Update

CURRENT TRENDS IN THE PHILOSOPHY OF MEDICINE

by Robert Lyman Potter

Abstract. The philosophy of medicine, a developing discipline, is defined as critical reflection on the activity of medicine. The clinical encounter is both its central aspect and the focus for philosophical analysis. The most systematic example of this discipline employs a mixture of empiricism and phenomenology. Systems thought presents an organizing schema by which the philosophy of medicine can move toward a more comprehensive and fundamental analysis of its own agenda, which includes four main topics: understanding the patient-physician interaction, concepts of health and disease, foundations of medical ethics, and the dialogue between medicine and the larger culture.

Keywords: clinical encounter; empiricism; phenomenology; philosophy of medicine; systems analysis.

The purpose of this essay is to introduce readers of *Zygon* to the philosophy of medicine, a developing field of inquiry that, when systematic, involves both the philosophy of science and the philosophy of religion among its departments of interdisciplinary study. For this reason the philosophy of medicine can be a vital topic for *Zygon,* and this article will therefore report on what has been accomplished toward attaining a systematic philosophy of medicine. A subsequent article will outline what remains to be done to incorporate

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the theological dimension into a comprehensive statement about the activity of medicine.

Medicine as a Composite Activity of Research and Practice

The philosophy of medicine is a discipline of critical reflection on the research and practice of medicine. *Research* is primarily involved with investigation of the nature of health and disease, as well as the technology of therapeutic intervention in pathological processes. *Practice* is primarily involved with investigation of the human interaction in the clinical encounter. Research deals primarily with basic natural sciences, while practice deals primarily with the broad spectrum of human sciences. However, this specialization does not support a dichotomy between science and art because medicine is an intersectional discipline.[1] Research and practice are so interactive that medicine must be understood as an indivisibly composite discipline in which the diversity of interests and methods of both natural and human sciences inextricably meet and mix. The philosophy of medicine is an example of the philosophy of science which challenges, and at the same time illustrates, the unity of science.

The composite nature of medicine makes it necessary to treat all its parts as inseparable from the whole. Basic medical research can be distinguished, but not separated, from the interests of clinical practice. Likewise, no specialty of clinical practice can be considered isolated from the other divisions of practical and theoretical work. For example, the sociology of medicine is integral to both basic research and clinical practice. Public-health issues and health-policy planning cannot be pursued without fundamental knowledge about the determinants of disease, including sociological forces, as they interact with biological factors. Policy-making in the health-care industry creates incoherence if it is conducted without a solid understanding of clinical practice and the multiple factors that structure the cultural function of healing. Taken as a total complex, the inseparable multiple features of the activity of medicine create a puzzling enterprise that can be fully investigated and coherently understood only by a systematic philosophical program.

The Philosophy *of* Medicine

The nature of the interaction of a philosophical program and medicine as a composite discipline suggests a fundamental question that can be posited in three relational terms: philosophy *and* medicine,

philosophy *in* medicine, and philosophy *of* medicine. This is a useful heuristic device for working toward a definition of a discipline in which "medicine and philosophy oscillate about each other like the strands of a complex double helix of the intellect" (Pellegrino 1976, 5).

There is no sharp demarcation among the three modes of relating philosophy and medicine, but Edmund Pellegrino has summarized the basic distinctions:

> The first mode of relationship is that of medicine *and* philosophy. Here, medicine and philosophy remain totally independent disciplines, each taking something from the content or method of the other to illuminate its own enterprise. . . . The second mode of relationship is that of philosophy *in* medicine. Here philosophers use the formal tools of philosophical inquiry to examine the matter of medicine, itself, as an object of study. The third mode of relationship, philosophy *of* medicine, concentrates on a philosophical inquiry into medicine *qua* medicine. It seeks to define the nature of medicine as medicine, to elaborate some general theory of medicine and medical activities. (Pellegrino 1986, 10)

Of the three modes, philosophy *of* medicine is the relationship that has the potential for being the most fruitful interaction. Philosophy *of* medicine consists of the examination of the unique character of medical practice itself, rather than the exploration of general philosophical problems that happen also to occur in medical practice. In the persuasive words of Pellegrino, "when philosophy turns to the meaning of medicine as clinical practice and examines its conceptual foundations, its ideologies, its ethos, and the philosophical basis for medical ethics, then it becomes the philosophy *of* medicine" (Pellegrino 1976, 20).

