

Radiology Ethic



The ethical dimensions of our professional endeavors are central in these deliberations. Traditionally, Western ethics has sought to discover, and to guide us toward, what is "right," and make moral judgments about what is "good." Ethics has sought to discover the "ought," which is often in conflict with the "is." Ethics asks questions about the values that we hold, about how

we ought to live and how humans ought to relate to one another and to the rest of nature. Insofar as one thinks critically about one's own moral views, or the moral values of others, or reflects on their justification, or compares them with rival attitudes, to that extent one is a moral philosopher.

In the first portion of this discussion, I will examine the Western philosophical tradition from which we descend. Second, I will examine a significant conflict in the modern medical paradigm. Third, I will speculate about the sort of new value system or new paradigm that might be needed if we are to appropriately meet the needs of our patients and society.

Western Philosophical Tradition

Prior to the Age of Enlightenment, the dominant world view in Europe was organic and the framework of science was based on the paradigms of Aristotle and the Church. With reason and faith as its main cornerstones, science endeavored to understand the meaning and significance of things. Subsequently, during the Scientific Revolution, major contributions were made in philosophy and science that changed the world view.

René Descartes, the founder of modern philosophy, experienced an illuminating vision. His vision was to construct a complete science of nature about which he could have absolute certainty. He began by doubting all traditional knowledge, the impressions of his senses, and even the fact of his body; until he reached the one thing he could not doubt, the existence of himself as a thinker. Thus, he arrived at his celebrated statement, "*Cogito, ergo sum*" ("I think, therefore

I am"). From this, Descartes deduced that the essence of nature lies in thought. This view had the startling consequence that the world is made of two incompatible kinds of substance: mind (or consciousness) and matter, which is extended and divisible. Thus, we are, in his view, an incorporeal or disembodied mind mysteriously located in a mechanical extended body. In fact, Descartes compared the human body to a clock. In this view, a sick man may be compared to a poorly made clock and a healthy man to a well-made clock. Thus, Descartes gave scientific thought its general framework; that is, the view of nature as a perfect machine governed by exact mathematical laws. As matter, the material universe had no intrinsic purpose, life, or spirituality. Descartes also shared Bacon's view that the aim of science was the domination and control of nature [1].

In contradistinction to the Cartesian world view, a modern system's view of nature gives value to concepts like organic, holistic, and ecologic; however, the Cartesian paradigm (of the mechanistic view of life) dominates our attitudes toward health and illness. The so-called biomedical model, which forms the conceptual foundation of modern scientific medicine, is firmly grounded in Cartesian thought. It regards the human body as a machine that can be analyzed in terms of its parts; disease is the malfunction of biological mechanisms, which are studied from the point of view of cellular and molecular biology; we physicians then intervene physically or chemically to correct the malfunctioning of a specific mechanism. This analytic and reductionist approach of the biomedical model has difficulty with the phenomenon of healing, a concept often considered outside the scientific framework; the biomedical model cannot give an account of the social, environmental, psychological, or spiritual dimensions of the human condition [2, 3].

Conflict in the Medical Paradigm

I will briefly characterize a distinction that seems preeminent in modern life, medicine, and radiology. It may be called the humanity vs technology conflict.

Humanity

In significant measure, illness is a loss of humanity. When one becomes a patient, one is suffering and fears dying (or a

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painful death) and one may no longer be free to order one's life; thus, one becomes dependent, vulnerable, and exploitable [4]. The fact of illness establishes our self-imposed obligation as physicians to act as moral agents, with particular sanctions to act in the patient's best interests, to relieve suffering. The patient is the beneficiary in the trust relation; we (physicians) are the trustees [5]. Our duty is to honor the patient's humanity and allow for one's individual uniqueness to be taken into account. We profess (or promise) competence, compassion, fidelity, and beneficence in that trust [6].

Technology

Advances in biology during the 19th century were accompanied by the rise of new technology. New diagnostic tools, like the stethoscope, were invented, and at the same time the attention of physicians gradually shifted from the patient to the disease. The mechanistic view of the human organism encouraged an engineering approach to health with an accompanying avoidance of the philosophical and existential issues that arise in every serious illness. An excessive emphasis on medical technology and the perception of it as the only, or most important, way to improve health results from this perspective. High technology, in which we are involved, has taken a central role in modern medical care. An examination of our increasing dependence on complex technologies reveals that technology has accelerated the trend toward specialization; has enforced the physician's tendency to look at particular parts of the body instead of the person with the illness; has shifted diagnostic evaluation to hospitals or high-technology centers; contributes to depersonalization, if not dehumanization, of patients, who often feel helpless and frightened; sharply increases health care costs; contributes to entrepreneurial medical practice and conflicts of interest (e.g., self-referral); causes unnecessary pain and suffering; contributes to "defensive medicine" and fear of litigation; contributes to the spellbinding mystique that surrounds the medical profession; and reflects the fact that our profession (like our society) denies death, the ultimate existential issue for humankind [2].

In the context of modern medicine's emphasis (and reliance) on high technology, to what extent do radiologists think of themselves as physicians and take responsibility for their role in the patient-physician relationship? I offer the following model of radiologic practice in its varied levels of function for our reflection.

At one level, the radiologist experiences physical proximity and psychosocial closeness to a patient, and perhaps to his or her family members, in a dialogue focused on the patient. The patient acknowledges the radiologist as an integral part of the health care delivery system and may remember the radiologist's name after several days. This level may correspond with the paradigm patient-physician relation.

At a second level, the radiologist has contact and discussion with a patient, perhaps during part of the informed consent process, but the interaction is brief and focused on a specific issue. The patient may not hear or remember the radiologist's name.

