

CHAPTER II

HISTORICAL CONTEXT OF SCIENCE AND MEDICINE

In order to understand today's views on health and disease it is useful to review some historical aspects of the evolution of these concepts. A more general view sees history marching purposefully from the past to the present in a linear way. Modern historians try to see the past from the perspective of the people who lived it. I intend to demonstrate that people's interpretations of their ailments and bodies have circulated around polar themes that have been erupting and conflicting with each other for most of the time. I am not a medical nor a science historian and won't pretend to fill all angles of the question in this section. My aim is much more modest: I am trying to expose some of the assumptions and ideas about the discourse of science and medicine relevant to actual conceptions of health and disease. The longer I study how people have dealt with health and disease the more I grow to believe that the various discourses reflect a deeper struggle of getting to know ourselves and our bodies. The debates about health are in my eyes an ongoing group process that wants to awaken us to the many intertwined levels that influence our notions of health and disease. Examples of such polar themes, some of which already appeared in the discussion of the current medical discourse, are: nature versus nurture; individual versus collective or social; body versus mind; secular/profane versus sacred/religious; "mechanism" versus "vitalism"; and disease as an objective entity versus the subjective experience of illness.

The Greek mythological personage Asclepius was both god and human. As god he is identified with health and disease, and as the first physician, he is usually portrayed with a winged staff and two intertwined snakes, double-helix like: The caduceus, symbol of the modern physician. The caduceus is a good emblem for my contemplation of the evolution of medical discourse. I conceive it as an ongoing dialogue between divergent polar conceptions, with singular themes orbiting around a center of attraction, the rod. The various dichotomies received over time varying degrees of attention; some were more central than others in different periods of history. I believe in some order or meaning, and envision that this process of evolving dialogue between polar views allows us to perceive always new facets of the universal problems, thus allowing us to deepen our understanding of these essential issues. "If evolution is continuous creation," says Bergson (1911), "it creates progressively not only the forms of life but also the ideas that make it possible for the intelligence to understand it, and the terms that could be used to express it" (p.103).

Turner (2000) analyzes health concepts along two dimensions, namely the sacred/profane domain and the collective/individual orientation to health and illness. In my analysis of historical perspectives I will follow the same two threads of discourse and add a third thread: the distinction between subjective and objective dimensions to health.

The Sacred and the Profane in Medical Discourse

The sacred framework sees the ultimate explanation of illness in nonnatural causes (such as divine punishment) and being sick in moral terms (the individual is responsible for his

illness). Medico-religious paradigms can assume an individual or collective form. Illness is either linked to the fundamentally evil nature of fallen man in creation and humans are exhorted to strive against evil through government of the body or to individually and collectively broken taboos. The profane world is the world of natural causes such as physical agents like viruses or social and environmental factors and the individual is not held accountable. This is the domain of materialist Cartesian concepts that define illness as malfunction of the human organism.

In “The Elementary Forms of the Religious Life” (1954), Emile Durkheim describes the belief system of primitive societies as based on a profound dichotomy between the everyday world of practical activities and the sacred world. Diseases are sometimes perceived as omens; the appropriate remedy is to identify the demons responsible and expel them by ritual incantations. In many ancient societies disease is symbolic of the relationship between the sacred and the profane world. In older and more recent shamanic traditions, human illness is also thought to provide a bridge between these two worlds. And for many people today, extraordinary states of consciousness, that are seen as mental disease in modern society, reveal sacred values to humans.

Greek medicine represents also a first secular orientation to health and illness. The humoral theory of disease, with four basic elements (fire, water, air, and earth), four qualities (hot, cold, dry, and damp), four humors (blood, phlegm, yellow bile, and black bile), and four personality types (sanguine, phlegmatic, choleric, and melancholic) describes a primitive mechanical concept in which the body could be imagined as a

hydraulic system. Illness is a consequence of an excess of one element and a lack of balance (Turner 1996). The notions of balance also reflected the premise of Aristotle's ethics in which good life was expressed through moderation and avoidance of excess. Greek medical tradition also revealed a polarity between an individualistic and a collectivist approach. Asclepius' two daughters were Hygeia from whom we derive the notion of hygiene, and Panakeia, from whom we derive the concept of panacea, the universal remedy. From these gods a division in medicine developed between a collectivist (hygienic) approach and an individualistic and curative perspective. They embody two main streams of thought that have been in a more or less fruitful and sometime conflicting dialogue until now: Hygeia points towards a communal and preventive view that supports a rational life style in a salubrious environment, whereas Panakeia promotes an interventionist medicine that restores health by directly curing the ailments of an individual.

The Judeo-Christian legacy was deeply ambiguous with respect to the importance and role of secular medicine. The ascetic doctrines of institutionalized Christianity treated the body as a means of human education through suffering. Sickness was, in the view of Pauline theology, the inevitable punishment of the flesh. The body as the vessel of the soul, they thought, is corrupted by the Fall from Grace in the story of Adam's disobedience. Disease was sent by God and again related to a supernatural plan. Healing became relegated to the realm of the spiritual and the cure of the soul took precedence over the cure of the body. Most ailments, as well as certain specific maladies, such as

leprosy, were associated with the Almighty's punishments for sin. According to the Book of Leviticus (May & Metzger 1965):

26.14 But if you will not hearken to me, and will not do all these commandments, 15 if you spurn my statutes, and if your soul abhors my ordinances, so that you will not do all my commandments, but break my covenant, 16 I will do this to you: I will appoint over you sudden terror, consumption, and fever that waste the eyes and cause life to pine away.

However, through this suffering human beings can come, through humility and pain, to a better understanding of God and themselves. Disease is a corruption that indicates the sinfulness of human kind, but also creates the occasions of insight and knowledge.

