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The mission of *Ethics & Medicine* is to reassert the Hippocratic consensus in medicine as seen through the lens of the Judeo-Christian tradition on the conviction that only a robust medical professionalism is able to withstand the challenges of emerging biotechnologies and their clinical applications.

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EDITORIAL

ETHICS & *METAPHYSICS*?

DAVID C. CRAMER, MDIV

At the Center for Bioethics and Human Dignity's 14th annual conference last summer—'The Bioethics Nexus: The Future of Healthcare, Science, and Humanity'—world renowned Notre Dame philosopher Alvin Plantinga gave a plenary address entitled, "Science and Religion: Why Does the Debate Continue?"[1] In his address he reflected on some of the misguided assumptions on the part of both scientists and people of faith that serve to perpetuate this ongoing debate. While his talk was quite interesting and helpful, perhaps a question even more germane to the state of bioethics today would have been: 'Bioethics and Metaphysics: Why Does the Avoidance Continue?'

Indeed, after a later address at the same conference, another renowned senior philosopher in attendance, George Mavrodes, asked the presenter a question about his philosophical understanding of *personhood*. Based on the quizzical countenances of some of the attendees, one might have gathered that Mavrodes was speaking a different language! Afterward, when some of the attendees approached Mavrodes about his question, a friendly but animated discussion ensued. Finally, when the discussion came to a standstill, one of the attendees asked Dr. Mavrodes what exactly he was a doctor *of*. When Mavrodes responded, 'Philosophy', the debater threw up his arms and exasperatedly exclaimed, 'No wonder!' And that was the end of the discussion.[2]

Certainly the reasons medical professionals and professional philosophers sometimes talk past each other are many. Due to the highly technical nature of both fields, one might expect that mutual understanding would be difficult to achieve. Perhaps one reason (please forgive the oversimplification here), is that medical professionals deal with concrete people and diseases, while philosophers often seem more interested in abstract propositions and ideas. On the other hand, perhaps some of these abstract ideas may have direct relevance to actual people. At least philosophers seem to think so, or else they probably would not be doing philosophy. (I hear the remuneration for professional philosophers these days is not what one might think!)

At *Ethics and Medicine*, our mission is 'to reassert the Hippocratic consensus in medicine as seen through the lens of the Judeo-Christian tradition…' It is thus our conviction that metaphysical questions—such as one's definition of *personhood*—are of critical importance to how we respond to the many ethical issues that arise in the field of medicine.

To that end we are pleased to offer a series of guest commentaries on the nexus of bioethical and metaphysical issues. We begin in this issue with a piece by Sister Renée Mirkes, 'Reading Brain Scans for Intention Identification: A Tale of Two Anthropologies.' Mirkes describes a recent experiment in which fMRI readings were used to identify human intentions. She explains how the conclusions drawn from the experiment rest on a materialist anthropology. Contrary to these conclusions, Mirkes argues that only an immaterialist anthropology can ground 'human rights, freedom, dignity and spirituality'.

In our next issue, Scott Rae tackles the question, 'How much brain do I need to be human?' Reflecting on cases of neurologically impaired individuals, such as PVS patients, Rae rejects functionalist accounts of personhood and argues instead that to be a human person is to be a particular kind of *substance*, created in the image of God and endowed with intrinsic worth and dignity.

It is our hope that by reflecting on these important metaphysical issues, you may become better equipped to deal with the increasingly complex challenges facing the field of bioethics today. And if along the way you become a closet philosopher, we promise not let the secret out. **E&M**

Endnotes

1 Delivered on July 12, 2007 at Trinity International University, Deerfield, Illinois.

2 This conversation was recounted to me in personal conversation with two different eye-witnesses.

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GUEST COMMENTARY

READING BRAIN SCANS FOR INTENTION IDENTIFICATION: A TALE OF TWO ANTHROPOLOGIES

SISTER RENÉE MIRKES, OSF, PHD

On February 8th, 2007, the Max Planck Society released a statement summarizing the results of a study[1] headed up by neuroscience researcher, John-Dylan Haynes. According to the report, the Haynes experiment demonstrated "how and where the brain stores [a person's] intentions." The study's conclusion—"that spatial response patterns in medial and lateral prefrontal cortex encode a subject's covert intention in a highly specific fashion"[2]—followed from an experimental design involving eight human subjects, all right-handed and with normal or corrected to normal vision. The participants' brains were scanned using magnetic resonance imaging (MRI)[3] while the subjects were instructed (1) to decide (a) whether to add or subtract numerical figures that would eventually be supplied and (b) to hold that covert intention for a variable number of seconds; (2) to carry out the chosen task after two 2-digit numbers were presented on a screen; and (3) to indicate which task they had chosen by pressing the button corresponding to the correct numerical figure for the respective addition or subtraction task they had decided upon and performed. With the coupling of functional magnetic resonance imaging (fMRI)[4] to sophisticated decoding algorithms, the researchers were able to decipher the structural and functional neural correlates of the various participants' covert addition/subtraction intentions with 70 percent accuracy.

Here, I want to contribute to the ongoing public debate surrounding fMRI for intention identification not with an ethics assessment of its current and prospective applications[5] but with an eye toward resolving the larger socio-ethical issues it spawns. Toward that end, I contrast a materialist view of the human person and human thought with that of an immaterialist[6] anthropology. Second, I identify the basic error underlying a materialist interpretation of the data generated by the Haynes experiment and how an immaterialist perspective avoids that error. Third, I explain why only an immaterialist view of the human person satisfactorily resolves the crucial psychological/metaphysical questions raised by the Haynes study, viz., how the brain activity pictured in a fMRI scan *relates to* the person's mental act, his freedom, and his essential nature.

