

The historical development of dualism and its impact on current medical philosophy

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SCIENCE HAS BECOME THE GOD OF WESTERN civilization. Daily, people depend on explanations for the events around them, explanations based upon an intellectual model dependent on the scientific method. The conception of 'proof' hangs on the assumption that cold, hard data is necessary and facts must be observable, repeatable, and quantifiable. In health care specifically, consumers are provided with more 'health' information than at any other time in history. They question and evaluate what their physicians tell them. If the explanations are viable—supported by research, quantified as to effectiveness, *proven*—they are satisfied and feel assured that our treatments will work. After all, the scientific method has shown it to be true in fact; it is not arguable, is it? Yet the limitations of science confront physicians every day in unfortunate and sometimes gruesome circumstances, and we wait for science to overcome them.

A brief dictionary search yields fruitful insight into the basis of our concept of medicine. 'Medicine' (from the Latin *medicina*) is "any drug or remedy; the art and science of the diagnosis and treatment of disease and the maintenance of health" [1], and a 'physician' is "an authorized practitioner of medicine" [1]. In contrast, although claims of 'holism' (from the Greek *holos*) abound throughout the medical community, the real meaning centers around

considering man as a functioning whole, the theory that determining factors in nature are organisms, which are wholes and not mechanisms and are irreducible, autonomous, and finally greater than the sum of their parts [1].

Medicine in particular, and health care in general, has strayed away from this definition into a depen-

dence on dualism. Dualism is the notion that the mind and body are two separate and distinct realities that do not interrelate. This article will focus on the phrase "greater than the sum of their parts," because it defines what is eluding us as we combat unprecedented levels of chronic disease not only in the United States but also in most developed countries. We no longer fight infectious disease as we did at this century's inception; instead, we desperately search for remedies for clogged arteries, malignant tumors, and viruses that mutate more rapidly than ever [2]. The remedies (medicine) we seek may never come.

These remedies may never come because the health care profession's approach to health is fundamentally flawed. It is based on a model of thinking so deeply ingrained in our society we cannot imagine that a different way of thinking exists. This thinking affects both professional and public life; we are all limited by a concept of 'Mind-Body' dualism that has been centuries in the making. It is neither within the scope nor the thrust of this article to describe all the good that has bloomed from dualism; it will also not be possible to offer a comprehensive, fully developed alternative. However, to effectively battle our current and future nemesis—chronic disease—we must allow a different paradigm to come into play. If the shortcomings of modern medicine are to be effectively addressed, the interdependence of mind and body must be acknowledged and the very canons of medical evidence must be revised.

DISCUSSION

Philosophic Development of Dualism

The foundation of our current philosophy of dualism spans thousands of years and can be seen as an elegant succession of major thinkers, each adding more and more to the concept until a wedge was driven irreversibly between body and mind. Simply

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[4]. In addition, the purpose of this collected data is to serve mankind. It does this by bringing change. In stark contrast to the old science, which had the goal of contemplation, the new science is active and efficacious [3].

The radical reflexivity of Augustine, developed into a knowledge-making inwardness by Descartes and reinforced by Newton and Bacon, was pushed even further by John Locke. For him, this inwardness was a disengagement that calls us to treat ourselves as objects and to live 'out of' our own experience. He wants to demolish any notions of innate ideas and separate us from ourselves. Our understanding, Locke writes, is constructed atomically with building blocks of knowledge that are imprinted on the mind through the senses and assembled through association. The only real understanding we have is self-developed.

What occurred over the course of centuries was a gradual shift from a dependence on 'Ideas' for our access to reality to a dependence on our selves to make our own reality by using our reason and senses. The difference between Plato's conception of higher and lower orders of the soul and Locke's conception of radical disengagement from the body and analysis by the mind is striking. By no means was this the only development to occur in man's thinking over time, but it has had the largest impact on our current thinking and perception of the world. We have developed an absolute trust in our ability to use science to objectify the world and thereby prove or disprove any theory, provided data can be collected.

