FIGURES, GROUNDS AND CONTAINERS. PATIENT PRESENTATION IN MEDICAL CASE REPORTS

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Introduction

The language of medical professionals documenting their academic activities has received substantial attention within the framework of specialised discourse analysis. The bulk of the studies on written medical discourse are made up of the quantitative investigations into specific lexical and grammatical features and their respective functions (Salager-Meyer 1994; Vihla 1998; Luzón Marco 2000; Salager-Meyer et al. 2006) as well as the organisation and presentation of ideas in specific text parts (Myers 1990; Koskela 1997). Another substantial body of research has examined linguistic features of texts and the effect they produce. These are studies devoted to impersonality (Hyland 2001), authorial identity (the KIAP project), metaphors (Sontag 1991; Van Rijn-Van Tongeren 1997), and the presentation of patients and diseases (Anspach 1988; Grice and Kramer-Dahl 1992; Donnelly and Hines 1997; Kenny and Beagan 2004). Furthermore, there is literature which explores the acquisition of professional communication styles (both oral and written) in the socialising process of medical culture (Van Naerssen 1985; Pettinari 1988; Atkinson 1997). On the other hand, the studies on spoken discourse have been devoted to communication broadly understood in medical settings (Sarangi and Roberts 1999; Barton 2006; Candlin 2006; Heritage and Maynard 2007). In this paper, a corpus of fifty-six medical case reports has been investigated in order to reveal how particular linguistic choices the authors make

when writing about patient diagnosis and treatment contribute to various spatial configurations in patient imaging. For this purpose, a number of concepts from cognitive linguistics have been used. Furthermore, some selected notions and distinctions from the sociology of medicine have made it possible to contextualise the language use patterns under investigation in the biomedical model. Combining a linguistic analysis of the texts with the perspective given by a bordering discipline offers a new vantage point from which the matter under study can be approached.

First, a theoretical background for the study will be presented. Next, the data and the methods applied will be described. Finally, the results of the analysis will be discussed.

Theoretical background

According to Bazerman (1988), scientific discourses are shaped by given disciplines (1988: 47). It follows that the ways in which academics inform about their scientific activities are influenced by modes of reasoning, methodologies, objectives, etc. of a given area of study (cf. Taavitsainen and Pahta 2000; Atkinson 2001). In other words, how researchers argue in scientific papers and the theories and methods they choose depend on a particular model which is in use at a particular moment in a particular discipline. Following this line of reasoning, features of medical texts might be conditioned by the nature of medicine as studied and as practised.

As regards medical practice, the framework that has outlined the premises of how medicine has been practiced in western societies since the mid-nineteenth century is the biomedical model, which views illness as a direct consequence of the diseased body and patients as mere recipients of treatment (cf. Wade and Halligan 2004: 1398). Therefore, the model is reductionist because it limits the understanding of disease to its biological manifestations only, excluding social and psychological aspects. Relevant to the present study is also the perspective on the biomedical model offered by the sociology of medicine. This discipline approaches medicine critically, which means that it does not treat medical knowledge as given but as the product of social and cultural practices (cf. Atkinson 1995: 25). Consequently, the sociology of medicine provides a number of notions and distinctions which prove to be instrumental in examining how medical discourse reflects the current status of medicine, namely the biomedical model. Firstly, the sociology of medicine distinguishes between *disease* and *illness*. *Disease* is a concept of a state conditioned by the presence or absence of the manifestations indicating a given pathological change. *Illness*, on the other hand, is defined in terms of its subjective perception by the patient (cf. Bond and Bond 1986: 200). It is a conceptual differentiation

between what the doctor sees and what the patient feels and it goes in line with the biomedical model in which only the abnormal states within the body are treated. This way, the model centres around the patient's body and its biological processes abstracting from the patient as a whole and the social and psychological aspects of his/her illness.