Ethics & Medicine, 24:2 (2008): 69-76.

Anthropological Backdrop: Materialism vs. Immaterialism

Neuroscientist and psychologist Alan I. Leshner argues that recent advances in real-time neuroimaging techniques have led to "the near demise of dualist views of mind and body."[7] In other words, the results of brain scanning techniques—making it possible to observe the structure and activity levels in various parts of the brain while the person is awake, thinking and behaving—impugn the theory that the mind or intellect is an immaterial causative factor behind thinking. When the Haynes study results are measured according to Leshner's pan-material ruler, the intention of each participant to add or subtract is seen as nothing more than an observable effect from neurobiological causes. And, as Leshner's logic dictates, if intention resides in the brain, then there is no distinction between the physiological substrate of the intention and the intention itself. Accordingly, Leshner avers that the empirical nature of fMRI scans for intention identification—what is observed in the brain scan is the intention—compels both scientists and non-scientists[8] to conclude that "their minds reside within their brains."[9]

Benedict Ashley, realist philosopher and educator, gives an opposing analysis of how the observable data from the Haynes study relates to its participants' covert intentions and, by extension, how the participants' brains relate to their minds.[10] Ashley's starting point is our commonsense experience of self as a singular person who is *at once* material (bodily) and immaterial (spiritual). On the one hand, we are aware that, like the other animals, we are composed of a body with its internal and external senses that confine us to a particular place and time. But, on the other, we also know that we differ from all other animals since, with our mind's capacity for abstraction, we can transcend those temporal-spatial limitations completely. The union of our material body and spiritual intellect or mind *requires* that abstract thought, though originating in the immaterial intellect, be accompanied by the simultaneous set of perceptual (material) thought processes produced by the secondary senses that are seated in the brain. In this way, the human neurobiological processes generate perceptual images from the particulars of sense data; this sense data provides the requisite material images for the formulation of concepts or ideas. In reference to the Haynes study, then, Ashley argues that the material, perceptual thought processes produced by the brain and visually recorded by the brain scan are the instrumental, not direct, cause of the participants' immaterial decision to add or to subtract. Therefore, we *might* (all technical and functional hurdles notwithstanding[11]) be able to infer the person's intentions from the spatial brain activity revealed in these scans—not unlike the way we can figure out what a person is thinking from what they are manifesting in physical words or signs.

I think the best way to understand the relationship between the mind-brain processes involved in human intention is to reconstruct their interactive dynamic in a particular decision, here, in an intent to murder.[12] The murderer, Mr. X, imagines his victim dead and compares this to imagining him alive and the mental stress of continuing to be annoyed by him in the future. Using his *imagination* in this manner, Mr. X refers to his *memory* of past injuries that the prospective victim (Mr. Z) did to him, which memories rely on his brain's *common* or *synthetic sense* to combine information about the real world gleaned from his primary, external senses of sight, smell, touch, hearing and taste. He remembers, then, what Mr. Z looked like, sounded like, smelled like, felt like, etc. Once his *synthetic sense* processes this particular sense information into a composite image, Mr. X's *evaluative sense* registers that image as hateful. But while he is imagining his victim dead or alive and the various ways he might kill him, Mr. X also imagines what it would be like to be caught, tried and electrocuted for murder if he goes through with his decision. All the while Mr. X imagines, remembers and evaluates these things, his *affectivity*—his emotions—are producing *bodily changes* through his hormonal system, some positive, some negative. It is important to note that, at the very same time Mr. X is thinking on the perceptual (brain) level just described, he is also *thinking abstractly*, or on a mind level, about all these things. He reasons, 'Mr. Z, the person I hate, is a member of the human race just as I am and, hence, to kill him is morally wrong and unjust.' But, as the moment of decision arrives when Mr. X knows he must act or abstain from acting, he performs another immaterial act of the will in continuing to imagine Mr. Z as hateful and thinking of him as a wretched individual deserving of death. When this last evaluative image is the center of his attention, Mr. X dismisses the possibilities of getting caught and punished as trivial considerations. So, he carries out his act of free will to murder by taking out his gun and shooting Mr. Z.

Ashley points out that if we were scanning Mr. X's brain during[13] the coterminous perceptual and conceptual thinking processes just described, the activity we would see in Mr. X's brain scan would not be a picture of his decision to murder for, obviously, we have no way of taking a picture of an immaterial thought. Hence, we would never be able to know directly from the MRI scan what is in Mr. X's spiritual intelligence and will, but would only be able to *infer*[14] these from studying those physical brain states that are the instrumental causes of his moral judgment and decision to kill Mr. Z. So, too, the real-time MRI scans of persons' brains during the act of decision-making, like those of the Haynes study, are not visual representations of their actual decisions but of their accompanying material acts of perceptual thought that are seated in the brain.[15]

What anthropology and human psychology—the account of the human person and human intelligence—ground the Leshner analysis of the Haynes experiment? If the mind (and its act of intention/decision) reside in the brain—that is, if human intelligence is a material organic power—there is no immaterial component of human intelligence and, by extension, no spiritual dimension to the human being. And if the human person is a material body only, then the nature of a human being and human intelligence can be explained comprehensively by material, i.e., bodily causes alone. And because humans only have a brain and not a spiritual intellect, they differ from animals not radically, but only in degree; not essentially, but only superficially. Human beings exhibit more sophisticated behavior and think better than chimps only by virtue of possessing larger and more physiologically complex brains, not because humans have some unique immaterial causal powers of intelligence and freedom making them superior to chimps.

