

March 1999 (Volume 40, Number 1)

## Teaching History of Medicine in the Perspective of “Medical Humanities”

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The current interest in philosophical questions and ethical aspects of medicine turns attention towards the past and obtains suggestions and perspectives from previous descriptions and interpretations of sickness, therapy, and the relation between the patient and physician. Culture as therapy and therapy as culture are fundamental challenges for the present; physician, patient, and society, i.e., humans and humane medicine, need this dialogue, which should also be constitutive for teaching history of medicine. Through the separation of the natural sciences and the humanities, modern progress of medicine has produced many benefits but has, at the same time, raised many problems. Negative consequences of this development exist not only for the patient, but also for his personal environment and for the physician. In the course of modern history, there have been several reactions aimed at overcoming these one-sided tendencies: in the Renaissance, in the epoch of Romanticism and Idealism, and at the beginning and the end of the 19th century. This article outlines, with historical examples and contemporary reflections, the concept of teaching history of medicine in the perspective of “medical humanities”.

**Key words:** art; art therapy; cultural characteristics; culture; education, medical; health education; history of medicine; medical education; medicine in art; modern medicine

Medicine needs history and culture because it is not only a natural science but also a humanistic science and art. The progress of medicine and medical institutions depends on cultural changes and is, at the same time, the result of immanent changes within the medical disciplines themselves. Culture as therapy and therapy as culture is a fundamental challenge for the present – in medical practice, as well as in teaching history of medicine.

Medical history, together with medical psychology and medical sociology, are parts of the German medical curriculum (1-10). Acknowledging the importance of ethics for medicine, this discipline will also be mandatory in the planned new curriculum. Teaching history of medicine in the perspective of “medical humanities” will help medical students understand scientific and humanistic character of medicine. They will view health and disease as entities closely connected to the physical, social, psychic, and spiritual nature of humans, and they will appreciate the value of history for their future medical practice and research. This is well illustrated in the saying of Karl Jaspers, a physician and philosopher: “The height of humanity is measured by the depth of memory” (11).

Culture is the cause of disease and the product of disease as well. Culture shapes the disease, diagnosis and therapy, situation of the patient, and activity of the physician. Marcel Proust, the famous French writer, stated that humankind owes its major cultural accomplishments to sick and suffering people: “They alone founded religions and created masterpieces” (*A la recherche du temps perdu*, 1913-1927). Philosophers and theologians, writers and artists, in the hope to give people assistance that medicine was unable to provide, produced valuable interpretations of health and disease. They took the spiritual and cultural nature of human experience into account, disputing the established positivistic perspective and the generally valid normative equation of health as positive and disease as negative.

The concept of teaching history of medicine in the perspective of “medical humanities” which will be illustrated in this article with some examples and reflections, consists of different dimensions and relationships (Fig. 1).

Figure 1: History of medicine – dimensions and structure. [\[view this figure\]](#)

### Dimensions and Developments

Health and disease may have different definitions, depending on the perspective: biological, psychological, social, or spiritual. Health and disease are not merely medical terms; they are also essential themes in art, philosophy, theology, sociology, and psychology (12,13). In fact, these very disciplines remind medicine again and again of its distinctly “anthropological” character, in the sense

that medicine deals with the nature and destiny of humans and not of machines or animals. Medicine, as well as physiology, pathology, therapy, and the concepts of health and disease in their historical development or their present state cannot be properly understood by using the only contrasting categories of natural sciences and human sciences as a framework. Just as medicine cannot be reduced to either of the two, it is also necessary to connect nature and culture in order to understand health and disease.

The word "illness" in the English language refers to the subjective or personal side of disease, whereas "disease" refers to the medical concept of pathological abnormality. It is possible for a person to feel ill without having a disease and, conversely, to have a disease without feeling ill. The term "sickness" transcends both of these concepts by focussing on social consequences. The concept of the "sick role" corresponds to the social nature of disease. The way in which societies vary in the interpretations of physical and mental disorders, and in the treatment of and symbolic reactions to them reflects the cultural, social, and political dimensions of the disease.