There is both a descriptive and a normative function for philosophical analysis to fulfill. "The philosophy of medicine seeks explanations for what medicine *is* and *ought* to be, in terms of the axiomatic assumptions upon which it is based" (Pellegrino 1976, 21). These functions cannot be satisfactorily performed by medicine itself because these functions are in a different mode of thought than that employed by medicine in its practical activity. "This is the realm of the transmedical meaning of medicine, the realm which neither medicine nor any other science can explore itself" (Pellegrino 1976, 21). Therefore, a philosophy *of* medicine is necessary for medicine to understand itself.

Even though some authors question whether there are any specialized features of medicine to be investigated by a separate discipline, the movement has gone forward on the assumption that the activity of medicine is not "derivative" but is, in fact, "distinctive."[2] The philosophical search for this distinctive activity of

medicine will be taken up after a brief introduction to the recent history of this young discipline.

Recent Growth of the Discipline

The history of medicine as an academic field and the philosophy of medicine have always been closely related (Temkin 1956). Whereas the history of medicine has been an established and respected discipline since the nineteenth century, the philosophy of medicine has emerged as a distinct field of inquiry only since the beginning of the last quarter of the twentieth century. Although there were definite antecedents, the philosophy of medicine could be said to have had its formal beginning in 1976, with the first issue of the *Journal of Medicine and Philosophy*.[3]

Emergence of the philosophy of medicine as a discipline has been a result of renewed interest in such topics as the nature of health and disease in human experience, epistemological problems in the process of decision making under uncertainty, enlarging concerns about biomedical ethics, and humanistic studies as they relate to medicine. Many voices concerned about these issues were heard, crying in the wilderness, until the Society for Health and Human Values was established in 1969. This society, which grew out of an exploration of questions of human values in medical education, is today the cornerstone in the philosophy-of-medicine movement, upon which a forum was built to advance critical conversation about important theoretical and practical issues.[4]

As a generative force to this movement, medical schools over the past twenty years have been developing departments within their faculties to address the broad topics of the philosophy of medicine. These departments have been labeled "history of medicine," "philosophy of medicine," "medical ethics," or "humanities and medicine." Most medical schools can now claim some development in this area, but the educational impact of these young and often tenuous positions continues to be slight. The average medical-school graduate is still unlikely to have been exposed to, let alone trained to proficiency in, the philosophical examination of the activity of medicine. Postgraduate medical educational events give little attention to this subject, with the result that members of the medical profession are largely unaware of the philosophical character and broadest practical implications of the activity in which they are daily engaged as a vocation.

Building primarily on a need to respond to medical-ethical challenges from within and outside professional ranks, the various

organizations of medicine are showing more evidence of engaging their members in philosophical discussion. It is now common for meetings of medical organizations to schedule a mixture of philosophical and scientific papers and panels. The mainline medical journals consistently publish articles related to issues in the philosophy of medicine. Although it would be premature to say that the medical profession is fully involved in a philosophical self-examination, there are reliable signs that the philosophy of medicine is establishing itself as a permanent and important discipline.

Leadership in the Philosophy of Medicine

Many persons in diverse disciplines are taking important leadership roles in the movement. Edmund Pellegrino, the most widely known representative of the modern philosophy of medicine, is a physician, humanist, educator, and administrator. His is one of the most vigorous voices among the philosophers of medicine. As founding editor of the *Journal of Medicine and Philosophy,* he was able to guide the movement from the time of its formal inception. He was the second president of the Society for Health and Human Values. He coauthored, with David Thomasma, the first substantial book (1981) in modern times to try to formulate a systematic philosophy of medicine. His energy in writing and speaking on behalf of the new medical humanism has made a definite impression on the profession.

This update centers on the writings of Pellegrino (and Thomasma) as the most representative synthesis of systematic thought in the philosophy of medicine. Although there are others whose work is outstanding, Pellegrino's writings have become normative, not as a final standard but as a reliable starting point for future advances.