Secondly, according to the sociologists of medicine, the biomedical model conceptualises diseases as "it", i.e. as an "isolatable entity" (Blois 1984), which manifests itself unchangingly in all patients. Associated with Plato whose aim was to classify diseases, this mode of disease presentation is referred to as the *nominalist* mode. It allows a disease to be described as a purely abstract concept and separate from its context, i.e. the patient (cf. Blois 1984: 92). For instance, doctors and patients may refer differently to the same medical condition. While the patient may talk about a stomachache, the doctor may refer to it as gallstone colic, thus reducing the experience of a pathological state to an entity carrying a particular meaning in medical discourse (cf. Nijhof 1998: 739). This entity can be enumerated and referred to in abstraction from the patient, as opposed to particular sensations, i.e. "attributes that constitute his illness" (Blois 1984: 94). The following sentences exemplify this mode:

(1) "Fifteen months after the patient's injury, staff members reported possible **leg flexion and eye closure** on two separate occasions in response to command, but the responses were rare and inconsistent during the next two months" (Childs and Mercer 1996).

(2) "A nine-year-old girl presented to the National Institutes of Health Clinical Center with **weight gain, growth arrest, hypertension, abdominal striae, acne, hirsutism, proximal muscle weakness, mood swings, and increasing skin pigmentation**" (Arioglu et al. 1998).

(3) "During her hospital course, the infant received diagnoses of **microcephaly, patent ductus arteriosus, bilateral hearing impairment, hepatosplenomegaly, and failure to thrive**" (Kellenberg et al. 2005).

(4) "On examination he was alert and orientated, with **bilateral complete ptosis, complete ophthalmoplegia, and dilated pupils showing no consensual nor direct response to light**" (Sheridan et al. 2004).

(5) "However, our patient's unresponsiveness was caused by **deep cerebral venous thrombosis, leading to haemorrhagic infarction of the anterior thalami and basal ganglia, with resultant abulia**" (Bernstein and Futterer 2004).

Although examples (1-5) include direct references to the whole patient, the symptoms and reactions (in bold) of each one are enumerated as if they were entities which were not part of the patient's experience of illness.

Thirdly, the sociology of medicine also studies how the development of technology has affected medical practice. As it specialized, medicine forked into numerous branches and sub-branches and the mind was taken over by psychology and psychiatry, while the body was taken over by science (cf. Helman 1994: 104). Moreover, as technological advancement in medicine progressed, certain phenomena became visible, audible and measurable, which allowed physicians to concentrate on smaller and smaller constituents of the human body abstracting from the whole person. Consequently, the application of advanced diagnostic procedures and the specialisation of medicine called a "disembodied body" (Atkinson 1995: 89) into existence: It is a body whose fragments are inspected and described separately from the different perspectives of individual observers and without reference to its owner (cf. Atkinson 1995: 89). The previously discussed biomedical model is the consequence, on the one hand, of the specialisation of medicine and its symbolic separation of the body from the mind, and on the other hand, of technological progress which redirected the doctor's gaze from the whole patient to his/her body and its parts.

Analytical tools

In order to demonstrate various spatial configurations used in the modes of patient imaging in the corpus, two notions from cognitive linguistics have been chosen.

One of the basic cognitive abilities is the figure/ground distinction (or "segregation", as in Evans and Green 2006: 69), i.e. the ability to differentiate between a focal point and its background (cf. Langacker 1987). It is based upon the premise that if a person is shown a black board with a white dot on it, he/she will probably focus on the white dot (cf. Langacker 1987: 120). Following this line of reasoning, "[w]hile one entity is typically privileged and represents the figure, the second entity is given less prominence and is referred to as the ground or reference object" (Evans and Green 2006: 69). This distinction can be observed also at sentence level where selected sentential elements can be given different amounts of attention. Consequently, the figure/ground distinction can be applied to the sentential positions of the subject and the object, each carrying a particular meaning. The subject precedes the verb and is the starting point of the sentence, i.e. something that "is talked about" (Palmer 1994: 2); the object, on the other hand, follows the verb and is given less prominence. With reference to semantic roles, the subject position is often occupied by the argument having the role of Agent, the instigator of the action denoted by the verb, while the object position may be occupied by the argument with the role of Patient or an entity affected by the action denoted by the verb. Functionally, the subject is "prominent

positionally" in that it is a "perspectival center" and "the starting of the communication of a sentence" (Smith 2003: 192-193). Chafe (1976) compares the structure of a sentence to a package of information which is "unwrapped" step by step by a reader. Although it consists of many elements, "knowledge directly attached to the subject may be most immediately accessible" (Chafe 1976: 44). This way, the subject and object slots, associated with the most prominent arguments in terms of semantics and particular functions, additionally find their rationale in a more general cognitive process (cf. Van Dijk 1980: 95-96).

