Tikkun תיקון

The Prophetic Jewish, Interfaith & Secular Voice to Heal and Transform the World

Medicine at the Millennium: Still Caught between Descartes and Spinoza

By Raymond Barglow *Tikkun Magazine*, March 2002

In the aftermath of the attacks on the World Trade Center in September, Washington's "war against terrorism" is shifting our nation's priorities not only in respect to military spending and civil liberties, but in the domain of health care as well. The federal government is now planning, for instance, to spend billions of dollars to protect Americans from the threat of biological/chemical warfare. But this new campaign will not remedy international dangers to human health such as epidemic infectious diseases, environmental pollution, and the overuse of antibiotics in agriculture and medicine.

Nor is medical care in the United States capable of coping adequately even with everyday illnesses. Medical expenses are rising to intolerable levels, while forty-three million Americans currently have no health care coverage at all. And the aging baby boomer generation will soon place extraordinary demands on the system.

What can be done? Medicine today, like Judaism as this magazine suggests, needs renewal. But in what direction? Legislation to bring down costs and establish a single-payer plan that covers everyone are certainly worth fighting for. But such reforms do not address what is fundamentally wrong with health care in this country and may not even be winnable in the absence of more fundamental change. In place of the orthodox medical model that focuses narrowly on biological repair, we need a much broader, prevention-oriented and ecologically aware approach—one that remains scientific while encompassing all the relationships that are essential to human health.

If we look at the history of medicine, we can see that it became what it is today because of a sweeping social transformation that modernized Europe centuries ago. Urbanization and commerce, along with Protestantism and the Catholic Counter-Reformation, encouraged new ways of conceiving and interacting with nature. It was within this context that "scientific medicine" was invented and elaborated. The particular scientific model that became predominant in Europe in the seventeenth century accepted the mind-body dualism of René Descartes, for whom the human body is a self-contained material machine. His contemporary, Baruch Spinoza, on the other hand, elaborated a more relational view, stemming from a Jewish tradition that regards the body as belonging to and reflective of the surrounding world.

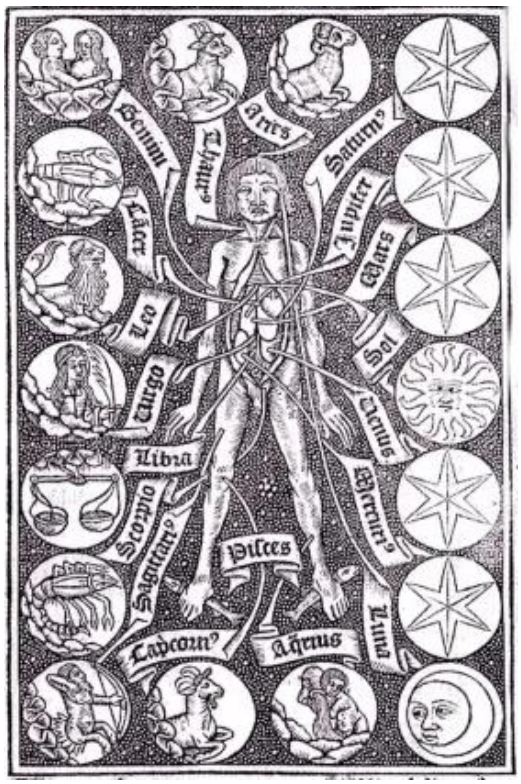
Spinoza's perspective is no less compatible with scientific medicine than the Cartesian view. Science sometimes explains by taking apart, as atomic physics does when it delves into the deep structure of matter, or by bringing into relation, as Einstein's relativity theory does. Spinoza was quite aware of the power of the first approach, as elaborated by Descartes and advanced by technologies such as the recently invented microscope. In the field of anatomy Spinoza acknowledges that the human body is composed of parts, and those parts of smaller parts still. But he recognizes also that humans are encompassed by, and can be adequately understood only in relation to, unities larger than themselves, until we reach the widest system of all, which is "the whole of nature."