What anthropological and psychological perspectives ground Ashley's critique of neural experiments like those of Haynes? As we have already noted, Ashley argues that the only way to fully account for the facts of conceptual thinking and freedom is to posit the direct causal power of an immaterial intellect (mind) that exists outside the material causal organ of the brain but works cooperatively with it. In this way, we see why (a) the brain and its sensory appendages are the necessary, though not sufficient, instruments of conceptual thought and (b) the immaterial intellect is the sufficient cause of abstract thinking, though dependent on the instrumental cause of the brain's perceptual thought processes.

In sum, it is the spiritual intellect or mind substantially united to a material body or brain that defines the human animal as an intelligent, free person. Identifying human beings as creatures who have the unique capacity for rational intelligence and freedom requires us to explain the difference between humans and animals as an essential, not a superficial, one. Human intelligence differs specifically from animal intelligence in being an immaterial causative factor rather than a material organic power. Therefore, humans differ from all other animals not superficially, or by degree, but radically. And that radical, specific difference of *sapiens* raises the human being above, i.e., a being superior to, all other members of the animal kingdom.

Philosophical Roadblocks to Understanding fMRI Data

The proximate philosophical error preventing materialists like Leshner from giving an adequate account of the human person and human thought (including the mental act of intention that is central to the Haynes experiment) is the failure to explain the facts of abstraction, true language, and self-consciousness. To imply that observable neurological processes in the human brain could ever be the cause of a person's capacity for these immaterial capacities is to conflate an inferior cause (the human brain) with a superior effect (conceptual thought). But simple logic dictates that the perfection of effects can never exceed that of their cause. And a human person's capacity for conceptual thought, notably evident in all scientific and mathematical thinking, with its ability to transcend time and space—empirical evidence of an immaterial dimension in the human being—exceeds the perfection of the sensate, material nature of the human brain's perceptual processes, dependent as they are on particular, material objects of thought in the here and now.

Materialists make a more remote philosophical mistake in maintaining that the mind (and, by extension, human intention) are in the brain. It arises from their untenable position, often unstated, that the unique human capacity for propositional language with its requisite capacity for abstract thought represents only a superficial difference in kind between animals and humans.

Correcting the Philosophical Mistake[16]

Since linguistic conceptual thought and free choice exceed the essential perfection of the material human brain and its sensate appendages, the materialist argument for the superficial difference of humans does not stand. Neither, of course, does Leshner's analysis of the relationship between the brain scan data and the study participants' intentions. Only an immaterialist view of the human person and human thought—one that recognizes an immaterial power in the human being that radically separates human nature from animal nature—adequately explains what it means to be human and what it means to think conceptually. Reading brain scans for human intention identification within an immaterialist anthropology is our only hope of adequately informing those conducting the study, those participating in it, and those reading about it online and in print of the radically different ways they ought to think about and treat human beings and animals.

First, humans, with their immaterial powers of intellect and will, are moral beings or persons. The human being, though rooted in the natural world, sounds through (*personare*) his or her body, thereby transcending his materiality. Animals, in contrast, defined directly by their materiality and circumscribed by the temporal, spatial, and determinative constraints of their perceptual (sensate) knowledge and behavior, are objects, not subjects; things, not persons.

Second, human beings, by virtue of their immaterial intellect, are emancipated from the determinative forces of basic instinctual drives toward food, sex, and drink. As a relatively free agent, then, the human person has the capacity to choose whether to satisfy or to deny these instinctual goals—or even to renounce them for spiritual ends. More comprehensively, the human person has the power to understand that happiness is the ultimate goal of life. No empirical evidence evinces the capacity in animals to transcend instinctual goals. Inferentially, then, we also conclude that an animal could neither conceive nor freely pursue a metaphysical, ultimate goal.

Third, human beings, by virtue of their subjectivity, possess intrinsic dignity. As a subject, a human being is to be loved as an end in himself, never used as a mere means to someone else's end. Animals, as part of the objective world, are not ends in themselves, and can in certain circumstances be used as means to extrinsic human ends.

Fourth, human beings—embodied persons dignified by their freedom and intelligence—possess inherent rights, rights that are theirs by virtue of their human nature. As the subject of rights, every human being has the corresponding responsibility to exercise those rights justly, that is, in ways that consistently honor the rights of other persons. Human beings have the responsibility to use animals, plants, and inanimate things in humane and intelligent ways. Animals, in contrast, have no intrinsic rights and, therefore, exercise no responsibility. Current concern by environmentalists clearly demonstrate that human technological control, both in positive uses and negative abuses, over our environment essentially transcends animal uses of the environment.

Fifth, accidental differences of race, gender, religion, developmental maturity, and acquired abilities notwithstanding, one human being is essentially equal to every other and shares equally in basic human rights. Even though human beings may not always treat one another in accord with this equality, a basic ontological equality of all humans is generally acknowledged.

Conclusion

What hangs in the balance in securing a satisfactory meta-ethical understanding of the brain scan experiments for intention identification considered here is the formidable and ongoing task of shoring up the metaphysical principles grounding human rights, freedom, dignity and spirituality. It follows, then, that the importance of giving center stage to such analysis in the current public debate surrounding neural research cannot be overestimated.

Endnotes

1 "Revealing Secret Intentions in the Brain: Scientists decode concealed intentions from human brain activity." (www.mpg.de/english/illustrationsDocumentation/documentation/pressReleases)

2 John-Dylan Haynes et al, "Reading Hidden Intentions in the Human Brain," *Current Biology* 17 (2007): 323-328.

3 Unlike x-rays and CT scans, magnetic resonance imaging (MRI) does not depend on radiation. Instead, it utilizes radio waves that are directed at protons, the nuclei of hydrogen atoms, in a strong magnetic field. Radio waves are directed at the protons in the organ or body part being studied. When the protons change their position in the magnetic field, they set up signals that are detected by coils in the MRI unit. A computer processes these signals and generates, first, one-dimensional and then three-dimensional images of the part of the body being studied.

