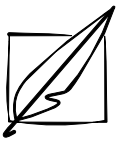

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Patient imaging in English medical case reports

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ABSTRACT

The present paper addresses the way patients are depicted in English medical academic texts aimed at health professionals. It examines the linguistic choices authors make and the effect they produce. The key issue is the construction of a patient persona, by analogy with other studies in which the authorial persona has been researched. In my project, I have attempted to analyse a corpus of selected case reports in search of references to patients in order to establish the roles they are assigned. Identifying these roles would help to determine patients' textual status, i.e. whether they function as the subjects or the objects of a medical study. The results of the analysis are discussed with reference to patient-centred approaches in medicine and to some facts concerning the history of medicine which have influenced the visibility of patients in medical literature.

1. Introduction

The language medical professionals use in order to document their academic activities has been widely researched in recent years within the framework of specialised discourse analysis. The bulk of the studies of written medical discourse constitute quantitative investigations into specific lexical and grammatical features (Gotti – Salager-Meyer 2006) and their respective functions as well as how authors organise and present ideas in specific text parts (Myers 1990). Another substantial body of research has centred on the broad theme of patient imaging. Under this umbrella term can be subsumed studies devoted to linguistic representations of patients, doctors and diseases. This research has addressed impersonality (Hyland 2001), authorial identity (the KIAP project) and metaphors (Sontag 1991) to mention but a few. Yet, the present author knows of no study of patient representation in medical

texts which considers the various contextual factors of their production. In this paper, I investigate patient imagining in a corpus of fifty medical case reports composed in Present-Day English in order to reveal the linguistic choices the text authors make as they write about patient diagnosis and treatment. I focus on the effect that particular selections produce and the possible factors influencing the language use patterns presented. I begin with an overview of the issues concerning written medical discourse, i.e. its characteristics and operational context. Next, the data and the methods applied in the study will be described. Finally, the results of the analysis will be discussed and conclusions will be drawn.

2. Theoretical background

The course by which to examine the relation between the form and the content of medical texts has been determined by the common practice to perceive their language as neutral, economical and depersonalized (Kenny – Beagan 2004: 1072), to a large extent due to the notorious use of the Passive Voice (cf. Albert 2004; Kenny – Beagan 2004). In general, these features are common to scientific discourse, yet, according to Bazerman (1988), scientific discourse is shaped by a given discipline (1988: 47). It follows that the ways authors give account of their scientific activities are influenced by modes of reasoning, methodologies and objectives of a given area of study. This hypothesis has been accepted by Taavitsainen and Pahta (2000), Atkinson (2001) and others who have examined relevant scientific papers. Following this line of reasoning, the features of medical texts might be conditioned by the nature of medicine as an area of study and practice. As regards the former, medical discourse may reflect the premises of the *biomedical model of medicine*, which has dominated since the 19th (c.) In short, this framework views illness as a direct consequence of the diseased body and patients as mere recipients of treatment (Wade – Halligan 2004: 1398). Regarding medical practice, according to Beagan (2000), in the course of medical training, students are taught to execute objectivity and personal withdrawal in their practice. They learn to report only facts and to limit personal input to a minimum (cf. Freidson 1970; Lock – Gordon 1988). The presented premises of the *biomedical model* have had to confront alternative models of medicine, for example *patient - centred medicine* and the *biopsychological model of medicine* (cf. Engel 1977). While the first of these "conceives of the patient as an experiencing individual rather than the object of some disease entity" (Mead – Bower 2000:

1089), the second advocates the incorporation of the patient's "whole self" (Wade–Halligan 2004: 1400) into the processes of diagnosis and treatment. If these postulates are considered in the context of medical texts, it may be assumed that even when writing about the methods of enhancing patients' treatment, one should still refer to patients as beneficiaries of these methods, not only as those to which these methods apply. As will be demonstrated, the biomedical model has a bearing on the way patients are depicted in medical case reports. Yet, it is not the only factor influencing patient imaging examined in the present study. I will now proceed to describe the data and the methods of my analysis.

3. Data and methods

The corpus for this study comprises fifty case reports taken from four international medical journals aimed at health professionals – *The Lancet* (15), *The Journal of American Medical Association* (12), *The New England Journal of Medicine* (12), and The *British Medical Journal* (11). The issues examined were published between 1995 and 2008 and were devoted to a variety of medical fields. Taavitsainen and Pahta (2000: 60) define the genre of case report 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. The rationale behind the choice of the genre of case report was the fact that this text-type does not present general medical knowledge or detailed results of clinical research, but it discusses particular patients suffering from particular diseases. In other words, case reports give the account of diagnosis and treatment but always in a real context referring to a given person. What is more, it is the genre which brings together all the elements of the medical management of a patient – recounting his/her history and performing physical examination/tests as well as therapy and the results of treatment which are described in respective sections of genre texts. Thus, all the past and present aspects of the patient's health are composed into a report of a case.