Diversity of Recent Philosophical Inquiry into Medicine

The philosophy of medicine in the United States is a youthful discipline, searching for an identity, that has propelled its explorers into every activity associated with medical science and practice in search of medicine's essential character. The range of this composite discipline can be measured in the purpose statements of the two leading journals in the field. First, the purpose statement of the *Journal of Medicine and Philosophy:*

> This quarterly publication has been established under the auspices of the Society for Health and Human Values to explore the shared themes and concerns of philosophy and the medical sciences. Central issues in medical research

and practice have important philosophical dimensions, for in treating disease and promoting health, medicine involves presuppositions about human goals and values. Conversely, the concerns of philosophy often significantly relate to those of medicine, as philosophers seek to apprehend the nature of knowledge and the human condition of the modern world. In addition, recent developments in medical technology and treatment raise ethical problems that overlap with philosophical interests. The *Journal of Medicine and Philosophy* aims to provide an ongoing forum for the discussion of these themes and issues.

Second, the purpose statement of *Theoretical Medicine:*

Theoretical Medicine, published quarterly, is a forum for interdisciplinary studies in the philosophy and methodology of medical practice and research. Special points of interest are the development of the philosophy and methodology of clinical judgment, clinical decision-making, clinical trials, and etiologic research; the study of problems of medical language, of knowledge acquisition and of theory formation in medicine; the analysis of the structures and dynamics of medical hypotheses and theories; the discussion and clarification of basic medical concepts; the application to medicine of advanced methods in the general philosophy of science, classical and non-classical logics, and mathematics; and the study of the interplay between medicine and other scientific or social institutions. Particular attention is paid to heuristic approaches in developing new methods and tools for better analysis and understanding of the conceptual and ethical presuppositions of the medical sciences and health care processes.

The diverse topics discovered through such research can be sorted into five clusters, the first of which deals with the nature of the human being. Issues surrounding the basic constitution of the human are examined under the headings of philosophical anthropology, embodiment, the brain-mind debate, and the relationship of the biological to the psychosocial dimensions of personality. There is an intense interest in understanding the stages of development of the human life cycle and clarifying how the range of human characteristics can be qualified as normal or as deviant. Philosophical investigation is intentionally focused on the formulation of a unified image of the human being, the subject of medicine. Establishing a working anthropology that is comprehensive enough to allow for understanding the human subject of medicine has not been a priority in basic medical science. The result has been that research and practice have too often focused on selected aspects of the human in illness rather than on a systematic understanding of the illness in its relationship to the whole human experience.[5]

The second cluster of issues surrounds the multifaceted topic of the clinical encounter. Such concerns as communication, language, and the problems inherent in the interaction of patient and physician are expanded into the nature of the experience of being ill, as well as the difficulties for a professionally trained person entering into and

understanding the life-world of the one who is ill. Here the analytic capacity of philosophical methods, drawn from the humanities, has special application for understanding the nature of suffering and the direction in which healing efforts must be nurtured in order to be satisfying to human life goals. Questions concerning the type of human relationship that the clinical encounter should ideally become in order to promote the goal of healing are evaluated best by discussions informed by a philosophical framework that includes all possible humanistic values. Additional topics, dealing with complexity of diagnostic reasoning (such as the logic of clinical discovery, the application of probabilistic analysis, and judgment under uncertainty), are also central to understanding the dynamics of the clinical encounter. These problems require close inspection by specialized philosophical methods in order to clarify their content.[6]

The third cluster, which focuses on the concept of health and disease, is crucial to the theory of medicine, and it attracts intense interest in the literature. Definitions of health and disease, classifications of disease, and theoretical and empirical constructs of the pathophysiology of disease stimulate critiques of both the limitations of biomedical reductionism and the exaggerations of holistic speculation. The adequacy of theoretical constructions regarding the range of human pathology is important for the effective function of clinical practice. The main purpose of the revitalized philosophy of medicine is to broaden the concept of health and disease to include psychological, social, and moral factors.[7]

The fourth cluster inquires into the philosophical foundations of medical ethics. Gathered into this cluster are the variables that ethics in general searches for a stable, reasonable, and functional model for the discussion of moral questions. Medical ethics is thus a specific case of general ethics. In addition, special problems are encountered, such as the definition of life and death, the assignment of autonomy to persons who are volitionally incapacitated (to varying degrees), and the value assumptions of applying general scientific theories to individual lives. Medical ethics has dominated the philosophy of medicine, but efforts are being made to contain medical ethics in the larger context of questions that deal with the whole of medicine.[8]

The fifth cluster of issues is concerned with dialogue at the interface of medicine and culture. The relationship of medicine to the legal, economic, political, and religious thought of the larger culture is currently a very popular topic for public discussion. The formation of national policy regarding the health-care industry is directly affected by philosophical positions taken by medical organizations. Examination of a potential conflict between medical technology and

human values is a major function of the philosophy of medicine. Indeed, the reciprocal impact of the humanities and medicine is a powerful force in determining the future direction of cultural development.[9]