4 In a fMRI exam, like that used in the John-Dylan Hanes study, participants are given a function to perform while their brains are being scanned. In the Haynes study, participants were asked to decide whether to add or to subtract. The resultant brain scans showed that the mental states associated with the participants' intentions could be correlated—70 percent of the time—with a respective addition or subtraction "signature" or template of increased metabolic activity in the area of the medial and lateral prefrontal cortex of their brains. The increase of neural activity in this region of the brain, including expanding blood vessels, chemical changes and delivery of extra oxygen, were recorded on MRI images. Then a computer, first, processed these blood-oxygenation-level-dependent (BOLD) functional MRI signals and, second, generated a series of images, each of which showed a thin slice of the brain. The computer compiled these serial images into a 3-D representation of the targeted brain region which were then analyzed from different angles on a computer monitor. Thus, "functional magnetic resonance imaging (fMRI) is a relatively new procedure that uses MR imaging to measure the tiny metabolic changes that take place in an active part of the brain." (www.radiologyinfo.or/en)

5 Using fMRIs for forensic evidence in a criminal case or to determine probation status for someone already in prison dependent on whether he/she intends to recommit the crime again raises the issue of whether these brain scans, even if perfected to an acceptable level of reliability, would be valid evidence. Since Anglo-Saxon law decides a criminal case on the basis of evidence that proves, beyond a reasonable doubt, that the one accused has actually committed the crime, serious reservations about the appropriate forensic use of fMRIs are obvious. Does allowing fMRI as circumstantial or even hard evidence mean that we are willing to convict people on the basis of their intentions alone (the dangers of which—the creation of "thought police," e.g.—are the stuff of sci-fi films such as *The Minority Report*)? How, practically speaking, will we judge an accused person's intention to murder someone if the scan cannot be done until after the alleged intention/criminal act? How will a post-crime fMRI that somehow reveals that the person did intend to murder someone take into account the possibility that that

person subsequently changed his mind and never carried out the intention? Currently, federal evidentiary rules prohibit all expert witnesses from testifying that a criminal defendant did or did not have the requisite intention to commit the crime (specifically, rule 704B: "No expert witness testifying with respect to the mental states of a commission or of a defendant in a criminal case may state that opinion or inference as to whether the defendant did nor did not have the mental state."). This rule would need to be changed before a fMRI could be used as circumstantial evidence in federal and most state criminal courts in proving the innocence or guilt of the person accused.

6 The term "immaterialist" anthropology should not be understood to mean that the human person is somehow disembodied, or without matter. Immaterialist here stands for a theory of *anthropos* that adequately accounts for the human being by its understanding that the human body is inspirited and the human spirit is embodied. Thus, the human person is a unitary being composed of both material and immaterial dimensions or causative powers that are inextricably linked. My use of "immaterial" is equivalent to the traditional notion of "spiritual" but unfortunately today that term is also used very ambiguously.

7 "It's time to Go Public with Neuroethics," *The American Journal of Bioethics* Vol. 5, No. 2 (2005): 1. Leshner is obviously using the term dualist rather loosely to refer to any view that defines the human person and human cognition as having both a material and a spiritual cause. Typically, overcoming dualism refers not to vindication of the notion that the human person is monolithically material, as Leshner seems to imply, but to the resolution of the failure of 17th century philosopher, René Descartes, to demonstrate exactly how body and soul are related, i.e., united within the individual person and a composite source of personal status and dignity. The commonsense approach of Aristotle and Thomas Aquinas demonstrates that the human person is a composite being whose soul or immaterial cause is substantially united to the body or material cause in such a way that the immaterial power informs the material body, making it an active whole with characteristic properties and performances, and thus defines the human being as a *rational* animal, specifically distinct from and superior to, all members of the animal kingdom.

8 The headlines of popular accounts of the Haynes study ("The brain scan that can read people's intentions," "Brain scan 'can read your mind,'") demonstrate that, without a hint of critical filtering, the populist print outlets mindlessly repeat a materialist reading of the Haynes study. Unfortunately, when such popular accounts are no more than an unexamined reinforcement of an inadequate reading of a study's conclusion, they not only fail to help their lay audience to properly critique the experiment but, more importantly, they fail to help readers to properly understand who they are: embodied persons who are rationally intelligent and free.

9 Leshner, "It's time," p. 1.

10 In this section I rely on Ashley's immaterialist philosophy of the human person and human psychology set down in chapters four and five of his book, *Healing For Freedom: A Christian Perspective on Personhood and Psychotherapy* (to be published by the Institute for Psychological Sciences, Arlington, VA).

11 For an excellent discussion of the formidable hurdles that would need to be overcome in order to untangle the complexities involved in the brain's perceptual processes, refer to: "Decoding mental states from brain activity in humans," *Nature Reviews: Neuroscience*, Vol. 7 (July 2006). Authors John-Dylan Haynes and Geraint Rees examine the long list of daunting technical and methodological challenges. First, since the neural base of the BOLD signal is not yet fully understood, we need to be cautious in interpreting the results of fMRI decoding. "Any information that can be decoded from fMRI signals might not reflect the information present in the spiking activity of neural populations." Second, the steep cost and limited transportability of current fMRI scanners "impose severe restrictions on potential real-world applications." Third, in all the human decoding studies done thus far, the decoding algorithm was "trained" for each participant individually and for a fixed number of mental states that were measured in a single recording session. The bewildering problem of developing decoding algorithms (brain activity templates) for real- world applications is that they must reflect "the invariant properties of a particular mental state" that "generalize over time, across subjects and to new situations" and across "different instances of the same mental state" with its infinite number of "contextual variations." Fourth, there is the question of adequately addressing superposition,

where a person’s immediate decision or mental states “coexists with simultaneously occurring changes in the current focus of attention.” Somehow these simultaneously occurring mental states must be able to be separated before they can each be decoded. Fifth, the problem involved with the fact that, though “the number of possible perceptual or cognitive states is infinite,” the “number of training categories is necessarily limited.” And, until this problem is resolved, brain reading will be restricted to “simple cases with a fixed number of alternatives, for all of which training data are available.” Sixth, since decoding of the brain is inversely inferential, “[e]ven if a specific neural response pattern co-occurs with a mental state under a specific laboratory context, the mental state and pattern might not be necessarily or causally connected. Just so when that response pattern is found in a real-world situation: the response pattern might not be “indicative of the mental state.”

