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HOLISTIC MEDICINE AND TECHNOLOGY: A MODERN DIALECTIC

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Abstract—This is an attempt to present a comprehensive overview of two major trends in American medicine which suggests significant evolutionary biopsychosocial developments in the remaining decades of the 20th century. Comments have been confined to the U.S. because it is the geographical country of residence and practice of the authors, and because the U.S. appears to be the locus of two contemporaneous and seemingly antithetical popular movements: quantum leaps in the development and use of medical technology and a groundswell of interest and enthusiasm for health enhancement or wellness which advocates a natural approach to health and emphasizes the central role of the individual in the preservation of health and the prevention of illness.

The dynamics of this modern dialectic in American medicine have generated important qualitative consequences in the nature of the doctor–patient relationship and the delivery of health care. They have also, it is submitted, generated the search for a new paradigm which will permit a workable equilibrium between the disparate imperatives of both movements.

The delicate process of developing that equilibrium is made more difficult by the co-existence of a host of complex factors, many of which are inextricably interwoven with one or the other of these two major trends.

As component or ancillary factors in the technological revolution, American physicians are witnessing:

(1) The ongoing computerization of medicine via increasingly sophisticated diagnostic and therapeutic instrumentation which contribute to a depersonalization of the patient.

(2) An explosion of new theory and design, in computerized techniques which physicians must keep abreast of, with the resulting decrease in time available for patient care.

(3) A trend toward specialization and sub-specialization in medicine and a compartmentalization of patient care which increase the quantity of medical care in terms of specialists seen, diagnostic procedures performed and various blood tests administered, but decrease the quality of direct physician–patient personal interaction.

(4) A reimbursement system which recognizes only procedural services but not cognitive skills, thereby remunerating the physician for *doing* something to the patient—surgery, X-rays, blood tests, etc. Compensation is based on objective services which can be quantified and assigned a specific monetary value but not for subjective services such as listening, counselling, empathy, or caring.

At the opposite pole of the dialectic are the components of the 'holistic' health movement:

(1) Patient interest in naturopathic approaches to healing which has created an educated, remarkably well-informed patient population.

(2) An appreciation of the multi-faceted approach to 'wellness' which acknowledges the role of nutrition, diet, exercise, behavioural modification, etc., in the enhancement of health and the prevention of illness.

(3) A wariness if not an anxiety regarding the long term consequences of pharmacologic intervention as well as the potential hazards of irradiation, thermography, sonography, etc.

(4) The appearance of number of entrepreneurs and even charlatans who seek to exploit the appeal of 'holism' or naturopathic approaches. Many of the programs they advance, irrespective of merit, evoke some degree of enthusiasm and adherence, and even achieve therapeutic success. Physicians are hard-pressed to become sufficiently familiar with acupuncture, *shiatsu*, kinesiology, Rolfing, macrobiotic diets, etc., to make informed judgements and to counsel their inquiring patients.

(5) The growing numbers of competing health professionals and para-professionals (psychologists, podiatrists, physician's assistants, nutritionists, etc.) who are encroaching upon the physician's traditional preserve of patient care.

As a partial response to these currents and trends, the definition of the traditional doctor–patient relationship is undergoing revision. Emerging is a new and equal partnership between healer and healed based upon a fundamental assumption that the physician and patient are co-therapists, and while the doctor remains the repository of medical knowledge and technical expertise, the patient is the covalent source of those factors without which no healing can take place: confidence, faith, hope, optimism and intelligent cooperation.

However, such a restructuring will not come easy. Many physicians are reluctant to relinquish their comfortable and familiar authoritarian role and are resistant to recognizing their own limitations, those of their wondrous technology, and the integral contribution the patient can and must make to their mutual effort to preserve health and cure disease. The patient will also have to assume his or her own share of that responsibility, eschewing the image of the body as a simple machine, ("if it breaks—doc can fix it!") and consciously acknowledge that individual behavioural patterns directly influence the quality of one's health and the incidence of disease. In reality, the 'new' relationship is only the most recent manifestation of the classical psychosocial bond between mind and body, healer and healed.