#### Ancient Times

The ancient Greeks explained health and disease cosmologically and anthropologically, i.e., in close relation to nature in general and to human nature in particular (14-16). Medicine sought not only to cure disease but to maintain health. Philosophy and medicine mutually influenced one another in ancient times, although Hippocrates is said to have separated medicine from philosophy. Health and disease were not only empirical descriptions. They always had philosophical implications and practical effects. Presocratic philosophers, who were physicians of their time, developed a universal model of health, the outlines of which can be found in the medical texts of Hippocrates and other physicians of the Corpus Hippocraticum.

Plato defined medicine as the theory of health and, in the perspective of his ethical concept of health, legitimized active euthanasia of the physically handicapped and mentally ill. Plato and Aristotle developed a typology of three types of physicians, with corresponding types of relationships to the patient. The "slave doctor" commands, and the patient has to obey; the "doctor for freemen" explains the treatment to the patient and the patient's family. "Medically educated layman" was an individual who took responsibility for his own health, sickness, and death. For the Stoic philosopher Seneca, disease meant physical pain (*dolor corporis*), suspension of joy (*intermissio voluptatum*), and fear of death (*metus mortis*), i.e., disease in this view combined physical, psychological, social, and mental dimensions.

The great physician Galen elaborated a cosmological model of health and disease as a structure of elements, qualities, humors, organs, and temperaments. Health was understood as a condition of harmony or balance (*isonomia*) among these basic components that make up both nature in general and the individual body. Disease, on the other hand, was regarded as discordance, or the inappropriate dominance (*monarchia*) of one of the basic components. Disease in the perspective of humoral pathology was interpreted as the disproportion (*dyscrasia*) of bodily fluids or humors: phlegm, blood, and yellow and black bile. Health (*eucrasia*) was characterized by an equilibrium in the body. Solidistic pathology traced diseases to disturbances in the solid components of the body (shape, consistency, distance, etc.). The pneuma- pathological (spirit) approach – the origin of psychosomatic medicine – attributed a disease to a failed relationship between body and soul.

According to Galen, and in contrast to contemporary views, health and sickness were not the only states of existence. Rather, there was a third condition, an intermediate state of "neutrality" that existed between health and sickness and represented the normal situation of man. Medicine was therefore conceived as the science of health, sickness, and neutrality. In this notion of medicine, the overcoming of sickness was secondary to the preservation of good health or aiding those impediments and handicaps.

#### Middle Ages

The Christian Middle Ages interpreted health and sickness in a theological perspective. Cosmological (natural) and anthropological (human) approaches were subordinated to, without being supplanted by, the supernatural notion of transcendence. Christian beliefs and natural causes for health and disease were not mutually exclusive. Sickness could be described simultaneously as a physical entity and as an act of God. The Christian, Arabic, and Jewish traditions all viewed health or "quality of life" as a good relationship with God and not as a social or working capacity.

These concepts also had their practical consequences, manifested in biographies and pieces of art and literature. Each transition from health to sickness and from sickness to health represented the eschatological process on an individual level. Even though sickness, suffering, and death had salvific significance or were essential traits of human life, they were fought against with dietetics and medical therapy. But they were accepted, for earthly life is different from paradise. In this regard Saint Augustine (Confessiones, 400 AD) remarked: "One can say 'yes' to some forms of pain, but there

aren't any that one can love".

The Greco-Roman link between health, beauty, and morality was abandoned during the Middle Ages. Every sick, suffering, or handicapped individual had the right to receive medical treatment. Hospitals, first founded during the Middle Ages, were open to all suffering and helpless people, based on Jesus' words: "I was sick, and you cared for me" (Matthew 25:36). At the same time, however, the Bible was used to justify banning lepers from the society. Classical and Christian concept of the seven cardinal virtues (prudence, temperance, fortitude, justice, faith, hope, and love) applied to healthy people as well as to the sick, physicians, and the community. Suicide and euthanasia were regarded as sins because they were deliberate attempts to shorten life given by God.