In the analysis, each report was carefully examined for words that referred to the patients, but only the descriptions of diagnosis and treatment

were included, leaving out the fragments which concerned demographic information about patients. Then, the sentences containing references to patients were isolated by means of *Wordsmith 5* and examined further.

4. Results and discussion

The present analysis consists of two stages. In the first stage (sub-sections 4.1. - 4.3), patient imaging is examined at the sentence level and with respect to grammar. It has been established that the authors of the texts under study use a variety of techniques in order to distance themselves from the subject of their medical inquiry. To this end, they select specific grammatical configurations which enable them to place words referring to patients in various sentential positions, which, in turn, may affect patients' prominence in texts.

4.1 The removal of agency in the process of diagnosis and treatment

The study reveals that the medical texts under analysis abound in sentences in which diagnostic procedures and treatment are described with no trace of an agent who performs these actions.

(1) He was stabilised with 7.5 mg zopiclone nightly and 3.75 mg daily and monitored closely. B2

(2) He was treated with broadspectrum antibacterial agents (i.e., vancomycin, ceftriaxone, and metronidazole) and antivirals (i.e., acyclovir and foscarnet). JA2

The research on the use of impersonal constructions in scientific discourse indicates that their aim is to focus on what is being studied (Bazerman 1988; Potter 1996; Marco 2000). On the basis of the history of the development of medical practice, it may also be assumed that as the specialisation of medicine has progressed and the methods of treatment have improved, illness (Dubertret 2006: 75) and various medical procedures rather than people who perform these procedures have become more emphasized in texts (Ashcroft 2000: 288). The Passive Voice, as used in (1) and (2), seems to serve its purpose, i.e. drawing attention to medical facts and treatment and hiding the "humble servants of the discipline" (Hyland 2001: 209).

4.2 Patients as locations

In a number of sentences patients do not occur either in the subject or object positions but in prepositional phrases in which the treated are presented as locations of infections and illness. Therefore, rather than to patients themselves, readers' attention is drawn to the diseases examined (Dubertret 2006: 75) and the treatment performed (Ashcroft 2000: 288).

(3) This report describes a case of imported CRS diagnosed **in an infant girl** aged 10 weeks born in New Hampshire to Liberian refugee parents. JA9

(4) Illness **in the two Louisiana residents** was attributed to shellfish that was not prepared or handled properly, perhaps because of difficult living conditions after the hurricanes. LA5

This particular linguistic phenomenon is also a textual manifestation of the container metaphor. Introduced by Lakoff and Johnson in 1980, it presents objects or concepts as having an inside and outside, and as being capable of holding something. As Lakoff and Johnson (1980) 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" (Lakoff and Johnson 1980: 29). When the container metaphor is used in medical discourse, the source domain CONTAINER is mapped onto a patient who "contains" a disease. The concept of disease in a patient is utilised to describe a number of medical procedures or to give account of medical facts. On the one hand, the patient's body tends to be viewed as a container in which diseases are localised and particular treatments performed. The skin, on the other hand, is the "bounding surface" which is crossed by a doctor in an attempt to get from the outside to the inside and manage the diseased site. Language-wise, the container effect is achieved by placing the words referring to patients in the position of complements of prepositional phrases which together function as adverbials of place, here with the meaning of a container. As a result, they serve as the background modifying the topic of a sentence. What comes to the fore is either an instance of a disease that has been localised in a patient (cf. Hodgkin 1985) or a specific treatment that is performed.

4.3 Deverbal nouns and derived nominals

In some other sentences, medical treatment and procedures are presented as the focal points. These often occupy the subject position and may be realised in the form of deverbal nouns (5 - 6) or derived nominals (7).

(5) **His clinical evaluations** did not suggest severe illness, and two bacterial throat cultures were negative. JA2

(6) **Examination** of the ear, nose, and throat detected no discharge or signs of inflammation. NEJM9

(7) Guidelines issued by the Public Health Service and the Infectious Disease Society of America recommend **screening all patients** for active tuberculosis and obtaining mycobacterial blood cultures before rifabutin prophylaxis is begun. NEJM3

The two forms enable the writer to remove his/her presence and to draw readers' attention to the described procedure. As regards patients, they are often made visible through the form of possessive pronouns or located in *of*-phrases. These linguistic selections seem to reflect the assumptions of the *biomedical model of medicine*. As has already been mentioned, this model views patients as those who passively undergo treatment. Therefore, what comes to the fore is treatment (in a nominal form) (cf. Taavitsainen – Pahta 2000: 71; Ashcroft 2000: 288).

