

ORIGINAL ARTICLE

Medicine and the humanities—theoretical and methodological issues

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Engel's biopsychosocial model, Cassell's promotion of the concept "person" in medical thinking and Pellegrino's and Thomasma's philosophy of medicine are attempts to widen current biomedical theory of disease and to approach medicine as a form of human activity in pursuit of healing. To develop this approach further we would like to propose activity theory as a possible means for understanding the nature of medical practice. By "activity theory" we refer to developments which have evolved from Vygotsky's research on socially mediated mental functions and processes. Analysing medicine as activity enforces the joint consideration of target and subject: who is doing what to whom. This requires the use of historical, linguistic, anthropological, and semiotic tools. Therefore, if we analyse medicine as an activity, humanities are both theoretically and methodologically "inbound" (or internal) to the analysis itself. On the other hand, literature studies or anthropological writings provide material for analysing the various forms of medical practices.

The development of modern medicine has been closely tied to the development of biology and its subdisciplines. Theoretical debates in medicine have, therefore, echoed the conceptual problems encountered in the biological sciences. Until the 20th century the theoretical demarcation line in the study of living processes resided in the debate between physicalism and vitalism. The advocates of physicalism claimed there was no fundamental difference between living organisms and inanimate matter. Living phenomena could therefore be studied and explained with the methods and laws of physics. This approach was strongly opposed by vitalists who postulated that living organisms had properties that could not be reduced to physics or chemistry and, therefore, biological phenomena could not be analysed with the concepts or methods of those sciences. Instead, vitalists claimed, to explain the nature of living phenomena one needed to apply such concepts as "vital force" and "vital fluids" to the analysis.

With the development of cellular and evolutionary theories it became apparent, however, that living processes could not be satisfactorily explained either by Newtonian physics or by any non-material life forces. This fundamental theoretical dispute in biology was eventually resolved with the conceptual development in biology of

organicism, where life processes were explained by physiochemical and evolutionary instead of physical or teleological concepts.¹

This conceptual change had a profound impact also on the development of medicine. The cellular theory of disease and its biochemical explanatory principle displaced the physical, humoral, and vitalistic approaches to human health and illness, and formed the knowledge base of 20th century medicine.

In clinical medicine, however, there are many instances where the biological approach alone cannot address the various human phenomena that physicians encounter in their everyday practice. When abandoning vitalism and physicalism a new theoretical demarcation line in medicine was formed between reductionism and holism.²

The reductionist approach in medicine attempts to explain human illness through biological concepts, whereas the advocates of holism have tried to incorporate social and cultural issues as well as personal experience into medical theory. This demarcation has deepened in the latter half of the 20th century with the rapid development of molecular biology and genetics, together with more and more sophisticated medical technology. All this has given rise to the hope of finding the ultimate explanation for human illness in the elementary cellular structures and their dysfunctions, as discarded amino acids in genetic processes.

Since the 1960s the critical social movement has been questioning—among various other cultural and political issues—the predominance of science and technology in modern society. This intellectual climate has also influenced medical faculties, especially in the United States, where medical students have expressed growing disenchantment with existing medical curricula. Medical education, it was claimed, neglected central issues of medical practice such as the patient's individual experience of his or her illness, and also social questions such as the role of poverty and social deprivation in causing illnesses.³ The aim of the curriculum had been, instead, to see the patient as the site of the disease, as Byron J Good⁴ has claimed. The student learns "the medical gaze", with which he reconstructs the culturally constructed person identifying him as a body, a case, a patient, or a cadaver (Good BJ,⁴ p 86). In this process the effects of the person's individual experience and his cultural context are dispelled.

In response to this criticism courses on social sciences and humanities were included in medical curricula at many of the medical

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faculties in the United States. It was assumed that incorporating humanities as a part of medical training could bridge the gulf between science and human experience. The aim was to educate more humane physicians and to recapture the notion of medicine as a learned profession.⁵ This development has gradually taken over most of the medical faculties in the US under the heading “Medical Humanities” and it is gaining ground in European faculties as well.

Arguably the holistic approach in medicine has, at its best, been able to demonstrate the inadequacies in reductionist approaches to human illness and to disclose many human phenomena in medical practice standing in need of further exploration. These attempts have not, however, been able to produce a sound conceptual apparatus for deepening our understanding of the nature of medicine. As Cassell regretfully remarks, “it is one thing to be concerned with wholeness, but quite another to develop the intellectual tools to deal with them. As a cautionary tale, the holistic medicine movement provides almost a caricature of what happens when new concerns arise unaccompanied with new understanding, or tools to deal with them” (Cassell E,³ p 50).