Medicine in the sixteenth and seventeenth centuries could have taken a more integrative path, in keeping with Spinoza's insight that we are guardians not

only of ourselves, taken individually, but of the environments with which we are continuous. Instead—for reasons that this essay will explore—mainstream medicine adopted the Cartesian machine model. Today, nearly four centuries later, the contradictions between these two approaches to health care remain unresolved.

The 17th-Century Origins of Medical Science

During the European Middle Ages, healing was regarded mainly as women's work. Midwives presided over the birth process, mothers attended to the illnesses of their children, and adults too relied upon women not only to feed and comfort, but also to restore their bodies.



The study of anatomy at this time was interwoven with astrology. The character and optimal timing of surgery, for example, were figured according to the zodiac, as in the early sixteenth-century print at the right.

Leaving this medieval tradition behind, the human body became, in the sixteenth and seventeenth centuries, the object of medicalizing concepts and practices. Commercial interests in European urban centers threw off the fetters of feudalism and embraced new rules of a market economy, along with an innovative way of knowing the world: "natural science." This form of inquiry aims to reveal how the body—now construed as a marvelously intricate machine—really works, what causes it to malfunction, and what can be done by way of repair.

Science carried, from the beginning, significant cultural implications: it could legitimate a way of governing as well as a way knowing. A new alliance of scientific with social authority can be observed in Rembrandt's *The Anatomy Lesson of Dr. Tulp*, painted in Amsterdam in1632. When seventeenth-century anatomical inquiry re-inscribed the human body scientifically, it became something distinctly individual—a bordered territory, so to speak, possessed by its owner. But this nascent individualism didn't mean that human bodies were no longer subject to social authority. Anatomy demonstrations such as the one Rembrandt portrays were political as well as scientific events, attended not only by students of medicine and academics, but also by prominent citizens of the community. In his painting, Rembrandt focuses upon only a handful of figures, but in fact such demonstrations were held in large

anatomical theaters. Around the dissecting table were arranged concentric circles of seats, to which visitors were assigned according to social rank.

The cadaver on display in Rembrandt's painting is that of Aris Kindt, a criminal who had been tortured, condemned, and executed by the state. His body lying on the table, foreshortened, is expressive of passivity and death. The shadow of one of the leaning spectators darkens its brow. Living subjectivity has fled from the corpse, to be expressed, with an intensity that is characteristic of Rembrandt's art, in the surrounding figures. Dr. Tulp in particular is singled out in the painting by his broad-brimmed hat, distinctive garb, and masterful gesture. A conch shell, which had been a token of spiritual elevation in earlier representations of religious themes, surrounds his head as if with a halo. The doctor is confident that what he says to his listeners will be empirically corroborated both by the observed cadaver and by the anatomy textbook lying open at its feet, just as the Creator's plan, revealed in the Bible, is daily confirmed by events on earth. In his inaugural speech for Amsterdam's anatomical theater, Casper Barlaeus declared: "Here addresses us the eloquence of learned Tulp, while with nimble hand he dissects livid limbs. Listener, learn for thyself … even in the smallest part God is enshrined."

God so enshrined was the subject of a science that regarded the structure of the body—and by metaphorical extension the structure of society—as divinely ordained. Consequently, medicine's practitioners had no reason to look into the ways that the social world itself might contribute to human illness, since its fundamental rightness was theologically guaranteed. If all law is authorized from on high, then the laws that govern that world are no less valid than those of science and mathematics. Hence the lawfully governed human body could serve well as a model that legitimates social order.

Colonial as well as domestic rule could be viewed as receiving support in this way from the science of anatomy. In England at this time, exploration and mastery of the New World were often compared to voyaging into the terra incognita of the human body. Francis Bacon's view of science as the possession and subjugation of nature was of a piece with his enthusiasm about exploration and conquest abroad.