I shall now proceed to the second stage of the analysis (sub-sections 4.4 - 4.7) in which patient imaging is examined on the level of text and with respect to lexis.

4.4 The separation of biological processes from the person (de-personalization) (Anspach 1988)

When studying case presentations delivered by physicians during ward rounds, Anspach (1988) reported the separation of biological processes from the person (de-personalization)[1]. What Anspach (1988) points to concerns such utterances as those where the main focus falls not on a patient but

[1] Case presentations are highly conventionalized oral descriptions of patients and their diseases, which are performed by clinicians or medical students in clinical settings (cf. Atkinson 1995).

on a disease or an organ. The author acknowledges the fact that doctors know the referents, but people and their treated organs or other body-parts are not rendered integral (1988: 366). The same practices are evident in the medical case reports of the corpus.

(8) Chest radiographs revealed progressive consolidation and a new right pleural effusion (Figure 2B). A chest tube was placed in the left pleural space. Total white blood cell count increased to 43.6 × 103/μL (83% segmented neutrophils, 12% lymphocytes, and 5% monocytes) and serum creatinine level increased to 3.7 mg/dL (327 μmol/L). Hematocrit, platelet count, liver enzymes, and coagulation profile remained normal, with the exception of an aspartate aminotransferase level of 61 U/L. JA3

(9) We started a magnesium infusion to maintain ionised magnesium levels of 1·5–2·0 mmol/L, asmuscle spasms were consistently worse once the serum magnesium fell below 1·5 mmol/L. Painful muscular spasms continued for weeks after extubation and were controlled by supranormal magnesium levels for a further 9 days and subsequently baclofen. LA14

In (8), medical tests are performed and their results are described, yet, with no indication of those who undergo the tests. Interestingly enough, even when "[a] chest tube was placed in the left pleural space", the patient was not mentioned. The second instance deals with administering drugs and giving account of specific symptoms, but again these facts are presented separately from the people receiving the treatment. It needs to be stressed that the de-personalization of patients as reported by Anspach (1988) and in the present study occurs in larger fragments of utterances and in texts, respectively.

Although it may seem difficult to evaluate patients' visibility given only fragments of their contexts, the corpus contains numerous examples in which diseases, processes, symptoms, particular treatments, or even body-parts are presented as if in abstraction from a patient. It is perhaps more understandable not to mention patients when writing about certain detailed analyses of specimens, tests on the cellular level, etc. Yet, mentioning patients, those whom the experience concerns, as well as describing their symptoms or reactions may also be considered requisite. Additionally, it should be stressed that it is not the possible difficulty in identifying who undergoes the

treatment dealt with in the case reports, as, by definition, case reports tend to present one particular patient who suffers from a previously unknown disease or a disease which manifests itself in an unusual way. The issue is whether patients' presence should be given more prominence in those parts of texts which refer to the matters directly affecting the treated and their experience of illness.

4.5 Focus on body-parts

Under the label of *focus on body-parts* are subsumed examples in which the human body-parts, organs, tissues, etc. are the most salient element of sentences (9) and/or are rendered separate from the patient (10-11):

(9) […] **the infant's right ear** passed the screening test but *the left ear* required further evaluation by an audiologist. JA9

(10) **The left eye** had 3+ anterior vitreous cells, an engorged disk, and cystoid macular edema. NEJM5

(11) **The bladder** appeared to be decompressed and contained an indwelling catheter. NEJM13

According to Virchow (1880), whose work on autopsy and pathological anatomy underlies the biomedical model, all diseases stem from the dysfunction of tissues. Following this medical premise, organs and tissues claimed centrality in medical case writing (Nowell-Smith 1995: 52) as they began to be perceived as the location of illness. This fact from the history of medicine might be helpful in explaining the linguistic phenomenon of the subjectivization of body-parts.

