dialect and Special Interest Domains: Conceptual and Methodological Issues in Collecting a Medical Lexicon. *American Speech* 67/4, 406-20.

Yeo, SeonAe 2004. Barriers and Access to Care. *Annual Review of Nursing Research* 22, 59-73.

MICHELA GIORDANO

The Old Bailey Proceedings: Medical Discourse in Criminal Cases

1. Introduction

Although medical evidence has always been critical in legal and administrative proceedings, proper medical expert witnesses have only appeared in criminal courts relatively recently. As Stygall (2001: 331) explains, "[m]any observers of the rise of the professions tend to treat expertise as a modern phenomenon, associated with the rise of the professions and the academic disciplines in the 19th century". Since then, as professionals with a specialized knowledge, doctors and physicians have had an obligation to assist and provide their expertise in the administration of justice. Through their education and experience, expert witnesses can provide the court with an assessment or opinion within their area of competence, which is not considered to be the domain of other professionals in court, such as the lawyers and the judge. Nor is it knowledge available to the jury and the public in general.

The aim of this study is to investigate medical discourse in historical criminal trials in order to ascertain whether specific discursive practices were employed. Fourteen trial accounts from 1902 to 1913 drawn from the Old Bailey Proceedings website constitute the corpus for the investigation. The offence considered is infanticide and the narratives, cross-examinations and re-examinations involving doctors, physicians, pathologists, practitioners and 'masters in surgery' are investigated both quantitatively and qualitatively, providing examples of medical testimony which give a specialist and authoritative account of the physical examination of both victims and murderers.

What the study focuses on in particular is the recourse to and embedding of specific medical jargon in courtroom discourse. It has been observed that specific discursive practices account for the search for "balance between credibility and comprehensibility" (Cotterill 2003: 196) in a context where the discourse is to be considered both professional/lay and inter-professional (Linell 1998: 143). Medical experts find themselves simultaneously engaged in these two types of discourse: their testimonies are in fact for the benefit of a lay jury and lay people in general who lack understanding of and experience with both the legal and the medical genres and jargon. Additionally, the interactional dyad lawyer/medical expert can be considered to be an inter-professional type of discourse inasmuch as two competing modes of reasoning represent profession-specific approaches to the particular case in hand.

Nowadays, expert witnesses occupy a unique position in court trials: unlike lay witnesses, they have more privileges and prerogatives, such as the right to give lengthier answers, to contradict their interlocutors, as well as to draw conclusions and express opinions on the strength of their experience and expertise. Outside the courtroom setting, they enjoy the same professional status and social standing of lawyers and judges, thanks to their competence and domain knowledge. However, since the witness box is a place outside their professional context, the experts are subject to the rule and role constraints which characterize the courtroom trial (2003: 168). Medical discourse in court is thus subject to recontextualization, i.e. the transfer and transformation of some part or aspect of a text or discourse and the fitting of this part or aspect into another context, text or discourse. As Linell (1998: 144) points out, this is because human beings wander between situations, just as discourse and discursive content travel across situations.

The present chapter starts from an investigation of the position of expert witnesses in the historical courtroom, since it seems that in the past they did not enjoy the same social status and professional standing as their present-day colleagues. Additionally, as one might expect when dealing with historical data, especially spoken texts such as trial proceedings and witness testimonies, other questions such as

source validity and accuracy may arise and these too merit close scrutiny.

2. Materials and methodology

The present study has drawn upon various studies which have dealt with courtroom discourse from wide-ranging, though often complementary, perspectives. A certain number of investigations looked at the socio-pragmatic aspects of courtroom discourse and are sometimes based on the description and exploration of actual courtroom proceedings, such as those in Atkinson and Drew (1979), Cotterill (2003), and Heffer (2005). Other works have dealt with the discursive implications of the merging of voices in professional and institutional discourse (Linell 1998). Among these, some are conversationally-oriented studies looking at language in interaction in various institutional contexts and focus on the interactional dynamics of the courtroom, such as turn-taking and the sequential organization of discourse, for instance Heritage (2004), and Thornborrow (2002).

Furthermore, the particular role of expert witnesses in the court-room and the fundamental matters of identity, credibility, power and social relationships therein, together with the ways these are negotiated through discourse, are discussed in depth by Chaemsaithong (2012), Maley (2000), and Stygall (2001). For the purpose of this chapter, useful insights were also gained from works about historical courtroom discourse such as those by Archer (2005) Chaemsaithong, (2011), Kryk-Kastovsky (2000; 2006), and those on historical data based on spoken interaction, e.g. Culpeper/Kytö (2000; 2010) and Jucker (2008).

The data for the present investigation are drawn from the Old Bailey Proceedings website which contains the proceedings of English criminal trial sessions from 1674 to 1913, after which publication came to a sudden halt. The earlier corpus built for this purpose entailed a first stage search for transcripts in the website containing

the keywords *doctor*, *surgeon*, *physician*, *practitioner*, *pathologist* in the texts, since it was presumed that their presence in the text might demonstrate the actual involvement of such professionals and their practice in the unfolding of the trial. The offence under consideration is infanticide, and the corpus was to include trials with all verdicts and all punishments. In the second stage, the search was narrowed down to trial accounts from January 1900 to December 1913, the last year in which the proceedings were published. Table 1 shows the results of the search. Twenty trial transcripts from March 1902 to January 1913 were found for that particular offence, i.e. infanticide.

1902-1913 Infanticide Corpus (The Old Bailey Proceedings online)		
[IN01]	Emily Moir	10th March 1902
[IN02]	Marian Dicker	5th May 1902
[IN03]	Louisa Beaumont	12th January 1903
[IN04]	Annie Walters Amelia Sach	12th January 1903
[IN05]	Louisa Lunn	21st March 1904
[IN06]	Mildred Cole	18th April 1904
[IN07]	Clara Hlldebrand	6th March 1905
[IN08]	Clara Bridges	29th May 1905
[IN09]	Leah Abrahams	16th October 1905
[IN10]	Alice Sargent	22nd October 1906
[IN11]	Alice Mary Ellis	22nd April 1907
[IN12]	Louisa Day	21st October 1907
[IN13]	Florence Hawkins	31st March 1908
[IN14]	Florence Perry	26th May 1908
[IN15]	Ethel Harding	10th November 1908
[IN16]	Nellie Betts	19th July 1909
[IN17]	Jane Stephenson	26th April 1910
[IN18]	Jennie Button	11th October 1910
[IN19]	Eleanor Eslick	19th March 1912
[IN20]	Eleanor Martha Browning	7th January 1913

Table 1. 1902-1913 Infanticide Corpus (the Old Bailey Proceedings online).

Table 1 shows then contents of Infanticide Corpus 1902-1913. The [IN] code stands for Infanticide to distinguish this particular corpus from others which also constitute the object of parallel research and which refer to different types of offences. In the second column the defendants' names and surnames can be found, while the third column provides the date of the trial.

In a subsequent stage of corpus building, a systematic and detailed reading of the twenty trial proceedings revealed that, despite the presence of such keywords as *doctor*, *surgeon*, *physician* or *pathologist* in the texts, six of them – namely [IN01], [IN11], [IN012], [IN13], [IN14], and [IN16] – do not actually include any medical expert narrative and were therefore excluded from analysis.

Consequently, the investigation was condensed to the fourteen trial transcripts that constitute the final corpus. Table 2 only contains the fourteen trials in which medical examinations were discussed and shows the total number of words in each transcript, the number of medical experts who testified in each trial and the number of words in the medical examinations. As we can see, the entire set of texts in the transcripts totals 42,459 words and those of the expert testimonies amount to 14,332 words. Despite the relatively small amount of data analysed, the results obtained do substantiate the conviction that the testimonies examined are representative of medical discourse in the legal context in the early 20th century.

Trial	*# of words*	*# of medical experts*	*Medical examinations # words*	*%*	*Type of examination in the transcript*
[IN02]	654	3	226	34.5	DE
[IN03]	3,311	3	752	22.7	DE/CR
[IN04]	11,431	3	1,699	14.8	DE/CR/RE/COE
[IN05]	4,679	2	1,684	35.9	DE/CR/RE
[IN06]	1,379	2	861	62.4	DE/CR/RE
[IN07]	5,029	1	1,463	29	DE/CR/RE
[IN08]	2,805	2	1,637	58.3	DE/CR/RE/COE
[IN09]	5,711	3	3,324	58.2	DE/CR/RE
[IN10]	966	2	189	19.5	DE
[IN15]	1,756	3	473	26.9	DE/CR
[IN17]	1,277	1	632	49.4	DE/CR/COE
[IN18]	1,612	2	799	49.5	DE/CR/COE

[IN19]	1,336	1	466	34.9	DE/CR
[IN20]	513	2	127	24.7	DE/CR
Total	42,459	30	14,332	33.7	

Table 2. Word count and type of examinations in the trials.

As shown in the percentage column, in some cases (such as [06], [08], and [09]) the medical testimonies cover more than 50% of the whole text. The last column in the table indicates the type of examination reported in the transcripts and the use of codes allows for better identification: DE stands for Direct Examination, CR stands for Cross Examination, RE stands for Re-examination and finally COE indicates Court Examination for those cases in which the intervention of the Court is provided.

It is worth noting that the transcripts in the website do not generally report the lawyers' or judges' questions, which were often omitted or abridged in the Proceedings. Conversely, the witness testimonies, including the medical accounts, are presented in the form of narratives. Yet it is clear that the practitioners and physicians were all answering questions posed by the Prosecution, the Defense and the Court. It is equally important to reiterate that the discourse in examinations was organized into a series of question and answer pairs, where both the turn order and the type of turn allocated to each party are fixed and pre-determined, as can be expected when dealing with a type of institutional discourse where specific forms of interaction are embedded in specific workplace contexts (Atkinson/Drew 1979; Thornborrow 2002; Heritage 2004). However, abridgments in the Proceedings were unavoidable since complete transcripts would have been uneconomic to publish because, as the website itself recounts, "publishers sought to make the trials readable and entertaining by presenting testimony unencumbered by legal and procedural details". Therefore, the largest amount of missing information concerns the role played by lawyers and judges, such as statement by counsel, opening statement by the prosecution, cross-examinations and judges' summing up, which were habitually excluded.

Despite the abridgments, the Old Bailey Proceedings website represents an invaluable historical corpus that facilitates both

diachronic socio-linguistic and socio-pragmatic research. Although this study will not take a diachronic perspective, but will conduct a synchronic analysis of expert witness narratives and discursive strategies in trials in the early 20thcentury, trials and expert witness testimonies undoubtedly represent a good example of spoken language data from earlier periods and moreover provide an invaluable source of information on the participants' age, sex, status, culture, and their relationship in a specific context and setting which would not otherwise be available.