To cope with disease was an art. The art of dying (*ars moriendi*) was considered the central part of the art of living (*ars vivendi*). Sickness and pain had four courses: inherited sin, personal guilt, demonic possession, and a test from God. Job of the Old Testament represented a classic example of this sort of test. Coping with illness was believed to manifest a person's fortitude and faith; furthermore, life without physical or psychical damage or pain was thought to produce a false image of earthly life and the human condition. In contrast to present-day attitudes, health could also be viewed as negative in the moral and religious sense ("corrupting health" or *sanitas pernicioso*) and sickness as positive ("a healing sickness" or *infirmetas salubris*). The abbess and naturalist Hildegard von Bingen with her life and work is a great example of this attitude.

Therapy as culture always refers to the central meaning of therapy and its different forms. Medical practice principally consists of dietetics, medications, and surgery. In the ancient times and Middle Ages, dietetics was thought to be of primary importance to the therapeutic process, followed by medication and then by surgery. Art therapy was integrated in this system. In the ancient perspective, dietetics involved much more than a health-conscious regulation of food and drink. Rather, it entailed a broad concept of how one should live a healthy life. It was concerned with six areas of life that, although natural, did not regulate themselves, as did such physiological functions as respiration and digestion. Because they required human manipulation, these six aspects of life were called "non-natural" (*sex res non naturales*). These cultural dimensions of medical therapy or human life included how humans deal with air and light (*aer*), food and drink (*cibus et potus*), sleep and wake (*somnus et vigilia*), motion and rest (*motus et quies*), secretions (*secreta*), and passions of the mind (*affectus animi*).

Dietetics prevailed throughout the Middle Ages and continued to be the most important form of treatment. The emphasis on spirituality did not run counter to medical aid and health education. As the vessel of the soul, the body warranted careful attention. During the Middle Ages, a variety of specific health rules (*Regimina Sanitatis*) were developed for people of various ages, occupations, and classes, as well as for both sexes. One famous example, the *Regimen Sanitatis Salernitanum* from the 13th century, has survived in various medical customs and prescriptions.

Modern Times

With the coming of the modern era at the time of the Renaissance, the emphasis on this world, nature, and the individual replaced the medieval focus on the world after life. The secularization of paradise – the hope of realizing beauty, youth, and health in the earthly life – has influenced human thought and action and the course of medicine up to the present. Empirical observation, causal explanation, and rational therapy became the ideals of education, research, and practice in medicine. This meant a fundamental separation of sciences and arts in medicine, with deep consequences for general and individual understanding of disease and therapy and for the relationship between nature and culture.

The philosophy of René Descartes with its mechanical model of health and disease became highly important for the new concepts of disease and therapy. According to Descartes, the body is a perfect clockwork mechanism set in motion by God to function mechanically. This dualistic system of body (*res extensa*) and soul (*res cogitans*) was widely accepted in medicine, and produced a mechanistic view of physiology, still accepted in the present and dominant also in lay interpretations of health and disease of today. Scientific explanation implied the discovery of fixed rules of mechanistic structure and their processes. Clinical medicine implied the detection of damaged structure and malfunction, departure from these rules, and restoration of proper anatomic structure and physiology.

Human beings are not machines. Only philosophy, theology, and art can give an answer why there is disease, pain, and death. According to Montaigne "we do not die because we become sick but because we live" (*Essais*, 1580-1595). Cartesian tradition was the basis for the evolution of modern forms of virtual medicine, virtual diagnosis, and virtual surgery. Against these dominating physical and objective perspectives, philosophy, theology, and art remind medicine and society of the subjective, mental, social, and cultural nature of the disease.

During the Enlightenment of the eighteenth century, a public health movement began to take shape.