The Social Contradiction within Scientific Medicine

What struck me when I saw Rembrandt's painting some years ago in The Hague was its unified expression of scientific inquiry, social hierarchy, and light. Yet, I perceived also a contradiction. Yes, the scientific perspective represented here pays homage to an authoritarian social order that, in the case of 17th-century Holland, built enormous wealth at the expense of the new nation's underclasses and of "primitive" peoples overseas. But its view of human nature is affiliated with egalitarian ideals as well. Rembrandt's portrait juxtaposes the gesturing hand of Dr. Tulp with the anatomically exposed hand of the cadaver, as if to acknowledge the universality of human physiology: the same intricate structure of muscles and tendons that operates the hand of a criminal also enables the doctor's agility as he presses his forefinger against his thumb.

In Rembrandt's day, this awareness that all human beings are constructed similarly could be extended to conclude that they share as well essential needs, limitations, and vulnerabilities. Allied with science, then, could be humanist values of altruism and tolerance—values that were to some extent recognized by the newly formed Dutch Republic. In most parts of the Netherlands, citizens could, for example, practice the religion of their choice, or no religion at all. The nation was officially Calvinist, but Spinoza, a Jew, lived securely in Amsterdam, as did Descartes, a Roman Catholic who had emigrated from France. 17th-century humanism regarded scientific method as liberating partly because it could be taken to imply that the authority to say what is true or false, good or evil, does not automatically belong to any one person, such as a monarch or a pope.

This was a time in Western Europe when such a democratic idea co-existed uneasily, and sometimes collided head on, with the conservatism of the past. The older, pre-scientific account of the human body had affiliated it with a person's social rank. Noble blood, for instance, was linked to nobility of spirit and social status, base blood to subservience. The new medical science did away with such distinctions. For William Harvey, an English physician who published his treatise on the circulatory system in 1628, blood is simply a fluid that flows in every human being and that no longer differentiates high from low birth. Hence the study of anatomy could be interpreted as sympathetic to

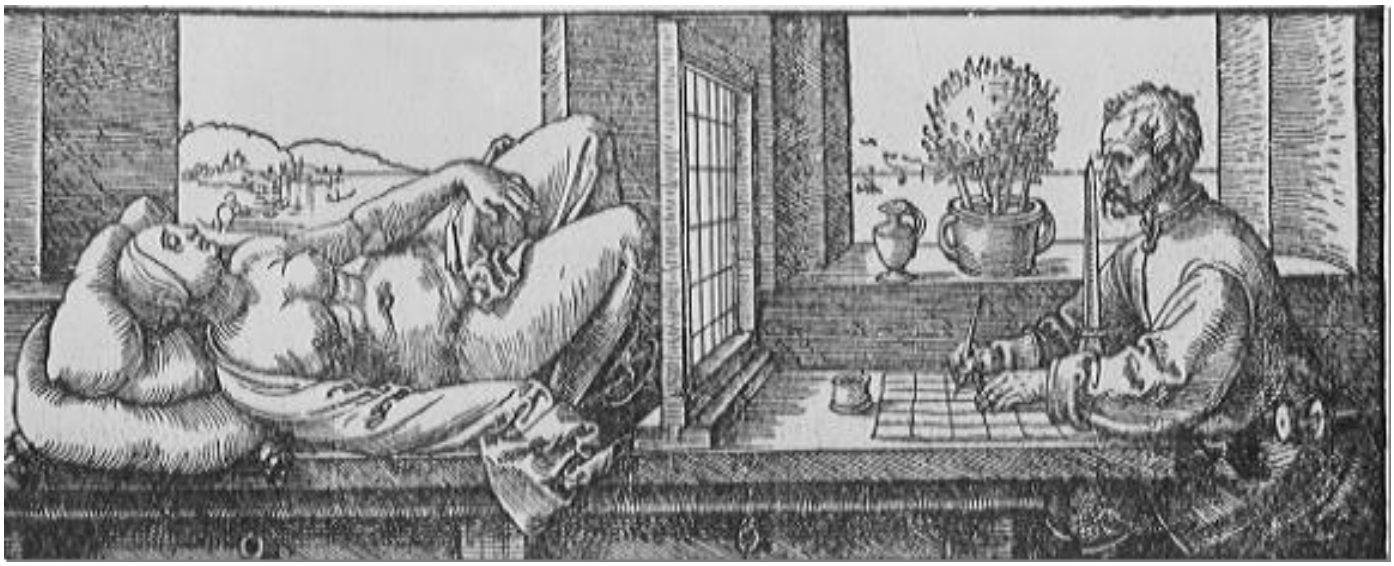
democratic aspirations. With its emphasis on empirical rather than magical explanations, science also played a role in dispelling superstitions such as the belief in witchcraft. Early in the 17th century in Holland, witch trials were done away with.