The Search for a Definition of the Activity of Medicine

This diversity of interest is symptomatic of the ferment of thinking about medicine. It is a time in which basic presuppositions are tentatively held. According to Anthony Storr, "medicine has now entered upon a period of paradigmatic instability" (Wulff et al. 1986, ix). Because a systematic philosophy of medicine does not yet exist, Pellegrino has called for action: "What is needed is a systematic set of ways of articulating, clarifying, defining, and addressing the philosophical issues in medicine" (Pellegrino 1976, 19). Pellegrino has asked the organizing question in this inquiry: "What is the essence of the activity called medicine?"

Pellegrino suggests three principal ways to define the enterprise of medicine as a distinctive activity. First, in terms of a knowledge base, such as the nature of disease; second, in terms of goals of medicine, such as the attainment of health; and third, in terms of relationships, such as those experienced in the clinical encounter.

Representing the first idea, that medicine is defined as a body of knowledge, Donald Seldin claims that "medicine is a narrow discipline. It does not promote the realization of happiness, inner tranquility, moral nobility, good citizenship. But it can bring to bear an increasingly powerful conceptual system for the mitigation of that type of human suffering rooted in biomedical disturbances" (Seldin 1981, 83). In Seldin's biomedical model, a "powerful conceptual system," a body of knowledge about "biomedical disturbance" (i.e., specific somatic disease entities) is the distinctive feature of medicine.

Even if this admittedly narrow view is broadened by the complementary biopsychosocial model of George Engel, medicine would still be defined in terms of a body of knowledge (Engel 1977). This kind of analysis does not reach to a level of the distinctive activity of medicine.

In the second of Pellegrino's categories, medicine is defined in terms of its end: "An alternative approach to viewing medicine as a body of knowledge is to define it in terms of its end, its purpose, the terminus toward which medicine is directed as a human activity. The end then becomes the determining principle that defines

what kind of knowledge medicine needs. Leon Kass is one of the few theorists of medicine who analyzes the nature of medicine this way—a genuinely philosophical way'' (Pellegrino 1983, 158). The ''philosophical'' method of Kass produces a definition of medicine in which the attainment of health is the only goal, as Kass plainly states: ''Health is a goal of medicine few would deny. The trouble is, so I am told, that health is not the only possible and reasonable goal of medicine, since there are other prizes for which medical technique can be put in harness. Yet I regard these other goals, even where I accept their goodness as goals, as false goals for medicine, and their pursuit as perversions of the art'' (Kass 1985, 159). Pellegrino gives his estimate of this second principal way of defining medicine: ''Defining medicine by its end is more sound philosophically than defining it as a knowledge base. But unless the end itself can be delineated the boundaries balloon again when we try to realize that end in actual practice'' (Pellegrino 1983, 159). Since Kass and others admit that health as a goal cannot be defined with precision, the central question remains unanswered: What is medicine?

The third category for defining medicine is the patient-physician encounter, and Pellegrino credits Mark Siegler with having identified the distinctive activity of medicine: ''To obviate some of the difficulties of the knowledge- and end-determined theories of medicine, one can approach the question more phenomenologically. Mark Siegler, for example, focuses his theory on the nature of the physician-patient relationship—on ''how clinical medicine works in the realities of daily practice.'' Siegler's formulation has the signal advantage of seeking a definition of medicine in the phenomena of clinical medicine itself—indeed, in what is most characteristic of medicine, the encounter between physician and patient'' (Pellegrino 1983, 159).

Pellegrino calls the clinical encounter the ''architectonic principle'' and summarizes it in this way: ''Medicine, then, is an activity whose essence appears to lie in the clinical event which demands that scientific and other knowledge be particularized in the lived reality of a particular human, for the purpose of attaining health or curing illness, through the direct manipulation of the body, and in a value-laden decision matrix'' (Pellegrino 1976, 17). Pellegrino has further identified the patient-physician clinical encounter as the nexus of interaction from which philosophical analysis must begin: ''Medicine clearly is a domain of activity which is distinctive and distinguishable as science, art, and praxis. It comprises a set of legitimate philosophical issues and questions which derive from the unique nature of the clinical encounter. It is precisely the clinical encounter

that constitutes the singular ordering concept which distinguishes medicine from the sciences and which is the ground for the logic, the epistemology, and the metaphysics of medical practice" (Pellegrino and Thomasma 1981, 27). For Pellegrino, the activity of medicine is defined in terms of the architectonic clinical encounter.

