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HISTORY OF MEDICINE

Holistic Medicine and the Western Medical Tradition

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The Western medical tradition spans millennia, extending from the prehistoric use of plants and herbs to heal wounds through the technological advances of the present day. Over that long history, the practice of medicine shifted from prescientific holistic approaches to modern, scientifically supported explanations of pathology. As the practice of medicine became more thoroughly grounded in science, which seeks unified explanations for diseases, many feared the loss of individuality, both for the patient and the physician [1, 2]. Thus it is relevant for modern practice to examine the social and historical forces behind medicine's paradigm shift and what that shift means for the 21st-century patient-physician encounter.

In the early days of medicine, physical manifestations of illness were almost always explained in spiritual terms. In a world where the deities were believed to affect mortals directly, seizures, for instance, were thought to be the result of having angered the gods [3]. In 400 BCE, Hippocrates, often lauded as the father of Western medicine, proposed a new schema in which natural—not supernatural—explanations of illness were sought. (It should be noted that the Hippocratic writings were probably not the work of a single physician but of a group of like-minded practitioners now referred to as “the Hippocratic physicians.”) The Hippocratic treatise *On the Sacred Disease*, opens with: “[epilepsy] appears to me to be nowise more divine nor more sacred than other diseases, but has a natural cause from which it originates like other affections” [4].

This radical approach to medicine was not immediately accepted by peers of the Hippocratic movement. According to medical historian Lawrence Conrad, the pluralism of ancient Greek medicine meant that “healers, both male and female, competed with root-cutters, exorcists, midwives, bone-setters, lithotomists, gymnasts, and surgeons for patients” [5]. Although Hippocratic medicine began as one of many approaches to human illness, the structure of medical education in medieval and early modern Europe encouraged its dominance.

Hippocratic physicians were unable to study anatomy and physiology directly in the human body because dissection of human cadavers was forbidden on religious grounds. Instead, they relied primarily on logic and philosophy to explain disease. The central tenet of the theory was the belief that illness resulted from imbalances among the humors—blood, black bile, yellow bile, and phlegm. The physician's role was to diagnose the problem and tell patients how to restore their humoral balance and thus heal themselves.

Centuries later, Galen, a Roman anatomist who studied pigs, associated each humor with a personality. Certain temperaments were considered to be predisposed to illnesses of their humoral type, especially if the illness seemed to be triggered by emotional shock. Hippocratic-Galenic medicine was integrative, proposing a synergistic and individual relationship between each patient's body, mind, and personality and the outside world. For hundreds of years, this doctrine stood as the basis of Western medicine.

The seeds of change were planted as early as the 1500s when Andreas Vesalius, a Belgian physician, began teaching his students via direct animal dissection rather than by study of Galen's work. In 1539, an Italian judge gave Vesalius dispensation to dissect executed criminals, which changed the study of anatomy forever. Suddenly, structures that were previously only imagined could be visualized, handled, and sliced open to reveal hints of their living function. With the development of scientific, empirical study of human anatomy, the body-mind-personality connection that was so fundamental to Hippocratic-Galenic medicine was rapidly abandoned. As early as 1628, with the publication of William Harvey's explanation for the circulation of blood through a closed system by the pumping of the heart [6], physicians were beginning to view human physiology as the mechanized interaction of organs.

Simultaneously, growth in medical technology spurred the development of pathologic or morbid anatomy. In 1664, Englishman Robert Hooke published *Micrographia*, which revolutionized biology by using the microscope to view cells, a term coined by Hooke himself. Microscopy spread across Europe as a tool to study not just simple organisms but also the disease process. Together, gross and microscopic anatomy changed the ideology of medical discourse from philosophical to scientific. The definitive transformation of clinical medicine into a science based on pathologic anatomy came with Giovanni Battista Morgagni's 1761 publication of a five-volume tome *De Sedibus et causis morborum* ("On the Seats and Causes of Disease"). This catalog of diseases connected etiology to specific anatomical "seats" or locations.

The impact of technology and pathologic anatomy on medical practice had two major foci. First, its scientifically grounded explanations sparked an era of experiment-based medical progress that continues today. Armed with specialized knowledge about human anatomy and pathophysiology, the physician could at last take an active role in treating disease. Second, and more problematically, the voice of the patient, which had been so central to the Hippocratic doctrine, was silenced by the growing medicoscientific dialogue in which the uninitiated patient was unable to take part. In essence, power over the body had been transferred from the patient to the physician.

French philosopher Michel Foucault argues that the dominance of pathologic anatomy "dates precisely from the moment clinical experience became the anatomo-

clinical gaze” [7]. For Foucault, the objectification of the patient is ethically problematic, a view by no means universal until the mid-20th century, if then. In fact, physicians of the 19th century considered the newly scientific basis of medicine “the ethical high ground” [8] and a moral imperative to their patients. French physician Xavier Bichat, writing in 1812, asked “What is observation, if we are ignorant of the place where the evil is seated?” [9]. Only by understanding the science of medicine, early modern physicians argued, would physicians be of service to their patients.

This view persisted through the 19th century. George Weisz, a historian of Victorian medicine, attributes the rise of specialties to “a new conception of disease; it was precisely the influence of localist pathologist thinking, based on pathological anatomy and subsequently on new technologies...that created ‘foci of interest’ in organ systems around which specialties could develop” [10]. Although it allowed for a deeper exploration of individual pathologies, the resultant division of the human body into disconnected pieces further eroded the integrative fundamental tenet that had sustained Western medicine for more than 2 millennia. The explosion of specialization was by no means unopposed; several 19th-century physicians called for a return to Hippocratic integration, arguing that the new trend would “fragment medical science” [11] and ultimately hinder medical progress. Despite such opposition, specialization became an integral part of the modern, scientific practice of medicine. By 1905, 35 percent of Parisian doctors were specialists [12]. Pathologic anatomy would seem to have won its quest to universalize disease processes and divide the body into separate, barely connected domains.

In recent years Western medicine has consciously tried to integrate its ancient, patient-centered roots with modern scientific validity. In the late 20th century, with the rise of illness narratives by authors such as Susan Sontag, Reynolds Price, and Audre Lorde, patients began to reclaim their voices and therefore power over their bodies. The patient rights movement, borrowing from the concurrent civil rights and feminist movements, argued that the patient should be an equal partner with the physician in medical care. In response to these and other pressures to restore patient-centered medicine, medical schools began to revisit holistic medicine. Although evidence-based medicine remains an important part of medical education—123 of the 125 Association of American Medical Colleges schools required students to take at least one such course in the 2004-2005 academic year [13]—most medical students now also study complementary or alternative medicine (111 schools), medical ethics (124 schools), and population-based medicine (113 schools). Medical students of the 21st century therefore inherit from both the Hippocratic and the pathologic schools of thought.

The history of Western medicine chronicles a struggle between two opposing ideologies of patient care. On one hand, the integrative Hippocratic view; on the other, the specialization view, with an ethically problematic depersonalization of the patient that coincides with the rise of pathologic anatomy and medical technology in the early modern era. Although the modern dominance of pathologic anatomy has

yielded centuries of medical progress, at times it threatens to divide and reduce the patient to a silent sum of mechanistic parts. Recent changes in medical education have begun to address the need for holistic medical care. Only with careful attention to both the individuality of illness and the universality of disease etiology can physicians most effectively care for their patients.

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