4.6 Technology as the agent (Anspach 1988)

A number of studies of scientific discourse have addressed the feature of emphasizing the role of data i.e. it is data that "show", "prove" or "reveal". To describe this characteristic, Potter coined the term "data primacy" (1996: 153). He claims that the fact that the agent is deleted from the text contributes to rendering the information objective and independent from

human involvement (Potter 1996: 153). A similar practice has been found in spoken medical discourse. For instance, one of the features of medical case presentations is "treating technology as the agent" (Anspach 1988), where it is medical equipment and diagnostic procedures that "reveal" or "show" particular results of the study. Such examples have also been found in the corpus under analysis:

(12) **A chest radiograph revealed** a nodular infiltrate, which was thought to be a residual finding from pneumonia diagnosed in early January. JA11

(13) Pituitary MRI was normal; inferior petrosal sinus sampling excluded pituitary-dependent Cushing's disease; and octreotide and **CT scans of chest, abdomen, and pelvis showed** no abnormality other than bulky adrenal glands consistent with adrenal hyperplasia. LA11

The focus on technology constitutes another textual reflection of the development of medicine, i.e. the introduction of modern diagnostic procedures (Ashcroft 2000). These technological innovations render the patient's body readable (cf. Atkinson 1995) and let the data speak for themselves.

4.7 Patients as cases

The analysis of the texts in the corpus also demonstrates the common practice of referring to an individual occurrence of particular disease as a *case*. Yet, close scrutiny also reveals examples in which the word *case* refers not to a disease but to a patient (cf. Fowler 1996: 124-134):

(13) Two of the 18 US **cases** of inhalational anthrax reported prior to the recent bioterrorism-related outbreak had underlying lung disease; one had beryllium exposure and chronic pulmonary fibrosis and the other had underlying pulmonary sarcoidosis. JA3

(14) Many of the reported **cases** are children and only two cases have survived. LA3

These examples suggest treating a patient as "the object of some disease entity" (Mead – Bower 2000: 1089), which, in consequence, can lead to other similar naming practices among health professionals (cf. Anspach 1988).

5. Conclusion

The present analysis of medical case reports reveals that some of their features have the potential to dehumanize patients. On the one hand, the use of specific grammatical structures influences patients' sentential position, which may affect their prominence in texts. On the other hand, the very decision of whether or how to mention a patient when describing his/her illness determines his/her textual visibility. Consequently, patient imaging in the corpus under study seems incomplete; because it renders patients, their body-parts, and biological processes separate. Such a writing practice requires further research as what distinguishes medicine from other scientific areas is that it does not only study diseases and develop new ways of their treatment but also manages patients who suffer all the consequences of being ill. While the alternative models of medicine presented have sensitized physicians to consider this human factor during any form of direct contact with patients (be it consultation, end-of-life conversation, etc.), it seems that similar sensitization could also be executed in the realm of medical publications. When giving account of the innovative techniques of treatment or manifestations of diseases clinicians also mediate a given image of patients, either as objects or subjects of medical study and practice. It appears to be an issue of concern in light of the fact that texts written by the already established members of the profession not only acquaint novices with particular attitudes and values but also promote discipline-specific modes of writing.

REFERENCES

Sources

Barakat, L. A. et al.
2002 "Fatal inhalational anthrax in a 94-year-old Connecticut woman", *Journal of American Medical Association* 287, 863-868. JA3

Bishai, W. R. et al.
1996 "Rifampin-resistant tuberculosis in a patient receiving Rifabutin prophylaxis", *The New England Journal of Medicine* 334, 1573-1576. NEJM3

Bush, Larry M. et al.
2001 "Index case of fatal inhalational anthrax due to bioterrorism in the United States", *The New England Journal of Medicine* 345, 1607-1610. NEJM9

Carroll, D. N. et al.
2005 "Congenital viral infection?", *The Lancet* 365, 1110. LA5
Jones, I. R. – G. Sullivan
1998 "Physical dependence on zopiclone: Case reports", *The British Medical Journal* 316, 117. B2
Keenan, Niall et al.
2006 "Unexpected shortness of breath in a patient with Cushing's syndrome", *The Lancet* 367, 446. LA11
Kellenberg, J. et al.
2005 "Brief report: Imported case of congenital rubella syndrome – New Hampshire, 2005", *Journal of American Medical Association* 295, 492-493. JA9
Kenyon, C. et al.
2004 "Fatal case of unsuspected pertussis diagnosed from a blood culture – Minnesota, 2003", *Journal of American Medical Association* 291, 1557-1558. JA11
Lindley-Jones, M. et al.
2004 "Recurrent tetanus", *The Lancet* 363, 2048. LA14
Mak, R. et al.
2001 "Two fatal cases of adenovirus – related illness in previously healthy young adults – Illinois, 2000", *Journal of American Medical Association* 286, 553-556. JA2
Rickman, L. S. et al.
1995 "Uveitis caused by tropheryma whippelii (Whipple's Bacillus)", *The New England Journal of Medicine* 332, 363-366. NEJM5
Sayegh, Mohamed H. – Robert B. Colvin
2003 "Case 8-2003: A 35-year-old man with early dysfunction of a second renal transplant", *The New England Journal of Medicine* 348, 1033-1045. NEJM13
White, J. M. et al.
2004 "Granulomatous amoebic encephalitis", *The Lancet* 364, 220. LA3