As already discussed in Giordano (2012), trial proceedings are a speech-based genre, i.e. stemming from speech that has been permanently recorded and preserved in writing. This seems to be one of the major obstacles that historical pragmatics has to face: knowledge of the spoken interaction of the past is only confined to what can be gleaned from written records (Culpeper/Kytö 2000). In considering the value of the Old Bailey Proceedings as a source of historical data, it is important to remember that even if they "do not provide a full transcript of everything that was said in court", as the website itself states, the materials reported can be considered accurate and their reliability has often been confirmed by other manuscripts or published records which can be checked using multiple sources or a 'triangulation' procedure, as suggested by Culpeper and Kytö (2010). Printers of the Old Bailey Proceedings relied on several note takers and shorthand writers who actually attended the trials. Additionally, it can be presumed that the trials under scrutiny here, occurring in a period between 1902 and 1913, were very likely to have undergone a comparison with other reports or alternative accounts before publication. As Culpeper and Kytö (2000: 188) explain, many trial proceedings were designed for general public consumption and "sometimes part of the marketing strategy was to claim, usually in the title page, that the proceeding was a 'true' or 'faithful' record taken in court". The same authors later state that the important factor in this kind of historical research is that "the historical speech report *purports* to be a faithful report" (Culpeper/Kytö 2010: 81).

Therefore, along with a quantitative analysis of data, a qualitative analysis will also be conducted. The inquiry will focus on the managing of specific medical lexis and phraseology (such as, for

example, the expressions *a separate existence*, *puerperal fever* and *transitory mania*) and their embedding in the legal context of which the particular setting and situation call for explanations and clarifications of meanings unknown to the lay jury, the lawyers and the judge himself as well as most of the people present in the courtroom.

3. Medical experts in the historical courtroom

The present chapter analyses the position and the discourse of medical experts in the historical courtroom: the adjective *historical* here carries multiple meanings. The first and more straightforward one is that which alludes to the old period being considered, in this case the decade 1902-1913, more than a century ago. The second meaning points to the distinction between the salient features of early courtrooms and the present-day ones and looks at what insights present-day courtroom linguistic studies can gain from the investigations of early or historical courtroom discourse. More precisely, the expression *historical courtroom* is utilised by authors such as Kryk-Kastovky (2000, 2006), Jucker (2008) and Chaemsaithong (2011), who see the courtroom of earlier periods as the site from which examples of original spoken language of the past can be derived. The analysis of the historical courtroom discourse aims at reconstructing the spoken idiom of the past on the basis of old written sources. Following this, the historical linguist or pragmatist is confronted with the question of how the written data available nowadays actually reflects the language spoken in that given historical period, in order to understand the "conventions of language use in communities that once existed and are no longer accessible for direct observation" (Archer 2005: 6).

With this in mind, it must be pointed out that the modern expert witness was a creation of the late 18th century (Golan 2003). However, the same author reports that, already in 1554, a judge declared,

> If matters arise in our law which concern other sciences or faculties we commonly apply for the aid of that science or faculty, which it concerns. Which is an honourable and commendable thing in our law. For thereby it appears that we don't despise all other sciences but our own, but we approve of them and encourage them, as things worthy of recommendation. (Golan 2003: 18)

It used to be the case that in order to exploit the knowledge and science of experts in their trials, courts could choose to follow one of three procedural options: call them as jurors, call them as consultants or call them as witnesses testifying on behalf of one of the parties. Historically, experts could in fact participate as specialist jurors whose particular knowledge was gained from their personal experience and training. In the late 13th and 14th centuries, such specialist juries were generally composed of goldsmiths, aldermen, cooks, fishmongers and masters of grammar who used their specialized knowledge to render their verdict (Chaemsaithong 2011). Towards the early modern period, there began a constant and continual decline in the use of a knowledgeable and informed jury that was entrusted with a "fact-finding, investigatory role" (Stygall 2001: 331). It was gradually replaced with a silent and uninformed jury whose responsibility was merely to consider evidence and testimony from the other witnesses in a trial. Thus, expert witnesses became necessary to give specialised testimony and evidence that would better inform the jury about the case before pronouncing their verdict (Chaemsaithong 2011). Nevertheless, as noted above, experts did not use to benefit from the same social-standing and professional status as their modern peers. Since they had personally observed the facts and testified as to their conclusions, they could express their opinions; yet these were not differentiated from those of lay jurors who could do exactly the same, basing themselves on their direct knowledge of the facts of the case (Golan 2003).

Furthermore, what must be borne in mind is that the growth of expert knowledge in fields such as medicine and its recognition as such is a relatively recent phenomenon, dating back to about the end of the 19th century. This was of course the result of the growing reliance on science and the simultaneous rise of university and mass education systems that helped to legitimize the privileged status of

experts, resulting from their professional expertise, capability and competence (Chaemsaithong 2011). However, as still happens in the modern adversarial court, expert witnesses in the historical courtroom needed to construct and negotiate their identity, especially during the cross-examination when they were obliged "to counterbalance sceptical attitudes and hostile attempts aimed to undermine their testimony that accompanied their vulnerable status and image" (Chaemsaithong 2011: 472). An analysis of their discursive practices could also help shed light on the means they adopted to gain control during the interaction and (re)negotiate and (re)affirm their identity and professionalism.

4. Analysis and discussion

The defendants in the fourteen trials under investigation were all unmarried women, aged 18-29 who worked as tailoresses, laundresses or domestic servants who were all accused of infanticide generally following an illegitimate pregnancy. Most of them were judged guilty and condemned to imprisonment or hard labour; some received the death penalty, and some were considered unfit to plead because of their (presumed) insanity.

As can be seen from Table 3, the medical experts were generally medical superintendents, or assistant medical officers, registered medical practitioners, divisional surgeons of the police, or pathologists. Despite their titles and qualifications, as stated above, medical experts in the historical courtroom had to negotiate their professional identity and their expertise. Cross-examinations were much more challenging than direct ones, as in present-day times. Experts were not always allowed to expand on their answers or provide further explanations of medical evidence for the benefit of the jurors and the judge. Table 3 reports the number of words in each examination (DE, CE, RE and COE) for each one of the experts who took part in the trials under investigation.

Trial	*Experts*	*# of words*			
		DE	*CE*	*RE*	*COE*
[IN02]	Divisional surgeon	27			
	Medical man	78			
	Assistant medical officer	121			
[IN03]	Medical doctor superintendent	71	75		
	Assistant medical superintendent	323	129		
	Medical superintendent	68	86		
[IN04]	Medical practitioner	145	25+4	96	19
	Master in surgery	931	8	78	
	Divisional surgeon of police	182	175		
[IN05]	Registered medical practitioner	379	478	90	
	Pathologist	382	355		
[IN06]	Registered medical practitioner	173	67		
	Pathologist	398	205	18	
[IN07]	Registered medical practitioner	685	323	445+10	
[IN08]	Registered medical practitioner	610	196	241	
	Medical man	507			83
[IN09]	Bachelor of medicine	842	1,223	183	
	Divisional surgeon of police	438	306	48	
	Medical officer	65	199	20	
[IN10]	Divisional surgeon	85			
	Assistant medical superintendent	103			
[IN15]	Medical doctor	139	59		
	Medical superintendent	192	38		
	Assistant medical officer	45			
[IN17]	Surgeon	498	47	87	
[IN18]	Doctor	314	155	110	
	Medical superintendent	44	27	49	
[IN19]	Registered medical practitioner	257	209		
[IN20]	Doctor	78	16		
	Medical officer	33			

Table 3. Word count in the experts' testimonies.

The medical narratives in direct examinations are generally longer than in the other examinations and this can be explained by its less challenging and taxing nature. Yet there are some cases in which cross-examinations were longer than direct examination such as in [IN05] and [IN09], thus showing that in certain circumstances doctors were able to expand on their answers and give much more information than required by the conventions of courtroom discourse. Listed below

are the professional titles utilized by the experts to introduce themselves:

- B.M., Bachelor of Medicine;
- M.R.C.S., *Member of the Royal College of Surgeons*;
- L.R.C.P., *Licentiate of the Royal College of Physicians*;
- Medical Superintendent;
- Assistant Medical Officer;
- Medical Doctor Superintendent;
- Assistant Medical Superintendent;
- Registered Medical Practitioner;
- F.R.C.S., *Fellow of the Royal College of Surgeons*;
- Master in Surgery;
- Divisional Surgeon of Police;
- Pathologist;
- Medical Officer;
- Medical man.

4.1. Medical jargon embedded in the legal context

From a thorough reading of the transcripts, the use of two particular phrases comes immediately to the reader's attention: *separate existence*, referred to the newly-born baby and *puerperal fever*, referred to the mother. As will be explained later through the selected excerpts, the experts in the trials in the corpus appear to have had the opportunity to provide clarifications and details about the meaning of the two expressions and this can be explained by what Chaemsaithong (2011) states about expansions of response. In their answers to the lawyers' questions, they were able to provide detailed information and to expand their replies, often adding explanations of the most difficult medical terminology or of the expressions which needed to be clarified for the lay jury and the public present in the courtroom or even for the legal professionals who had no knowledge of or even familiarity with certain scientific and medical facts. Additionally, Chaemsaithong (2011: 480) notes that, differently from lay witnesses, experts in historical courtrooms were there to convey their opinion about a particular issue based on their qualifications and thus

attempted to shield themselves from blame and criticism. The expansion of responses had several communicative goals for medical experts:

a) to establish their identity as experts;
b) to negotiate positive self-representation and prevent their already vulnerable status from being attacked;
c) to propagate and reproduce the scientific ideology.

The need to elucidate on scientific principles and disseminate medical perspectives was often in contrast with the discredit and distrust that experts were sometimes subjected to. Nevertheless, as highlighted by Anesa (2012: 164), "the expert witness plays a crucial function in framing specialized (scientific) knowledge and often assumes the role of an expert mediator of knowledge". The author refers to experts in the contemporary courtroom context, but we can safely affirm that what she says was true of the historical courtroom, where witnessing through medical and scientific evidence was also a way to make medicine and science more comprehensible and accessible to lay people.

In order to try defendants in an infanticide case and judge whether they objectively committed the crime of killing their newly-born baby, the baby's life had to be demonstrated before presupposing it was actually murdered rather than stillborn. Therefore, the baby's *separate existence* had to be proved scientifically by the doctors or pathologists in the trial. As the Barrister-at-Law Stanley B. Atkinson wrote in 1904,

> A child is not born alive in law, and consequently cannot claim the right of a subject of the King, until it has exhibited a separate and independent existence after complete extrusion from the body of its mother. This expulsion does not also imply the delivery of the paraphernalia of the fœtus, nor need these be disconnected, for the legal consummation of birth (539-544).