It seems that among the various holistic approaches the most ambitious and influential attempts at bringing biologically based medical theory more into line with clinical reality are Engel’s biopsychosocial model, Cassell’s promotion of the concept, “person”, within medical thinking, and Pellegrino’s and Thomasma’s philosophy of medicine as a form of human activity.

ENGEL’S BIOPSYCHOSOCIAL MODEL OF MEDICINE

Engel’s biopsychosocial model of medicine is based on general systems theory, where reality is seen as built on hierarchical levels. The model retains the biological basis of medicine but it suggests that we need to increase the number of variables which should be “taken into account” in medical practice.⁶ These variables are derived from different scientific disciplines and their concepts and methods of addressing the world. Engel’s idea is thus to see medicine as a mixture of scientific disciplines applied by a physician to the care of the patient.

In Engel’s thinking the physician acts as a “participant observer” who, in the process of attending to the patient’s complaints, taps into his own personal inner viewing system in order to compare and clarify the information obtained from the patient. The patient is both an initiator and a collaborator in the process, not merely an object of study. The basic methodological triad for clinical study consists of observation (outer viewing), introspection (inner viewing), and dialogue (interviewing) and these ultimately render the patient’s data as scientific.⁷

For Engel the clinical encounter, which defines the conditions and setting in which scientific work with patients proceeds, constitutes not an obstacle to objectivity, but simply another mode of data collection. The consistency and reliability of the data can be perfected once it is recognised how the scientific study of one person by another differs from the study of non-human material or phenomena. In the clinical setting the scientific effort actually becomes a joint undertaking to be negotiated between physician and patient. The physician as scientist operates concurrently in two modes, one observational, the other relational.

Engel assumes that once the foundational character of dialogue in medical practice is acknowledged, the essential complementarity of the human and the scientific premised by the 20th century paradigm becomes apparent. This is inherent in the fact that dialogue as a means of data collection and processing is itself regulated by conditions that determine human relationships.⁸

ERIC CASSELL AND THE CONCEPT, “PERSON”, IN MEDICINE

Eric Cassell has in many of his writings introduced the concept, “person”, into medical theory. For Cassell medicine is about the care of the sick and all medical care flows through the relationship between doctor and patients (Cassell E,³ p 6). The core of medicine is the doctor/patient interaction, where the physician should approach the patient as a person instead of merely a biological phenomenon. The person becomes thus an object for the physician to observe and analyse in the diagnostic and therapeutic process. As Cassell formulates it: “the focus of medicine is the sick person ... the individual sick person is both our concern and under our direct observation”.⁹ Furthermore, when the person is the logical locus of concern, scientific information about disease and technology becomes subservient to ideas about the interest of the person. The clinical method must place the sick or well person at the centre of the physician’s thoughts but without impairing the physician’s ability to think and act scientifically.¹⁰

Cassell concludes that in modern medicine it is a matter of dogma that knowing what to do with the sick follows an understanding of only the biological mechanism involved in the illness. In clinical medicine, however, there is a genuine need to understand the physician’s act, the relationship between doctor and patient, and other non-scientific areas of medicine (Cassell E,³ p 30).

EDMUND PELLEGRINO AND DAVID THOMASMA: MEDICINE AS A FORM OF HUMAN ACTIVITY

Edmund Pellegrino and David Thomasma, in their book, *A Philosophical Basis of Medical Practice*,¹¹ contend that medicine is oriented toward caring for human beings, and that this orientation materialises in medical practice. Therefore the philosophy of medicine should be developed from the practice of medicine itself.

For Pellegrino and Thomasma medicine cannot be reduced to biology, physics, chemistry, or psychology; nor it is only what doctors do or what patients expect; neither is it simply a rigorous science nor solely an art of making good on clinical hunches. Instead, medicine is a “human relationship where one person in need of healing seeks out another who professes to heal, or to assist in healing. The act of medicine ties these two persons together. It is the nature of this action in the presence of healing relationship that gives medicine its special character among human activities” (Pellegrino E,¹¹ p 5). Thus, Pellegrino and Thomasma see the essence of medicine as a form of human activity in which cure may take place.