The separation of mind and body is a cultural artifact, passed on to each succeeding generation carefully wrapped in an unchallengeable shroud. We are immersed in this dualism. Public health problems such as sexually transmitted diseases, chronic disease, mental illness, and violent crime are attacked with medical solutions, which have obvious limitations in addressing these problems. Yet our inability to overcome the enormous limitations of our knowledge confronts us every day. What is the explanation for the incredible amount of conclusive data compiled on psychosomatic illness? How can some people defy medical odds, whereas others succumb so easily to disease? Why is the 'placebo effect' an important component of scientific study? Why is diagnosis such a guessing game? Obviously, other factors that elude the dualistic model are at work in human beings.

Philosophic Development of Medicine

Medicine is always bound to culture, and the prevailing philosophic winds affect the way doctors view their patients, patients view their doctors, and how both conceive of disease [5].

A historical study of medical philosophy supports the view that it runs parallel with (maybe slightly

ahead of) cultural perspectives. Medicine began as a religious, priestly pursuit. Physicians are confronted by patients who need help and who want to believe in their healing abilities. Aristotle, a predecessor of Plato, described a coherent theory of health which is psychophysical in nature and precedes the trap of dualistic reductionism [6]. This view slowly changed just as cultural philosophy has.

Hippocrates may have been the first to advocate a 'naturalistic' view. However, spiritual/ethereal models continued to dominate the medical landscape until only recently. Medical training was based largely on history and authority. The teachings of Hippocrates, Galen, and Avicenna were held as immutable and impregnable, and historical authority and logical method governed training until the last 150 years [5]. Gradual shifts began occurring in the mid-1800s, when Semmelweis, using the empirical method, reasoned that some aspect of cadaveric material was being transmitted to the bloodstream and causing death in a maternity ward. Leeuwenhoek's invention of the microscope led to the discovery of microorganism structures. Robert Koch postulated the germ theory of disease after seeing the effects of microorganisms on disease processes. He said that infectious diseases must meet several conditions: a pure culture of the same organism must be present and demonstrated in every case of the disease, inoculation with this organism must cause the same disease in healthy animals and could subsequently be cultured [2]. Bassi, Henle, Pasteur, Lister, Koch and others built the foundation of infectious disease theory and its treatment [5]. Thus was born the familiar 'one cause—one cure' germ theory of disease.

The last century has brought the largest changes in medical theory. Neoclassicism was abandoned and the focus was shifted to anatomy, pathology, biochemistry, microbiology, and mechanistic deduction. The body was fragmented into compartmentalized organs and systems. Doctors now possessed esoteric knowledge and became more and more comfortable with the notion of patients as scientifically probe-able objects. *Somatic* pathology became almost the exclusive focus, but the *psyche* was either not noticed at all or was carefully sidestepped [7].

This naive dependence on single causes and cures is not common to the thinking of modern physicians. Yet there is a tendency to believe in biology before behavior, in a 'magic bullet' before a long-term, multidisciplinary treatment [5]. Technology, empiricism, and research support are rewarded; 'psychosomatic medicine' is a threat to much of the medical culture.

A Psychosomatic Response

Psychosomatic medicine arose in the 1920s and 1930s, drawing its inspiration from psychoanalysis [7]. Its one basic tenet was: "It is best to treat the

whole person" [8]. Thus, it was a reaction to the growing dependence of the medical establishment on biological data and to the loss of a view that incorporated the patient's individuality. Dr. Pelletier, an expert on holistic medicine, writes:

Mind and body are inextricably linked, and their second-by-second interaction exerts a profound influence upon health and disease, life and death. Attitudes, beliefs, and emotional states ranging from love and compassion to fear and anger can trigger chain reactions that affect blood chemistry, heart rate, and the activity of every cell and organ system in the body—from the stomach and gastrointestinal tract to the immune system. All of this is now indisputable fact. However, there is still great debate over the extent to which the mind can influence the body and the precise nature of the linkage [9].

A psychosomatic disorder is a syndrome in which psychological processes play a substantial role in its etiology, maintenance, or treatment. The medical model has several limitations in addressing these disorders. First, the fact is widely accepted now that *many* variables play a role in health status, and the psychosomatic link becomes increasingly evident as chronic disease becomes our primary medical focus. Psychosomatic medicine attempts to explain why, for instance, type A personalities have more heart attacks, asthmatics sneeze at plastic flowers, cancer patients in group therapy live longer, and some people live well into their 90s in spite of poor diets and unfavorable genetic makeup. It is true that infectious diseases are caused by a germ of some sort; it is naive and foolish to believe that the germ theory of disease is universally applicable to all disease entities. For chronic diseases,

hypotheses of singular causality seem fruitless. . . the chronic diseases may well have no single necessary cause and a very complex multifactorial model may be required [5].