The philosopher Gottfried Wilhelm Leibniz offered numerous recommendations for public health. The physician Johann Peter Frank and the philosopher Jean-Jacques Rousseau represent the opposition between state policies and individual agendas. According to Rousseau, civilization and the state had ruined human health in its natural state. Frank, in contrast, believed that social reforms lead to progress. Several books were published primarily on prevention and rehabilitation. Christoph Wilhelm Hufeland, author of the well known "Makrobiotik" (1797), elaborated on the relationship between concepts of health and disease, especially as normative categories.

#### Romanticism and Idealism

Around 1800, romanticism and idealism again introduced cultural or philosophical and religious interpretations of health, disease, and death. These three states were regarded as dialectically connected with one another, and were interpreted as the main stages of the genesis of spirit out of nature. According to the poet Novalis, there is always disease in health and health in disease; illness or sickness is given a central value: "Medicine should be an elementary science of every cultivated person" (Das Allgemeine Brouillon, 1798- 1799). Disease can be an experience or medium of personal growth and art of living ("Lehrjahre der Gefühlsbildung und Lebens- kunst"). "Human being = person; that is the point of unity" categorically announces the anthropological physician J.C.A. Heinroth (Lehrbuch der Anthropologie, 1822). Important in teaching history of medicine is the biographical perspective; sick persons are treated by individual physicians.

The philosopher Schelling held that health is the harmonious relationship of the basic organic functions of sensibility, irritability, and reproduction (Vorläufige Bezeichnung des Standpunktes der Medizin, 1805). Hegel argued that life would be impossible without disease; each organism contains the "germ of death" from birth, all therapy presupposes that disease was not a total loss of health but rather a conflict within physical or psychological forces. Only through disease and death of an individual does the universal and eternal world of the spirit come into being. "Above this death of nature, from this dead husk, proceeds a more beautiful nature, proceeds spirit" (Die Naturphilosophie, 1830).

#### Positivism

Medicine in the nineteenth century followed the model of the natural sciences and not of natural philosophy and philosophical anthropology of the romantic-idealistic era. This increasingly self-conscious scientific medicine concentrated on curing diseases, and neglected the maintenance of good health. It also neglected the contributions of the arts, literature, and theology to medicine. The patient became an object, his subjectivity or personality was disregarded and the "history of the patient" was reduced to the "history of the disease". Anatomy and physiology were connected; the cell replaced the tissue as the center of attention. Experimentation, statistics, and causal thinking became the basis for medical research. The Cartesian concern for mechanistic structure and function according to discernable rules became dominant, with many diagnostical and therapeutical advances but also anthropological reductions.

In the nineteenth century, dietetics lost its broader anthropological and cultural meaning, and referred simply to the intake of food and drink. Thus a two thousand year old tradition, already limited in the eighteenth century, reached its end. Scientific medicine in its modern form considered mental and social factors relatively unimportant to the etiology of disease. Therapeutic success of that time have come with the infection as the central explanatory factor.

#### Twentieth Century

At the beginning of the twentieth century, constitutional pathology and anthropological medicine counteracted the one-sided approach of infectious disease models of medicine. Medicine re-realized the importance of the individual and social circumstances in health and disease, constitutional pathology on the physical level, and anthropological medicine on the mental level. The physician Viktor von Weizsäcker reintroduced "the person as subject" in his anthropological medicine: "The introduction of the subject in pathology and medicine says that every human being here also has to be regarded as a moral being" (17). In this perspective he put a stimulating question for medicine in the perspective of "medical humanities": "How much longer should physicists and generals determine the Weltbild instead of poets and painters?". Medicine is not only a natural science but also an art with different meanings. Surgery needs artistic capacities, intuition is an important prerequisite for the therapy in general, as well as for the physician-patient relationship. Overcoming disease and producing health is a creative act.