Special studies

Albert, T.
2004 "Why are medical journals so badly written?", *Medical Education* 38, 6-8.
Anspach, R. R.
1988 "Notes on the sociology of medical discourse: The language of case presentation", *Journal of Health and Social Behaviour* 29, 357–375.
Ashcroft, R. E.
2000 "Teaching for patient-centred ethics", *Medicine, Health Care and Philosophy* 3, 287-295.

Atkinson, D.
2001 "Scientific discourse across history: A combined multi - dimensional/ rhetorical analysis of the Philosophical Transactions of the Royal Society of London". In: S. Conrad and D. Biber (eds.) *Variation in English: Multi-dimensional Studies.* Harlow: Longman, 337-374.
Atkinson, P.
1995 *Medical Talk and Medical Work*. London: Sage Publications.
Bazerman, C.
1988 *Shaping Written Knowledge. The Genre and Activity of the Experimental Article in Science*. Madison: The University of Wisconsin Press.
Beagan, B. L.
2000 "Neutralizing differences: Producing neutral doctors for (almost) neutral patients", *Social Science & Medicine* 51, 1253-1265.
Dubertret, L.
2006 "Patient – based medicine", *Journal of European Academy of Dermatology and Venerology* 20, 73-76.
Engel, G. L.
1977 "The need of a new medical model: A challenge for biomedicine", *Science* 196, 129-136.
Fowler, R.
1996 *Language in the News: Discourse and Ideology in the Press*. London: Routledge.
Freidson, E.
1970 *Profession of Medicine. A study of the Sociology of Applied Knowledge*. New York: Harper & Row.
Gotti, M. – F. Salager-Meyer (eds.)
2006 *Advances in Medical Discourse Analysis – Oral and Written Contexts*. Bern: Peter Lang.
Hodgkin, P.
1985 "Medicine is war", *British Medical Journal* 291, 1820-1821.
Hyland, K.
2001 "Humble servants of the discipline? Self - mention in research articles", *English for Specific Purposes* 20, 207-226.
Kenny, N. P. – B. L. Beagan
2004 "The patient as text – a challenge for problem – based learning", *Medical Education* 38, 1071-1079.
KIAP – Cultural Identity in Academic Prose: National vs. discipline – specific.
2006 http://www.uib.no/kiap/index-e.htm.
Lakoff, G. – M. Johnson
1980 *Metaphors We Live by*. Chicago: The University of Chicago Press.
Lock, M. – D. Gordon (eds.)
1988 *Biomedicine Examined*. Dordrecht: Kluwer Academic Publishers.
Marco, M. J. L.
2000 "Collocational frameworks in medical research papers: A genre based study", *English for Specific Purposes* 19, 63-86.

Mead, N. – P. Bower
2000 "Patient – centredness: A conceptual framework and review of the empirical literature", *Social Science & Medicine* 51, 1087-1110.
Myers, G.
1990 *Writing Biology: The Social Construction of Popular Science: The Narrative of Science and the Narrative of Nature*. Madison: University of Wisconsin Press.
Nowell-Smith, H.
1995 "Nineteenth - century narrative case histories: An inquiry into stylistics and history", *CBMH/BCHM* 12, 47-67.
Potter, J.
1996 *Representing Reality : Discourse, Rhetoric and Social Construction*. London: Sage.
Sontag, S.
1991 *Illness as Metaphor and AIDS and Its Metaphors*. London: Penguin.
Taavitsainen, I. – P. Pahta
2000 "Conventions of professional writing: The medical case report in a historical perspective", *Journal of English Linguistics* 28, 60-76.
Virchow, R.
1880 *Post-Mortem Examinations, with Special Reference to Medico-Legal Practice*. Translated by T. Smith. Philadelphia: Presley Blackiston.
Wade, D. T. – P. W. Halligan
2004 "Do biomedical models of illness make for good healthcare systems?", *British Medical Journal* 329, 1398-1401.