



Humanizing the Biomedical Model, and the Quality-of-Care Crisis

Humanização do Modelo Biomédico e a Crise na Qualidade do Cuidado com a Saúde

James A. MARCUM¹

Abstract: In this paper, I explore the philosophical issues concerning the efforts of philosophers and clinicians to humanize the biomedical model of medical knowledge and practice to address the quality-of-care crisis. To that end, I discuss the metaphysical, epistemological, and ethical dimensions of the biomedical model and its humanization. I begin with metaphysics, exploring the presuppositions upon which modern medical knowledge and practice are founded; for presuppositions determine the entities that compose the medical worldview. Next, I examine the epistemological issues that face the humanization of the biomedical model, particularly those driven by methodological procedures undertaken by epistemic agents to constitute medical knowledge and practice. Finally, I investigate the ethical implications of the biomedical model and of its humanization, especially in terms of the physician-patient relationship. In a concluding section, I discuss the issues surrounding the question of the humanization of the biomedical model in terms of the quality-of-care crisis.

Resumo: Neste artigo exploro as questões filosóficas concernentes aos esforços de filósofos e médicos em humanizar o modelo biomédico de conhecimento e práticas médicas com o objetivo de abordar a crise na qualidade do cuidado com a saúde. Para tal fim, discuto as dimensões metafísicas, epistemológicas e éticas do modelo biomédico e sua humanização. Começo pela metafísica, explorando as pressuposições sobre as quais a prática e o conhecimento médico moderno são fundamentados; pois tais pressuposições determinam as entidades que compõem a cosmovisão médica. A seguir, examino as questões epistemológicas que lidam com a humanização do modelo biomédico, particularmente aquelas direcionadas pelos procedimentos metodológicos executados por agentes epistêmicos para

¹ Director of Medical Humanities Program and Professor of Philosophy, Baylor University, Waco, TX, 76798, USA. E-mail: James_Marcum@baylor.edu.



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constituir o conhecimento e a prática médica. Finalmente, investigo as implicações éticas do modelo biomédico e de sua humanização, especialmente em termos de relação médico-paciente. Na seção de conclusão, discuto os problemas que cercam a questão da humanização do modelo biomédico em termos de crise na qualidade do cuidado com a saúde.

Keywords: Biomedical model, Humanistic medicine, Quality-of-care crisis.

Palavras-Chaves: Modelo Biomédico, Medicina Humanizada, Crise na Qualidade do Cuidado.

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I. Introduction

Today the biomedical model is the prevailing medical model. This model depends upon the natural sciences and the technology derived from them. The philosophical hallmarks of this model include a metaphysic of reductive materialism, an epistemology of technique, and an ethic of concern. In this model, the patient is reduced to a physical body composed of separate body parts that occupy a machine-world. The physician's emotionally detached concern is to identify the patient's diseased body part and to treat or replace it, using the latest scientific and technological advances in medical knowledge sanctioned by the appropriate professional community.

Although the biomedical model of medicine has been heralded for enhancing the quality of life, it has left many patients dissatisfied with the healthcare industry. 'In spite of remarkable advances in medical therapy and in development of fantastic diagnostic devices, American society appears increasingly disenchanted with the physician'.² The overly enthusiastic appropriation of the biomedical model has precipitated, over the past several decades, a perceived quality-of-care crisis on the part of patients. In response to this crisis, humanistic modifications of the biomedical model have been

² INGELFINGER, F.J. Medicine: Meritorious or Meretricious. *Science*, 200, 1978, p. 942-946.



proposed, in order to reinstate the humanity of both patient and physician into medical practice.

Humanistic modifications of the biomedical model have ranged from conventional efforts, such as George Engel's biopsychosocial model, to the unconventional efforts of phenomenologists. These modifications are often founded on a metaphysics of dualism, an epistemology of information, and an ethic of care. In humanistic models, the patient is recognized as a person or at least an organism composed of body and mind (or self) occupying a socioeconomic environment or a lived context. Under the practitioner's empathic care, the informed and autonomous patient is healed using scientific-based or even nontraditional therapies.