Christianity has, according to Drewermann (1991), fostered a one-sidedness of Western culture in a twofold way: first, in marginalizing and controlling our individual bodily nature, as well as the external nature; and second, in supporting a one-sided goal-oriented thinking about progress and development. J. Vikkelse (1997) demonstrated, in her dissertation, how institutionalized Christianity introduced, in an authoritarian manner, the notion of value opposites and how this opened the way for many forms of oppression. Salvation would be linked with definite behaviors and values. Conforming to these values would be rewarded and became a measure of goodness; non-conforming would be punished. The church fought against amoral behavior with powerful instruments. This led to the oppression of the more impulsive nature of human beings, to the repression of people's inner spirituality and marginalization of emotions, as well as exclusive encouragement of rationality. One of the ways Christian theology was misogynist, and thus patriarchal, is because the Fall of Man was often blamed on the temptation of Eve.

Theologians, reinforced by the legacy of Greek philosophy, that favored reason and rationality and degraded the female body and its physical earthy nature (e.g. female blood in menstruation), saw men as the crown of creation, and everything else in nature ranking below them (Chittister 1998). Women were physical and natural; men were reasonable and spiritual. The implications for society of the theological justification of difference, the approbation of a hierarchy of values with men on top, just below a male God, can hardly be overestimated. It opened the door for the oppression of women in all aspects of life; it launched a continuing war against the body, and made the exploitation of the earth possible. It justified domination and has consolidated the power of the center over the margin. It has influenced human politics and values ever since.

Furthermore Kleinman (1997) claims that monotheism has had a determinative influence on Western biomedicine. The idea of a single God and Augustinian imperative of a universal moral order led to the dominance of rational principles, the idea of a single objective truth. It also fostered a single-minded approach to illness and care with an extreme insistence on materialism as the foundation of knowledge. Medical orthodoxy developed, on the base of Cartesian materialism, very strong value orientation, seeing nature as physical and bare of any teleological meaning. That serious illness may involve a quest for meaning got disavowed. The emphasis on quantitative data and the rejection of qualitative interpretation led to an objectivistic worldview bare of any moral purpose. The positive aspect of this reductionistic approach has been the development of biochemical-oriented technology and its many successes in the treatment of acute pathology. But in proceeding within this cultural logic of dualistic value opposites

between male and female, mind and body, hard and soft, strength and weakness, technology and human experience biomedicine, warrants marginalization of the “softer” side of the poles. Following that logic, ‘soft’ medical procedures and specialties, which concentrate on the human practice of medicine and understand its social, psychological and moral aspects have low value, provide the lowest incomes, and attract more women practitioners.

Faith-based religious views on one hand, and more rational and humanist conceptions of the body on the other hand, have built the warp and weft of the fabric of medical thinking. At different times one view has been more predominant than the other. In the struggle between magic and scientific conceptions epilepsy has held a key position. Despite many attempts by mainstream medicine, throughout history, to remove the “divine” label, epilepsy continues to be ascribed to supernatural causes and many treatments for epilepsy have in many cultures occult associations (these spiritual remedies were for long time – and some might still be – far safer than the medical therapies).

Henceforth, one way to define “modern” or “scientific” medicine is by its detachment from a religious framework. Golup (1997) connects Science with a secular approach to reality void of any divine design or providence. This separation has happened over time, many social movements were opposed to it, and it has never been really completed. Freitas (1999) establishes the beginnings of that process with Hippocratic (ca. 460-377 BC) medicine, the foundation of Greek written medicine. Rational curiosity about the

cause of illness replaced a healing system that was dependent on the supernatural. Man is governed by the same physical laws as the cosmos, claimed the new philosophy, hence medicine, by reasoning about nature, would be able to explain health and disease. Others (Golup 1997) see the surge of modern science with the rediscovery of the grandeur of Western civilization after the Dark ages and the domination of the Roman Church. The renewed interest in the ancient thoughts of Aristotle, Plato, Virgil, Cicero, and others, allowed the rediscovery of a vision of man as rational being. From a human understanding of God's plan the renaissance humanist came to a view that man must control the world created by God. The study of nature through one's own eyes became important as a requirement for one's ability to change nature.

It was the centrality of the Church with its emphasis that God permeates all aspects of life that began to change during the Renaissance. It gave place to a reorientation towards Greek philosophical ideas and a burgeoning concept of progress and a vision of purposeful change (Golup 1997).

The Roman Church at that time had become very institutionalized and sin had become both regulated and commercialized. Through confession and indulgences people would buy salvation from sinfulness and illness. The Reformators – Luther, Zwingli and Calvin – challenged the Roman Catholic doctrines and the practice of commercialization of the sacred. Later they contributed to the rise of the seventeenth-century scientific revolution and the erosion of medieval visions of a religious embedding of disease.

The secularized worldview which is deemed necessary for a scientific conception and analysis of nature wasn't occupying all aspects of life and society. Religion was controlling all of a person's action from birth to death as late as the Enlightenment and the ensuing social revolutions. Neither was the Greek understanding of health purely rational. Ancient Greece had its own tradition of folk healers, including priest healers employing various methods of divination (Freitas 1999). Pergamon, for example, the site of the sanctuary of the healing god Asclepius was a place where the attendant priests converted the dreams of patients into therapeutic regimens. In many aspects the medicine of ancient times was primarily religious. The hands of the gods or God were in everything. Disease was caused by spirit invasion, sorcery, malice, or the breaking of taboos, and sickness was both judgment and punishment. These beliefs are still very prevalent in many tribal cultures around the world. They also remain very influential in our perceptions of ailments that lack obvious scientific or causal explanations. Confronted with disturbing symptoms many people will at some point have thoughts that relate the symptoms to repressed thoughts and preoccupations. Magical or archetypal thinking, irrational fears, the association of emotions and feelings with disease and their cures are features of this "religious" thinking.

Dr. Bernard Lown (1999), provides many examples of the extraordinary powers of words, words that can injure and maim, as well as words that can heal. One dazzling example is the case of a sixty-year-old critically ill man who recovered after he heard Dr. Lown referring to the gallop sound of his heart, paradoxically a bad prognostic sign in conditions of heart failure.