Even though it is advisable to approach the philosophical analysis of medicine from a basic and definable perspective, the investigator is not relieved of the responsibility to look simultaneously at the entire context of the clinical encounter (which embraces the systematic whole of medicine, from basic science to public policy). The clinical encounter is only the entry, rather than the systematic whole of a philosophy of medicine.

Philosophical Methods Appropriate for the Analysis of Medicine

Critical methods of reflection must be chosen to clarify the activity of medicine. In Pellegrino's words, "If a philosophy of medicine is to meet the needs of both philosophy and medicine, it must somehow unite the concreteness of clinical experience with the critical method of philosophy" (Pellegrino and Thomasma 1981, ix).

Pellegrino, together with David Thomasma, has chosen a method: "Our mode of philosophizing is eclectic. Though it leans most heavily on the moderate realism of the Aristotelian-Thomist tradition, it is supplemented by some of the analytic tools and insights of phenomenology and empiricism. This combination seems best suited to the kinds of problems encountered in our attempt to philosophize about medicine" (Pellegrino and Thomasma 1981, 4). Pellegrino supports this eclecticism with two warrants: that philosophy is perspectival and that there are multiple dimensions to the clinical encounter.

To hold that philosophy is perspectival is to accept the pluralistic character of knowledge which gives at least some authenticity to a wide variety of philosophical positions. This viewpoint denies that one is compelled to work from a single, all-embracing set of assumptions and that one is compelled to accept all implications of that set of assumptions. Pellegrino feels that an investigator should be free to use whatever analytic tool seems appropriate for the research subject being investigated.

The clinical encounter, which is the research subject being investigated by the philosophy of medicine, consists of multiple facets. Because there are various dimensions to this central act of medicine, it cannot be adequately examined by just one philosophical

method. For these reasons, the investigator must be willing to use whatever philosophical method, or combination of methods, fits the special aspect of the problem at hand. For Pellegrino and Thomasma, "moderate realism . . . supplemented . . . by the insights of phenomenology and empiricism" is the most useful combination.

Critique of Pellegrino and Thomasma

The collaborative work of Pellegrino and Thomasma has been adversely reviewed by a group of Dutch scholars in the philosophy of medicine. Gerlof Verwey (1987), challenging the claim that Pellegrino and Thomasma have made a significant advance toward a systematic philosophy of medicine, asks three questions: What do Pellegrino and Thomasma mean by eclectic philosophical method(s)? In what sense are they using an Aristotelian-Thomistic orientation? And just what kind of philosophical anthropology is endorsed by Pellegrino and Thomasma?

Verwey is trying to demonstrate "that what they say about their methodology appears to be but a partial, if not a misleading description of what they actually do" (Verwey 1987, 165). He concludes that "whatever the philosophical method actually put into practice by Pellegrino and Thomasma may be, it certainly cannot be identified with any of the philosophical approaches they list in support of their investigation: Aristotelian-scholastic dialectic, conceptual analysis, Husserlian-style phenomenology" (166). This is an appropriate criticism, which philosophers of medicine will likely encounter as they engage academic philosophers.

Verwey particularly questions the use of the Aristotelian point of view, as if there was only one interpretation of this perspective. Even if one's view were restricted to the twentieth century, the many permutations of Aristotelianism range from those of the language philosophers to those of Neo-Thomists and include the naturalistic interpretation of Dewey. It is the naturalistic Aristotelianism of Dewey that, Verwey claims, forms the real basis for much of the thought of Pellegrino and Thomasma.

Verwey agrees with Pellegrino and Thomasma about the importance of philosophical anthropology and concludes that the desirable type of philosophical anthropology for medicine is represented by Arnold Gehlen in Europe and John Dewey in the United States. Gehlen, in fact, is closely related to Dewey, and his writings freely quote Dewey. This is a strong tradition that depends heavily upon an empirical-scientific philosophy; nevertheless, it is very different from the other strands of philosophical anthropology. Verwey's

critique says that "this Dewey/Gehlen conception of philosophy may in no way be equated with the conceptions of philosophy—philosophical anthropology—which are characteristic of the philosophers cited by Pellegrino and Thomasma: Scheler, Buber, Cassirer. Even less can it be equated with the phenomenologically oriented philosophical anthropology of Merleau-Ponty, whose philosophy Pellegrino and Thomasma make extensive use of in their so-called ontology of the body" (170). Therefore, Verwey concludes that Pellegrino and Thomasma neglect the philosophical differences between these concepts of anthropology, and that to do so is "utterly misleading and inaccurate" (170).