In this paper, I examine the question of whether the biomedical model can be humanized in order to address the quality-of-care crisis, by mapping the shifting philosophical dimensions of medical knowledge and practice. To that end, I explore the philosophical issues, especially in terms of their metaphysics, epistemology, and ethics, surrounding the humanization of the biomedical model. I begin with metaphysics, inspecting the presuppositions upon which modern medicine is founded; for presuppositions determine the entities that compose a medical worldview. Next, I examine the epistemological issues, particularly those driven by methodological procedures undertaken by epistemic agents to constitute medical knowledge and practice. Finally, I investigate the ethical implications of the biomedical model's humanization, especially in terms of the physician-patient relationship. In a concluding section, I discuss the issues surrounding the question of whether the biomedical model can be humanized, in order to address the quality-of-care crisis.

II. Metaphysical Dimensions

The metaphysical presupposition of the biomedical model is reductive materialism. Although most humanistic practitioners of the biomedical model share this presupposition, it is tempered in humanistic medicine by including the patient's psychological or mental disposition as an etiological factor in illness and as a therapeutic factor in recovery. For example, Engel argues that although the biochemistry behind a disease like diabetes is important in terms of diagnosing and treating the patient, the patient's experience of the illness is



also critical in the healing process.³ Although the metaphysic of humanistic medicine is generally dualistic, the connection between the physical body and the mental is still material. In this section, the notion of the human body is used to illustrate attempts to humanize the biomedical model's metaphysic.

For the practitioner of the biomedical model, who labors under the presupposition of reductive materialism, the human body is a material object or machine. The body, then, can be reduced to a collection of physical parts, which can be assembled to form a mechanical system. Importantly, the mind is not a separate non-material entity but a functional property of the brain, as the pumping of blood is the functional property of the heart. According to the biomedical model, 'The body becomes a hierarchical structure—an organism framed in a special language'.⁴ Thus, the body as parts is composed of different anatomical and physiological systems, such as the nervous or the digestive system. These systems, in turn, are made up of assorted organs, such as brain and stomach, which are made up of various tissues. Finally, to complete the reduction, these tissues are composed of diverse cell types that are made up of sundry molecules. The patient, then, is a fragmented body composed of individual body parts that can be fixed or exchanged with new parts, when broken.

Besides the fragmented body, assuming reductive materialism leads to two other manifestations of the patient's mechanistic body. The first is the standardized body, a generic body to which the patient's body *qua* clinical data and observations is compared. The physician's task is to shape or reshape the patient's body to conform to the standard body deemed appropriate by the medical community. Another outcome of assuming reductive materialism is the estranged body. This body represents the alienation of the patient's body from the self or other people, or even the patient's lived context. The collective effect of assuming reductive materialism is that a patient becomes a mechanical cog in a medical machine-world—a world of interconnected machines in which the patient's body is but another anonymous and exchangeable part. Physicians utilize this world to diagnose the diseased body part and to mend or replace it. The biomedical machine-world is an abstract,

³ ENGEL, George. The Need for a New Medical Model: A Challenge for Biomedicine. *Science*, 196, 1977, p. 129-136.

⁴ SVENAEUS, Fredrik. *The Hermeneutics of Medicine and the Phenomenology of Health: Steps Towards a Philosophy of Medicine*. Boston: Kluwer, 2000.



scientific world made up of technological devices. Through fragmentation, standardization, and estrangement, the patient's body recedes into the background of this machine-world.

In humanistic medicine, the patient is viewed as an organism or as a unique self-constituting body and mind-embedded within an environment. Thus, instead of reducing the patient to a physical body alone, the humanistic practitioner encounters the patient as an organism composed of both body and mind within an environmental context: 'the embodying organism is a *complex whole*—an entire series of differently interrelated sets of members, structures, and patterns of interfunctioning, evincing multiple and multiply connected contextures'.⁵ As an organism, the patient is more than simply the sum of separate body parts, exhibiting properties that surpass the aggregation of those parts.

For other humanistic practitioners the patient is a person, who occupies a lived context or life-world. For example, Eric Cassell argues, 'Unlike other objects of science, persons cannot be reduced to their parts in order to better understand them'.⁶ The patient as person is embedded within a lived context or in Husserlian terms, a life-world: 'the sphere of prescientific activity...the realm of everyday social interaction and practical projects...The human being who inhabits and acts in the lifeworld is the embodied subject'.⁷ This world is not the physical universe that science depicts; rather, it is the world of the everyday that is made up by personal activities and projects. It is the world that is lived bodily, through which meaning is imparted to life. The patient, then, is embodied concretely in the here and now and not abstractly in a universal world that occupies no specific place and occurs at no particular time.