On Thursday morning, April twenty-fifth, you came in with your gang, surrounded the bed, and looked as though I was already in a casket. You put your stethoscope on my chest and urged everyone to listen to the 'wholesome gallop.' I figured that if my heart was still capable of a healthy gallop, I couldn't be dying, and I got well. (82)

In recent years many scientific studies have been conducted on distance healing and the effects of prayer or meditation on medical treatment. The numinous realm has become part of scientific endeavor. Increasing research is done on the biology of religious experience in an attempt to learn how physiology connects with spiritual experiences (Andresen & Forman 2000). The issues of religion and science have long been perceived as either/or dichotomies, presuming that the two poles exist only in opposition to each other. In academic medicine, religion and science have mostly been two opposing paradigms with the new development mentioned above constituting an exception. However in the lived experience of people they were never that separate. The empirical and religious components of medicine have always evolved in parallel strands. Besides the religious paradigm, even in prehistoric and ancient times, many empirical observations were made and many substances tried, eventually creating a considerable sum of medical knowledge that was passed on orally to others (Freitas 1999).

The Reformation and the ascetic and individualistic ethic of Calvinism encouraged the emergent culture of competitive capitalism (Weber 1930), with its values of rationalism and individualism. It also converged with scientific Renaissance principles. The two social movements anticipated the growth of experimental medicine and the medical revolution of the seventeenth century that was founded on the rationalism of René Descartes (1596-1650) and Isaac Newton (1643-1727). Descartes's dualism, in which the

self is separated from the natural world, the soul from the body, created the basis for modern experimental rationalism. Life is split in half: spirit, which is one, is without a material foundation, and therefore cannot join matter; and matter, the other pole, is endowed with substantiality and mechanical movement. One motive for Descartes to affirm that matter was totally inert and insentient was the desire to use the non-human world for human purposes, namely for scientific inquiry. Descartes's denial of any form of experience to 'nature', including all non-human animals, allowed the use of nature for exploitative practices, such as vivisection. The founders of this early modern worldview saw the soul as being different in kind from matter and, therefore, immortal. Their dualism and materialism was meant as an argument for the existence of God and against upcoming atheistic views of the universe. The sanction of the physical world to its own realm and the exclusion of religion from philosophy allowed assigning God its own sphere and justification.

In combining Cartesian rationalism with Newtonian physics, seventeenth century physicians sought to create a medical system that had mathematical elegance and simplicity. The discovery of the principles of blood circulation by William Harvey (1578-1657) also advanced the view of the human body as a mechanical pump whose movements could be measured mathematically. On the other hand, there is no reason to exaggerate the secular dimension of medical practice in the seventeenth century. Medical interventions were still typically set within a broader moral and religious framework.

In reaction to Cartesian dualism and materialism some biological scientist in the School of Medicine of Montpellier in France (Joseph Barthez, Théophile de Bourdieu, Xavier Bichat, and Claude Bernard) developed in the middle of the eighteenth century the concept of a vital principle basic to all living phenomena, later called “Vitalism.” A counter movement to the reductionistic tendencies of growing “scientific” developments, vitalism remained a unifying philosophy in search of a metaphysical fundamental principle. Its roots are found in early Greek thoughts. Anaxagoras talked of a “nous” which guides life’s unfolding. It also derives from the “logos” of Heraclitus and the “entelechy” – or life force – of Aristotle. Its big questions were: What is life? What is the innate force in living organisms and where does it come from? How is it manifested and how does it work? The Cartesian solution to splinter mind from body (dualism) and its implicit materialism appeared to many as spiritually lethal. Vitalist thinkers attempted to reunify the self: not merely of the elusive mind and body, but also of the passions and intellect, the heart and head, the self and other. Many philosopher tried to integrate mechanism with a superimposed vitalism. Others tried to find answers to the emergence of the separation of mind and body. How did they come to be separated? Was dualism part of God’s plan or the result of some other intervention? Vitalistic beliefs and ideas surged throughout history and culminated in the Bergsonian (1859-1914) notion of “élan vital.” For Bergson élan vital is the dynamic energy which guides the evolution of the living; it is the force behind any form of creativity, art, philosophy and sciences, and it blends and transcends matter and spirit (Chiari 1992).

Many succeeding thinkers, like the Phenomenologists Husserl, Heidegger, and Merleau-Ponty, continued to follow this metaphysical thread and worldview. “The world and life are given consciousness through the transcendental “I,” or the individuated essence of Being, apprehended as intersubjectivity” (Chiari 1992, 261). In the phenomenologist’s eyes some aspects of the real world cannot be known; they are not measurable, only apprehendable by a subject. They differentiate between phenomenal reality, which can be assessed and verified by measurements and noumenal reality, the aspect of reality that transcends the presence of an observer and that can only be experienced by the human being.

In nineteenth-century America, some popular movements operating outside conventional religious and medical institutions explored new dimensions of the realm of consciousness and health (Schmit 2000). Influenced by progressive ideas, social reforms, and the successes of science, they pursued the discovery of laws that would reveal the scientific secrets to health and the hidden spiritual foundations of life. The allopathic medical treatment model was still very primitive and medical practice often dangerous. This feature of that time helped popularize alternative medical systems like Mesmeric healing, Mind Cure, and Spiritualistic trance-induction methods.

Emanuel Swedenborg (1688-1772) and Franz Anton Mesmer (1734-1815), two figures of eighteenth-century Europe, were very influential in the efflorescence of these unorthodox American religious and medical movements. Swedenborg outlined a cosmology segmented into a hierarchy of different spheres of existence – ranging from gross

material to subtle and spiritual – and an entire cosmos that was interpenetrated with a transcendent spirit. His law of Correspondence described events in the spiritual world having corresponding manifestation in the physical world. Swedenborg believed that hidden spiritual laws were immanent and understandable and that one could improve one's lot if they were known.