In excerpt (1) the divisional surgeon to the H division of the police, Mr. Charles Graham Grant made the *post-mortem* examination of the newborn child and explained why, in his opinion, the fatal blow to the victim was given during its legal life:

(1) in my opinion that bruise was inflicted during legal life according to the definition given in our medical text books […] we are taught to gauge the circulation by our experience by the quantity of hemorrhage and the severity of the injury − if the prisoner were able to give the child a blow on the head directly it presented itself the results might be the same, but I cannot say positively − my opinion is that the blow was given during legal life − the hemorrhage extended over a considerable part of the surface of the brain − […] but I am going largely by the books. [IN09]

The doctors in the trials under examination utilized the expressions *separate existence* 24 times and *independent existence* four times. One of the ways in which they provided evidence that the baby was actually born before being killed is through the examination of the lungs, which were inflated to demonstrate that the baby breathed fully and deeply before receiving the lethal injuries. In [IN06] direct examination, the pathologist Dr. Ludwig Freyberger stated that the baby's lungs were perfectly inflated. Then, when cross-examined, he provided expansion and further explanation of how the hydrostatic test worked, as in excerpt (2):

(2) A child does not breathe so fully when only half born as it does when the birth is complete; the amount of air in the lungs varies […] – the hydrostatic test is, in my opinion, absolutely conclusive in circumstances of this kind; each lobe is separately tested to see if it floats; then each is cut into pieces, and these pieces are tested, and so you get a complete test of the lungs […] the inflation of the lungs, to my mind, proved conclusively that the child had had a separate existence, and breathed fully and deeply. [IN06]

It appears from some of the trial testimonies that the concept of *separate existence* must have been decisive and crucial in certain circumstances since the expression *born alive* itself did not have the same meaning in the two fields, medical and legal; this could have created some misunderstanding when trying to ascertain the legal life of the child. In [IN09] cross-examination, the Bachelor of Medicine Dr. Leonard Harman distinguishes between the biological (and medical) and the legal sense of the phrase *born alive*:

(3) I told the Magistrate that I formed the opinion that the child was probably born alive − I fully appreciate the difference of the sense of the biological and

> legal phrases of being born alive − in a medical sense 'born alive' means the child has breathed, but in the legal sense it means it has breathed after it was wholly separated from the body of the mother […]. [IN09]

This seems to be a crucial and critical matter in infanticide trials, since other examples show that the separate existence of the child had to be demonstrated in order to proceed with the investigation of the events and the formulation of hypotheses on how things must have gone at the crime scene. In [IN18], Dr. Alfred B. Blomfield of the Camberwell Infirmary exposed his findings resulting from the examination of the baby's body and stated:

(4) I do not think the wounds could have been inflicted before complete birth. From the appearances as a whole, I conclude that the child did have a separate existence. [IN18]

When examined by the Court, the doctor amplified his answer and provided further explanation of the phrase *separate existence* and its medical meaning, as shown in excerpt (5):

(5) I think the child, at the moment before it died, was separated from the mother and had an independent or separate existence. […] In my opinion the wounds contributed to the child's death. By 'separate existence' I mean that the child breathed; […] that it has born and has breathed; by 'born' I mean that it is away from the mother; the attachment or non-attachment of the cord makes no difference. [IN18]

Therefore, from a medical point of view, the attachment or non-attachment of the umbilical cord makes no difference and a child is fully born even if the placenta is still inside the mother, as reiterated by the medical superintendent William J.C. Kent in the same trial when examined by the Court. The two doctors were apparently asked the same question, i.e. to explain what they meant by separate existence. Through his medical opinion, part of which is shown in excerpt (6), Dr. Kent provided a confirmation of what had been already opined by his colleague Dr. Blomfield in excerpt (5) above:

(6) By a 'separate existence' I understand that the child was carrying out its life entirely apart from any circulation of its mother. The child may have a separate existence although the placenta remains in the mother. The probabilities are that this child had a separate existence. [IN18]

The second expression analysed here is *puerperal fever* which, according to medical dictionaries and glossaries present on the web, was once a devastating disease, affecting women in the first three days after childbirth and causing acute symptoms of severe abdominal pain, fever and debility. The first example is uttered by Dr. Christopher Thackaray Parson, Superintendent of the Isleworth Infirmary in trial [IN03] in the corpus:

(7) I examined the prisoner and came to the conclusion that she had recently been delivered of a child – I could not form a definite date, but it would be within ten days – after her admission she developed symptoms of puerperal fever − that is a common occurrence within four of five days of confinement. [IN03]

In excerpt (7) there are two expressions strictly linked to the phrase *puerperal fever*, *be delivered of a child* and *confinement*, which deserve particular attention. Saying that the prisoner *had recently been delivered of a child*, thus using a passive construction rather than the active one *had recently delivered a child*, might hint to the fact that in the past pregnancy and childbirth were life-threatening ordeals and many women did not get through them alive. To disburden a woman of the fœtus was like to 'be delivered' of this danger, to be relieved from it. The idea that pregnancy was a burden, a menace and a risk is also confirmed by the frequent use in the corpus of the word *confinement* and the clause *she had been recently confined*. Confinement meant keeping a new mother and her baby at home for a certain number of days or weeks after delivery, in order to protect both from infection and help the mother to recover. This is a traditional practice which is still used in some Western and Eastern countries, where women observe some forty days of recuperation in their post-partum period. Puerperal fever was one of the symptoms women endured during the period of confinement, as in excerpt (8):

(8) a woman having her first child may, in a way, be affected mentally; there would be pain during the birth, which would be accentuated by depression − child birth is very often followed by a period of partial or total unconsciousness – a woman might not know what was going on around her, or what she was doing herself – I do not think that child birth is a surprising branch of medical science. [IN05]

According to the doctors in the corpus, puerperal fever was the same as or was followed by *puerperal mania*, also known as *transitory mania* or *temporary insanity*, which affected women mentally, causing delusions, or leading to depression or even unconsciousness.

(9) When confinement comes on women frequently suffer from temporary insanity and they have been known to suffer from delusions; if a woman were having her first confinement by herself I think those circumstances might send to make her do things without realising what she was doing. [IN19]

In excerpt (9) Dr. Harry Brown explained that this temporary insanity affected women especially during their first pregnancy or first confinement, particularly if they had given birth to the child unassisted. Some of the defendants were so young and inexperienced that they did not even know to be *in the family way* (as stated in [IN15]), i.e. to be pregnant. This excerpt shows how the doctor justified the woman's actions following the delivery, perhaps including the baby's killing, i.e. she was not aware of what she was doing. Generally, doctors in the corpus affirmed that it was quite likely that a woman having her first child might have her mental equilibrium upset and that for a brief period she might not realize what she was doing. They often maintained that, at the time the accused killed the newborn baby, the woman was undoubtedly not responsible for her actions because she was in a state of frenzy, caused by the 'pain acting on her nerves', as explained in excerpt (10):

(10) I do not think that the concealment of the body of a child recently born would be the act of a person suffering from transitory mania – it generally comes on after the last pain and before the child is born − it is the pain acting on the nerves of a woman […] puerperal mania comes on afterwards. [IN07]

Therefore, puerperal fever developed into puerperal mania or puerperal insanity which was adduced as the strongest argument in the woman's defense for the killing and concealment of the baby's body, as reported in excerpt (11):

(11) I found her then suffering from puerperal insanity; that is a form frequently accompanying the stoppage of milk, and infanticide is one of the characteristics. [IN20]

A reading of excerpt (12) might lead us to assume that Dr. Patrick McGregor in [IN07] was pressed by the taxing and challenging counsel's questions during cross-examination, when he went so far as to affirm that transitory mania could occur in cases of illegitimate pregnancy. Then, after hesitating and hedging, he promptly corrected himself and stated that loss of memory and other symptoms could be especially present in first labours, but they were not caused or linked in any way to illegitimate pregnancy:

(12) where women have never had a child before there is a possibility in cases of this nature, and especially in illegitimate pregnancy, that an occurrence of transitory mania may be followed by loss of memory of events at this period − loss of memory may follow any confinement − I would not say as to illegitimate pregnancy − I should say especially to first labours, whether they were illegitimate or not. [IN07]

The same assertion about certain symptoms being somewhat linked to illegitimate pregnancy can be found in [IN15]. When cross-examined, Dr. Charles Ewart explained that the state of mental excitement is typical of married women and thus even more likely to occur in young unmarried women who find themselves in great agony because of their unwanted pregnancy, as shown in excerpt (13):

(13) I have had a great deal of experience in child delivery. Even a healthy married woman at such a time would be in a state of mental excitement; a respectable, but unmarried young woman in great agony, suddenly discovering that she was about to become a mother, would be even more likely to be affected in her mind [IN15].

Along with the expressions already analysed such as *separate existence*, *independent existence*, *confinement*, *be delivered of a child*, *puerperal fever* or *transitory mania* and *born alive*, other expressions were found which refer to the defendants' state of health right after delivering (such as *loss of memory*), or to the abovementioned *hydrostatic test* performed through the *inflation of the lungs* on the bodies of the dead babies to ascertain their separate existence after birth.

Other expressions belonging to medical professional discourse and typically recurrent in infanticide cases seem to be *complete birth* to mean the complete separation from the mother's body and *precipitated birth* or *precipitative birth* (corresponding to the modern 'precipitate delivery') to refer to a delivery which follows an unusually rapid labour and results in a sudden and spontaneous expulsion of the infant, causing health problems to both the baby (such as brain haemorrhage) and the mother (such as lacerations and infections). In [IN09] cross-examination, Dr. Thomas John Price Jenkins explains that the defendant might have become delirious because of the pain of a rapid and intense labour and considers the matter of precipitative delivery, which might cause the newborn's brain to haemorrhage:

(14) I was told on one occasion of her being inclined to be violent – such pain as she had had might make her temporarily insane and unconscious – I do not say irresponsible, but unconscious – it is quite possible that she became delirious through pain, because she was melancholic – I do not think the pain would make her unconscious, but it might make her delirious – severe haemorrhage would produce unconsciousness – if in a case of precipitative birth a child had its head fractured on a hard surface, death would be produced by it, and in those cases there would be signs of haemorrhage in the brain – they do not die immediately from the fracture of the skull. [IN09]

Table 4 below summarizes the occurrences of some of the medical jargon found in the trial transcripts.

separate existence	24
independent existence	4
confinement	8
confined	4
be delivered	9
alive	14
born alive	6
fever	1
puerperal fever	1
puerperal insanity	1
puerperal mania	2
temporary insanity	1
transitory mania	4
loss of memory	2
hydrostatic test	4
inflation of the lungs	4
precipitated birth	3
precipitative birth	1
complete birth	2

Table 4. Occurrences of medical jargon in the trial transcripts

5. Conclusions

The research carried out in the present paper showed that medical discourse in the historical courtroom deserves thorough investigation as it represents a type of both interprofessional and lay-professional discourse embedded in the specific institutional legal context. Being objective, impersonal and empirical, specific medical discourse was often at odds with the forensic tactics and the argumentative character of trial discourse. This chapter has attempted to show some of the features of expert discourse in court. It has analysed some instances of medical jargon utilized in the testimonies and explained through the

expansion and amplification of responses to judges and lawyers and for the benefit of the lay jurors. Some terminology and phraseology, such as *confinement, be delivered of a child, precipitative birth, puerperal fever* which referred to the defendant and *separate* or *independent existence* and *born alive* which referred to the dead baby, have different meanings and produce different interpretations when considered from a different professional perspective: the medical interpretation does not always correspond to the legal understanding and explanation of certain vocabulary. Despite the small number of texts in the corpus and the consequent relatively low frequency of certain lexis and expressions, the findings can be considered particularly relevant and representative of medical discourse in court and in particular of cases of infanticide in the time span between 1902 and 1913.