Contemporary medicine in the U.S. is confronted with difficult and perhaps painful choices in

developing a functional synthesis of the two trends described above. However, it is submitted that after 2000 years, allopathic and holistic medicine need no longer be perceived as mutually exclusive creeds. The earliest healers were high priests who taught and practiced a philosophy grounded on an inseparability of body and mind in a positive state of health and well-being. Life reflected that fundamental integrity. Only if today's high priests of medical technology will blend their reverence for science with a dedication to the humanistic values that characterized their discipline's early practitioners can medicine achieve that early unity of thought and deed, that coalescence of the art of healing and the science of medicine.

American medicine appears to be at some form of crossroads. The reasons for this are varied, but center mainly about changing relationships between doctors and patients and methods of delivery of health care. To a large extent, these issues are intertwined and in turn are dependent upon a host of other factors such as:

(1) The soaring costs of medical care in the United States which now represent a grand total of $287 billion a year—a sum greater than the combined total of the U.S. national defense budget, the annual sales of all automobiles in the U.S. (both domestic and foreign) and the profits of 41 major oil companies.

(2) Increasing patient education about medical problems, as well as subjects such as nutrition, exercise and stress reduction, that focus primarily on areas of preventive medicine and health enhancement. In some instances, the patient may be as knowledgeable or even more knowledgeable than the physician.

(3) A growing wariness on the part of the public about the long-term and unknown side effects of medications, partially a consequence of the DES and thalidomide problems, as well as a variety of other drug recalls because of adverse effects, despite presumed adequate investigation.

(4) An increasing encroachment upon the traditional preserve of the physician by a variety of health professionals and para-professionals including psychologists, podiatrists, optometrists, physician's assistants, nurse practitioners, nutritionists, as well as standard competition from chiropractors and osteopaths.

(5) An increasing reliance on technology in areas of diagnosis and treatment which contribute to the dehumanization and depersonalization of the individual.

(6) A system which rewards the physician for procedural services but not cognitive skills. Doctors are reimbursed for *doing* something to the patient such as cutting, peering into a body orifice or performing some tests, but receive no remuneration for thinking, feeling or caring.

(7) Rapidly growing technological advances and computerized techniques which medical students and physicians must keep abreast of, thereby curtailing the time spent in patient interactions and further depersonalizing the patient–physician relationship.

(8) The 'wellness revolution' which is oriented towards health promotion and enhancement and illness prevention rather than the treatment of disease. Accompanying this, an increasing appreciation of the important role of stress and psychosocial factors in health and illness and in influencing the quality of life.

(9) The closely allied area of 'holistic medicine' which is laudible in terms of its orientation towards the treatment of the whole individual with naturopathic approaches, but has attracted a variety of entrepreneurs and even charlatans because of its popularity and imprecision.

The two major recent trends in western medicine, holism (wholism) and technology, would appear to be mutually exclusive and to exist in a fragile alliance at best. However, there are reasons to hope that the benefits of both to physician and patient need not be antithetical. It may well be that the future of medicine will lie in the happy synthesis of the seemingly disparate approaches to patient care: the art of healing and the science of medicine.

The concept of holistic medicine, as well as the allied subject of the role of stress in the production of illness, has captured the attention and interest of both the public at large and the medical profession in an unprecedented fashion in the last decade. The phenomenon does not appear to be transitory. Publications from prestigious professional journals, such as the *New England Journal of Medicine* and the *Journal of the American Medical Association*, to popular media, the *New York Times*, *Wall Street Journal*, *TIME*, periodically feature articles devoted to the changing nature of American health care and the renaissance of humanism as a necessary and welcome adjunct to medical science.

What is the basis for this interest? Americans, particularly those of the post 1950s, have been characterized as a people preoccupied with their health and culturally disposed to the unorthodox and the unconventional. But however amenable a portion of the American population may be to iconoclasm, the holistic health movement has demonstrated more substance than simple sub-culture 'faddism' or a variant of popular 'cultism'.