Considering the daunting nature of any one of the challenges just described, each complicated by the ever present possibility of an error of personal judgment on the part of those interpreting the brain scan, it is easy to see why some aver that neuroimaging techniques are not now and never will be reliable and unambiguous proofs for the existence of certain mental states within a person’s brain. (Cf. Paul Root Wolpe, Kenneth R. Foster, and Daniel D. Langleben, “Response to Commentators on ‘Emerging Neurotechnologies for Lie-Detection: Promises and Perils?’” *The American Journal of Bioethics*, 5[2] 2005: W5.)

12 We could do a similar hypothetical reconstruction of the less involved intention studied by Haynes, i.e., the decision to add or to subtract. The dynamic of the latter would still reveal the same kind of simultaneous activity between the primary and instrumental causes of the mind (intelligence and freedom) and brain, respectively.

13 Of course, we know that the eventuality that Mr. X or any other person with criminal intent would submit to a fMRI while he is deciding to perform a crime is simply risible. That reality raises the question of what neuroimaging specialists would be looking for if they would scan the brain of a person accused of a criminal act after the fact. Would the function assigned to the accused be to remember his criminal intent? Could the accused resist doing so, even if he had made a decision to commit the crime?

14 Neuroscientists who evaluate the results of fMRI studies for intention identification do describe the scanned information as that which infers the person’s intention, almost as if they believe that the neurobiological substrate references some immaterial intention apart from the observed biological brain activity. But, if we held materialist neuroscientists to consistency with their position that the intention is in the brain, they would have to define the inferential nature of the biological brain substrate shown on the fMRI as referencing the biological intention produced by the brain! This reveals the basic reductionist error of their materialist interpretation of the content of brain scans for intention identification.

15 Ashley’s distinction of the four distinct secondary senses—synthetic sense, memory, imagination, and evaluative sense—is based on empirical analysis of human and animal behavior just as is that of the primary senses of touch, smell, taste, sight and hearing.

16 In this section, I am relying on the conclusions of Mortimer Adler in *The Difference of Man and the Difference It Makes* (Bronx, NY: Fordham University Press, 1993), which I have summarized elsewhere (Cf. “Is It Ethical to Generate Human-Animal Chimeras?” *National Catholic Bioethics Quarterly*. Spring [2006]:109-130). Adler’s arguments harmonize perfectly with those of Ashley and in a way that elegantly confirms our commonsense experience of who we are and how we think.

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GREY MATTERS

FROM BIOCHEMICAL SYNAPSE TO BIOETHICAL SYNTAX

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The synapse is a specialized junction through which neurons – the brain's fundamental cellular units – signal other cells. An examination of patterns of neural transmission at the synapse provides an interesting small-scale paradigm for considering principles of effective and ineffective communication among and within human communities. Following a general description of the synapse, this essay will draw parallels to larger realms of human ethical communication.

A typical synapse consists of a presynaptic nerve terminal and a postsynaptic density separated by a narrow synaptic cleft. The presynaptic terminal buds from the tip of an axon, which is a long, slender projection of a neuron designed to conduct an electrical impulse known as an action potential. Vesicles filled with neurotransmitters lie docked at the presynaptic terminal. The arrival of an action potential produces an influx of calcium ions, which triggers a biochemical cascade culminating in fusion of the vesicles with the cell membrane and release of their contents into the synaptic cleft. Neurotransmitters, such as norepinephrine, acetylcholine, dopamine, glutamine, or gamma-aminobutyric acid, which vary depending on the type of synapse, act as signalling molecules that diffuse across the synaptic cleft and bind to their target receptors to produce a transsynaptic effect. Breakdown or reuptake of the neurotransmitter terminates the signal.

The adjacent neuron's postsynaptic membrane appears as an elaborate, thickened complex of interlinked proteins gathered on the surface of a dendrite, which is one of the many arborizing extensions of a neuron. Neurotransmitter receptor binding alters the electrical potential of the dendritic membrane, which processes spatially and temporally the incoming barrage of synaptic impulses to form a signal directed toward the cell body. The dendrite receives both excitatory and inhibitory synaptic inputs. Once a sufficient number of receptor binding events occurs and threshold is reached, the postsynaptic neuron then fires an action potential. That momentary electrochemical flux becomes one nod from one neuron among the brain's hundred billion.[1,2]

Exquisitely precise networks of highly differentiated neurons integrate the signals flowing from synapse to synapse. In all there are approximately 160 trillion synapses in the adult human cerebral cortex.[3] A cubic millimeter of human cerebral cortex contains as many as a billion synapses. The brain's internal communication network of synapses underlies its capacity to interpret, reflect upon, and interact with the external world and communicate with other persons.