Mesmer was a Viennese physician who created a medical system based on trance induction, mental cure, and a belief about vitalistic fluids underlying human health. With Swedenborg he forged a world view and sense of identity that was organized around an increasing interest in consciousness and powers of the mind. They affected the popular movements of Spiritualism and Mind Cure. They were very influential in the development of psychology and psychiatry and inspired the popular interest in altered states of consciousness, dreams, metaphysical or unusual occurrences such as sleepwalking and clairvoyant properties, and mental healing powers.

The Spiritualists' and Mind Curists' worldview of cultivating mental and spiritual affirmations, prayers, visualizations, and meditation to improve one's health and well-being stood against mainstream secular and rationalistic belief systems. William James (1842-1910) was fascinated by these insurgent popular medical, psychic, and religious phenomena and studied them with the methods of science. Through careful analysis of mental healing and experiments in applied hypnosis, he and his colleagues of the American Society for Psychical Research were able to elaborate and extend current theories of the unconscious mind and its various manifestations. From this consciousness-

oriented research physicians and psychologists from what has been called the Boston School of Psychopathology incited the practice of modern psychotherapy. Weaving together ideas about the subconscious mind; with cross-cultural perspective on religion and mysticism, James articulated a vision of the powers of the human mind and the nature of consciousness. By the 1920's research on consciousness and religious states would be replaced by the more materialistic and reductionistic methods of Behaviourism.

North American spiritualism and European vitalism are two historic examples of dissident spiritual views. In more recent times some physicists and astrophysicists tend towards a spiritual view of life, one which gave meaning and direction to evolution, and its self-regulating creativity. The metaphysical and teleological conceptualization of life that opposes entropy and gives meaning and direction to evolution managed to go on despite materialism and scientism. In physics Newton determined the forces controlling the fate of objects and saw them as lifeless. Leibniz disagreed and insisted upon an inner force the "vis viva" as the mover of matter, for only matter can move matter, and the spirit or energy which is able to move it is necessarily part of it. History has for a certain time decided in favor of Newton. Einstein's relativity theory ($E = mc^2$), on the other hand, asserts that every material object has an energy which is inherent within it. But as Mindell (2000) observes: "Newton's idea of lifeless matter still prevails in science, since energy is defined mechanically. Yet Leibniz's "vis viva" hovers in the background, behind the new tendency of scientists on the cutting edge of physics who are exploring where consciousness enters matter"(134).

With the rise of genetics and evolution, vitalist ideas disappeared almost completely except inside some departments of theoretical physics. Modern molecular biology ascribes life to an emergent property of biochemical processes and any vitalistic life force or energy field is deemed unnecessary and unacceptable. Nonetheless functional descriptions still fail to capture the organizing principle present in living systems, the kind of inherent wisdom which fuses together amino and ribonucleic acids into proteins, molecules, and organisms. New concepts of quantum theory (quantum coherence, quantum entanglement, quantum state reduction) are drawn to explain basic intercellular and intermolecular dynamics and to revise macroscopic physical systems. They form the new fields of quantum holism¹ and quantum vitalism (Esfeld 1999, Hammeroff 1997). The question is still open as to which quantum holism can be regarded to be universal in the physical realm or limited to the microphysical level. For Hammeroff (1998) life is a macroscopic quantum state: “Life is an emergent phenomenon involving macroscopic quantum superpositions which are, in reality, self-organizing blisters in fundamental spacetime geometry” (1).

At the quantum level where the existence of particles is determined by the presence of an observer, one is confronted with a subjectivity which makes possible a new type of knowledge that transcends the phenomenal. Mindell (2000) relates the indeterminacy of a quantum state, the unobserved state of a particle, to a dreamlike non consensual²

¹ The description of quantum states as superposed and entangled possibilities or tendencies that actuate by virtue of observation. All the possibilities that can happen to an observed system when it interacts with an observing system are described by the quantum wave function, a mathematical equation that englobes all actualities.

² The term consensual stresses the notion that reality is a cultural concept, not an absolute truth. Arnold Mindell (2000) adds a concept of non-consensus reality that encompasses all spheres of experience that get

experience of reality: “Because our normal state of consciousness marginalizes sentient, reflective processes, we become uncertain about the nature of reality...The important point is that reality rests on interactions between the observer and the observed at levels of experiences we do not always normally notice” (197).

The findings of quantum physics have inspired the physician Larry Dossey (1999) to formulate a new theory of medicine that includes the concepts of non-locality, indeterminacy, and complementarity and questions a reductionistic view of causality. He applies the phenomenon of entanglement of distant particles that can exchange their quantum state with no signal involved to explain distant or non-local healing. He views the principle of complementarity replacing a dual world of dichotomies. Dossey (1999) cites in his article the Indian physicist D.S. Kothari:

The Principle of Complementarity ...is perhaps the most significant and revolutionary concept of modern physics. The complementarity approach can enable people to see that seemingly irreconcilable points of view need not be contradictory. These, on deeper understanding, may be found to be complementary and mutually illuminating — the two opposing contradictory aspects being parts of a “totality” seen from different perspectives. (104)

Dossey questions the straight linear one-to-one relationship between cause and effect and suggests a circular mechanism of positive and negative feedbacks responsible for homeostasis. In Alfred North Whitehead’s (1966) account everything is interconnected and there is no rigid boundaries between things, thoughts, persons, and events:

marginalized (e.g. altered states of consciousness and foggy dreamlike states) in the process of shaping consensus reality by the more dominant parts of society.

... the togetherness of things involves some doctrine of mutual immanence. In some sense or other, this community of the actualities of the world means that each happening is a factor in the nature of every other happening. ...[C]onsider our notion of causation. How can one event be the cause of another? In the first place no event can be wholly and solely the cause of another event. The whole antecedent world conspires to produce new occasion. (164)

This suggestion of mutual immanence defies the philosophical prejudice of the scientific community against such vitalistic concepts as guiding entelechies, *élan vital*, and final causes. Yet Dossey (1987) advances that the idea of mutual immanence rests on modern physics and is needed to understand and treat diseases and to accommodate the increasing facts that don't fit the old models of a physicalistic and mechanistic view of humankind.