Another analytical tool which makes it possible to examine spatial configurations of patient imaging is the metaphor of a container. Metaphor can be defined as "the use of language to refer to something other than what it was originally applied to, or what it 'literally' means, in order to suggest some resemblance or to make a connection between the two things" (Knowles and Moon 2006: 1). In other words, metaphor describes a thing in terms of another thing by establishing a common ground between the two. Introduced by Lakoff and Johnson (1980), the container metaphor presents objects or notions as having an inside and outside and as being capable of holding something. As Lakoff and Johnson (1980: 28) explain,

> [w]e are physical beings, bounded and set off from the rest of the world by the surface of our skins, and we experience the rest of the world as outside us. Each of us is a container, with a bounding surface and an in-out orientation.

In medical discourse, the concept of disease in the patient is utilised to describe medical procedures or to give an account of medical facts. From this perspective, the patient's body tends to be viewed as a container in which diseases are localised and particular treatment is performed. Language-wise, this effect is achieved by placing patient referents in the positions of complements of prepositional phrases with the meaning of location.

As regards examples (1-5) demonstrating the nominalist account of a disease, such a conceptualisation is referred to as an ontological metaphor, which through the "understanding of our experiences in terms of objects (...)" helps to describe them in a variety of ways (Lakoff and Johnson 1980: 25). In medical discourse, this conceptualisation facilitates the presentation of decontextualised information about diseases.

Yet another metaphorical tool found in medical texts is metonymy by which wholes are referred to in terms of their parts, or vice versa, or "naming by association" (Knowles and Moon 2006: 37). An example of the former would be, for instance, referring to *workers* as *hands*, and of the latter the *stage* to refer to the *theatre* (cf. Knowles and Moon 2006: 37). From the perspective of the present paper, the use of metonymy is of particular interest in the presentation of the patients. Here references to body-parts to denote the patients themselves are pervasive in medical

discourse. In this way, the body-part is figuratively separated from its owner and "the sufferer is excluded from the ensuing treatment, which is directed toward the synecdochic sign (…) [and] from the health professional's perspective the patient becomes the affected body part" (Fleischman 1999: 22).

Data and Methods

The corpus for this study comprises fifty-six case reports taken from four international medical journals designed for health professionals: *The Lancet* (15), *The Journal of American Medical Association* (13), *The New England Journal of Medicine* (16), and *The British Medical Journal* (12). In their study of case reports from a diachronic perspective, Taavitsainen and Pahta (2000:60) define this genre in the following way:

> In its typical form, the case report records the course of a patient's disease from the onset of symptoms to the outcome, usually either recovery or death. The background and a commentary on the disease are also given, but their scope may vary. Often a limited review of the literature is added and the number of known cases stated.

Generally, case reports present new diseases or diseases that are already known but which have unusual manifestations.

In the analysis, each article carefully searched for any words that referred to the patients described there. Next, the examples containing references to the patients were isolated by means of *WordSmith 5* and further examined. The examples which did not refer to the patients directly, yet concerned various aspects of their treatment, were also taken into consideration. In the following discussion of the results, it will be demonstrated how various grammatical, rhetorical and lexical configurations of the texts in the corpus examined contribute to different spatial representations of the patients.

Results and Discussion

Figures and grounds

In the analysis, first, instances of the use of the figure and ground distinction and then of the metaphor of the container found in the case reports will be presented.

In the following fourteen examples, figures and grounds can be distinguished. In each example, the figure is the pathological change, either on or in the patient's body. Where these examples differ is the ground, and it is the type of the ground, in turn, that determines the mode of patient imagining.

(6) "Although the patient discussed here could not recall a clear break in his skin or an accident in the laboratory, most reported occupational infections occur without recognized instances of exposure" (Srinivasan et al. 2001).

(7) "An 84-year-old woman presented with a bruise on her face from a fall the previous day" (James 2005).

(8) "She developed pain and massive inflammation at the injection site, was told she was allergic to the toxoid and should not have further tetanus immunizations" (Lindley-Jones et al. 2004).

(9) "Two days before admission, he observed a "brown spot" in the left visual field and noted mild pain in the left eye" (Rubin et al. 2003).