References

Anesa, Patrizia 2012. *Jury Trials and the Popularization of Legal Language. A Discourse Analytical Approach*. Bern: Peter Lang.

Archer, Dawn 2005. *Questions and Answers in the English Courtroom (1640-1760). A Sociopragmatic Analysis*. Amsterdam: John Benjamins.

Atkinson Maxwell J. / Drew Paul 1979. *Order in Court. The Organization of Verbal Interaction in Judicial Settings*. Basingstoke: Social Science Research Council.

Atkinson, Stanley 1904. *Separate Existence in the Child.* First published online on 25 August 2005, DOI:10.1111/j.1471-0528.1904.tb07218.x.

Chaemsaithong, Krisda 2011. In Pursuit of an Expert Identity: A case Study of Experts in the Historical Courtroom. *International Journal for the Semiotics of Law* 24/4, 471-490.

Chaemsaithong, Krisda 2012. Performing Self on the Witness Stand: Stance and Relational Work in Expert Witness Testimony. *Discourse and Society* 23/5, 465-486.

Cotterill, Janet 2003. *Language and Power in Court. A Linguistic Analysis of the O.J. Simpson Trial*. Basingstoke: Palgrave Macmillan.

Culpeper, Jonathan / Kytö, Meria 2000. Gender Voices in the Spoken Interaction of the Past: A Pilot Study Based on Early Modern English Trial Proceedings. In Kastovsky Dieter / Mettinger Arthur (eds) *The History of English in a Social Context*. Berlin: Mouton de Gruyter, 53-89.

Culpeper, Jonathan / Kytö, Meria 2010. *Early Modern English Dialogues. Spoken Interaction as Writing*. Cambridge: Cambridge University Press.

Giordano, Michela 2012. The Old Bailey Proceedings: Quoted Dialogue and Speaker Commitment in Witness Testimony. In Mazzon Gabriella / Luisanna Fodde (eds) *Historical Perspectives on Forms of English Dialogue*. Milano: Franco Angeli, 321-342.

Golan, Tal 2003. *Laws of Men and Laws of Nature: The History of Scientific Expert Testimony in England and America.* Cambridge, Mass.: Harvard University Press.

Heffer, Chris 2005. *The Language of Jury Trial. A Corpus-Aided Analysis of Legal-Lay Discourse*. Basingstoke: Palgrave Macmillan.

Heritage, John 2004. Conversation Analysis and Institutional Talk. In Sanders Robert E. / Fitch Kristine L. (eds) *Handbook of Language and Social Interaction*. Mahwah, NJ: Erlbaum, 103-147.

Jucker, Andreas H. 2008. Historical Pragmatics. *Language and Linguistics Compass* 2/5, 894-906.

Kryk-Kastovsky, Barbara 2000. Representations of Orality in Early English Trial Records. *Journal of Historical Pragmatics* 1/2, 201-230.

Kryk-Kastovsky, Barbara 2006. Historical Courtroom Discourse: Introduction. *Journal of Historical Pragmatics* 7/2, 163-179.

Linell, Per 1998. Discourse Across Boundaries: On Recontextualizations and the Blending of Voices in Professional Discourse. In

Linell, Per / Sarangi, Srikant (eds) *Discourse Across Professional Boundaries*, Special Issue of *Text* 18/2, 143-158.

Maley, Yon 2000. The Case of the Long-nosed Potoroo: The Framing and Construction of Expert Witness Testimony. In Sarangi, Srikant / Coulthard Malcolm (eds) *Discourse and Social Life*. Harlow: Pearson, 246-269.

Stygall, Gail 2001. A Different Class of Witnesses: Experts in the Courtroom. *Discourse Studies* 3/3, 327-349.

The National Archives, London Metropolitan Police, *Domestic Records Information 52,* <http://www.nationalarchives.gov.uk>

Thornborrow, Joanna 2002. *Powerful Talk: Language and Interaction in Institutional Discourse*. Harlow: Pearson.

Primary source

Old Bailey Proceedings Online, <www.oldbaileyonline.org>.

KIM GREGO / ALESSANDRA VICENTINI[1]

English and Multilingual Communication in Lombardy's Public Healthcare Websites

1. Background

Starting from the 1990s, Italy, like other European countries, has been undergoing a process of devolution by implementing forms of administrative decentralisation. Within this trend, a number of public services have been, over the years, partly devolved to local governments. This, in response to a call for greater local autonomy, especially as regards the use of funds deriving from local taxation and paying for services administered locally. Public healthcare belongs to the latter category. What was born as and was for decades a national healthcare system (Servizio Sanitario Nazionale) evolved into so-called local healthcare authorities (Aziende Sanitarie Locali or ASL). Among the advantages expected were an increase in attention to local needs and in economic autonomy, and a move toward a business-oriented approach as opposed to a classic paternalistic welfare system. Whatever the socio-economic outcome of this move, to be evaluated by experts in that field over a lengthy period of time, a practical and tangible consequence, with relevance from a socio-linguistic point of view, was that the devolution of Italy's public healthcare resulted in the immediate, significant differentiation of its ASLs' websites in both their layout and, especially, content. Online communication is deemed especially relevant, for its ethical implications, when it occurs between a country's healthcare institutions and its citizens. Specifically,

1 Research for this paper was conducted jointly by the two authors. Specifically, Kim Grego is responsible for §1, 4.2, 5; Alessandra Vicentini for §2, 3, 4, 4.1.

the Italian Ministry of Health has published guidelines on web communication, which identify:

> una batteria di indicatori articolati in 4 aree tematiche, che ha operazionalizzato il concetto di qualità dell'offerta informativa on line in altrettante dimensioni di analisi:
> - area 1 – Caratterizzazione istituzionale e relazionalità
> - area 2 – Trasparenza amministrativa
> - area 3 – Disponibilità e qualità dei servizi on line
> - area 4 – Utilizzabilità e qualità tecnologica.
>
> (Ministero della Salute 2010: 29)[2]

The institutional nature, rationality, transparency, availability and quality of online services, and usability and technological quality of the communication are thus the seven indicators, divided into four areas, that set the background of this study.

2. Aims

The chapter intends to evaluate the application of the indicators put forward by the Ministry of Health in the English language versions, pages or documents of the websites of Regione Lombardia ASLs. In particular, our aims consist in:

- investigating the multi-lingualism (if any) of the ASLs' websites, focusing on English as the *lingua franca* of international communication;
- seeing what information is provided in which languages, and in English in particular;

2 [a series of indicators organized into 4 subject areas, which has turned the concept of on-line information quality into as many levels of analysis:
area 1 – Institutional characterization and relationality
area 2 – Administrative transparency
area 3 – Availability and quality of on-line services
area 4 – Usability and technological quality.]

- ascertaining which social groups are addressed when using English;
- determining the linguistic effectiveness of such web-mediated communication.

ASLs were identified as suitable entities for the study because they represent the smallest healthcare institutions in Italy, those that should meet local healthcare needs and be closer to families' needs, those – therefore – that should first be consulted by citizens when in need of institutional health information or services.

The choice of investigating English-language material has a double rationale. As a *lingua franca*, English is employed in Italian institutional communication with both an inbound and an outbound purpose. Inbound, because it is aimed at attracting and including patients/users in need that do not speak Italian or not well enough, for whom it can represent a universal idiom at least for first/emergency contacts. This would be a nationalising drive, i.e. a way to include reluctant users – whether foreign residents, (il)legal immigrants or just tourists – and let them *access* the country's healthcare system. Outbound, because English is used as a means for Italian institutions to reach out to patients/users who might *choose* to be treated in Italy, as part of an internationalising drive (Grego/Vicentini 2011). This would also mean satisfying the obligation that every European country has of implementing multilingualism, very much encouraged both nationally (see the ministerial international policy, Ministero della Salute 2013) and supranationally, in that "multilingualism in Europe [can] provide a firm basis for assessing existing public policies and practices within major areas such as education and health" (European Commission 2014), and "Social Sciences & Humanities research could provide the economic and social analysis necessary for reforming public health systems" (Horizon 2020).

A mixed methodology combining Critical Discourse Analysis (Fairclough 1993, 1995, 2003; Fairclough *et al.* 2007), multimodality (Kress/van Leeuwen 2001, 2006; Garzone *et al*. 2007), ESP (Gotti 2003, 2011) and lexicological studies was adopted, aimed at producing a qualitative analysis. Within this framework, the specific research questions addressed in the chapter were directed at identify-

ing: a) the quantitative presence of information in English and b) its linguistic quality, i.e. the conformity of the English language used to the Ministry of Health's seven indicators reported in the previous section. For the purposes of the latter, aspects considered for each texts were:

- location within the website;
- genre;
- size;
- subject;
- purpose;
- target audience;
- lexico-syntactic quality.

3. Corpus and quantitative analysis

Lombardy is one of Italy's 20 administrative regions; it is home to about one sixth of the country's population (9,704,151/59,433,744, Istat 2011) and produces one fifth of the GDP (€337,161/1,580,410, ASR Lombardia 2014). These data, and the region's geographical position in the north-west of Italy, close to continental Europe, make Lombardy a significant territory to screen for multilingualism and internationalisation. The corpus collected for analysis consists of all the English-language texts retrieved in the websites of Lombardy's 15 ASLs as of 31 March 2015. The websites considered were, of course, only the official ones published and maintained by Lombardy's ASLs. The devolution process described in Section 1 is responsible for the autonomous – at least to a certain degree – choices in the layout and content of the websites.