An element of the appeal of 'holistic' medicine derives in part from its etymology. The word springs from the Indo-European root word *kailo* which defined 'whole' or 'intact' or 'uninjured'. In the evolution of language, new words invariably seem to retain in the subconscious the connotation and particularly the nuance of the old. Thus, the sense of unimpaired integrity or healthy totality engages the imagination, and evokes an appealing sense of the transcendent—the 'holy'.

Practitioners of holistic medicine differentiate themselves from orthodox physicians by their dedication to the concept of health as opposed to disease or illness and their focus on the patient as the *subject* of treatment rather than the object. This orientation posits several fundamental axioms. The most essential of these is the importance of 'wellness', which, holistically defined, encompasses not merely the absence of clinical disease, but also the existence of a positive state of well-being that embraces the physical, emotional and spiritual aspects of health. There

is an assumed inseparability of mind and body in holistic approaches to evaluate or treat the patient, and an inherent faith in the innate wisdom of the body and its natural potential for maintaining health (*vis medicatrix naturae*). As a consequence, holistic medicine relies upon the utilization of naturopathic modalities of therapy rather than upon pharmacologic agents or other artificial interventions. Most importantly, it recognizes and affirms that the individual's health is his own responsibility, with the obvious corollary that the patient must be an active participant in any therapeutic endeavor. Prevention of illness and enhancement of health, rather than treatment of disease, are its primary goals.

Holism therefore is the study of the whole person, his totality: physical, mental, spiritual, behavioural, emotional, nutritional, ecological and any other factors that might affect his well-being. It stands in vivid contrast to the familiar disciplines of physiology, psychology, sociology, anthropology and psychobiology which concentrate on a specific area of human function. Such traditional sciences are related *to* the person, whereas holistic medicine aspires to be the science *of* the person.

The ideal state for man as envisioned by the practitioners of holistic medicine is analogous to the *euexia* espoused by Hippocrates and Aristotle. It is not merely a state of excellent health, but a proper way of life, what the ancient Chinese referred to as the '*tao*'—a quality of life that was intimately interwoven with the condition of one's total health in the holistic sense.

Holistic medicine is therefore, to a large extent, filling a void that has been created in part by the technocratization of medicine. With mechanization and miniaturization, the practice of medicine has become for many physicians less and less an art and more and more a mechanical skill, a technical expertise, a specialized service or a business. The doctor–patient relationship, integral to the healing process, has been steadily disintegrating due to factors related to time, cost, degrees of expertise and quantum advances in technology. Patients are depersonalized in a vocabulary that reduces individuals to specific clinical conditions: 'the coronary in ICU', 'the ulcer in Room 212'. Throughout the entire range of medical care, there is less and less evidence of the sensitive, caring, human touch and more and more reliance upon the regularized automated hum of computer chips and laser beams and the rhythmic staccato of computer printouts.

Americans are at least as culturally fascinated by machinery as by unorthodoxy, and as a people have placed in their pantheon of national heroes the wizards of invention and the entrepreneurial giants who forged the industrial infrastructure of the world's most technically advanced society. However, technology, irrespective of its specific design, is not a neutral force. It imposes its own imperative—use. Millions of dollars of capital investment in sophisticated equipment compels utilization. Thus the quality of medical care has, in too many instances, been replaced by the quantity of medical care—the multiplicity of X-rays, sonograms, sophisticated blood tests, etc.

This interrelationship between societal norms and concepts of health and the healing art is not a modern phenomenon. They have maintained an inextricable relationship virtually since men organized themselves into societies. Illness, as well as health, has long been definable in terms of cultural value systems. One need only recall that in classical Greece, health was a virtue, and those afflicted with disease were not merely shunned but regarded as non-virtuous, despised by the gods. In other societies, exorcism was both a religious and a healing rite. Similar correlations between illness and divine retribution still exist in underdeveloped areas of the globe today.