(10) "On examination she was feverish (38°C), with exudate on her tonsils and tender cervical lymph nodes" (Graham and Fahey 1999).

(11) "On September 18, he presented to the medical clinic with severe dyspnea, weakness, and a petechial rash on the legs" (Mak et al. 2001).

Although the patients are Agents of the sentences only in (7) and (11) in all six examples they stand in the subject position, which makes them the primary topics and content of the clauses (cf. Givon 1984: 137-138; Halliday 1994: 76). As regards the figures –*break*, *bruise*, *inflammation*, *brown spot*, *exudate*, and *rash*, they are imaged against the body-parts– *his skin*, *her face*, *injection site*, *eye*, *tonsils*, and *legs* respectively. Yet, because of the fact that the patients are referred to as whole persons and it is they who are being talked about, they can be treated as the grounds as well. To put it differently, in these examples the authors seem to have chosen the patient's perspective for the description of the situation.

(12) "On May 30, a similar lesion developed on her left cheek" (Garde et al. 2004).

(13) "Three months later, a return visit to her dentist revealed a persistent nonhealing ulcer at the right mandibular extraction site and mobility of the mandibular right second bicuspid" (Dodson et al. 2008).

(14) "CT of his neck showed oropharangeal oedema, and parapharangeal oedema on the right" (Chapman and Tully 2004).

In (12), the *lesion* –the figure– is imaged as Agent appearing in a particular location –on the *cheek*– the ground. In comparison to (6-11) above, here the lesion occupies the subject position whereas the *cheek* metonymically represents the patient, who is marked by the possessive pronoun (as opposed to 15-19 below). Consequently, the most topical element of this sentence is the lesion which is placed against the patient's body-part. In (13) and (14), the pathological lesions –*ulcer* and *oedema*– are not the most prominent elements in the sentences. However, the sentences

display the same figure/ground alignment, with *extraction site* and *neck* functioning as the grounds. What is more, the patients are also textually marked by possessive pronouns. Furthermore, such a type of the part-whole relation as in the case of the *cheek, site* and *neck* is classified by Iris et al. (1988: 272) as *functional parts*, where "[t]he part (…) contributes to the whole, not just as a structural unit but as essential to the purposeful activity of the whole". With this explanation in mind, the focus of the sentences below falls on the body-parts and their conditions which affect the functioning of the larger structure, i.e. the whole body (cf. Górska 1999: 78-79).

(15) "On examination, we found large venous ulcers on both legs, and bilateral ankle oedema" (Woodman et al. 2004).

(16) "On physical examination, the rash was most prominent on visible parts of the body, including the face and anterior neck" (Cordell and Gordon 2004).

(17) "There were 1 to 2 vitreous cells in the right eye, a few small dot hemorrhages in the macula, and slight engorgement of the optic-nerve head" (Rickman et al. 1995).

(18) "A purple mass developed at the same site months later, followed by similar nodules on the trunk" (White et al. 2004).

(19) "No lesions or rashes were noted on the skin" (Bush et al. 2001).

In (15-19), the patients are represented metonymically only by their body-parts (*legs, parts of the body, eye, trunk*, and *skin*), which constitute the grounds for the pathological lesions (*ulcers*, *oedema*, *rash, vitreous cells, hemorrhages*, *engorgement*, *mass, nodules,* and *lesions*). Yet, in contrast to (12-14), here the body-parts appear in abstraction from their owners and only the definite articles in (16-19) denote whose parts of the body are dealt with. Additionally, while in (15) and (17) the pathological lesions occupy the object position being less prominent, in (16), (18), and (19) the skin conditions are the focal elements of the sentences.

All in all, sentences 12 to 19 exemplify three modes of patient imaging. In (6-11) the type of the patient referents (the whole person) and their sentential position (the subject) make the patients the grounds for the diseases presented. In other words, although these examples inform about patients' conditions, the authors seem to have chosen to present this information from the patient's perspective. The most prominent element of (12) is the lesion, which is presented as appearing against the patient's body-part. Although this mode directly refers to the patient, it is the body-part that stands for her. In (16), (18) and (19) similarly to (12), the figures are the pathological lesions. Yet, due to the absence of the direct patient referents, the body becomes abstracted from the patient. Such a mode of patient imaging tallies with the assumptions of the biomedical model and with the reign

of technology in medical practice. In this mode, the emphasis is on the pathological changes treated and the body-parts affected. What is more, the textual abstraction of the body from the patient resembles the way bodies are examined and assessed using modern diagnostic technologies. With respect to the disease/illness distinction, all the pathological changes described (cf. examples 7-19 above) are viewed from the perspective of the researcher who informs about what has been observed.