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Despite the brain's vast number of dynamically interconnected neurons, it rarely descends into internal anarchy. Like musical instruments arranged in an orchestra, cortical neurons precisely lined in layers and columns listen for their cues and may collect input from thousands of other neurons before breaking silence. Many regions of the brain are functionally organized into delicate systems of checks and balances. Groups of neurons specialized to perform a specific function bounce information to complementary groups which then reply with feedback. These neuronal systems engage in planning, modeling or rehearsing exercises so that the coordinated response is finely tuned. From this symphony of synapses arise perception, thought, language, emotion, reasoning, belief and decision. The well-functioning synaptic brain draws from various knowledge resources within its memory banks, heeds its history, studies the signs of external reality, follows tested principles and anticipates outcomes. Perhaps the synapse with its robust relationships holds lessons in teamwork that could be instructive to the medical profession, bioethical discourse, and society at large.

The brain's capacity to retain memory has been linked to synaptic plasticity. There is evidence that dynamic remodeling of the synapse, growth of new synaptic connections, and strengthening or weakening of existing synaptic connections underlie learning and memory as well as the development of some chronic sensitized pain and anxiety states.[4,5] This synaptic flexibility entails benefits and risks similar to those encountered in the dynamics of interpersonal, intercultural and international human relationships. Individuals may choose to revise and strengthen favorable habits of communication in ways that promote healthy communication and minimize misunderstanding among persons. Society may choose to develop and reshape institutional systems of information sharing in ways that promote rather than frustrate human flourishing.

There is an intricate division of labor within the brain. Some neurons are tonically active, imparting through their synapses a steady, consistent message. Other neurons are phasic, waiting their turn until the right time to fire synaptic bursts of information. Still other neurons are fast-spiking. One might expect that fast-spiking neurons would be hair-trigger sentinels that respond promptly to novelty or potential danger and signal an immediate alarm, but that supposition would be incorrect. Fast-spiking neurons, in fact, are inhibitory.

Approximately 20% of cortical neurons inhibit rather than excite their neighboring neurons.[6] Synaptic inhibition is essential to cortical processing, and inhibitory neurons are especially diverse in morphology and function.[7,8] Inhibitory interneurons in the somatosensory cortex, for example, selectively suppress irrelevant input, filtering out incidental distractions and unchanging sensory stimuli.[9] This allows the brain to focus. The brain, it would seem, values restraint. It values restraint not with the goal of inaction, but rather with the aim of achieving a controlled balance of calmness and intentionality.

Bioethics also expresses at times inhibitory judgments. Ethical principles necessarily impose certain limits on what should be done with biotechnology in the responsible service of human interests. In Oakland, California several years ago, a scientist attending the Center for Bioethics and Culture conference on Technosapiens asked a panel of bioethicists, "Must bioethics always say no?" This author's reply was, "Well, no."

Inhibitory systems such as those in the frontal lobes exert judicious control over subordinate brain systems which, if not restrained, could lead to unbridled and abnormal behavior. The famous case of Phineas Gage illustrates this point. Gage, a previously capable and even-tempered railroad construction foreman, sustained a devastating injury to his left frontal lobe when an explosion sent a metal rod through his skull. Following the accident, Gage became impatient, capricious, irreverent, profane, unable to process his emotions or to assess the future consequences necessary to make rational plans.[10]

Pathological activity at the level of the synapse is also instructive. Impaired release of a needed message may produce a null effect. Botulinum toxin, for example, blocks the release of the neurotransmitter acetylcholine from presynaptic nerve endings at the neuromuscular junction, causing paralysis. In other situations, incoherent neuronal signalling may generate an inconsistent effect. Antibodies to the acetylcholine receptor in myasthenia gravis, for example, block the arrival of the neurotransmitter on the postsynaptic terminal, causing intermittent or fatiguable weakness. At the level of ethics, silence in response to injustice can weaken society.

Synaptic overstimulation can be as detrimental as understimulation. Cocaine, for example, interferes with the synaptic reuptake of the neurotransmitters dopamine, norepinephrine and serotonin, leading to an excessive amount of dopamine in the synaptic cleft, which causes intense stimulation of the central nervous system and extremely dangerous mental and cardiovascular effects. Another example of synaptic overstimulation is epileptic seizures, in which susceptible individuals experience episodes of hypersynchronization of cortical neurons, leading to convulsions or other involuntary brain attacks. Such excesses can be devastating to individuals. For society, aggression, violence and other forms of excessive behavior are sometimes preventable through gentle communication, withholding the means to harm, or implementing restraining factors.

Persistent synaptic signals can also occur abnormally. An example is chronic neuropathic pain. Long after acute bodily injury has ceased, sensitized central sensory systems may perpetuate the experience of pain, whether at rest or in response to ordinary sensory inputs that formerly were not painful. Similarly, synaptic sensitization is partly responsible for some forms of persistent anxiety such as post-traumatic stress disorder, in which the individual experiences lingering apprehension and autonomic arousal years after an emotionally traumatic event. These disorders cause much suffering. Their experience is often intertwined with personal memory, body image and identity. Touching on these areas in conversation requires the utmost in delicacy and compassion. For society, as for individuals, sensitive issues often relate to remembered historical events that shape cultural identity. Approaching them in dialogue requires the utmost in mutual respect and empathy.

Some types of blindness have been linked to specific molecular synaptic defects.[11,12] Analogously, some types of societal misconceptions have been linked to misleading communication in biased journalism.[13,14]

It takes at least two neurons to form a synapse. The neuron does not cogitate alone, nor does the brain reason in isolation. Cortical neurons are richly interconnected through an abundance of synapses. As far as neuroscience has determined, there is no one area in the brain that has access to all the brain knows. Similarly, in society no one group of people has exclusive possession of all knowledge or access to all truth. Solving complex ethical problems requires a broad conversation. Wise decision-makers do not limit their information base to communication drawn from within their own specialty but are receptive to the ideas, experience and perspectives of others from diverse backgrounds. This, too, is a brain-based principle, as neurons learn not only from synaptic inputs from other neurons but also from their connections with all manner of peripheral receptors in touch with the rest of the body and with the external world. These receptors transduce information about light, sound, movement, pain and temperature into the common neuronal language of electrical signals.