It would be unrealistic and unjust to depict technology as the evil *Zeitgeist* of modern society. Clearly the development of improved diagnostic instrumentation and equipment has led to greater knowledge and treatment of various portions of the body and is responsible for extraordinary advances in the 'state of the art' of modern medicine. At the same time, specialization and sub-specialization in medical care have too often given rise to an assembly line type of production, particularly in large clinics or hospitals, where patients are shuttled from one specialist to another, depending upon their complaints. Human contact is minimal and there is often an inverse ratio between the time spent in receiving medical attention and the time spent in attention to developing that unique personal bond that represents the essence of the therapeutic relationship between doctor and patient.

While it might be tempting to allocate the erosion of personalized health care to the irresistible force of technology, to do so would be both facile and erroneous. Time is another crucial factor. Physicians, under pressures of case loads, often find themselves limited to treating the visible or tangible symptoms of the disease without devoting adequate time to the causes of the disease. Far too frequently, patients are dismissed cured of the problem, but in total ignorance of how the dysfunction came about, how it might have been prevented, or how its recurrence might be avoided. In its extreme, both patient and physician are ill served by the preoccupation with immediate relief of symptoms, and neither is wiser for the experience. Disenchantment afflicts both healer and healed.

And disenchantment with contemporary medicine is growing. It is, ironically, fueled by one of the heralded benefits of civilized society—education. The education level of the average patient has risen steadily over the past several decades, and the barrage of information available through the popular media has increased awareness of health discoveries almost as soon as they occur. The increase in medical knowledge on all frontiers has been occurring at such a rapid rate that it is impossible for physicians to be aware of every new drug or technique or diagnostic tool, much less acquire the personal capacity to evaluate one or several. Much to the profession's chagrin, the public knows of a new discovery at the same time, or even before, the physician.

The information explosion, the technological explosion, together with the intense interest Americans currently manifest in their health, physical fitness and emotional equilibrium, have all encouraged many patients to transpose a national fascination for speed

and immediate results into an erroneous equation applied to medical care: a new drug (procedure) = a new cure. The success of antibiotics in treating infections and the subsequent beneficial effects of a host of other new pharmacologic agents in the treatment of a variety of conditions and disorders have conditioned the average citizen to believe that virtually all ills must yield to some type of pill. Healing or the amelioration of a problem is peremptorily demanded in the same fashion as one would obtain any other commodity from a provider, whether it be gasoline from the local service station, food from the supermarket or repair service on one's television set.

On the other hand, the dynamics of the conventional doctor–patient relationship consigned the patient to an essentially passive entity—a consumer with a limited role—compliance. Emphasis is customarily placed on the active role of the physician, and even when considering patient compliance, it is in the sense of whether the patient is faithfully executing his physician's instructions rather than actively participating in the healing process.

Thus, the practising physician finds a disturbing dichotomy in his patient population: the traditional patient for whom the healer represented a minor diety whose instructions and prescriptions were to be followed with all the faith of the true believer, and a growing number of dissenters who ask pointed questions about the unknown and long term effects of radiation, the side effects of new drugs such as reserpine, the consequences of estrogens, even the implications of prolonged use of ubiquitous substances such as saccharin. A dissonant emotional element has been added to the traditional doctor–patient relationship—wariness, if not anxiety.

This attitude has spurred the search for alternative, especially non-toxic, natural forms of treatment, even if based solely upon anecdotal experience. This trend has been supported by the recognition that previously unknown or discredited procedures such as biofeedback, behavioural modification, acupuncture, transcutaneous stimulation, hypnosis, megavitamin and other forms of nutritional therapy, are becoming widely accepted and utilized by orthodox physicians.

Because of all of these factors, patients are neither as disposed to accept all medical directions as dogma, nor to share the unreserved admiration of technological advances expressed by many of their doctors. Rejection of naturopathic types of therapy, based simply upon the argument of lack of scientific rationale or quantifiable results, no longer seems as compelling as it once was, especially when the treatment sought produces no harmful effects.