The preliminary quantitative analysis identified the foreign languages employed in at least one text throughout the corpus, as reported in Table 1.

Foreign languages found in Lombardy's ASLs (in alphabetical order)	*Foreign languages most spoken by the foreign residents of Italy (Istat 2014)*
1. Albanian	1. Romanian
2. Arabic	2. Arabic
3. Chinese	3. Albanian
4. English	4. Spanish
5. French	5. Italian
6. Polish	6. Chinese
7. **Portuguese**	7. Russian
8. **Punjabi**	8. Ukrainian
9. Romanian	9. French
10. Russian	10. Serbian, Croatian, Bosnian, Montenegrin
11. Spanish	11. Other languages (including Bengalese, English, Polish, French)
12. **Urdu**	

Table 1. Foreign languages found in Lombardy's ASLs vs the foreign languages most spoken by Italy's foreign residents.

The highlighted languages in Table 1 are those that are not present in the list of the eleven languages most spoken by Italy's foreign residents (Istat 2014).

As far as English is concerned, its presence in the websites of Lombardy's ASLs is shown in Table 2.

ASL websites with English texts
1. ASL Bergamo
2. ASL Brescia
3. ASL Como
4. ASL Lodi
5. ASL Mantova
6. ASL Milano
7. ASL Milano 1
8. ASL Milano 2
9. ASL Pavia
10. ASL Vallecamonica-Sebino
11. ASL Varese

Table 2. Lombardy's ASLs' websites with English texts.

The presence of English language information is confirmed in a quite good number (11 out of 15) of the websites, not fully justified by its low position as one of the 'other' foreign languages spoken by foreign residents in Italy, but in line with its role of *lingua franca*.

4. Qualitative analysis

A qualitative analysis of the English texts retrieved in the preliminary quantitative search reveals that the English texts found on the ASLs' websites are not located in any specific webpage(s); they are usually downloadable PDF brochures/leaflets and mostly include information on common infectious disease or vaccination campaigns, contact information or useful forms that a foreign resident/citizen might need to fill in. They are aimed either at informing or attracting users within the Italian healthcare system, generally pregnant women, new mothers, workers and new immigrants. No specific information is addressed at tourists. A sample lexico-syntactic analysis will help assess their usability and functionality within a multilingual context. Among the ASLs' websites including English material, ASL Milano 1 and ASL Vallecamonica were selected as case studies, since they serve two completely different territories and comprise some very interesting English language texts in their websites.

4.1. Case study A: ASL Milano 1

ASL Milano 1 serves the western part of Milan area. It is an urban, densely inhabited district, where the foreign residents' population consisted of 69,524 units as of 1 January 2011 (ASL Milano 1 2012). This figure represents 7.3% of the entire Italian population, with an average age of 29.7, which, compared to 43 in Lombardy, points to young people as the typical social group migrating to this area. The main

continents of origin are Europe (Romania and Albania), Africa (Morocco) and America (Ecuador) (ISTAT 2011). Several companies operate here, with many opportunities for international trade and business. Furthermore, the main tourist attractions of Milan centre are not far away, and hotel accommodation capacity is extremely good (ASR Lombardia 2012).

The expectation was therefore to find lots of English as a *lingua franca* material for foreign residents, tourists and businessmen alike. On the contrary, the scrutiny of the ASL's website returned no presence of foreign language versions of the site (full or partial), not even any signal on the homepage directing foreigners/foreign language speakers at foreign language resources. This means that apparently foreign users are not among the targets of the ASL's communication strategies, with the consequence that foreigners in need of medical information might not be able to find it when looking at the ASL's website.

Indeed, only a manual search allowed for retrieving a document titled *CALIS, Cancer Literacy and Information Seeking* (2013), a research protocol submitted to ASL Milano 1's ethical committee by Università della Svizzera Italiana. The document is in English, given the international relevance of the research, which was conducted and published by a non-Italian University. The implied addressee is the international scientific community acquainted with English, which is clearly used here as a *lingua franca* in a specialised context.

Moreover, English material is present, along with documents in other languages, in the section *Malattie infettive e vaccinazioni*, a thematic area concerning infectious diseases and vaccinations, which is reachable only by those interested in the issue via the path: *Homepage > Malattie infettive e vaccinazioni > Vaccinazioni > Vaccinazioni per l'infanzia*, where a PDF on childhood immunisation information (*Vaccinazioni dell'infanzia: quali sono e quando effettuarle*) is present in seven languages (i.e.: Spanish, Rumanian, English, French, Chinese, Arabic and Albanian). The same applies to the website's section *Malattie infettive*, where users can find ten PDF brochures about various infectious diseases, as can be seen in Table 3.

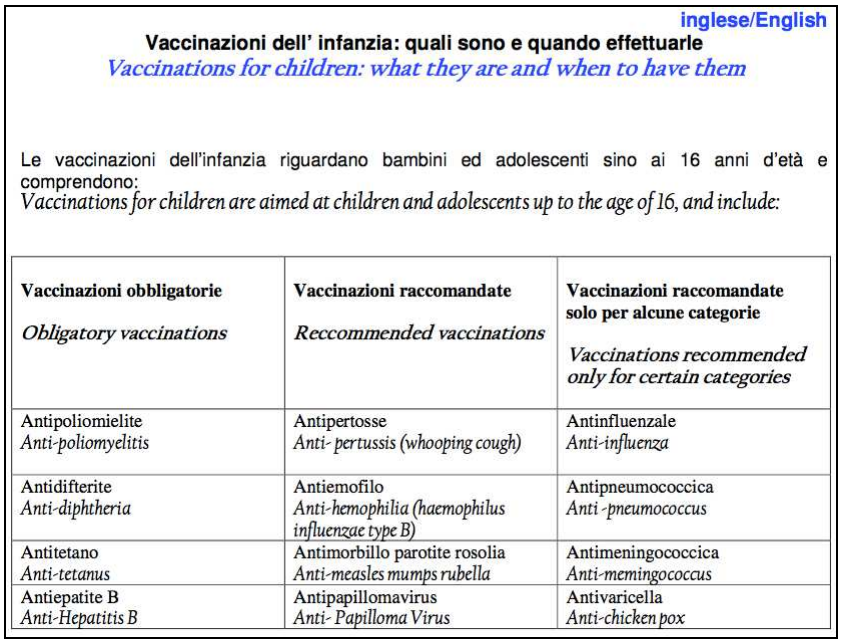
Title of document	**Genre**	**Size** (pag.)	**Purpose**	**Target audience**
1. Vaccinations for children: what they are and when to have them	PDF brochure	5	Inform about childhood immunisation campaign	All foreign residents with children
2. Tuberculosis - Test	PDF leaflet	2	Inform about Mantoux test	All foreign residents
3. Tuberculosis	PDF brochure	4	Inform about tuberculosis and its treatment	All foreign residents
4. Ringworm	PDF leaflet	2	Inform about ringworm and its treatment	All foreign residents
5. Scabies	PDF leaflet	2	Inform about scabies and its treatment	All foreign residents
6. Lice: what to do?	PDF leaflet	2	Inform about pediculosis and its treatment	All foreign residents with children
7. Lice	PDF brochure	5	Inform about pediculosis and its treatment	All foreign residents with children
8. Measles	PDF leaflet	2	Inform about measles and its treatment	All foreign residents, especially those with children
9. Meningitis	PDF brochure	4	Inform about meningitis and its treatment	All foreign residents
10. Sexually transmitted diseases	PDF brochure	13	Inform about sexually transmitted diseases	All foreign residents
11. Orally or faecally transmitted disease	PDF brochure	11	Inform about orally/faecally transmitted disease	All foreign residents

Table 3. English texts in the ASL Milano 1's website.

All of these texts seem to address users/patients already within the healthcare system, who are familiar with the ASL's website and can thus quite easily reach the information they are looking for. The focus is on infectious diseases; the documents are meant for information and follow a quite similar move structure: definition of disease – description of transmission and general causes – description of symptoms – description of treatment – description of vaccines and/or prevention of disease.

They are all translations from Italian (L1) into English (L2), as both the textual organisation and the syntactic and lexical choices reveal. Indeed, each leaflet/brochure is translated paragraph by para-

graph, sentence by sentence, and even word by word, into English. The L1 text is juxtaposed to the L2 version (see Figure 1).



inglese/English

Vaccinazioni dell' infanzia: quali sono e quando effettuarle

Vaccinations for children: what they are and when to have them

Le vaccinazioni dell'infanzia riguardano bambini ed adolescenti sino ai 16 anni d'età e comprendono:
Vaccinations for children are aimed at children and adolescents up to the age of 16, and include:

Vaccinazioni obbligatorie *Obligatory vaccinations*	**Vaccinazioni raccomandate** *Reccommended vaccinations*	**Vaccinazioni raccomandate solo per alcune categorie** *Vaccinations recommended only for certain categories*
Antipoliomielite *Anti-poliomyelitis*	Antipertosse *Anti- pertussis (whooping cough)*	Antinfluenzale *Anti-influenza*
Antidifterite *Anti-diphtheria*	Antiemofilo *Anti-hemophilia (haemophilus influenzae type B)*	Antipneumococcica *Anti -pneumococcus*
Antitetano *Anti-tetanus*	Antimorbillo parotite rosolia *Anti-measles mumps rubella*	Antimeningococcica *Anti-memingococcus*
Antiepatite B *Anti-Hepatitis B*	Antipapillomavirus *Anti- Papilloma Virus*	Antivaricella *Anti-chicken pox*

Figure 1. *Vaccinations for children: what they are and when to have them*, page 1.

Looking at the quality of translation, numerous choices show a literal translation, with lots of syntactic and lexical loan translations:

(1) *Vaccinazioni dell'infanzia: quando sono e quando effettuarle*.
Vaccinations for children: what they are and when to have them.

(2) *Vaccinazioni obbligatorie*.
Obligatory vaccinations.

(3) *Sono gratuite tutte le vaccinazioni obbligatorie e raccomandate, comprese quelle per particolari categorie di bambini (in genere a rischio per patologie).*

> All the obligatory and recommended vaccinations are free, including those for particular categories of children (in general those at risk from diseases). (Doc. 1 *Vaccinations for children: what they are and when to have them*, page 1)

(4) *Il pidocchio, conosciuto da più di 100.000 anni, è uno sgradito ospite specifico dell'uomo: le specie 'umane' non infestano gli animali e viceversa. La specie più comune è il pidocchio del capo*.
Known to man for more than 100,000 anni, lice are an unwelcome guest specific to humans: the 'human' variety does not infest animals and viceversa.
The most well-known variety are the head lice. (Doc. 7 *Lice*, page 1)

The first example shows an incorrect syntactic choice (*when to have them* instead of *when to get vaccinated*/*when* or *why you should get them*), while the second presents inaccurate lexical realisations (*obligatory* instead of *mandatory*, which usually collocates with the word *vaccination*, see WHO website search engine results with the keywords *obligatory vaccination(s)* – 719 hits – vs *mandatory vaccinations* – 9 hits). In the following two excerpts (3 and 4) there are grammar errors such as wrong prepositions (at risk *from* instead of *for/of*), incorrect singular/plural concordance (*lice are an unwelcome guest*; *the most well-known variety are the head lice*), incorrect lexical choices (*human variety* instead of *human species*) and words that are left in Italian (*anni* instead of *years*).