The synapse merits admiration as a compact locus of communication among neurons and between neurons and other cells. The synapse also vibrantly displays biological principles of effective information exchange. Some features of the elegant design and disease failures of the synapse are relevant to understanding and improving upon human communication, whether it be habits of explicit or nuanced language, electronic messaging, medical conversations at the bedside, or ethical discourse. In so doing, it is also important to keep in mind that models have limitations. It would be a mistake to reduce the meaning of human communication to what occurs at the nanometer scale of the synapse. Even so, history suggests that humankind still has lessons to learn about harmonious communication. The simple synapse may contain useful pointers.

Amidst a multitude of synapses, few neurons ever play an individual role. Neuroscience has discovered, however, that, in some instances, the voice of even an individual neuron can make a difference.[15] Endowed with so many synapses, one person can make a world of difference.

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CLINICAL ETHICS DILEMMA

IS IT PERMISSIBILE TO FORGO LIFE-SAVING DIALYSIS?

ROBERT CRANSTON, MD, MA

The following consultation report is based on a real clinical dilemma that led to a request for an ethics consultation. Some details have been changed to preserve patient privacy. The goal of this column is to address ethical dilemmas faced by patients, families and healthcare professionals, offering careful analysis and recommendations that are consistent with biblical standards. The format and length are intended to simulate an actual consultation report that might appear in a clinical record and are not intended to be an exhaustive discussion of the issues raised. Column editor: Robert D. Orr, MD, CM, Consultant in Clinical Ethics, CBHD.

Question

Is it permissible to forgo life-saving dialysis in this man with a stroke based on his family's refusal?

Case

Herbert is a 75-year-old retired engineer who went to the Emergency Department two weeks ago with leg pain, shortness of breath, changed mental status, and mild left-sided weakness. Work-up on admission showed an oxygen deficit and a lung scan showed that he had had a pulmonary embolus. Past history shows that he had coronary artery bypass graft surgery three years ago with multiple complications — dialysis for two months, ICU for four months, hospitalization for a total of five months.

On admission two weeks ago, he was treated with oxygen and with heparin to prevent further clotting. Two days later his left-sided weakness progressed to full paralysis, and a CT scan of his brain has shown a large, non-hemorrhagic stroke, presumably from a blood clot in spite of the heparin. He has had no neurologic improvement in the subsequent 12 days. He appears to have minimal awareness. He has also had deteriorating kidney function and will need dialysis if he is to survive. His family has struggled with decisions and has now requested limitation of therapy — no CPR, no intubation, no dialysis — believing this would be consistent with his wishes. Since his neurologic condition is stable, his physicians are somewhat uncomfortable not using dialysis to prevent his death.

His wife, son and daughter-in-law met with the ethics consultant. They describe him as optimistic, vigorous, energetic, even "hyperactive." He loves life and is well loved by family and friends. He has made it clear to them on more than one occasion that he would not want to go through another illness like his protracted hospitalization and dialysis three years ago. When his wife was in a

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convalescent home for a few weeks last year, he again stated that they were to "let me go" if he were to be "stroked out like those patients." His nurse reports that he is intermittently able to interact, and on one occasion he wrote on a clipboard that he wants to die and "go to God." He is a devout Christian and his family believes he is spiritually ready to die. His wife says that if she were to choose what she would want for him, she would request dialysis, full aggressive therapy, and eventual transfer to a rehabilitation facility so that he could live, even if disabled from a stroke. But she recognizes his right to choose limitation of therapy, and she will reluctantly accept that. Her son and daughter-in-law are in agreement that his wishes should be followed.

Discussion

In American medicine, autonomy is honored as one of our most revered tenets. An essential element of autonomy is the precept that as healers we are not empowered to touch, treat, or invade another person's body against his or her will. Emergency care to save a life presumes consent, but otherwise consent must be obtained from the patient or an appropriate surrogate decision-maker prior to treatment. When a patient is unable to make an autonomous choice, the appropriate standard is to use "substituted judgment," i.e., we are to make the decision we believe the patient would make, based on his written instructions, his verbal expression of wishes, or an understanding of his values.

This vignette does not tell us if Herbert has completed a Living Will or Durable Power-of-Attorney document. Assuming that these legal documents have not been completed, in most states the next-of-kin is authorized to make medical decisions for the patient. Specifics vary by state, but generally the patient's spouse is authorized to make these important decisions, with input from the patient's physicians.

In this case, Herbert had ample opportunity to examine the option of dialysis, having already undergone this himself, and had clearly expressed his will to not undergo this again. Additionally, he directly observed patients who were left with disabilities just like those he is likely to have should he survive this stroke.

His written communication during this hospitalization should also be considered, though we might question his decisional capacity at the time this was written. His capacity may have been compromised by medication, depression or other circumstances. It would be wiser and safer to consult with his designated decision-makers, and not base our treatment decisions solely on his questionable communiqué.

The fact that the children are in agreement with their mother is very helpful. Bitter family arguments sometimes center on difficult end-of-life choices like this. While it may be tempting to consider societal issues, such as allocation of scarce or expensive resources, these are policy matters that should not be made at the bedside.

Fifty years ago, Herbert would probably not have survived for two weeks. He is still alive, and the issue of dialysis has been raised, because of technological advances. Because something is possible and available, however, does not automatically mean that it is wise for the patient, the family or our society. This rejection of the "technological imperative" ("can do" therefore "must do") leads to more dilemmas.