III. Epistemological Dimensions

The epistemology of the biomedical model is one of technique, for medical knowledge and practice within the biomedical model rely on the technological

⁵ ZANER, R.M. *The Context of Self: A Phenomenological Inquiry Using Medicine as a Clue*. Athens, OH: Ohio University Press, 1981.

⁶ CASSELL Eric J. *The Nature of Suffering and the Goals of Medicine*. New York: Oxford University Press, 1991.

⁷ SCHWARTZ, M.A. Science, Humanism, and the Nature of Medical Practice: A Phenomenological View. *Perspectives in Biology and Medicine*, 28, 1985, p. 331-361.



developments in the natural sciences. The acquisition and implementation of medical knowledge reflect the techniques and procedures of these sciences. Moreover, the randomized, double-blind clinical trial is considered the ‘gold standard’ for determining the efficacy of a new drug or a surgical procedure. Clinical trials and other experimental procedures have become the foundation for evidence-based medicine. Scientific practices, then, define acceptable medical knowledge within the biomedical model. This knowledge represents the universal, abstract knowledge that must be applied to the individual patient.

Practitioners of humanistic medicine accept the epistemological standards of the biomedical model, but also include information about the individual patient in the healing process. This information obtained from the practice of humanistic medicine is not just about the patient’s disease state but also more importantly about the person who is suffering from an illness. In the biomedical model both laboratory and clinical techniques generate the data needed to identify the disease and to treat it, whereas in humanistic medicine information about the patient as a unique person is also required to treat successfully the illness and the suffering associated with it. According to Cassell, ‘three kinds of information about sick persons—brute facts, moral, and aesthetic—are necessary to the work of the clinician’.⁸ While brute facts about the patient’s disease state are required for practicing medicine, they alone are inadequate for the patient’s healing. Both the patient’s moral and aesthetic values are needed to understand and treat the patient’s illness and to relieve the suffering associated with it.

Medical knowledge according to the biomedical model is generally expressed in terms of mechanistic or bottom-up causation, for mechanisms play a crucial role in biomedical explanation of disease. Physicians are interested in identifying only the physical causes or entities and forces responsible for the patient’s disease. Just as scientists explain natural phenomena in terms of material components and mechanisms, so biomedical clinicians explain disease phenomena in terms of material entities and mechanisms. Once the causal mechanism is identified, treatment or therapy, then, is generally based on some type of chemical or physical intervention, either in the form of a pharmaceutical drug or surgical procedure.

⁸ CASSELL Eric J. *Op. cit.*



The type of knowledge obtained in humanistic medicine depends on informational or top-down causation, where the patient's psychosocial dimension is an important factor in diagnosing and treating illness. For example, Stephen Toulmin argues for a richer notion of medical causation than just somatic causation. It must also include the patient's 'employment, styles of life, personal temperaments, and so on'.⁹ Medical causation, then, is more than the result of scientific technique; rather, it is informed by the patient's psychological and social dimensions. Caroline Whitbeck also argues for an enlarged notion of medical causation, which includes information besides the patient's pathological condition.¹⁰

Finally, humanistic medicine shares many epistemological features with the biomedical model, e.g. logic is important for practicing medicine; however, it also relies on the humanistic practitioner's intuitions.¹¹ Intuitions are not necessarily impediments to sound medical judgment; but when judiciously constrained by the epistemic and empirical dimensions of the biomedical model, they enable the physician to evaluate information about the patient's illness that may outstrip laboratory test results. This information obtained from the practitioner's use of intuitional resources is not only limited to objective or quantifiable test results but also includes the patient's humanity; for behind such information is 'the face of the Other', which is important for practicing the art of medicine.¹²

IV. Ethical Dimensions

The ethical stance of the biomedical practitioner is emotionally detached concern for the patient's diseased body. Because this model stresses the mechanistic nature of the patient's body and the scientific problem-solving aspect of medical practice, diagnosis and treatment of a patient's disease are puzzles that concern the physician-scientist *qua* mechanic or technician. As

⁹ TOULMIN, Stephen. 'Causation and the Locus of Medical Intervention?'. In: CASSELL, E.J. and SIEGLER, M. (eds.). *Changing Values in Medicine*. Frederick, MD: University Publications of America, 1979, p. 59-72.