But the affinity of humanism and science for high-minded ideals came into conflict with the division of society into social classes. Although science revealed that, on a physical level, human beings are very similar, their life opportunities and social destinies turned out to be quite different. Accounting for such different outcomes—that one individual becomes, for example, a highly respected doctor and another a condemned criminal—was one of the aims of the Cartesian mind-body distinction: although our bodies are nearly identical, our minds differentiate us. One person pursues a higher path than another, and that explains why one enters the light and another falls into darkness. In Rembrandt's Anatomy Lesson, a deep shadow covers the brow of the cadaver.

Later in Rembrandt's life, following personal misfortunes and conflict with the Calvinist Church, he would adapt the Italian chiaroscuro (play of light and shadow) to masterfully contrast the illumination and darkness within a single soul, as in the self-portrait on the right.

The ambivalent moods characteristic of Rembrandt's later work are less evident in the Anatomy Lesson, in which light articulates a divinely inspired, scientific reason that shines upon men. It is not accidental that no women

attend the lesson. Officially sanctioned healing was regarded as men's work, and although childbirth, for instance, remained the work of midwives, the seventeenth-century Dutch legal system subjected them and folk healers to supervision by male surgeons and physicians. A restructuring of medical authority occurred in the name of Cartesian science, which sharply distinguished the active, knowing subject from the passive, known object. Science conceived in this way as a disembodied, objectifying point of view is modeled in Albrecht Dürer's illustration of single-point perspective (below), for which hierarchical relationships (male versus female, reason versus emotion) belong to the stable and natural way of the world.



These binary oppositions were embraced by a medical world-view that took for granted a Cartesian mind-body dualism. But medicine could have accepted instead a more egalitarian philosophy such as Spinoza's. He criticized Descartes' view that humans are "lords and masters of nature," and that their mastery mirrors God's dominion over His creation.

Spinoza's philosophy didn't adapt well to modernity's hierarchical distinctions, and therefore wasn't found suitable as a basis for medical science. To some extent, that science continued to support universal humanist ideals, but it also became allied with social interests that were anything but universal. This predicament has divided medicine against itself ever since.

The Rise and Fall of Public Medicine

The Cartesian machine model of the human body, along with the idea of medical treatment as repair of a machine, has led to important discoveries and technologies for reducing human suffering. But this approach has also contributed to a narrow-minded focus on physical states inside the body rather than on its relationships with the surrounding social/natural world.

Yet the evidence linking illness to these relationships is overwhelming. In the past decade, researchers Richard Wilkinson, Michael Marmot, and Nancy Adler, among many others, have documented high correlations between economic inequality and rates of illness in modern societies. Limited access to professional health care services partly explains this correlation, but most of it is due to literally sickening life circumstances. Addressing these circumstances, which include unsanitary living conditions, unsafe workplaces and alienating work, toxic environments, and inadequate nutrition, turns out not to be as financially profitable as individual-centered care – is that not one of the reasons that a broader view has been neglected by mainstream modern medicine?