Philosophy continued with its interest in medicine (18). Martin Heidegger claimed that he wrote his analysis of death in "Sein und Zeit" (1927) especially for physicians – only man has the consciousness of death, especially of his own death. The physician and philosopher Karl Jaspers defined disease and health in the perspective of his philosophical position (11). He defined neurosis as "a failure in the marginal situations" (Grenz- situationen) of life, and proposed the therapy as a "self-realization or a self-transformation of the individual through the marginal situation, in which he is

revealed to himself and affirms himself in the world as it is". Jaspers thought that psychiatry had two methodologies (Methodendualismus): that of "explanation" which characterizes the natural sciences (disease), and that of "understanding" which is typical of the human sciences (illness). Ethical and practical consequence of his concept of disease in the objective, subjective, and cultural sense is outlined in his concept of the existential communication between the physician and the patient, which, in his view, was more than empathy.

In the twentieth century, psychology and sociology expanded the scientific understanding of health and disease, emphasizing the difference between "disease" as objective and physical and "illness" and "sickness" as subjective and social. According to this general perspective, contemporary people associate disease with the following interpretations: challenge, enemy, punishment, weakness, relief, strategy, loss or damage, and value (19,20). Medicine concentrates on weakness, loss and damage, i.e., the physical components of this model, and therefore normally neglects showing sociocultural dimensions.

An important prerequisite to the twentieth century discussions and positions was the establishment of a natural scientific basis of medicine in the nineteenth century. Impressive progress in diagnosis and treatment led to new ethical problems. Concurrent with this process was a loss of humanistic dimensions in the natural sciences and medicine, leading to various attempts at balance and correction in the early twentieth century.

#### Health and Disease between Nature and Culture

Health and disease are physical, social, psychological, and spiritual phenomena that can be represented in concepts that are both descriptive and normative, although these two sorts of concepts have not always been clearly distinguished in their historical development (21,22). Humans not only determine what will be regarded as health and disease, they at the same time interpret these experiences and decide how to respond to them. Health should also be understood as the ability to live with illness and disabilities, which may harbor opportunity and challenge. The patient has rights and duties, as does the physician; both can exhibit virtues. Their relationship manifests both asymmetry and symmetry, such as differences in medical knowledge and experiences of pain and disease.

Concepts of disease and health influence the manner and goal of medical treatment, as well as a relationship between the patient and the physician (23). Thus a mechanical or technologically structured understanding of disease (viewing the man as a defective machine) requires a mechanical or technologically structured therapy (in the sense of repair) and a mechanical or technologically structured healer-patient therapeutic relationship (relationship of a technician to a defective machine). More personal or holistic concepts urge corresponding types of therapy and healer-patient relationships.

#### Future Challenges

Modern medicine is increasingly confronted with the task not only of overcoming sickness, but also of preserving health. Prevention and rehabilitation complement curative therapy more and more.

Treatment must include attentive caring and support. Chronic suffering and death place different demands on the doctor-patient relationship than do acute illnesses. In light of such developments, concepts of health and disease require new definitions, as well as the understanding of culture and the arts. Separation of the sciences and the humanities is inappropriate in medicine.

These initiatives aim at bridging the gap between the natural sciences and humanities in medicine. The history of the patient should be as important as the history of the illness. The ethical dimension has been recognized anew in the understanding of disease, the concept of treatment, and the physician-patient relationship (24,25).

Literature and art have often taken disease and therapy, patient and physician, as their subjects (26,27). Scientific and artistic films have been made on specific diseases, diseases have been publicized on postage stamps. The situation of the patient, physician and hospital is often portrayed in art and literature. Healing miracles, anatomical and surgical metaphors, birth and death scenes are topics of mosaics, frescos, and drawings during the Middle Ages and the Renaissance. Again and again, the concept of the works of mercy as well as of the virtues and sins, so significant for both the patient and physician, can be observed there. Epileptic child in Raphael's Transfiguration in the Vatican Pinacoteca represents a fascinating example of the transition from the Middle Ages to Modern Times in combining the empirical and metaphysical dimensions.