¹⁰ WHITBECK, Caroline. Causation in Medicine: The Disease Entity Model. *Philosophy of Science*, 44, 1977, p. 619-637.

¹¹ BRAUDE, Hillel D. *Intuition in Medicine: A Philosophical Defense of Clinical Reasoning*. Chicago: University of Chicago Press, 2012.

¹² TAUBER, Alfred I. *Confessions of a Medicine Man: An Essay in Popular Philosophy*. Cambridge, MA: MIT Press, 1999.



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Michael Bayles remarks, ‘The occupation of auto mechanic has arisen in society almost simultaneously with the progress of medicine...Despite one’s initial aversion to this analogy [physician as mechanic], it soon seems a very strong and informative one for the concepts of health and illness as well as the ethical relations involved’.¹³

Although humanistic medicine does not abandon the goal of a scientific cure, when possible, it does strive to obtain this cure within a caring ethos. ‘Without very much reflection, *curing* replaced *caring* as the dominant ideology of this new technology-driven medicine. We are slowly realizing that most people want both’.¹⁴ Patients expect the physician to cure not only the diseased body but also to heal the sick person: ‘most patients believe that doctors should do more than simply mechanically intervene in the disease. Rather, they expect the doctor to help them find and remedy the factors that led to the illness, and assist them in returning to their best possible function’.¹⁵ Thus, the ethic guiding humanistic medicine is empathic care.

As a mechanic operating from an ethic of concern, the biomedical physician’s ‘clinical gaze’ is frequently myopic—focused only on the diseased body part, to the exclusion of the patient’s overall experience of illness and suffering. In addition, as Kay Toombs asserts, ‘the ‘medical gaze’ is directed to the inside of the body’, so that the ‘physician in a sense renders the outer appearance of the physical object-body transparent’.¹⁶ She also notes that the gaze of the machines used to diagnose and treat the patient’s diseased body often accompanies the physician’s gaze.

Because diagnosis of the disease depends on a technology that reduces the patient to a set of objective data and observations, from which the physician relies almost exclusively in determining the patient’s disease state, the relationship between the patient and physician is further strained. And from that diagnosis, the physician then chooses the appropriate therapeutic

¹³ BAYLES, Michael D. ‘Physicians as Body Mechanics’. In: CAPLAN, A.C., ENGELHARDT, Jr., H.T. and MCCARTNEY, J.J. (eds.). *Concepts of Health and Disease: Interdisciplinary Perspectives*. Reading, MA: Addison-Wesley, 1981. p. 665-675.

¹⁴ GOLUB, S. *The Limits of Medicine: How Science Shapes Our Hope for the Cure*. Chicago: University of Chicago Press, 1997.

¹⁵ CASSELL Eric J. *Op. cit.*

¹⁶ TOOMBS, S. Kay. *The Meaning of Illness: A Phenomenological Account of the Different Perspectives of the Physician and Patient*. Boston: Kluwer, 1993.



modality, often with little patient consultation. The chief concern of the physician is to save the patient from the disease and ultimately from death, with minimal concern for the patient's psychological and social well-being.

Under the biomedical model, the physician's concern for the patient's body and its parts is detached from the emotions of either the patient or physician: 'modern medicine has now evolved to the point where diagnostic judgments based on 'subjective' evidence—the patient's sensations and the physician's own observations of the patient—are being supplanted by judgments based on 'objective' evidence, provided by laboratory procedures and by mechanical and electronic devices'.¹⁷ Emotions are considered to interfere with a correct or an accurate diagnosis of the disease or treatment of the patient.

The humanistic physician's gaze, by contrast, is both compassionate and empathic. This gaze is founded on what Toombs calls the 'eidetic' features of the patient's illness, including losses of wholeness, certainty, control, freedom to act, and the familiar world. The loss of wholeness is reflected in the breakdown of the patient's bodily integrity, which often leads to a loss of control over bodily functions and of the patient's life. Besides these losses, illness is also associated with a loss of freedom to do many common, daily activities. The loss of certainty pertains to the acknowledgement of the patient's immortality. Finally, illness leads to a loss of the familiar world in which the patient lives. By being made aware of these features of illness and how they influence the patient's life, physicians can more adequately attend to the patient's suffering rather than simply to the patient's pain caused by a diseased body.