A common feature of all these approaches is their aim of widening medical theory from its current biological basis to include humanistic and social issues in medical thinking. To achieve this goal they place medical consultation at the core of medicine and propose that humanities and social sciences need to be included in medical theory and education. The humanities are seen as the tool by which the physician is able to enlarge his or her understanding of the human condition, and the personal features and uniqueness of the patient. The social sciences consider the larger context where this healing process takes place. In these approaches humanities seem, however, ultimately to be an addendum to medicine’s biological knowledge base. The role of the humanities appears to be mainly educational—that is, to make doctors behave in a more humane fashion or, as Cassell has expressed it, to make medicine a “learned profession” (Cassell E,³ p 8).

If medicine is seen as a form of interpersonal human activity taking place between a physician and her patient, we may ask, then, (1) how can medicine be examined as an activity, (2) what consequences does this bring for medical

theory, and (3) what is the role of the humanities in this approach?

MEDICAL PRACTICE AS ACTIVITY

Although there are no definite answers to these questions as yet, we would like to propose activity theory as a possible means for understanding the nature of medical practice. By activity theory we refer to a distinct approach that developed in the so called cultural historical school of psychology. This tradition is also known as “Vygotskian”, after the Russian psychologist Lev Vygotsky who developed it with his co-workers and students in the 1920s. Activity theory is an offspring of Vygotsky’s research into socially mediated mental functions and processes, such as language acquisition. It is closely associated with the work of Leontiev, Vygotsky’s young colleague, who outlined the basic structure of human activity in his subsequent work.¹² Activity theory has currently a number of interesting applications, particularly in studies of technological innovations and the development of expertise in rapidly changing work environments.¹³

The theory holds that any description of activity requires simultaneous consideration of its subject, target, and mediating tools. Another important aspect of activity is its development—its origins and the transformations it has undergone. The basic structural components of any activity, as well as their relationships, change in the course of its evolution over time.¹⁴ Human activity develops not in a vacuum but in the varying historical and cultural contexts that shape its content.

Medical development represents the collective experience of understanding the nature of human health and illness and of the verbal and technical tools of medical examination and treatment. Medical concepts, too, have developed in the long history of encounters between the physicians and their patients. They reflect the nature of medicine in the context of practice. Those concepts, as mediators of the activity in question, point to the understanding of the nature of the patient’s problem as a structural component of the activity. For instance, in accordance with the emergence of the theory of infectious disease, such concepts as “consumption” and “neurasthenia” have disappeared from common Western medical parlance and have been replaced with terms like “pulmonary tuberculosis” and “postviral fatigue syndrome”. This conceptual change has affected the therapeutic approach to these conditions accordingly.

While neurasthenia was a psychiatric diagnosis, postviral fatigue syndrome has recast the essence of the illness and indicates a physical ailment. On the other hand, neurasthenia still appears to be to a common diagnosis among the Chinese population in South-East Asia and is considered to be a physical ailment. This is due to an East Asian concept of man which makes no distinction between body and mind in the Western sense.¹⁵

These conditions, as suffered by patients, may to a large extent have remained the same but the medical approach to them has developed differently. For the approach to make sense, the historicity and the cultural context of medical concepts need to be acknowledged and understood.^{16 17}

SEMIOTIC MEDIATION OF ACTIVITY

Medical practice can be seen as a complex activity which is mediated by a number of semiotic devices that are used in the communication between patients and physicians. The technical devices by which the examination of the patient is conducted can also be seen as means to elicit those signs of disease which the physician uses to formulate a diagnosis.

The patient and the physician jointly focus their attention on the problem the patient presents as the reason that

brought him to the surgery. The object of medical practice is defined by the *concepts* that medicine uses to construct the diagnosis, according to the symptoms the patient presents and the signs elicited by the examining physician. If the concepts used accord with the signs elicited from the patient, they spell out the relevant observations to be made. They organise the physician’s reflective thinking and direct his responses to the patient’s complaints.^{14 18}

Different medical specialties have their preferred domain of tools. They construct their own objects in specific ways, which are historically and culturally evolved. While verbal expressions are used in all practice, they are combined with other tools that shape the diagnostic process and therapeutic practice characteristic of each mode.¹⁴ Physicians also use verbalisations to instruct, to assure, and to comfort their patients. The therapeutic setting itself can also be regarded as a domain of tools.