As regards the strictly medical terminology, alternatives are usually given between the specialised and the popular term (see Figure 1 above, *pertussis* and *whooping cough*), though there is no coherence throughout the various brochures/leaflets, where sometimes only popular variables are used (*chicken pox* and not *varicella* – see WHO, Varicella 2013; *ringworm* and not *tinea* – see WHO, Ringworm/Tinea 2014). There are numerous spelling mistakes in all the texts (*anti-meMingococcus*) and no coherence between American and English spelling even in the same brochure and paragraph (*hemophilia* vs *haemophilus*; *fecal* vs *faecal*).

Plenty of similar examples may be reported, emerging from a detailed analysis of the mentioned documents. These all contain inaccuracies and lexico-syntactic calques, which suggests that they were most probably translated from Italian by non-native speakers of English. Generally speaking, though, the lexical and syntactic issues

identified do not seem quantitatively so frequent as to prevent understanding the message and fulfilling their purpose, i.e. to inform foreign residents, with a special focus on families with children, on vaccination campaigns and infectious diseases. Indeed, to verify qualitative comprehension, surveying native speakers of English may be necessary.

4.2. Case study B: ASL Vallecamonica-Sebino

ASL Vallecamonica-Sebino serves the homonymous valley and lake north of the city of Brescia, in west Lombardy. It is a mountain and rural community, with popular lake resorts by the Sebino Lake and ski areas in the Alps, and has good hotel accommodation capacity compared to other areas in Lombardy (data: ASP 2014). The foreign residents' population consisted of 9,720 units in 2012 (ASL Vallecamonica-Sebino 2014: 12), mostly male and living in the valley's lowlands, closer to industries and public transportation. The expectation, therefore, was for some relevant presence of English texts, at least in the foreign citizens' section, with a differentiation between those aimed at international tourists and those for foreign residents.

The screening of the ASL's website revealed no presence of foreign language versions (full or partial). There was and still is, however, a very visible clickable area on the top-right of the homepage, showing foreign flags and indicating, though without any writings, a link to the so-called International section. Interestingly, although English material is present in this section, and comes first before all other foreign languages, the UK or USA flag is not among those in the homepage. The presence of information in English in the website, however, was limited to this section. A manual search retrieved a document titled *Gioco d'azzardo patologico (GAP) – Ludopatia*, in the News section, in Italian, English and Chinese, about pathological gambling. This document, however, is part of a ministerial campaign and can be found on other ASL websites, for example Rieti's in the

Lazio region.[3] Moreover, in the section *Guide ai servizi*, users can find 17 PDF brochures about various hospitals, wards, surgeries, services and labs in the area, all of which (with only one exception) are trilingual Italian, English and French. These texts seem to address users/ patients already within the public healthcare system, who, in other words, must be legal residents, because they mostly deal with specialised treatments and services to access which a referral by a family doctor is usually necessary.[4] The focus is on admittance/dismissal procedures as well as daily hospital routines. English and French are clearly used as *linguae francae*. The quality of the language shares features with the texts in the International section, analysed in detail below. The International section – which also features material in French, Russian, Arabic, Albanian, Chinese, and Rumanian – represents the most interesting source of English language texts in the website, as it hosts six English monolingual documents (cf. Table 4).

Title	**Genre**	**Size**	**Purpose**	**Target audience**
1. I'm foreigner and want to have information about the cultural mediation services available for the ASL Seats and at the Hospital	PDF leaflet	1	Inform about language and interpreting services	All foreign residents
2. Guida al ricovero - Guide for foreign citizens	PDF brochure	12	Inform about hospital admittance, stays and dismissal	All foreign citizens, il/legally resident
3. Nascere Oggi - Born today in Valle Camonica	PDF brochure	12	Inform about healthcare services for expecting women / new mothers	Expecting women and new mothers

3 <http://www.asl.ri.it/cittadino/ludopatie/pdf/Gambling---Poster-in-Inglese.pdf>.

4 Urgent treatment is however provided by law to all those in need, even if illegally resident, and all the texts specify this.

Title	Genre	Size	Purpose	Target audience
4. Percorsi e consigli - Ways and councils	PDF leaflet	2	Inform about access to prevention and treatment	All foreign citizens, il/legally resident. Special section for expecting women and new mothers
5. Prevenzione e Sicurezza - Prevention and safety information	PDF brochure	4	Inform about safety and prevention on workplaces	Foreign workers
6. Aspetti un bambino? - You are pregnant?	PDF brochure	12	Inform about services for expecting women, including right to and procedure for abortion	Expecting women and new mothers

Table 4. English texts in the international section of the ASL Vallecamonica-Sebino's website.

The lexico-syntactic analysis immediately revealed that these texts are translations and, considering the numerous calques, they are most likely Italian into English translations. This is clear, for instance, in document 5 *Prevenzione e Sicurezza*, which is a mix of excerpts from materials by international organisations like the WHO (source acknowledged), as shown in the following extract:

> Five keys to safer food
> Keep clean
> Wash your hands before handling food and often during food preparation
> Wash your hands after going to the toilet
> Wash and sanitize all surfaces and equipment used for food preparation
> Protect kitchen areas and food from insects, pests and other animals. (Page 3)

and original Italian text translated into English, as in the excerpt below:

> Foreigners workers
> Informations about prevention
> Accidents and safety […]
> For all explanations or information You must address at:

Medical Prevention Department of the 'Asl di Vallecamonica-Sebino' - via Nissolina 2 - Breno.

While the first example is lexico-grammatically correct, the second shows the incorrect use of a noun instead of an adjective (*foreigners* instead of *foreign*), the plural use of an uncountable noun (*informations*), the use of the modal *must* instead of the imperative, the use of *address* instead of *contact*, the use of the preposition *at* after *address*. Moreover, part of the text on page 4, presumably translated from Italian, is also present in other similar online documents,[5] probably coming from INAIL, Italy's National Institute for Insurance against Accidents at Work. Similar considerations may be made about the lexicon and syntax of the other five documents which, however, seem to be original ASL Vallecamonica-Sebino texts or, rather, translations of Italian originals. Figure 2 shows the text on page 3 of document 2 *Guida al ricovero*.

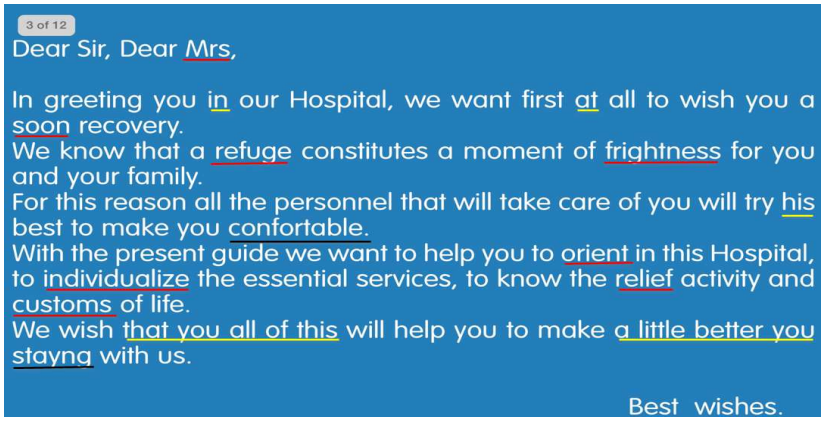


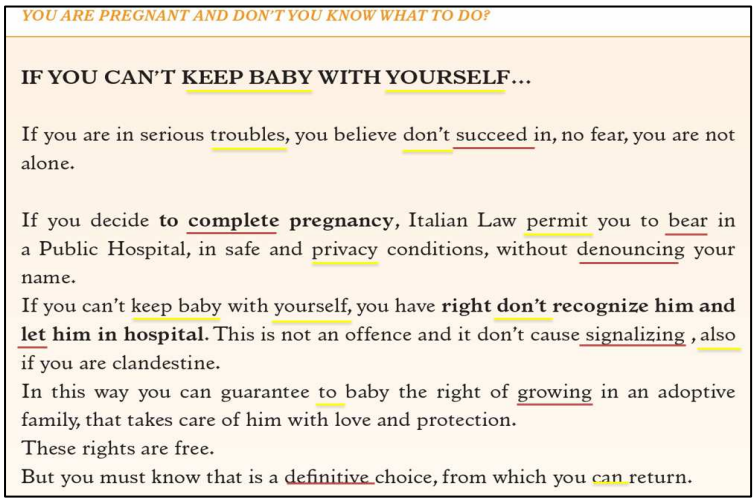
Figure 2. Doc. 2 *Guida al ricovero*, page 3.

The red lines highlight lexically ambiguous choices, the yellow ones syntactic incongruences, the black ones mere misspellings. Whereas

5 For example, in a brochure titled *Foreigners and INAIL: accidents and safety*, <http://www.laprotezionecivile.com/Archivio/dir_articoli/200908181028110.NG.pdf>.

some of these issues are minor (e.g. *Mrs* instead of *Madam*, without discussing the choice of salutation) and do not prevent comprehension, some may indeed cause misunderstandings, with consequences that may prove relevant, given the text's target audience of foreigners in need of health services. One such case is the word *refuge*. From the context as well as a comparison with the Italian brochures on the same website, it seems to have been chosen to translate the Italian word *ricovero*, or *(hospital) admittance* – it is indeed one of its translations as reported in most Italian-English dictionaries.[6] However, although *admittance* and *refuge* do share the common semantic idea of 'shelter' and 'welcoming', because *refuge* is very similar to *refugee*, and the document addresses all kinds of foreigners, including illegal residents, ambiguity may arise as to the possibility of seeking asylum and not treatment in hospitals.

Another example – a syntactic one this time – that highlights the ethical relevance of the language of public healthcare comes from document 6 *Aspetti un bambino?*.



YOU ARE PREGNANT AND DON'T YOU KNOW WHAT TO DO?

IF YOU CAN'T KEEP BABY WITH YOURSELF…

If you are in serious troubles, you believe don't succeed in, no fear, you are not alone.