The ideas of Whitehead...might allow us to think of medicine in unorthodox ways: we might legitimately insert mind and consciousness as important factors in the world — including the world of bodies, cells, molecules, and germs;...we might begin to look seriously at the accumulating data in all medical subspecialties suggesting an important role for thought and emotion in the development of health or illness. (175)

Vitalistic notions prevail in concepts of Eastern medicine, Homeopathy, and in the field of complementary and alternative Western medicine. They describe the body's health and vitality in terms of energy and/or information which may explain some of the renewed interest in these alternative concepts. They further assert the need to regain a sense of the sacred which was traditionally a feature of the healing profession. With his "Dreambody" concept and his incorporation of quantum physics into conceptualizations of medicine Mindell (1984, 2000) opens a dialogue that embraces seemingly antagonistic views. The sacred and the profane come together. He differentiates between the everyday world of practical activities in which consensual views of reality reign and a more symbolic

numinous realm that is governed by more dreamlike events. Symptoms are seen as an attempt to compensate the one-sidedness of consensual reality and as a link to the world of sentient experiences. From Mindell's standpoint the most marginalized aspect of today's discourse about life and experience of life is the realm of Dreaming. Materialistic views dominate our current perception and experience of reality. From quantum physics he extrapolates a dimension of experience in which time is non linear and parts, events and ideas are entangled and non local. In this sentient dimension basic tendencies, moods, and atmospheric changes reign. Subtle influences and energies resonate throughout our bodies and manifest in slight discomforts and symptoms at the fringe of our awareness. They can later develop into full blown symptoms and diseases. A quantum or sentient medicine's aim, says Mindell (2000), is to discover the origin of problems before they manifest as symptoms.

To attempt to reduce questions concerning the sacred or the religious to psychology, sociology, history, logic, or scientific evidence ignores the mystery that lies at the root of life, and the innate sense of the sacred which is co-extensive with man. (Chiari 1992, 269)

The Role of the Individual and the Collective in the Historical Medical Discourse

The second dichotomy in conceptions of health runs along the lines between an individual and a collective sphere. It encompasses another long lasting polarity between two concepts. On one hand the concept of a proper balance of principles with disease a generalized phenomenon affecting the whole body and, on the other hand, the idea of disease as a localized disturbance with a specific causal agent. This latter divide was also

used as a threshold to discriminate surgeons as minor and the poor people's physician. Then since Greek medicine physicians with greater social prestige treated the general imbalance of humors and left the risky localized surgical procedures to others. The social movements of the Enlightenment and the French Revolution played an important role in changing medical practice and forced the two branches of medicine – surgery and internal medicine – together.

The thinkers who formed the Enlightenment (e.g. the German metaphysician Immanuel Kant 1724-1804, or Denis Diderot 1713-1784, the creator of the first encyclopedia) believed that human reason and intelligence would illuminate the path to knowledge and progress. They were scientists who after Descartes believed in secularism and were moved by the desire to question and test everything, from the purely scientific to the social. "To them, the social order was as proper to examine with the new philosophy as was the physical order" (Golup 1997, 59).

One aim of the French Revolution was to give medical care to all citizens, and to do this meant to open the hospitals to all citizens. The French Revolution also reformed the medical schools, opening them up to all students and bringing together the training of physicians and surgeons. The expansion of hospital medicine further allowed many patients to be treated in one place and a systematic compiling of the symptoms of the patients with the results of the autopsy after their death, thus creating a base for further rational associations of cause and effect.

On the other hand, disease was still thought of as an imbalance of humors and the therapeutic strategy was still to re-establish that balance. And even if the structural organization of medical care had changed dramatically, improvement in health did not come from the growth of scientific knowledge but from social changes coming from industrialization and the progresses in sanitation that came along with it.

The nineteenth century gave rise to great scientific discoveries and was a period of profound struggles between individualistic curative medicine and social medicine. It provided the context for an historical conflict between human suffering and illness as the consequence of social degradation and environmental pollution versus an individualistic medical approach to disease entities. Medical reforms were strongly influenced by the political movements of the 1848 liberal revolutions. They produced monumental social investigations on the conditions of the poor, which continue to influence contemporary social responses to health and illness.

The development of the “germ theory” by Louis Pasteur (1822-1895) and Robert Koch (1843-1910) paved the way for the idea that specific organisms cause specific diseases. It opened the door for future empirical treatment of infectious disease. For long, their discovery of bacteria causing wine to turn into vinegar and at the root of plagues like cholera and tuberculosis, was thought to be the major factor in eradicating the plagues and improving health conditions by the twentieth century. But today, the social changes accompanying industrialization, are perceived to have had more influence on health and disease in populations. Thomas McKeown (1979) argues that the infectious

plagues of the nineteenth century (tuberculosis, measles, whooping cough, and venereal diseases) disappeared with improvement in housing, water supply, food, and education. He showed that tuberculosis was declining already steadily from the 1830s before the introduction of vaccination and drug treatment. Nevertheless the controversy about the role of public health and individualized medicine in affecting health outcomes, the conflict between Hygeia and Panacea, and the polarity between the individual and the collective continues.

In England and France Enlightenment thinking was the driving force behind the social reforms of the sanitarians. In England, with the growth of industrial cities and as people were attracted to the cities, the combination of increasing population and urban crowding created a new working class with an immense health problem. 1815-1850 was the worst period of unhealthy urbanisation with population growth surpassing housing development and laborers living on average to only twenty-two years of age. Jeremy Bentham and Robert Malthus, social economists, came to the conclusion that it must be the conditions in which the poor lived that were responsible for their early age of death. Jeremy Bentham (1748-1832) is best known as the man who founded the theory of utilitarianism. He claimed that it was possible to decide by scientific means what was morally justifiable. He thought that through a calculation of pleasure and pain people could tell what was right or wrong, and that the motivations for health reforms had to rely on some sort of benefits for society.