Second, medical diagnosis of these diseases has fundamental limitations. The traditional process moves from data-gathering (patient history and presentation and other diagnostic tests), A, to diagnosis and treatment, B. If the treatment is not effective, A may be repeated and a new diagnosis and treatment, C, is given. If C is effective in alleviating symptoms and restoring physiologic normality, it is a 'successful' treatment. There is an inherent problem in this A-B-A-C sequence, in which A can change over time, independently of B or C; this is known as a *post hoc, ergo propter hoc* fallacy [5]. The reality may be, in fact, that the body left to itself will tend to fix itself [5]. Psychosomatic medicine addresses the role of the individual patient in the etiology, maintenance, and treatment of disease. It sidesteps the fallacy of assuming causation after the passage of time by focusing first on prevention, second on a multidisciplinary approach.

Even closer to the heart of the clinical mentality is a dependence on unproven correlations and hypoth-

eses. Until recent years, educated guesses and personal experience were the mechanism of treatment formulation. These treatments were invariably directed at symptoms because of a lack of adequate understanding of etiology. Even now, if a practitioner has seen a treatment method work, she is reluctant to abandon it for an alternative therapy she has only read or heard about [10]. More recently, medical knowledge has expanded, but contradictions in the literature are common. Doctors must sort through relevant data and make a decision regarding its value.

There is little doubt that much of physician behavior is superstitious. It is superstitious in that it is based on selective perception of the potentially relevant data, such that supporting facts are noted and non-supporting ones are ignored [5].

Patients can usually decide which clinicians are better at this; medicine is very much an art in which some are better at making patients well.

Finally, the most damning evidence against the medical model is its dependence on *a priori* assumptions. Science is based on such presuppositions as the uniformity of nature, the understandability of nature, and observable patterns as revealers of unobservable processes. It is not wrong to make assumptions, for they are the only place to start. However, the *a priori* assumptions are not themselves results of the system. "They are the pegs on which the system hangs and without which there would be no system at all" [4]. Science cannot validate itself; its presuppositions are not generated by science. Yet deep trust is placed in science, primarily because it works. Therefore, similar grounds can be made for accepting other 'nonscientific beliefs' that may be based on a different set of presuppositions and are also effective. Psychosomatic medicine is based on a different set of assumptions, at least in theory.

Positive Developments

The past 40 yr have evidenced a gradual growth in psychosomatic theory and acceptance. In the mid-1950s, Selye published a comprehensive survey of a phenomenon he described as the 'stress response.' He defined 'systemic stress' as dysfunction or damage to extensive regions of the body, causing them to deviate from their normal resting state. This is caused by an 'alarming stimulus,' which is any agent capable of eliciting a short-term 'alarm reaction,' which in turn could lead to a 'general adaptation syndrome' (GAS). Selye divided the GAS into four stages: shock, counter-shock, resistance, and exhaustion. This scientific description of the stress response revealed to the medical community the *concept* of a disease resulting from a long-term abnormal condition of the body that is directly related to that person's psyche, personality, or behavior [11].

In 1964, a paper entitled "Emotions, Immunity, and Disease" was published in *The Archives of General Psychiatry*; it has since been given a certain pioneer status in the field of psychoneuroimmunology (PNI). PNI's basic assumption is that all disease is multifactorial in origin and results from a pathologic interaction of genetic, nervous, endocrine, immune, behavioral, and emotional factors. Research is continuing to show support for PNI's basic premises and its acceptance is growing.

Rapidly accumulating data from experimental and clinical research have significantly reduced resistance among clinicians and basic scientists to the concept that the immune system, operating via the central nervous and neuroendocrine systems, may act as a 'transducer' between experience and disease, in effect converting the signals that originate in psychological responses into the signals that affect health [12].

There are obvious similarities between the nervous and immune systems: memory, adaptation, defense, self-harming defense, sensitization, tolerance.