Wim J. Van der Steen and P. J. Thung, also Dutch scholars, are even more heavy-handed than Verwey; they call the work of Pellegrino and Thomasma "an American ontology" characterized by "American progressivism" (Van der Steen and Thung 1987). Their main criticism is directed toward the inappropriate coupling of philosophical types. According to Van der Steen and Thung, "the authors are avowedly eclectic; they mix philosophies as different as European phenomenology and Anglo-Saxon philosophy of science" (1987, 12). These two critics believe that phenomenology is measurably waning and is, in fact, inadequate to inform medicine as a science. They endorse, instead, a broad empirical approach, represented by Thomas McKeown's "realistic and transculturally valid" structure of theoretical medicine (McKeown 1979).

Additional Systems of Philosophy of Medicine

In addition to the generative work of Pellegrino and Thomasma, other authors are attempting to formulate a systematic philosophy of medicine. Howard Brody has suggested how the different approaches of John Rawls, Richard Rorty, and Alasdair MacIntyre might contribute toward such a systematic effort (Brody 1985). E. K. Ledermann (1986) and Henrik Wulff (1986) have written books that examine the many issues involved in a comprehensive understanding of the philosophy of medicine. Edwin R. Wallace (1988) has begun an important project of relating the basic assumptions of modern psychiatry to the philosophy of medicine in a way which illumines the epistemological foundations of the theory of medicine.

In each literary contribution to the philosophy of medicine the unresolved problem of methodology is either expressed or implied. There is no consensus at this stage of development, and more systematic work on fundamental methods will have to be done to construct a practical guide to this philosophical investigation. It is never-

theless predictable that important methodological contributions will be developed from both the empirically directed philosophers of science and those philosophers oriented to phenomenology.

Philosophy of Medicine Turns to the Philosophy of Science

The relationship between the philosophies of science and medicine has often been examined, and the general conclusion is that the philosophy of science has not reached a clear consensus on which method to recommend to the philosophy of medicine. With both the generic and the specific fields of inquiry in an unstable transition, there is no strong authority toward which to look for direction.

Resolution of the fragmentation of disciplines of inquiry cannot wait for total satisfaction in a grand, all-resolving synthesis. Nowhere, however, is urgency for a working solution more evident than in medical philosophy, because medicine is at the nexus of the problem of human care, which must be performed in the immediacy of the present. Its overall strategy is to maintain intellectual unity between the natural and human sciences that converge in medicine (i.e., the human-in-the-world). The interaction of multiple disciplines is required for understanding the complex phenomenon of the human in health and disease. Mediating the tension between the natural sciences of physics, chemistry, and biology and the human sciences of psychology, sociology, philosophy, and theology is the task of the youthful discipline of the philosophy of medicine.

It is possible that the philosophy of medicine might make a salutary contribution to the philosophy of science. Indeed, Stephen Toulmin (1982) has suggested that medicine has already saved the intellectual life of philosophical ethics by calling it back to case situations. Marx Wartofsky (1977) sees in the struggles of the former a possible paradigm for restoring the philosophy of science. H. Tristram Englehardt, Jr., (1973) envisions medicine as a concept over which a dialogue between natural and human sciences can reach for reconciliation. Edmund Pellegrino declared the slogan of this movement when he wrote that "medicine is the most humane of the sciences and the most scientific of the humanities" (Pellegrino 1979, 31).

The empirical methods promoted by the modern philosophy of science are useful but do not completely supply the conceptual needs of the philosophy of medicine. Medicine's strong emphasis on the human dimension recommends that a philosophical method, designed to describe the world from the perspective of a "lived" human existence, be evaluated for its appropriateness.

Philosophy of Medicine Turns to Phenomenology

Just as the method of phenomenology was originally advanced by Edmund Husserl as a solution to the crisis of positivistic science, a significant trend is once again moving phenomenology and the philosophy of medicine toward one another, with the expectation of resolving the crisis that comes from the breakdown of strictly empirical medical-scientific methods.