The arts, literature in particular, also proffer important influences and models. Medical ethics has profited and will continue to profit from the unification with medical humanities. Novels and stories describe the attitudes and behavior of the patient and physician in detail, drawing the reader into the context of the hospital and wider social environment. Such literary interpretations can play an important role in medical education in regard to history and ethics. Scientific pleas for euthanasia at

the end of nineteenth and the beginning of the twentieth century find their supplementation or seeds in the literature of the nineteenth century (Maupassant, Storm, Tschechow, Heyse, Söderberg). Medical ethics - in research and teaching - often uses documents of art and literature. Karl Jaspers stated in his *General Psychopathology* (1913, 9th edition 1973): "It is not mere chance therefore that poets have used symbols and figures of madness for the essence of human life in its highest and most horrible possibilities, in its greatness and decline. Thus Cervantes in *Don Quixote* and Ibsen in *Peer Gynt*, Dostoevski in *The Idiot*, Shakespeare in *Lear* and *Hamlet*" (11).

Apollo is the God of medicine and art. Since ancient times, the arts played a role in therapy and diagnosis. According to Aristotle, watching tragedies has a cathartic effect. Writing as a help in coping with disease and pain (*scribendo solari*) was common in the Middle Ages. All arts were used as therapeutic means in the past. The nineteenth century showed a decline of their use, new stimuli can be observed in the present. Art and literature are increasingly acknowledged as helpful in coping with disease, pain and death. Art can provide fruitful stimulation to medicine, physician, patient, and the environment.

Effects of art in medicine are important, but it should be studied in relation to diagnosis, therapy, prevention, rehabilitation, the relationship between the patient, his physician and his family, therapeutic milieu of the hospital. Also important is the influence of different types of disease and therapy for the reception and production of the arts. Although art can be used in medicine, pictures and novels cannot be prescribed like medications. The logic of art therapy is not the logic of pharmacy. Art transcends therapy and medicine in the biological sense; art is a cultural response to birth, disease, and death. For the poet Kafka literature is an "axe for the frozen sea in us".

#### Outlook

The 1947 World Health Organization's definition of health as "a state of complete physical, mental, and social well being and not merely the absence of disease or infirmity" has to be interpreted in its cultural, social, and political context and purposes. This definition includes social and spiritual as well as biological aspects. It was used as the starting-point for intense bioethical debates on the moral and political responsibilities of the international community for health care.

But this definition, taken generally, is limited in its sharp contrast between health and disease and its exaggerated estimation of health. With good reason, health can also be regarded as man's ability to bear injury, handicaps, and the anticipation of death, and to successfully integrate them into one's life. Disease should not be understood merely as a limitation or a loss, but also as a challenge or genuine trait of life. Coping with illness can manifest courage and compassion; meeting this challenge strengthens self-confidence, causes social reactions, and enriches the world of culture.

Medicine did not have the sole domain over health and disease; a multitude of important interpretations originated from the arts, theology, and philosophy. In this holistic perspective, people of the present also expect medical and social aid. Medical humanities is the modern term of medicine as a unity of sciences and humanities. Representations of the arts are fundamental contributions, medicine itself is a science and an art, and living with a disease is also an art. Sickness and health, in their natural and cultural breadth, remind medicine of its fundamentally scientific and humanistic nature. Health and disease are concerned with life and death, and are closely connected to the physical, social, psychic, and spiritual nature of humans.

Modern medicine stands under the principle of secularization or nature, humanity, and society. The history of medicine from the Renaissance to the present with its scientific specialization and consequent loss of philosophical and religious reflection has produced many benefits, but, at the same time, has caused a lot of problems: dichotomy of natural sciences and humanities, separation of descriptive from normative dimensions of science, separation of the physical and mental or social approaches to the understanding of humanity. Several reactions in the past aimed at overcoming these divergent and one-sided tendencies: Renaissance, epoch of Romanticism and Idealism, the beginning and the end of the twentieth century. In this spirit history of medicine should be taught in the medical curriculum.

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Received: September 4, 1998

Accepted: September 29, 1998

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