If you decide **to complete pregnancy**, Italian Law permit you to bear in a Public Hospital, in safe and privacy conditions, without denouncing your name.
If you can't keep baby with yourself, you have **right don't recognize him and let him in hospital**. This is not an offence and it don't cause signalizing , also if you are clandestine.
In this way you can guarantee to baby the right of growing in an adoptive family, that takes care of him with love and protection.
These rights are free.
But you must know that is a definitive choice, from which you can return.

Figure 3. Doc. 6 *Aspetti un bambino?*, page 8.

6 E.g. the *Collins Online Italian-English Dictionary*, <http://www.collinsdictionary.com/dictionary/italian-english>, s.v. RICOVERO.

Again, the same colour code applies as in Figure 2. Focusing on the use of syntax, an example of serious ambiguity is the use of *can* in the last line. The text informs pregnant women who do not want their baby about their right to give birth anonymously and to give the child up for adoption. The Italian law on the matter is clear about the mother's right not to acknowledge her new-born child (Presidential Decree no. 396/2000, art. 30), furthermore stating that she has 60 days to change her mind (Law 184/1983, art. 11).[7] After that, the procedure will start for the child to be adopted. In this complex, changing legal context, it is evident how the use or omission of the adverb *not* in conjunction with the modal *can* may indeed give rise not only to momentary confusion but also to serious legal issues.

Analogous examples of questionable lexical and syntactic usage are recurrent throughout the six documents analysed in detail. The rather frequent calques point to the translations having possibly being made by non-native speakers of English, most likely by Italian speakers. Comprehension of the information provided in the documents thus proves oftentimes compromised, in certain cases, like those reported, with significant ethical implications.

5. Summary of results and conclusions

Upon the basis of the samples considered here, it is possible to observe that, from the viewpoint of quantity, the presence of English language information is scarce, with eleven out of 15 websites containing just a few texts of any kind in English. It is particularly unexpected that even the populous areas surrounding Milan do not seem eager to reach out to potentially international users/patients. Moreover, tackling multilingual communication must be a quite recent necessity;

7 This was changed, with limits, by the recent 2802 sentence by the Italian Supreme Court of 7 February 2014, which allowed a woman who had given up her new-born child for adoption to change her mind past the legal terms.

evidence thereof is that all the English and foreign language texts were uploaded on ASL Milano 1's website only in 2010, and on ASL Brescia's website even in 2015.

On the qualitative side, the most relevant feature is that there are very few original texts, since most are (likely to be) L1 (Italian) into L2 (English) translations. The original texts are in some cases copied from English originals (e.g. UNICEF or WHO informative brochures and leaflets). The analysed translations, including those presented in the case studies in this chapter, are mostly low-quality linguistic products, suffering from numerous syntactic calques and incongruities, as well as unsuitable lexical choices at both the non-specialised and specialised levels, which, all combined, may sometimes prevent understanding and result in non-communication.

The devolution process has indeed led to variations in the layout, content and organization of Lombard ASLs' websites even as regards multilingual information. Its presence is both scarce and randomly distributed across the corpus examined. Concerning English, in particular (other languages would require separate studies), the following observations apply. To begin with, English does tend to be used as a *lingua franca*, as such a purpose would imply a larger presence of the language, not only in terms of pages/documents present in the website, but also of full English versions of ALSs' websites.

Another important issue to highlight is that almost all the English texts retrieved while screening the corpus of the 15 websites of Lombardy's ASLs have been identified through lexico-semantic analysis as translations. The use of translation is in itself problematic, if only for the time and money a professional (L2 into L1) job requires, two factors of some relevance when discussing web (which means fast) communication, and a public service (funded by public money). Indeed, the results of the analysis point in particular to L1 into L2 translations, and this has at least two important implications. On the one hand, it means that the focus of any linguistic qualitative evaluation moves from language assessment to translation quality assessment, which requires an altogether different methodological approach (House 1977/1997; Grego 2010). In this particular case, the quality of the translations was oftentimes such as to prevent full comprehension of medical procedures as urgent as abortion, for example.

On the other hand, both translating original texts and evaluating translations appear to be, generally speaking, time-consuming processes, hardly justified in fast-paced web communication, unless it regards long-lasting documents like guidelines or annual information, in which case, though, centralised translations at ministerial level to be shared locally have been identified as better strategies (Grego/ Vicentini forthcoming).

A third consideration stems from a Critical Discourse Analysis perspective, i.e. considering the relations of power implied by discourse. It is agreed that access to healthcare information is a right for everybody, irrespective of the language spoken, and as such it should be as inclusive as possible. In this view, withholding information from citizens/users implies withholding power from them, as well as preventing individual choice. The ethical aspect of whether some specific information is provided in one language and not in another (especially when this is given in the country's main language – Italian, in this case) is thus evident, pointing to questions such as: who chooses what to say what in what language(s)? On what grounds, and for what purpose(s)? Who is included/excluded, how and why? What are the implications? Is it better to have some poorly communicated information, or to have no information at all? Of course, it is not for the linguist but for policy-makers to address these issues. The discourse analyst, in this respect, can only offer professional linguistic analysis, informed interpretation, constant critical confrontation.

References

ASL Milano 1 2012. *Documento di Programmazione e Cordinamento dei Servizi Sanitari e Socio-Sanitari e Allegati*. <http://www.pianodizonalegnanese.it/static/pdf/a2Accordo20122014.pdf>.

ASL Vallecamonica-Sebino 2014. *Documento di programmazione e coordinamento dei servizi sanitari e socio sanitari*. <http://

www.aslvallecamonicasebino.it/files/documenti%20istituzionali/2014_DOC_progr_DEF.pdf>.

ASP Annuario statistico provinciale Lombardia 2014. *Posti letto negli esercizi alberghieri per 1000 abitanti. Anno 2012*. <http://www.asr-lombardia.it/ASP-Brescia/i-comuni-della-lombardia/turismo/strutture-ricettive/cartine/1758x/c/>.

ASR Annuario Statistico Regionale Lombardia 2014. *Esercizi ricettivi per tipo. Numero letti e camera. Italia, Lombardia e Province Lombarde*. <http://www.asr-lombardia.it/ASR/lombardia-e-province/turismo/strutture-ricettive/tavole/14480/>. / *PIL e valore aggiunto*. <http://www.asr-lombardia.it/ASR/regioni-europee/conti-economici-territoriali/pil-e-valore-aggiunto/tavole/13548/.

CALIS 2014. *Cancer Literary and Information Seeking.* Lugano: Università della Svizzera Italiana. <http://www.aslmi1.mi.it/screening/calis.html>.

European Commission 2014. *Advancing the European Multilingual Experience*. <http://cordis.europa.eu/project/rcn/111514_en.html>.

Fairclough, Norman 1993. *Discourse and Social Change*. London: Polity Press.

Fairclough, Norman 1995. *Critical Discourse Analysis: The Critical Study of Language*. London: Longman.

Fairclough, Norman 2003. *Analysing Discourse*. London: Routledge.

Fairclough, Norman / Cortese, Giuseppina / Ardizzone, Patrizia (eds) 2007. *Discourse and Contemporary Social Change*. Bern: Peter Lang.

Garzone, Giuliana / Poncini, Gina / Catenaccio, Paola (eds) 2007. *Multimodality in Corporate Communication*. Milan: Franco Angeli.

Gotti, Maurizio 2003. *Specialized Discourse. Linguistic Features and Changing Conventions*. Bern: Peter Lang.

Gotti, Maurizio 2011. *Investigating Specialized Discourse*. Bern: Peter Lang.

Grego, Kim 2010. *Specialized Translation. Theoretical Issues, Operational Perspectives*. Monza: Polimetrica.

Grego, Kim / Vicentini, Alessandra 2011. Holiday Dialysis in Italy on the Web: Multidimensional Hybridization in Institutional

Healthcare Communication. In Sarangi, Srikant / Polese, Vanda / Caliendo, Giuditta (eds) *Genre(s) on the Move: Hybridization and Discourse Change in Specialized Communication*. Napoli: ESI, 393-406.

Grego, Kim / Vicentini, Alessandra (forthcoming). The Revolution of Devolution: Issues of Multilingualism in Italian Public Healthcare Websites. In Daniele, Franca / Garzone, Giuliana (eds) *Medical English: Communicating science, Popularizing Science*. Roma: Padova.

Horizon 2020. *Social Sciences & Humanities*. <http://ec.europa.eu/programmes/horizon2020/en/area/social-sciences-humanities>.

House, Juliane [1977] 1997. *Translation Quality Assessment*. Tübingen: Gunter Narr.

Istat 2011. *Censimento Popolazione Abitazioni*. <http://dati-censimentopopolazione.istat.it>.

Istat 2014. *Diversità linguistiche tra i cittadini stranieri*. <http://www.istat.it/it/files/2014/07/diversit%C3%A0-linguistiche-imp.pdf?title=Diversit%C3%A0+linguistiche+tra+i+cittadini+stranieri+-+25%2Flug%2F2014+-+Testo+integrale.pdf>.

Kress, Gunther / van Leeuwen, Theo 2001. *Multimodal Discourse. The Modes and Media of Contemporary Communication*. London: Arnold.

Kress, Gunther / van Leeuwen, Theo 2006. *The Grammar of Visual Design*. London: Routledge.

Ministero della Salute 2011. *Linee guida comunicazione online*. <http://www.salute.gov.it/portale/documentazione/p6_2_2_1.jsp?lingua=italiano&id=1473>.

Ministero della Salute 2013. *Linee programmatiche del Ministero*. <http://www.salute.gov.it/portale/ministro/p4_3_5.jsp?lingua=italiano&label=lineeProgrammatiche&menu=ministro>.

Vicentini, Alessandra 2012. Institutional Healthcare E-Brochures and Multilingualism Issues in the Recent Immigration Era in Italy (2007-2010). In Campagna, Sandra / Garzone, Giuliana / Ilie Cornelia / Rowley-Jolivet Elizabeth (eds) *Evolving Genres in Web-mediated Communication*, Bern: Peter Lang, 53-76.

WHO 2001. *Ringworm* (*Tinea*). <http://www.who.int/water_sanitation_health/diseases/ringworm/en/>.
WHO 2013. *Varicella*. <http://www.who.int/immunization/diseases/varicella/en/>.

Notes on Contributors

LUCIA ABBAMONTE works as a researcher and as a teacher of English at the Second University of Naples, where she takes part in interdisciplinary research projects, and teaches in Master Degree and PhD courses. A major focus in her research activities has been on the pragmatic aspects of situated linguistic communication in different sociocultural contexts. She has participated in several funded projects of national relevance. Her present interests lie in the fields of CDA, communication in socially sensitive contexts, language in professional practice and mediation, ESP for (Neuro)Psychology and Cognitive Sciences, and the translation of scientific texts – especially (neuro)-psychological measurement scales and questionnaires. She has authored three books and several essays, and has presented papers at international conferences.