A flurry of research has occurred in the identification and analysis of neuropeptides, elucidation of the histology of efferent fiber tracts, and discovery of the apparent plasticity of the neuroimmune system. Some hormones (gonadotropin-releasing hormone, thyrotropin-releasing hormone, etc.) have been found to have activities relevant to the immune system, and opiates and enkephalins have a high density of receptors in the limbic system and hypothalamus, which are responsible for emotions and basic drives. Interestingly, a given neurotransmitter is capable of functioning as a neurohormone, a neurohormone can act as a neurotransmitter, and either can act as a neuromodulator. Neuromodulation research is occurring in order to discover the link between the 'memories' of the nervous system and the immune system [12]. These are positive steps toward the development of a new paradigm in which dualism is pushed aside.

A third development is the use of longevity studies to reveal important characteristics of a healthy, high-quality life. Developmental psychologists and anthropologists have compiled statistics on groups of people who live long, vibrant lives well into their 90s and 100s. It is curious that a certain theme runs through this data over and over again. These populations, which range from former Soviet republics, Ecuador and Pakistan to Mexico, exhibit similar characteristics: a semimountainous habitat, impoverished conditions, some (small) genetic influences, age exaggeration, lacto-ovo vegetarian diet with prolonged caloric restriction (1800–2000 kcal/day), regular moderate aerobic activity, moderate alcohol consumption in a meal/social setting, outdoor smoking of native grown tobacco, encouragement of sexual activity well into old age, no concept of mid-life crises, possessiveness, jealousy, time urgency, or hurrying, extended family units, expectation of long

life, and high social status and respect granted to the elderly [13]. Most of these characteristics center around the life perspective of both the individual and the community. These are communities of relaxed, unhurried, respected people who have extensive support networks and who expect to live long lives. In spite of substandard medical care, poverty, and little understanding of what science can do to 'improve' their lives, these people are enjoying life and for a long time. What kind of response can come from a country which leads the world in research and technology? No people in the history of the world have been as materially blessed as Americans, but our culture is filled with chronic disease states: cancer, heart disease, obesity, hypertension. We live on the cutting edge of science, but not for very long. The nakedness of the medical model is exposed for all to see because this response *cannot be a scientific one*. Psychosomatic medicine may have the correct response to the questions posed by longevity studies.

CONCLUSION

There is certainly more to be said about the evolution of psychosomatic medicine. Its relative youth and small but growing body of knowledge make it vulnerable to doubt. However, an intuitive mind can acknowledge that too much doubt exists about the adequacy of a dualistic model of health. We currently operate with this model in our actions and usually in our thinking. As physicians, we fix the complaint that is brought to us. When the symptoms subside, it is cured. But medicine cannot exist in this separate world, as if it had no correlation to the rest of human philosophy and experience. A broad and deep field of mental health exists, but it has been cleanly dissected away from the field of physical health. We go to a doctor of psychology, and we go to a doctor of medicine. We are surrounded by health professionals, yet chronic disease states are everywhere, and unprecedented numbers of people are seeking psychological counseling. Does this seem ironic? It reveals the inherent problems in the Western model of health, which stresses symptom alleviation and ignores a healthy life style of prevention.

Plato's concept of a division of the soul started us on our way down this slippery slope of dualism. St. Augustine's writings on radical reflexivity and 'first personness' led us to an idea of objectivity. Descartes passed on an inheritance of reductionism, and Locke further emphasized all of these philosophies. Medical development of the germ theory of disease by Koch, Pasteur, Lister and others caused a focus by practitioners on a one-cause, one-cure model of disease and treatment. These are the ideas in which we are ensnared today.

Selye's description of stress has been accepted by our culture, and I suspect that longevity studies and PNI research will continue to reveal the oneness of

mind and body. This work is encouraging and will be critical in creating a fundamental change in our perspective of health and disease. A slow shift is occurring whereby the public is taking greater possession of their health and demanding more of medical professionals. Alternative medicine, nutrition intervention, and physical fitness are a large part of our culture. Physicians should not be alarmed by this change; rather, they should be encouraged, because the best patient is one who is educated and motivated to change and improve. This is the first step in altering public thinking about truly healthy living.

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