Compounding the problems in medicine today is the fact that, since the concept of holistic medicine is so appealing, and the depersonalization and computerization of conventional medicine so unattractive, many unethical individuals and groups have embraced its rubric. To be sure, many of the proponents of iridology, Rolfing, kinesiology, psychocalisthenics, etc., are sincere if not zealous in their advocacy of alternative methodologies. They are committed to the belief that their respective modalities will find the same path to legitimacy as biofeedback or meditation, and they press their claims with the persuasive ardour of religious conviction. Aiding their cause is the recognition that many of these therapies will be successful, irrespective of merit, depending upon the enthusiasm and faith of the subject. Benefits will be augmented if the technique also purports to provide an explanation as to *why* the individual became ill, as well as *what* he must do to become well and remain in that state. As the Roman poet observed, "it is part of the cure to wish to be cured' and therapeutic trust has been for years a component of the mystique of medicine. Newer discoveries of endorphin secretion and the nature of the placebo effect suggest a physiologic rationale for these heretofore 'magical' responses.

The seeds for confusion are many, and the bases for determining the validity, legitimacy and efficacy of promising modes of therapy are ill-defined and frustratingly elusive for both patient and physician alike. What then should the response and attitude of the responsible physician and enlightened patient be to the seemingly exclusive claims of both holistic medicine and advancing technology?

The first requisite would seem to be the maintenance of an open mind about the potential merits of newer developments in the diagnosis and treatment of disease, even if they do not appear to be consonant with past experience or medical training. For many physicians this will require conscious rethinking of traditional precepts which have demanded proof of hypotheses. But scientific proof is not always synonymous with evidence, and inflexible adherence to purely scientific research, which depends upon a rigid objectivity, can virtually preclude all the qualities that are integral to discovery: insight, imagination, inventiveness, adventurousness of spirit and freedom from intellectual stasis. However heretical to some, the idea that science (technology) alone does not hold sole dominion over the answers to all the problems related to the healing process is necessary for growth.

Yet, medicine cannot unreservedly endorse unorthodox methodologies simply because they are natural or harmless, or have had occasional success in some individuals. This is especially true if the adoption of such treatments expends valuable time by forgoing therapeutic methods that could be helpful or life-saving. Therefore, it is wise to question, to exercise discrimination and to adhere to scientific principles in evaluating various modalities as they appear, but it is also equally essential *not* to summarily dismiss them because they have no basis in terms of previous training, experience, or because their apparent effects cannot be justified.

Contemporary medicine must strike a workable balance that retains a healthy but not implacable skepticism. At the same time, it must recognize that the inability to explain certain results or observations does not necessarily vitiate their validity. Perhaps Pasteur's observation should serve as the physician's operating principle: "Keep your enthusiasm, but let strict verification be its constant companion".

Change would appear to be the irresistible wave of the future in the remaining decades of this century, and not all physicians will be comfortable with the present direction of the practice of medicine. Many will mourn the passing of the role of doctor as demigod before whom the supplicant patient worshipped and sought miraculous cures. Others will be

resistant to the concept of the doctor as entrepreneur, a role in many instances, brought about by the intrusion of government and fiscal intermediaries into medical practice. The expanding role of Medicare, Medicaid, Major Medical and other insurance carriers in bearing the financial burden of health care costs has had a direct impact upon the number and types of procedures and tests performed on patients. Whereas 25 years ago, a physician would be concerned about the possibility of wasting his patient's time and money, today that concern is relieved by the knowledge that they will be paid by a federal or corporate bureaucracy.

Moreover, medical fees paid to doctors for batteries of diagnostic tests and procedures, which represent sources of income, are rationalized and justified on the basis of a growing litigious climate. If a less than perfect result is achieved by the physician, patients are increasingly inclined to believe an error was made and to litigate to obtain redress. Consequently, the number of malpractice cases and the sizable awards made to patient–plaintiffs have accelerated at a rapid pace in the last decade, placing malpractice insurance premiums for some specialities in excess of $65,000 annually. This places an additional pressure on physicians to become businessmen and to make adequate reimbursement their first priority. Many perceive it as the guarantor of their professional survival.