Edwin Chadwick (1800-1890) Bentham's literary secretary and friend used a utilitarian approach to sanitary reform in Britain. He believed that if the health of the working population could be improved then there would be a drop in the numbers of people on poor relief and an increase in working laborers in the factories. He consequently embarked on a nation-wide investigation of public health which culminated in the sanitary report of 1842. The report later formed the basis of the 1848 Public Health Act. Chadwick used statistical data from the Poor Law Commission and demonstrated a correlation between the lack of sanitation and disease, high mortality rates, and low life expectancy. He and other social reformers used these facts to change the sanitary conditions of the poor and improve their health. On the other hand, however, these men weren't only interested in benefiting the health of the poor. Their sanitary reforms weren't only motivated by social concerns for the poor. They also got institutionalized to secure a cheap work force in the factories that were experiencing many early death of their laborers.

French sanitarians had seen death as a social disease. Louis René Villermé (1782-1863), one of the founders of epidemiology, first documented and ranked variations in mortality rates across different neighborhoods in Paris. He proved that these variations depended on social factors such as wealth and poverty dismantling the belief in disease as a "natural" phenomenon uninfluenced by human or social dynamics, a belief that still permeates many current health policies and "scientific" approaches to gender and racial health differences (Freedman 1999).

John Snow (1813-1858) in England simultaneously made a remarkable study in which he examined the distribution of cholera and the distribution of water by the private water companies of London. In 1854 he was able to investigate the source of a local cholera outbreak and link it to a polluted public water pump, the now infamous Broad Street pump. This confirmed his theory of a contagious agent causing cholera that was spread through the water system. Remarkably this discovery came before Koch's detection of the *Vibrio cholerae* in 1883. Nevertheless the most dominant beliefs of that time, that pervaded till the early twentieth century, associated cholera with divine punishment for personal and collective sin, and with weakened individual constitutions caused by overeating and sexual excess. The contagionists like Snow, whose models of transmission paralleled modern models of vector-based transmission, believed, on the other hand, that such diseases as cholera were transmissible from person to person. Other explanations linked cholera with filth, horrid housing conditions (e.g. the Hygienists in the Netherlands), or humidity and miasma (Tesh 1995). This alternative view of epidemics was that they are caused by atmospheric influence or 'epidemic miasma'. Epidemics were thought to be caused by bad air; "*mal aria*." Max von Pettenkofer (1818-1901), a German professor of hygiene, stressed the impact of environment, and emphasized that spread occurred without personal contact as the result of changes in atmosphere, vapor from the earth, rotting vegetation, or sewers and cesspools. His analysis of the south German cholera epidemic of 1854 led him to conclude that the cholera germ was a product of the soil. He offered a technical solution, namely a reconstruction of urban water systems in order to regulate water levels. Although flawed in his interpretation, his response brought a considerable improvement in health. The

debate about contagion went so far as to drive Pettenkofer to ingest a sample of cholera bacteria to prove his point. Why he didn't develop any symptoms is still unanswered. Later, miasma as a theory was refuted by the discovery of the living organisms that produced many diseases.

The conflicting theories reflect old and still existing polarities. Generalized phenomena leading to ill health were perceived in the environment, in form of atmospheric influences, and within the individual, in the form of constitutional weakness and imbalance of humors. Specificity of cause and effect was in like manner discussed as part of the environment, the disease causing agents or vectors, and as part of the individual, the specific organ showing the disease. The question about the importance of social factors was also already mingled in the debate. All these debates remain as vivid and significant as they were then. Today field theory has replaced the concept of miasma. The modern controversy between the role of specific genetic make ups and environmental factors is an outgrowth of the old discussion between doctors that stressed constitutional factors and others, like Friedrich Engels (1820-1895), who studied the social and health conditions of the working classes in England.

The early public health movements of the nineteenth century created the first secular and collectivist assumptions about health and illness. Early critics of capitalism (Rudolf Virchow and Friedrich Engels) saw disease as a collective and secular condition of social existence and deprivation in emergent industrialized and capitalist societies. For his analysis "The Condition of the Working Class in England in 1844," Engels (1892) used

data from Chadwick's report to blame deprivation and alienation of working-class slums for causing human disease. Durkheim (1952) later showed that in some subgroups of people committing suicide, suicide rates were closely related to degrees of social integration. He interpreted suicide as a socially triggered event, not as an action based on individual motives. Michel Foucault (1971) directed his attention to the function of concepts of disease and illness (such as the concept of madness in history) as components of social regulation of deviant behavior. His critique of the medicalization of deviance questioned the alleged neutrality and objectivity of scientific methods and concepts in the management of human affairs. The attempt to treat homosexuality as a mental disease is a classic illustration. The ignorance of social factors leading to hypertension in Blacks, the reduction of this social component to a genetic cause, demonstrates the danger of intrinsic racism that can be implicated in scientific concepts. The idea that social integration could affect health (suicide) was taken further with postwar community studies of mental health. Social integration was studied in terms of the health of the community, as the disruptive stimulus of a negative life event (e.g. death of a spouse), and the protective integration afforded by social support. Following Durkheim's line of research, the question was whether social support, or lack of it, had a direct effect on health or acted as a buffer against negative life events (Berkman & Syme 1979, Henderson 1980). Finally, Antonovsky (1979) provided with his concept of sense of coherence a further individualized notion of social integrity.