Different medical specialties tend to differ also regarding their understanding of the agency involved in the process. For a surgeon—for example, the true object may be the patient’s herniated intervertebral disc, while for a psychiatrist the target may be the patient’s anxiety and depression whilst suffering from low back pain. Thus the structure of the medical alliance appears quite different, depending on the understanding of the object. The alliance’s joint activity occurs in a context that is geared to facilitate whatever actions are regarded as central to the diagnostic and therapeutic task.

THE ROLE OF THE HUMANITIES IN MEDICINE

What, then, is the role of the humanities in approaching medicine as a form of human activity? We have considered sign mediated interaction, cultural contextuality, and the historicity of medical concepts as central features of medicine. Toulmin¹⁹ has argued that all clinical knowledge is, essentially, historical knowledge: that is, the aim of clinical interaction is to explore the sequence of events that has led the patient to consult the physician in search for cure and alleviation. Furthermore, when the patient’s body is examined from a biological point of view, his or her body is approached as being in a state of constant change and transformation in relation to time. Taking the patient’s history is, therefore, integral to evaluating the natural history of the body.

Clinical knowledge is, however, also cultural knowledge: that is, there needs to be a shared understanding between the physician and the patient on what is meant by a description of the symptoms, and on the interpretation of behaviour or the aetiology of the ailment. This is especially acute in cases when the patient has a cultural background different from that of the physician.²⁰

Because medicine has traditionally been classified as a science, it follows that its methods and conceptions are supposed to be universally applicable: after all, the biological features of the human body are basically the same everywhere. When dealing with psychiatric disorders, however, many concepts used in the diagnostic criteria for description of symptoms implicate values, and therefore are culturally constructed. The concept of dependency—for instance, implies very different features in a person’s behaviour according to whether—for example, he has been brought up and has lived in a Finnish family or in a Gypsy family. The criteria for a pathologically dependent person in psychiatric nosology do not fit the person who has been brought up to think of himself as meaningful and capable of fully self actualising only as a member of his kinship group. From psychiatry’s viewpoint (at least, in Finland), such strong ties to one’s kin and family as those held—for instance, by Finnish gypsies—are considered to be a sign of mental

underdevelopment, the result of an unsuccessful individuation process. In Finland, contemporary values in bringing up a child have stressed the child's early development as an independent person: he needs this if he is to be able to cope by himself. Parents proudly relate how many daily responsibilities and decisions can be entrusted to their "very independent child". Whereas the ideals in Gypsy upbringing are just the opposite: a desirable feature in a child as well as in an adult is loyalty to and dependence upon the family and kin to a point that it can be said that "I myself am the same as my kin". To diagnose someone from such a cultural background as being *pathologically* dependent leads easily to the fallacy of considering a whole culture to be pathological—or "primitive", as the term was only a few decades ago.

The inference from this is that the presupposition, that those psychiatric concepts which imply values and ideals are culturally constructed, and that their use is universally applicable, is seriously to be questioned.^{21 22} The first step to avoid this kind of pitfall—which easily leads to misdiagnoses—is to interpret the patient's life history in the context of his or her own cultural background.

The physician's understanding refers thus to the condition of one particular subject in his or her particular condition, with all the consequent time bound, local, and particular features. This calls forth the idea that medicine may belong, in this respect, within the realm of the humanities instead of within science. Having said this we may bear in mind, however, that the distinction between science and humanities has, in itself, cultural roots. In continental scientific tradition this distinction is not as clear cut as it is in the Anglo Saxon world. The German idea of a science as *Wissenschaft* includes both sciences and the humanities, with no clear distinction between the two. Furthermore, the idea that humanities deal with particularities whilst sciences deal with general laws does not apply in modern biology. This is especially the case in such fields as developmental and evolutionary biology, where the historicity and the contextuality of the phenomenon under scientific study is unavoidable.¹ As before, developments in biological sciences seem to be, once again, reflected in current philosophical debates within medicine.

CONCLUSIONS

Analysing medicine as activity enforces the joint consideration of object and subject: who is doing what to whom. This requires the use of historical, linguistic, anthropological, and semiotic tools. Therefore, if we analyse medicine as an activity, the humanities are both theoretically and methodologically internal to the analysis itself. On the other hand, literature studies or anthropological writings provide material for analysing the various forms of medical as well as other healing practices.^{23 24}

Approaching medicine as an interpersonal activity in the pursuit of rational healing may offer us new possibilities of

developing a philosophy of medicine where medicine stands as a discipline in its own right.

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