The shift in financial responsibility to fiscal intermediaries has resulted in another vexing problem for the doctor–patient relationship. Technology has again presented a double-edged 'benefit'. While it has offered major improvements in efficiency, storage capacity, speed of retrieval, improved cost–effectiveness, etc., in the maintenance of medical record keeping, it has at the same time, breached the heretofore sacrosanct confidentiality that existed between doctor and patient. Information stored on computer disks is readily available to a host of anonymous computer operators and its accessibility has in some instances given rise to problems with reluctance on the part of patients to reveal matters of a sensitive nature or which might be regarded as self-incriminating. Patently, reticence and a resultant incomplete medical history cannot contribute to quality medical care.

All these public and personal dislocations in the physician–patient relationship have created a void which is rapidly being filled by other health professionals, but more importantly, by self-appointed naturopaths, herbalists, masseurs or advocates or unproven approaches who may lack expertise but have the time to spend with the patient which the physician cannot or will not do. For many individuals in the quest for health, the choice seems to have been reduced to either an unscientific human being or an inhumane scientist.

Fortunately, not all the news is grim. New disciplines point to a promising synthesis of holism and technology. Increasing knowledge about the mechanisms whereby the body mediates stress-induced health responses has reaffirmed the vast potential of the individual to influence his own well-being. Further, if negative influences or distress can make us ill, are there not positive emotions such as faith, love, humor and creativity that negate such effects or promote wellness? The rapidly emerging field of psychoneuroimmunology has spurred analysis of anecdotal reports of cures from shrines and faith healers, shamans or laying on of the hands, less in cynicism than in the true spirit of scientific inquiry. The observation of direct nervous system influences on immune function and new advances in psychopharmacology have altered our concept of the brain as a vast electronic switchboard, and brought the realization that it is in effect a vast endocrine organ with awesome potential. The ability to identify and track the small brain peptides in response to emotions offers the promise of learning how to relate, emulate or simulate their activity to promote self healing.

In a sense, modern man is still captive to the mythology of Hygeia and Asclepius which symbolizes the perpetual tension between the two schools of medical doctrine. For the worshipers of Hygeia, the body possessed its own wisdom, and health is a positive attribute to which we can aspire if we live our lives wisely. The function of medicine is to discover and teach those ways which will insure a sound mind and a sound body. For the followers of Asclepius, whose ranks were swelled by the disciples of the Cartesian mechanistic dualism—the dominant medical paradigm for the past several centuries—the physician's role is to treat disease and restore health by correcting any imperfections in the body/machine due to accidents or illness.

But surely after 2000 years, allopathic and holistic medicine need no longer be perceived as parallel continua. The opportunities for physicians to return to the true definition of '*doktor*' or teacher, as well as healer, certainly exist. At this point in time, western medicine has the greatest potential to achieve this end. Throughout recorded time, medicine and culture have been mirror images of one another; the values of both covalent. Therefore, it is not surprising that the contemporary practice of medicine is in its present state. Medicine has progressed full circle to its origins. The earliest healers were high priests who taught and practiced the philosophy of their beliefs in a coherent, integrated life style. If today's high priests of medicine can blend their reverence for science with a dedication to the humanistic values that characterized early religions, philosophies and cultures, we may yet achieve that early unity of thought and deed.

Perhaps the theory of the ultimate convergence of parallel lines may prove demonstrable, not in the vastness of cosmic space, but in the dimensions of the classrooms and laboratories of the university. A revered American healer—not of physical but of psychic wounds—Abraham Lincoln may have provided the formula when he suggested to his law partner: "Let not a worship of the past nor a confusion of the present keep us from an attempt to wisely plan for the future."

There are myriad discoveries open to the educated, inquisitive but uncluttered mind, and as we mature in our knowledge and appreciation of the wonder of the art of healing and the science of medicine, we should strive to feel "only the check rein, not the curb, the blinder nor the hobble" in the pursuit of that elusive synthesis.