The Objective and Subjective Spheres in the Historical Medical Discourse

The history of psychoanalysis documents the discourse between the objective and the subjective spheres. Psychoanalysis emerged at the end of the nineteenth century in reaction to the dominant worldview. With its focus on the subjective experiences found in dreams, psychoanalysis can be seen in part as a reaction against overly objective cultural tendencies. At that time, the objective focus in medicine was culminating in the work of physicians such as Virchow, Pasteur, and Koch, who sought to prove that the only forces acting in the organism were physics and biochemistry. Freud induced a counter-movement against the prevailing scientific views by seriously considering language and the rediscovery of the subjective sphere, evident in his interest in the meaning and interpretation of psychological symbols and symptoms, the world of the subjective 'I'.

Psychoanalysis explained some symptoms as an expression of neurosis. Such symptoms were seen as a 'compromise formation' expressing the conflict between a forbidden desire and a censoring repressing force. The roots of these conflicts were believed to lie in the early development of the child. This psychodynamic theory was originally based on hydraulic metaphors of the conservation of psychic energy. If emotional processes were blocked (through unconscious defense) the same quantum of psychic energy would be diverted through the brain and other organs, resulting in increased physiological arousal and structural lesions.

The psychodynamic theories prepared the ground for other therapists to develop psychosomatic medicine, which for the first time introduced psychotherapeutic treatment

of symptoms. Psychosomatic medicine is based on the psychodynamic theory of illness causation in which psychological conflicts are transduced into bodily distress. Its model is organized around the following ideas: a) the primacy of psychological experience; b) the strictly individual and intrapsychic regulation of psychosocial actualities into physiological processes; c) a conceptualization of the self as independent and the individual as relatively autonomous. Thus, health and illness are defined in terms of the interaction of mental and physical characteristics of individuals in response to their psychosocial environment. Because psychoanalysis was based on causal and mechanistic theories, as well as Christian morals, psychoanalysts also reinforced the notions of guilt and blame in the realm of body symptoms.

Influenced by psychodynamic ideas, the expression of distress through somatic symptoms was later viewed as somehow more primitive, infantile or regressed. The construct of alexithymia described difficulties in identifying feelings, impoverishment of fantasy life, and excessive preoccupation with physical symptoms. Another more recent concept called somatic amplification refers to a tendency in hypochondriac patients to scrutinize their bodies and misinterpret the body sensations. These concepts tend to pathologize and disqualify patients with somatic symptoms and are sometimes used to deny them the ability for psychotherapy. In fact it is, in Kirmayer's and Young's opinion (1998), more an expression of the social and cultural context of communication, which emphasizes verbal dialogue and marginalizes body experience, than the sign of cognitive limitations or psychological defensiveness of the individual.

In 1977, Engel advanced the notion of a biopsychosocial model of illness that combined the various elements of the classical biomedical model with newer ideas from social science (Engel 1977). This concept sees disease as a chain of psychological factors, and the human being as a product of bio-psycho-social phenomena (Uexkuell, 1996). The overall personality of the diseased person, her life circumstances, behavior and emotions, are seen in their social, cultural, economic and ecological context. Newer findings in the field of psycho-neuro-immunology describe the interwoven relationship between immunity, the nervous system, and the endocrine system, linking mind and body and challenging the reigning concept that body and mind are separate. After over two thousand years of division, the promise of reconciliation between body and mind brings hope for empathetic understanding to the ill. In bridging the gap between body and mind, psychosomatic medicine helps explain an individual's suffering. What could only be expressed through the body in terms of symptoms is now explicable through psychosomatic thinking, which offers relief from hopelessness. The sufferings of the body and the illness experiences become more related and communicable. Seriously ill people can now actively participate in the healing process, and illness can provide a chance to react against the challenges of one's existence. As a result ill people gain increasing freedom. A person is no longer only the prisoner of an illness. The belief in the power of the spiritual, the psychological, the mental (mind over matter) can give remarkable hope to some patients and foster healing.

While the new psychosomatic approach has allowed insight and healing, it has also had the opposite effect. It has been used to put a new dimension of individual responsibility

upon the ill person. Repeatedly, the psychosomatic understanding of illness has been used to blame the ill for their suffering. As Susan Sontag (1978) writes, “patients who have unwittingly caused their disease are also made to feel that they have deserved it” (68). In the new psychosomatic view, the individual is often seen as responsible for disease, which is seen not only as a frightening natural event but as a consequence of one’s personal actions, emotions and life views. Health becomes a socially defined goal, disease a result of incorrectly lived life. Sick people are seen as those who failed to stay healthy. In this perspective, becoming sick is closely related to guilt and shame and is experienced as a defeat.

When the onset and outcome of disease are directly ascribed to the afflicted, sick persons are subject to censure for personal failures that “caused” their condition. Blaming the individual threatened by adverse health further stigmatizes and victimizes the ill person. The causal understanding of disease co-opts the psychological realm of subjective experiences and concentrates on the individual’s responsibility for her own suffering. For example, high-risk behavior is sought to lead to physical symptoms such as AIDS and repressed guilt feelings to the psychological condition of ‘neurosis’. The mechanical understanding of disease, now extended into the psychological dimension, is directed towards controlling the individual. The new psychosomatic view does not consider interpersonal relationships, community, culture and spirit as important forces that influence all levels of our well being. The risks of today’s technical society and of power and rank phenomena in relationship are not examined as potential contributors to illness.

Somatization, the concept of psychodynamic illness causation, reflects in addition the dualism in Western medicine. Biomedicine sharply distinguishes between objective evidence of disease through physical sign and laboratory testing, from patients' subjective reports of distress. Patients who complain of body symptoms in the absence of physiological confirmation are suspect. Real diseases, for which patients are not responsible, contrast with imaginary illness, which are then labeled with terms like hysteria, hypochondriasis and malingering.

The causal model of illness, which accuses and blames the individual, speaks loudly about our own culture and values. This view ignores the inherent complexities of disease, the cultural context of illness, and the environmental, socioeconomic and political forces influencing them. Susan Griffin rightly argues that a danger of the current practice of psychosomatic medicine is its paralyzing and concealing effect on 'the politics of ecology'. In perceiving each incidence of illness as a separate occurrence, whose etiology exists only in individual minds and bodies, environmental causes have been obscured.