The principal originators of the phenomenological movement did not have a specific interest in medicine. There was, however, a strong association with medicine, through psychology, by way of Franz Brentano and William James. This branch of the movement quickly matured into a phenomenological psychology which entered directly into psychiatry and internal medicine in Europe during the early part of this century as the "second generation" of phenomenologists. This European phenomenological movement, known as *anthropological medicine,* had among its leaders Karl Jaspers, Carl Binswanger, Medard Boss, and E. B. Straus. Straus, after he migrated to the United States, developed a mode of activity that integrated phenomenology and medicine. Even though European interest in phenomenology may be waning, enthusiasm is just reaching its crest among philosophers of medicine in the United States. In addition to Pellegrino and Thomasma's intentionally employing phenomenology, other influential voices are calling this method the most appropriate analytic tool to apply to medicine.

Michael Schwartz and Osborne Wiggins (1985) have outlined a program for the application of phenomenology to medicine. In their highly influential writings they evaluate the advantages and weaknesses of both the biomedical and biopsychosocial anthropological models that are competing in the philosophy of medicine and conclude that both of these rival paradigms must yield to a more profound phenomenological analysis of the "prescientific experience" in order to reach to a foundational understanding of the human being.

Integration of Empiricism and Phenomenology

Even though phenomenology is not yet universally accepted as a primary method for the analysis of medicine, it has been thoroughly presented and defended by a strong contingent of respected scholars. There is promise in the philosophy-of-medicine literature that phenomenology is gaining strength and will become the method by

which humanistic concerns are introduced into the theoretical and practical thinking of medical science. This does not suggest the complete capitulation of an empirical science to this philosophical school. Instead of capitulation there will likely be cooperation between some type of modified phenomenology and some strand of reformed empiricism to lead medical science as an interdisciplinary team dedicated to an interfield interpretation of the activity of medicine.

Systems Philosophy as an Important Method for Medicine

Systems philosophy, when broadly conceived, has the power to coordinate empiricism and phenomenology. The central features of systems thought are a strong empiricism, usually accompanied by some variation of critical realism, and a nonreductionist explanation of data that models reality as a hierarchical order achieved through the emergence of novel, yet interrelated, levels of self-organization.

Ludwig von Bertalanffy, the founder of systems philosophy, began his scientific work as a biologist, and his earliest formulation of a general systems theory was an elaboration of the "organismic conception" (von Bertalanffy 1952). Paul Weiss also applied systems thought to the web of living things (Weiss 1973). However, the masterwork which allows the field to be usable by medicine is that of James Miller, who says that "general systems theory is a set of related definitions, assumptions, and propositions which deal with reality as an integrated hierarchy of organizations of matter and energy. General living systems theory is concerned with a special subset of all systems, the living ones" (Miller 1978, 9). The systems method is the most comprehensive approach available for the investigation of living organisms, and Miller has constructed the most elaborate and elegant statement to guide this investigation.

Other schools of thought, developed on the claim of being comprehensive, can be included in systems philosophy: holism, ecology, cybernetics, gestalt, field theory, organismic theory, process thought, hierarchical organization, and self-organizing systems. There are varieties of interest and emphasis in this list of thought patterns, but they display some common characteristics (Ford 1987).

Howard Brody (1985) and George Engel (1977) have applied the general systems model to theoretical medicine. Through their influence, the wider vision of the biopsychosocial model of the human has been steadily gaining acceptance in the philosophy of medicine. More recently, Lawrence Foss and Kenneth Rothenberg (1988) have

advanced the scientific and philosophical acceptability of Engel's model by a more elaborately stated theoretical foundation in self-organizing systems thought. This statement by Foss and Rothenberg introduces the concept of *infomedicine* as a replacement for *biomedicine*. With the explicit approval of Engel to authorize its credibility, this postmodern version of the philosophy of medicine must be evaluated for theoretical coherence and practical utility.

The Philosophy of Medicine Has Matured

In this review of the central features of the philosophy of medicine I have concentrated on the direction in which philosophical investigation has headed in the past twenty-five years. Following the lead of Edmund Pellegrino and a band of dedicated philosophers, ethicists, humanists, and physicians, the movement has occupied a small but stable position in the ecology of medical thought. Using a pragmatic combination of empiricism, phenomenology, and systems philosophy, analysis of the activity of medicine is steadily building a case for revision of our basic understanding of what constitutes medical theory and practice. The expansion of medical concerns to include the humanistic values nurtured in Western culture has set a strong challenge before the profession of medicine. Although intense theoretical and practical thought and action are directed at the fundamental questions of the activity of medicine, they have not yet produced a systematic philosophy of medicine that can command the field.