PAOLA BASEOTTO holds a PhD from the University of Reading (UK) and teaches English at Insubria University, Italy. Her research interests centre mainly on the works of Edmund Spenser and on the theological, legal and medical treatises of the Renaissance period. She is the author of articles for academic journals and of the volumes *Fighting for God, Queen and Country: Spenser and the Morality of Violence* and *'Disdeining life, desiring leaue to die': Spenser and the Psychology of Despair*.

ASHLEY BENNINK is a doctoral student at the University of Oviedo who specializes in dialectology and medical discourse. Her current work examines lexical variants used by Hispanic patients during the medical interview in the United States. Recent publications include: *The Effect of Dialect: Teaching Lexical Variants to Healthcare Professionals* (2013), *Seeking Understanding: Proposal for Technology as a Partial Solution to the Use of Spanish Lexical Variants in the English Medical Setting* (2015), and Searching for

Understanding in the Medical Consultation: Language Accommodation and the Use of Dialect Variants among Latino Patients in *Discourse in Co(n)text – The Many Faces of Specialized Discourse* Murawska, Szczepaniak-Kozak, Wasikiewicz-Firlej (eds) (pending publication).

WILLIAM BROMWICH is a researcher and lecturer in English linguistics at the Marco Biagi Department of Economics at the University of Modena and Reggio Emilia, and at the Doctoral Research School at the Marco Biagi Foundation in Modena. His research interests include legal English, courtroom discourse, the linguistic construction of social reality, language and disability, and metaphor in economic and financial discourse. An expert witness at the Tribunal of Bologna, he is also English language editor of the *International Journal of Comparative Labour Law and Industrial Relations,* and *Ratio Juris: An International Journal of Jurisprudence and Philosophy of Law.*

FLAVIA CAVALIERE is a Tenured Lecturer and adjunct professor of English Language and Translation at the Department of Human Studies of the University of Naples Federico II, where she teaches ESP in an international PhD course and in a Master course. Her research interests lie within the fields of Translation Studies – mainly in the field of Audio-Visual Translation – Cross-cultural Communication, Language and Media, (multimodal) Discourse Analysis (including Appraisal Theory), English for Special Purposes, the use of CALL and Internet for English teaching, Multilingualism, Language in professional practice and mediation (Restorative Justice), as witnessed by her many publications. She regularly presents papers in international conferences and participates in interdisciplinary research projects.

SILVIA CAVALIERI holds a Ph.D in Comparative Languages and Cultures from the University of Modena and Reggio Emilia, Department of Linguistic Studies on Language, Text and Translation. She has lectured at the University of Modena and Reggio Emilia, University of Ferrara, University of Parma and University of Milan.

She has held a research grant at the University of Milan, where she has also taught CLIL courses organized by the Department of Comparative Studies on Languages and Cultures. Her research interests include ESP, legal language, courtroom discourse, and academic discourse.

PAULA DE SANTIAGO, PhD in Translation and Interpreting, presented her thesis *Estudio intra e intralingüístico de la variación denominativa en el lenguaje de la biomedicina: las células madre* at University of Valladolid in 2013. Her publications in journals include the following articles: 'The polymorphic behaviour of adjectives in terminology' (*Meta: Translator's Journal*, 2015) and 'De la forma al contenido, del contenido a la definición' (*Normas. Revista de Estudios Lingüísticos Hispanos*, 2014). She has co-authored several books, among which: *Glosario español-italiano sobre la gestión del turismo* (2014) and *Diccionario terminológico y fraseólogico español/inglés sobre vitivinicultura* (2009).

MICHELA GIORDANO (MA in Linguistics, California State University, Long Beach) is a Researcher and Lecturer in English Language and Translation at the University of Cagliari. Since 2006, she has taught English Language (including ESP modules) for both BA and MA courses. She has also taught courses on both Legal English and Presentation Skills. Her research activity to date lies mainly in applied linguistics, ESP teaching methodology, CLIL, discourse and genre analysis applied to academic, political and legal discourse. She has presented papers at several international conferences and has published on these areas extensively in national and international journals.

MAURIZIO GOTTI is Professor of English Language and Translation, Head of the Department of Foreign Languages, Literatures and Communication, and Director of the Research Centre for LSP Research (CERLIS) at the University of Bergamo. His main research areas are the features and origins of specialized discourse (*Robert Boyle and the Language of Science,* 1996; *Specialized Discourse:*

Linguistic Features and Changing Conventions, 2003; *Investigating Specialized Discourse*, ^{3}2011). He is also interested in English syntax and English lexicology and lexicography, with particular regard to specialized terminology and canting. He is a member of the Editorial Board of national and international journals, and edits the *Linguistic Insights* series for Peter Lang.

KIM GREGO graduated in Translation from the University of Bologna (Italy) and received a doctoral degree in English for Specific Purposes from the University of Naples (Italy). She is a researcher and lecturer in English Language and Translation at the University of Milan, where she teaches English Linguistics. Her interests include Translation Studies, English for Special Purposes (Politics, Medicine & Healthcare, Bioethics), Critical Discourse Analysis and Genre Analysis. Recent publications: *Specialized Translation: Theoretical issues, operational perspectives* (2010), and 'Intercultural and Ideological Issues in Lexicography: A Prototype of a Bioethics Dictionary' in Facchinetti, R. (ed.), *Cultural identities in English lexicography* (2012).

ANNA LOIACONO is currently Associate Professor in Medical Departments of the Universities of Bari and Foggia. She has vast experience in teaching undergraduate and postgraduate students in the biomedical sector. With over 50 publications, her most recent volumes in medical communication include: *The Medical Alphabet* (Andria: Matarrese); *A Virtual Hospital for Medical English* (Como: IBIS) and *Medical Communication: Systems and Genres* (Como: IBIS). With Giovanni Iamartino and Kim Grego, she edited *Teaching Medical English: Methods and Models* (Monza: Polimetrica). Her most recent papers include 'Medical CLIL: How the Brain Works' and 'Medical Genres in Socio-political Communication: Overcoming Gaps' in Cambria *et al.* (eds) *Web Genres and Web Tools* (Como: IBIS).

STEFANIA M. MACI is Associate Professor of English Language and Translation at the University of Bergamo, where she teaches English linguistic courses at graduate and undergraduate level. Her research is

focussed on the study of the English language in academic and professional contexts, with particular regard to the analysis of medical, legal and tourism discourse. Her most recent publications include: the volume *Tourism Discourse: Professional, Promotional, Digital Voices* (2013); and the papers 'What Does he Think This is? The Court of Human Rights or the United Nations?' (2014). '(Plain) Language in the Written Memories of Arbitral Proceedings: A Cross-Cultural Case Study' (2014); 'Investigating Variation in Medical Poster Abstracts' (2014); 'Institutional Popularization of Medical Knowledge: the Case of Pandemic Influenza A (H1N1)' (2014); 'Popularizing Scientific Discourse for an Academic Audience: the Case of Nobel Lectures' (2013).

MARELLA MAGRIS is Associate Professor of German language and translation at the Department of Legal, Language, Interpreting and Translation Studies of the University of Trieste. Her main research topics are specialized translation, contrastive linguistics, terminology and terminography. She is one of the editors of the *Rivista Internazionale di Tecnica della Traduzione*. Recently she has published several articles on the translation of tourism texts (e.g., 'Deutsche Gäste willkommen' Eine linguistische Fallstudie zum italienischen Tourismusmarketing für den deutschen Markt, 2014).

DOLORES ROSS is Associate Professor of Dutch language and translation at the Department of Legal, Language, Interpreting and Translation Studies of the University of Trieste. Her main research topics are specialized translation, contrastive linguistics and linguistic typology. She is co-author of a Dutch grammar (Ross/Koenraads: *Grammatica neerlandese di base*, Hoepli 2007) and co-editor of a volume on literary translation (Ross/Pos/Mertens (eds) *Ieder zijn eigen Arnon Grunberg*, Academia Press2012). Together with Marella Magris she has written several articles on medical translation, website communication in the healthcare sector as well as legal translation.

MICHELE SALA, PhD (University of Bergamo), MA (Youngstown State University, Ohio), is a researcher in English Language and Translation at the University of Bergamo, where he teaches English

linguistic courses at graduate and undergraduate level. He a member of CERLIS (Centro di Ricerca sui Linguaggi Specialistici) and a member of the scientific and editorial board of the CERLIS Series (international peer-reviewed volumes on specialized languages). His research activity and major publications deal with language for specific purposes and, more specifically, the application of genre and discourse analytical methods to a corpus-based study of legal-academic discourse and to the analysis of the linguistic, textual and pragmatic aspects of legal translation. He has also published in the field of academic discourse (*Persuasion and Politeness in Academic Discourse*, 2008, *Genre Variation in Academic Communication. Emerging Disciplinary Trends*, 2012 [co-edited with S. Maci]; *Corpora in specialized communication*, 2013 [co-edited with C. Desoutter and D. Heller]) and in the domain of pragmatics and cognitive linguistics (*Differently Amusing* 2012).

ALESSANDRA VICENTINI is a tenured researcher in English Linguistics and Translation at the University of Insubria, Varese (Italy), where she teaches English Linguistics and English for Special Purposes. Her research interests include English and Anglo-Italian grammaticography and lexicography (16^{th}-18^{th} centuries), ESP (Media & Journalism, Medicine & Healthcare, Bioethics), Critical Discourse Analysis and Genre Analysis. Her most recent publications include a volume on the first 18^{th} century grammars of English for Italian learners, *Anglomanie settecentesche: le prime grammatiche d'inglese per italiani* (2012), and the article 'Intercultural and Ideological Issues in Lexicography: A Prototype of a Bioethics Dictionary' in Facchinetti, R. (ed.) *Cultural identities in English lexicography* (2012).

MARIANNA LYA ZUMMO is a researcher at the University of Palermo. Her interests cover issues in sociolinguistics, genre, communication dynamics and studies on the dimension of modality and evidentiality. Her research is primarily related to issues in health communication in online contexts. Recent publications include: *The Web Participatory Environment: a New Genre in Health Exchange*, 2015; *Evidentiality and Commitment: An example from Sports Medical Writing*, 2014;

Formal and Informal Features in CMMC. Some observation on Doctor-Patient Interaction in Online Communication, 2012; *Health On the Net: The Doctor Answers*, 2012. She is also the author of *Health Quering in the Digital Era,* 2015.