The irony is that though a psychosomatic approach to medicine has the potential to heal not only individual illness, but in its wider implications, our shared alienation from nature, the denial that commonly infuses this perspective blends almost imperceptibly with another unconscious belief, the illusory sense that human beings are neither dependent on nor really part of life on earth. But we are part of the earth, and the effects of ecological damage can be seen in the human body. (Griffin 1999, 96)

The Role of Complementary Medicine

Eisenberg (1993) described the demographics, prevalence and patterns of use of unconventional or complementary medicine in the United States. Findings include the following: Americans made approximately 425 million visits to providers of unconventional therapy during 1990; expenditures associated with alternative therapies appear similar to non-reimbursed expenses incurred for all hospitalizations in the United States; and the users of alternative therapies do not inform their primary care physicians. These findings indicate that alternative medicine modalities occupy a large role in the self-health care of U. S. citizens. They also stress the fact that there is an information or communication block about self-health care efforts between the patients and their primary care physicians. These findings document the growing defiance towards conventional medicine I often come across in my medical practice. They call for a renewed effort of dialogue between health care providers and their patients. It is time to reflect upon the paradigms conventional medicine relies on. Mind-body dualism, the polarity between somatization and psychologization, and ignorance of differing cultural values are some of the reasons people mistrust the medical establishment. We need a new patient-centered medical paradigm, which sees and values the patient's subjective distress and connects it to her dreams, her social roles, her cultural values and norms, and her ecological context.

In most of the great traditions of medicine (e.g. Ayurveda, Chinese medicine, Homeopathy) there is no sharp distinction between body and mind. And in the case of Traditional Chinese medicine there is no notion of disease at all; psychology isn't

perceived as a separate realm. Symptoms, instead, reflect imbalances in bodily systems that extend into larger social and ecological systems and disharmony in relationships – not understood in terms of individual conflictual relationships, but in term of disturbances of a social order – is seen as a potent cause of illness.

Some other medical traditions are more open to competing paradigms and seem less troubled by the uncertainty of human experience. Taoists understood the cyclic nature of the world. In their thinking, the dynamic contrasts and polarities don't form independent units but are, like Yin and Yang, components of the body-self. They are in complementary opposition and in a continuous flow. The symbol of ouroboros (the snake who bites himself in his tail) and the metaphor of dancing Shiva, who with one hand creates the world to destroy it with the other hand, describe the melting pot of natural opposites. Complementary or natural opposites don't combat but rather complement each other. "They arise together, depend on each other while they exist, and perish together"(Vikkelseoe 1997, 32). Body processes are additionally seen in close interaction with Yin/Yang constituents of the group and nature. In India the body-self is held to be permeable to substances and symbols in social interactions. Health is a balance among the body's humors and the constituents of the outer world. In ancient Western society a similarly dialectical or balanced view existed of body, self and world. Further, most of these cultures perceive bodily complaints also as moral problems: they are symbols of disharmonies in social relationships and in culture.

Each medical tradition has its own validity and no one tradition covers all the different aspects of human misery. It seems clear that Western health sciences offer powerful tools for understanding and treating a lot of different conditions and open up new possibilities for positive change. Nevertheless, traditional scientific language introduces a culture-specific concept of the person, which may well conflict with the values of the patient's culture of origin. Besides that, if medicine is used to reinforce dualistic worldviews, it devalues many patients' sense of wholeness.

Turner (2000) offers a good summary of the principal issues in contemporary understanding of the concepts of health and illness from a social science perspective.

Regardless of the epistemological difficulties surrounding the notions of disease entities, there is widespread agreement that conceptions of disease have changed radically. It is no longer accepted that there is a universal taxonomy of disease or that medical categories are neutral. The general theories of health and illness that explain the medical condition of humanity are shaped and organized around the dominant ideologies and beliefs of a culture....At the everyday level, social experiences of illness are equally shaped and constructed by cultural assumptions and social relationships. At this level of lay beliefs, there is a continuing tendency to see illness experiences within a moral framework of blame and responsibility, a framework that attempts to help individuals, in a predominantly secular environment, to answer questions about life and death. (21-22)

We have seen that there are many conceptions of health and disease and ways in which they are codified into science. The newer and more modern materialism got rid of God and the soul while retaining the concept of matter being inert. Of course this thinking has proved enormously successful for certain purposes in certain areas. Biomedical materialism disapproved the concept of vitalism, of a vital power or life force. In this disenchanted worldview there is no place for mystery and magic. With the demise of the

divine and the numinous realm, with the denial of sentient experiences and our dreaming nature, all our inner experiences, which follow alternative values to those of objective materialism, are marginalized. With the denial of the idea of a force of life that animates our bodies and selves, there is no room for the therapeutic powers within ourselves, which help us regain force and overcome fatigue and sickness.

I imagine and strive for a medical system that is aware of its own values and norms, and how they may marginalize other experiences. I do not mean by stressing the social dimension of health to imply that individual behavior change and responsibility is irrelevant to improving health and preventing disease. I agree with Freedman (1999) that, “as a matter of human rights, individuals must be empowered to make the kinds of decisions about their lives that will enable them to protect their health” (p.232).

Nevertheless I think that today’s complex medical culture demands a change in how we perceive illness. Our subjective experience of symptoms and disease is predominantly influenced by social or cultural values and by the experience of contextual factors such as class, gender, ethnicity, educational level, age, and social support. And, I believe that a future view of health has to encompass mental, social, and spiritual well being. An analysis of the factors influencing health cannot be solely individual. Environment, economic constraints, and political structures affect health and illness and our experience of them. This expanded view will move beyond the individual to incorporate interpersonal relationships, community, culture, and spirit as intricate parts of disease causation as well as the concept of *salutogenesis*, the generation and maintenance of health.