An environmental approach to health care would not disregard the underlying social etiologies of illness. Such an approach has always had some support in the history of medicine. In the middle of the 19th century, the German anatomist and pathologist Rudolf Virchow organized public campaigns to address the fundamental causes of disease. When in 1848 he investigated a devastating epidemic of typhus in Upper Silesia, a territory under the domination of Prussia, he concluded that its cause was the economic and political subjugation of the Polish inhabitants, whose poverty, starvation, poor housing, and lack of education contributed to the rapid spread of the illness. Only "full and unlimited democracy … education, freedom, and prosperity," he said, could address the underlying causes of the epidemic and prevent it from recurring in the future. The natural role of physicians, he believed, was to serve as "attorneys for the poor." While Virchow became famous for his discoveries in cell biology, he should be given equal credit for his advocacy of "social medicine."

Virchow was not alone. In the United States, many physicians embraced a broad interpretation of their profession's responsibilities, one that would integrate scientific advances with a primary commitment to community medicine. Their research documented dangerous working conditions, unemployment, urban squalor, malnutrition, and general poverty as major disease agents. (Had this approach to illness been taken in Spinoza's day, it might have saved his life. He made his living by grinding lenses, and suffered from a lung condition common at the time among lens makers and caused by inhaling fine glass dust. This illness contributed to his death at the age of forty-four.) At the end of the nineteenth century and during the first two decades of the twentieth, a broad coalition of researchers, care providers, and trade unionists advanced a workers' rights and human rights agenda to remedy these basic problems.

But public medicine, as they understood it, came into conflict with conservative interests—including the American Medical Association—that gained control over medical school education and credentialing, and restructured the medical profession. Implementation of the recommendations in the Flexner Report published by the Carnegie Foundation in 1910 can be credited with making medicine more scientific and more effective in many areas, but the Report also led to the creation of a monopoly by sharply reducing medical school admissions and limiting the range of services that could be offered by nurses and other non-MDs.

Although this reorganization did not entirely silence the profession's more socially minded practitioners, officially sanctioned medicine would henceforth favor individualized doctor-patient care and treatment of already existing pathologies. Preventive medicine, which earlier had examined and criticized the broad economic and social circumstances of illness, was given scant attention in this new model. Some preventive strategies remained important at the level of individual care, including screenings of patients for disease susceptibility, and these certainly did prove medically useful. A test can reveal, for example, that a patient with hypertension is at greater risk for heart disease, and a medication can be prescribed to bring blood pressure down. It is well established, however, that elevated blood pressure often stems from such originating conditions as poverty, inadequate diet, and other adverse

circumstances. (Hypertension is epidemic in inner city neighborhoods.) A revival of public medicine today could bring more attention to such environmental circumstances.

Health Care and Globalization

In Rudolf Virchow's day, medicine's scope of knowledge was small enough, and its technologies simple enough, that a physician could pretty much master the entire field. Virchow himself excelled in the roles of family doctor, research scientist, environmentalist, and political activist. These days, medicine has become much more specialized, but at a time when, as Kenny Ausubel points out, conscientious medical care can no longer overlook the larger – even global – web of relationships that links human beings. Widening economic inequalities, along with practices such as the overuse of antibiotic drugs and the uncontrolled use of synthetic chemicals, are contributing to new illnesses and exacerbating old ones. Joshua Lederberg, Nobel Prize winning bacteriologist, notes that "The world really is just one village. And our tolerance of disease in any place in the world is at our own peril. Patients are dying because we no longer have antibiotics that work." Malaria, tuberculosis, AIDS, and other modern plagues have become more widespread, if not pandemic. Such problems are worsened by global warming, which incubates pathological microbes and subjects food production to conditions of drought and flood, among its other harmful consequences.

Hence healthcare advocacy will have to take up issues of international commerce, demographics, population growth and the earth's limited carrying capacity. There are widely shared principles that we can draw upon. The United Nations has, in a number of resolutions and covenants, reaffirmed a commitment originally made in the "Universal Declaration of Human Rights," adopted by the General Assembly in 1948:

> "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or lack of livelihood in circumstances beyond his control."

Note the attention given here to the broad circumstances of people's lives. Support by the United Nations for human rights provides a framework for a worldwide health care agenda. This is the larger project that can bring us together—providers and patients, and everyone else engaged in looking after the wellbeing of human bodies—within a movement that takes a holistic approach to health care.