Patients as containers

The other spatial configuration of patient imaging as examined in the corpus is patient as container. The following six sentences exemplify this metaphorical tool:

> (20) "**In this 10-year-old child** with a history of chest pain, dyspnea on exertion, and noisy breathing, the results of spirometry testing are important in the differential diagnosis" (Haver et al. 2008).
>
> (21) "It is very unlikely that other causes contributed to the hypoglycaemia **in our patient**" (Seckl et al. 1999).
>
> (22) "**In our patient**, two-site immunoassays for luteinizing hormone demonstrated elevated levels" (Hirshberg et al. 2003).
>
> (23) "**In four of our patients** who had diabetes, the lesion was initially misdiagnosed as a diabetic foot ulcer" (Kong et al. 2005).
>
> (24) "In 1994, splenomegaly was documented **in a 72-year-old woman** from the Greek island of Karpathos during a routine examination (her first in many years)" (Vinetz et al. 1998).
>
> (25) "We report a relapse of tuberculosis characterized by resistance to rifampin and rifabutin after exposure to both drugs **in a patient** whose infection was initially drug-susceptible" (Bishai et al. 1996).

Examples (21), (23) and (24) present the patients (in bold) as the location of illness, while examples (20), (22) and (25) present them as the location of medical procedures. Consequently, the readers' attention is drawn to the diseases examined (cf. Dubertret 2006: 75) and the treatment performed (cf. Ashcroft 2000: 288) rather than to the patients themselves. Although the patients are textually present, they do not hold sententially prominent positions. They are located in the prepositional phrases functioning as adverbial complements or adjuncts, i.e. denoting the place of the described facts or procedures. What is more, these examples can also be viewed as the extension of the figure and ground distinction where the patients as locations are the grounds for the matters that are

the primary topics of the examples, i.e. disease and treatment. As Grice and Kramer-Dahl (1992) observe, "the patient (…) is presented less as a person than as an experimental resource" (1992: 64), whereas diseases are "isolatable entities" as located in patients-containers.

Conclusion

The present study demonstrates that the figure/ground alignment and the container metaphor focus attention on the selected elements of a sentence by means of the grammatical, rhetorical, and lexical configurations of texts, in this case the sentential position of the patient referents and their type. The mode of imaging patients as containers, which has already been reported in the literature (Grice and Kramer-Dahl 1992; Fowler 1996: 128-129), has been supplemented by the examples of imaging patients as figures and grounds. The analysis of the texts in question reveals that the patients tend to be textually backgrounded, while disease and medical procedures come to the fore. This is achieved when pathological lesions are the primary topics and they are presented as figures against the background of the body-parts or when the patients-containers serve as the background for the conditions or treatment described. As a result, in some of the texts examined, the patients are separated from their bodies in that the textual focus falls on body-parts, medical procedures and diseases. In other words, the patients are portrayed in abstraction from their bodies and their mental/somatic reactions. However, the examples where the patients take centre stage have also been presented. Here the patient references occupied the subject position, whereas pathological lesions were described against the ground of the body. These various ways in which authors may choose to write about patients and their diseases point to the fact that it is up to them what mode they will select and where they decide to lay stress. Additionally, the contribution of the sociology of medicine to the critical analysis of the biomedical model needs to be emphasised, as it has substantially informed the analysis of the linguistic choices studied. What is more, some of these choices appear to confirm the commonly held assumptions that what medicine focuses on is the patient as a case of a given disease and not the whole person experiencing illness.

The present paper has sought to draw attention to patient imaging in medical texts for professionals, as written communication among medical professionals is not conceived of as being of direct relevance to the patient. However, it does matter how patients are written about as the production and reception of such texts is a standard medical practice and it reflects how patients are positioned therein.

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Received: 18 December 2009
Revised: 26 May 2010