Instead of being rationally concerned in an emotionally detached manner for the patient, the humanistic practitioner cares both compassionately and empathically for the health of the patient *qua* person. The basis of this caring is founded in the emotional life of the patient, as well as the physician's emotional life. 'Feeling about the patient, the illness, the role of the sick person and the doctor's own role, all influence diagnostic accuracy and treatment decisions'.¹⁸ Ian McWhinney also proposes a patient-centered

¹⁷ REISER, S.J. *Medicine and the Reign of Technology*. Cambridge: Cambridge University Press, 1988.

¹⁸ GORLIN, R. and ZUCKER, H.D. Physician's Reactions to Patients: A Key to Teaching Humanistic Medicine. *New England Journal of Medicine*, 308, 1983, p. 1059-1063.



clinical method to reform the biomedical model. According to this method, ‘The physician is enjoined to discover the patient’s expectations, his feeling about illness, and his fears. He does this by trying to enter the patient’s world and to see the illness through the patient’s eyes’.¹⁹

V. Conclusion

Medicine’s reliance on the biomedical model has led, in part, to a quality-of-care crisis. One of the responses to this crisis has been a shift in the dimensions of medical knowledge and practice, in terms of the biomedical model’s humanization. This state of affairs has significant implications for medical knowledge and practice. Certainly, if philosophy has any relevance for issues facing modern medicine it is serving to clarify them and to indicate avenues of exploration for possible solutions, especially in terms the advantages and disadvantages of the biomedical model.

The biomedical model exhibits distinct advantages in terms of treating certain diseases. For example, many bacterial diseases are susceptible to routine application of antibacterial drugs. The ‘miracle drugs’ of modern biomedicine have become part of our cultural mythology. Few technocrats would question the supremacy of this model for medical knowledge and practice. However, the model’s critics have identified several of its disadvantages. For example, abuse and overuse of antibacterial drugs have resulted in diseases that are resistant to these drugs. Furthermore, many diseases have been eliminated not through modern medical technology but by public health and sanitary projects. In addition, the reductive materialism necessary for the success of the biomedical model continues unabated, reducing the patient not just to body parts but also to a single macromolecule—DNA. This strident reductive materialism will only continue to exacerbate the quality-of-crisis facing medicine.

But, can humanization of the biomedical model adequately address the crises and issues facing medicine? The recognition of the patient *qua* human and the physician’s empathic care of the patient may help to alleviate part of the alienation that characterizes today’s deteriorating physician-patient

¹⁹ MCWHINNEY, Ian R. ‘Through Clinical Medicine to a More Humane Medicine’. In: WHITE, K.R. (ed.). *The Task of Medicine: Dialogue at Wickenburg*. Menlo Park, CA: Henry J. Kaiser Family Foundation, 1988, p. 218-231.



relationship. But, can such recognition and care go far enough? Is inclusion of the patient's psychosocial disposition or lived context sufficient to remedy a profoundly limited vision of human nature advocated by the biomedical model? Or, is there something terribly wrong with the overall metaphysical, epistemological, and ethical dimensions of modern biomedicine that makes it unsalvageable? These are important questions that require consideration if humanization of the biomedical model of medicine is to succeed.

Certainly the biomedical model has improved healthcare but at a substantial cost in terms of our humanity, as experienced by a deteriorating patient-physician relationship. The crisis facing medicine is not just quality-of-care or even cost-of-care, or is the issue facing it simply the replacement of the practitioner's warm, friendly touch by the cold indifference of technology or even the usurping of the art of medicine by the science of medicine. As evident from the analysis of the metaphysical, epistemological, and ethical dimensions of the biomedical model and its humanization, the road to resolving these crises and issues will require further mapping of uncharted terrain.

A major part of the solution to quality-of-care crisis *vis-à-vis* humanization of the biomedical model involves the education of medical students. The medical curriculum represents indoctrination into the science of medicine, often with little concern for the art of medicine.²⁰ Although many schools offer medical humanities courses, these courses are generally at the periphery of the medical curriculum. What is needed is an integration of these courses into the core of medical education. As we have seen the philosophical differences between the biomedical model and the attempts to humanize it are profound and fundamental, if not incommensurable at points. Any attempt, even a change in medical education, requires a revolutionary change in perspective.

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²⁰ EVANS, M. Reflections on the Humanities in Medical Education. *Medical Education*, 36, 2002, p. 508-513.



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