Neglect of the Dialogue between Medicine and Religion

This article has introduced some of the features of the philosophy of medicine, but a missing ingredient for readers of *Zygon* is any reference to the philosophy of medicine vis-à-vis the philosophy of religion—or any other aspect of the medicine and religion dialogue. There has been little activity in this dialogue since the burst of enthusiasm in the early 1960s. With the new excitement in the interaction of other forms of science and religion, it can be expected that interest in medical science and religion would be enlivened. In the next article in this series, accordingly, I will report on the status of religion within the philosophy of medicine and will develop my position that a systematic philosophy of medicine must necessarily be completed by thematization of the theological dimension.

NOTES

1. This label was used by Michael Landmann, who described his multidisciplinary version of philosophical anthropology as an "intersectional discipline." See Michael Landmann, *Fundamental Anthropology* (Washington, D.C.: University Press of America, 1982).

2. The counterpoint is presented by Richard Vance in "Medicine as a Dependent Tradition: Historical and Ethical Reflections," *Perspectives in Biology and Medicine* 28(2) (1985): 282-301.

3. An often-quoted source for an early modern history of the philosophy of medicine is Wladyslaw Szumowski, "La Philosophi de la Medicine, son histoire, son essence, sa denomination et sa definition," *Archives Internationales d'Histoire des Sciences* 29(9)(1949): 1097-1139. Many authors refer to the following as the prototype for a modern philosophy of medicine: Scott Buchanan, *The Doctrine of Signatures: A Defense of Theory in Medicine* (London: Kegan Paul, Trench, Truber, 1938). A real pioneer in the field has been the journal *Perspectives in Biology and Medicine,* published by the University of Chicago Press since the mid-1950s.

4. The address of the Society for Health and Human Values is 6728 Old McLean Village Drive, McLean, VA 22101. Membership categories are very diverse, and inquiries are welcome.

5. Representative books in this first cluster are *What Is a Person?,* ed. Michael F. Goodman (Clifton, N.J.: Humana Press, 1988); *The Philosophy of the Body: Rejections of Cartesian Dualism,* ed. Stuart F. Spicker (New York: Quadrangle/New York Times Book Co., 1970); and Richard M. Zaner, *The Context of Self: A Phenomenological Inquiry Using Medicine as a Clue* (Athens: Ohio Univ. Press, 1981).

6. Representative books in this second cluster are Howard Brody, *Stories of Sickness* (New Haven: Yale Univ. Press, 1987); *The Humanity of the Ill: Phenomenological Perspectives,* ed. Victor Kestenbaum (Knoxville: Univ. of Tennessee Press, 1982); and *Encounters between Patients and Doctors: An Anthology,* ed. John D. Stoeckle (Cambridge: MIT Press, 1987).

7. Representative books in this third cluster are *Concepts of Health and Disease: Interdisciplinary Perspectives,* ed. Arthur Caplan, H. Tristram Engelhardt, Jr., and James J. McCartney (Reading, Mass.: Addison-Wesley, 1981); Robert P. Hudson, *Disease and Its Control: The Shaping of Modern Thought* (Westport, Conn.: Greenwood Press, 1983); and Lawrie Reznek, *The Nature of Disease* (London: Routledge and Kegan Paul, 1987).

8. Representative books in this fourth cluster are Tom L. Beauchamp and James F. Childress, *Principles of Biomedical Ethics* (New York: Oxford Univ. Press, 1983); H. Tristram Engelhardt, Jr., *The Foundations of Bioethics* (New York: Oxford Univ. Press, 1986); and Thomas M. Garrett, Harold W. Baille, and Rosellen M. Garrett, *Health Care Ethics: Principles and Problems* (Englewood Cliffs, N.J.: Prentice-Hall, 1989).

9. Representative books in this fifth cluster are Leon Kass, *Towards a More Natural Science: Biology and Human Affairs* (New York: Free Press, 1985); *Nourishing the Humanistic in Medicine: Interactions with the Social Sciences,* ed. William R. Rogers and David Barnard (Pittsburgh: Univ. of Pittsburgh Press, 1979); and Mervyn W. Susser, William Watson, and Kim Hopper, *Sociology in Medicine* (New York: Oxford Univ. Press, 1985).

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