At a third level, the radiologist may have visual contact with the patient who is undergoing an imaging examination, perhaps a glance through the window of the CT or MR device, without interpersonal contact. At this distance, the radiologist probably lingers in the patient's mind as just another hospital employee. At this level, the radiologist may review the patient's chart for relevant information and/or make a note in the record about some aspect of the imaging data or patient care.

At a fourth level, the radiologist has no contact with the patient but engages in some form of dialogue with the patient's physician about the patient, the imaging data, or other aspect of the patient's care. This communication may take the form of a telephone call or face-to-face discussion.

At a fifth level, the radiologist may be concerned exclusively with current medical images, have no access to (or interest in) relevant clinical data or previous images, and have no contact with the patient or the physician other than through a written report.

At a sixth level, the consultative communication may take the form of "shadow"-based language that relies on words and phrases such as opacity, echo density, attenuation, or signal intensity. The radiologic report may remain descriptive, and important concepts such as anatomic designation, pathologic characteristics, likely diagnosis, and significance (of the findings) to the patient are not offered in the communication. Perhaps included at this level of function is the physical absence of the radiologist from the sites of the patient's examination and the interphysician dialogue; for example, because of telecommunication of images to the radiologist's residence.

Finally, a seventh level entails a view that the "patient" is merely an abstract entity, an object in the marketplace, a source of income. In this view, the patient-physician relation is perceived as a means; the end is perceived as material success, community prestige, or personal power.

In a culture in which the marketing orientation prevails, and in which material success may be the dominant value, there is little reason to be surprised that the patient-physician relation may follow a pattern of exchange wherein the patient is perceived as a commodity and the radiologist (or any physician) is remunerated for his or her skilled labor. This seven-level model, although imperfect and incomplete, represents a spectrum of separation or uncoupling between the patient and physician on which we all can be found, and it serves to illustrate the conflict between humanity and technology, as well as the conflicting values between a physician's obligation to the patient and self-interest.

New Paradigms

I assert that our dominant value system is inadequate and inappropriate for guiding our thinking about new ways to deal with current health care and societal crises. The problems that we have created cannot be resolved by the same mode of thinking with which we created them. A humorous story helps to introduce new thinking.

A customer at a restaurant is so well known as a borscht lover that whenever he comes in he is immediately served

borscht without having to order it. One day, after being served, he beckons to the waiter.

"Waiter," he says, "taste the borscht."

"You don't like it?"

"Taste it."

"Look, you don't like, so I'll change it."

"Taste it."

"Why do I have to taste? You don't like? So I'll give you a menu, you'll select something else, I'll bring anything at no extra charge. We only want to please you."

"Taste the borscht!"

"Look, I got 57 other customers here, I'm gonna taste everybody's borscht, I won't get any work done!"

The customer stands up.

"Will you sit *down* and *taste* the BORSCHT!"

The waiter sits down, looks around the table. He says, "So where's the spoon?"

The customer says, "Ahh!" [7]

The customer could have asked the waiter for a spoon. Instead he asked the waiter to examine a process, to participate for a moment in a different world view.

We are clearly in a paradigm shift—a profound transition in thoughts, perceptions, and values that form a vision of our reality. Systems theory looks at the world in terms of the interrelatedness and interdependence of all phenomena. In this framework, an integrated whole whose properties cannot be reduced to those of its parts is called a system [8]. Living beings, societies, and ecosystems are all systems. As living beings, we are self-organizing systems, intrinsically dynamic in nature. The principal dynamic phenomena that characterize self-organizing systems are self-renewal and self-transcendence. Self-renewal is the ability to continuously renew and recycle our components while maintaining the integrity of our overall structure. Self-transcendence is the ability to reach out creatively beyond physical and mental boundaries in the process of learning, development, and evolution [9].

Self-renewal and self-transcendence require that we think in new ways. New learning begins with curiosity and perhaps in seeing with new eyes. To whom should we listen in the process of acquiring this new thinking? In my view, we listen to persons who speak from different perspectives and in different voices. We listen to patients, lost in the system. We listen to women; the demise of patriarchy is in sight. We listen to children; they disarm us. We listen to our elders; they have a sense of what is important in the long view. We begin to examine the processes in which we are involved and perhaps question the very basis of the conceptual framework of our most cherished ideas.

Clearly, an organism that thinks only in terms of its own survival will invariably destroy its environment and, as we are learning from experience, will thus destroy itself [10].

The shift in our thinking from a world of objects to a world of relationships has far-reaching implications [11]. As we seek to become more holistic in our thinking, we integrate medical concerns with other societal concerns and see ourselves as part of a single moral community that is global in scope and extended in time. Another element of a new ethic concerns mindfulness and concentrates on mundane details of every-

day life. We must be mindful of everything we do, because in a highly interconnected world almost nothing is done without effect. Mindfulness is part of a strenuous morality, one that sees moral content in many activities that have been seen traditionally as morally neutral [12]. Such morality can be empowering, for it gives enormous opportunity to make a difference even in our everyday lives. I believe the ultimate reason for living virtuous lives is not for the sake of being virtuous, but because such a life will have a long-term effect on the collective good.

In summary, I have briefly explored the mechanistic Cartesian world view as the basis of our biomedical model, reflected on the conflict between humanity and technology, and speculated about new values.

As spiritual beings we are unable to separate ourselves from our connections to one another. As moral philosophers our continued growth is an ongoing and open adventure whose outcome is inherently unpredictable. We have the opportunity to use our creative and moral imaginations to find the answers that ethics asks: How should we live, how should humans relate to one another in the human community, and how should the human community relate to the rest of nature? Finally, as radiological physicians, to what extent should we value our relatedness and interdependence with our patients, and to what extent do our contributions in patient care, education, and research turn on that connection?

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