This consult asks: "Is it permissible to forgo life-saving dialysis in this man with a stroke based on his family's refusal?" However, this decision to forgo dialysis is not based on the family's refusal, but on Herbert's refusal. He was asked this question by the circumstances that had already presented themselves to his wife and to him. He answered the question with a clear "No!"

Recommendation

From legal, ethical, and professional perspectives this patient's wife has clear authority to forgo dialysis for her husband. This decision may or may not end in death, but in either case, it remains the prerogative of the patient and his surrogate. If his doctors were to perform dialysis on Herbert against his will, they would be making a serious error.

Christian Perspective

Some Christians believe that life should be preserved at all costs. (Some other religions and some sects also believe that this is extremely important.) This approach has been labeled a "vitalist" stance. God intervenes in the affairs of men, the argument goes, and that means that we are compelled to preserve any opportunity for God to perform a miracle. This position may be especially important to believers at the bedside of a non-believing family member. They might hope that a delay could allow the sick patient to find Christ, and thus any expenditure of money or time would be worth it. (In Herbert's case we know that he is "spiritually ready to die".) The obvious rejoinder would be that God is not limited by technological, physiological or time constraints, and that if he plans to intervene he can easily do this without dialysis, intubation or CPR.

While Herbert's death may bring great grief to his wife and family, they can rest in the knowledge that Herbert himself made these difficult choices, that he was not assaulted against his will, and that he will now be with God. They will meet Herbert again in glory.

Follow-up (editor)

During a period of relative mental clarity, Herbert's doctor, wife and son met with him to discuss treatment options. By way of head nods and finger squeezes, the patient made it clear that he did not want dialysis, even if that meant he would die. He had no objection to other measures (antibiotics, fluids and nutrition, physical therapy). He remained comfortable, but with diminishing function and alertness. He died seven days later.

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ETHICS IN THE EMERGENCY DEPARTMENT

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Abstract

Emergency Medicine (EM), the branch of medicine that deals with the evaluation and initial management of trauma and acute sudden illnesses, is a relatively young and dynamic discipline. Medical ethics is inter-twined with the concepts of professionalism and serve as the mortar for professional behaviour for Emergency Physicians. The central concept of ethical practice in the Emergency Department (ED) is discussed here, including principles involving Beneficence, Autonomy, Fairness, Nonmaleficence, Informed Consent, Refusal of Care and Futility. A general framework in approaching an ethical problem in the ED is put forth, which can be adapted appropriately to individual situations.

Key words: ethics, emergency medicine, autonomy, beneficence, informed consent

Introduction

The basic professional obligation of beneficent service to humanity is expressed as every physician's oath. In addition to this general obligation, emergency physicians (EPs) have certain ethical obligations that stem from the unique features of the practice of emergency medicine (EM).

Ethics describe the core values upon which a profession is based. In medicine, this includes the relationship with patients, colleagues, students, the public, pharmaceutical companies and medical institutions.[1,2] EM represents a very complex and variegated area of medical practice, where patients frequently may have received some form of treatment by non-physicians (eg. paramedics, first responders) outside the hospital and after management in the Emergency Department (ED), are either discharged or admitted for inpatient management. The emergency care rendered may comprise of highly invasive interventions which need to be carried out without first obtaining informed consent from patients or their surrogates. Even previously expressed patient preferences, including advanced directives, can be overlooked when not immediately and readily available to the EPs. In other specialities, there is more often the benefit of obtaining informed consent either explicitly or implicitly.

The unique ethical perspectives encountered by the EP have not been dealt with adequately in the literature pertaining to medical ethics. The ED patient may come for treatment not because of his choice but due to the urgency and acuteness of the problem. Most often in an emergency he would have to make a decision to go to the nearest clinic or hospital instead of to one of his choice. The ED physician would most likely not have a pre-existing physician-patient relationship with this patient. For this patient, the ability to pay is not an issue considered up front. Emergency treatment will be rendered first as deemed appropriate. Decision making time for any procedure he may require is short.

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Decisions are often being made to 'play safe', many times erring on the side of caution.

Medicine is indeed a moral enterprise. This means that besides the necessity of being technically competent and knowledgeable, EPs and teachers of EM must also embrace the appropriate ethical practices and act in a professional manner. This will enable them to make a reasoned analysis of ethical conflicts and develop skills to resolve ethical dilemmas in an appropriate way.

Unique Duties of Emergency Physicians

The special setting and goals of EM can give rise to distinctive ethical concerns. The potential for ethical problems is exacerbated by the timeframe for decision making, by the frequent lack of complete information and by the increased incidence of impaired cognitive abilities amongst the ED patients.[1] When patients arrive at the ED, EPs have little time to gather detailed information and data. Instead, quick decisions and actions, sometimes guided by predetermined protocols, must be undertaken. EPs have no prior relationship with their patients as they arrive in the ED unscheduled and in crisis. EPs need to have a very good and close relationship with the pre-hospital caregivers who bring the patients in, and also with physicians from other disciplines, nurses and other healthcare professionals. Inter-professional norms of conduct will thus apply. EPs the world over also seem to have been ascribed the social role and responsibility of acting as caregivers for these patients who have no other access to healthcare. This represents almost a societal duty. EPs are also a valuable resource for the community in pre-hospital care, disaster management, toxicology, cardiopulmonary resuscitation, injury control and other related areas, by virtue of their broad expertise and training. It is all these special circumstances that shape the dimensions of ethics in EM.[2,3]

The EP-Patient Relationship

The physician-patient relationship is the moral centre and major element in bio-medical ethics. However, the unique practice of EM and the diversity of EM patients pose special considerations. For example, a patient's decision to seek emergency care is based at times on the institution's reputation, accessibility or assurances rather than on personal preference. Sometimes ethical considerations are over-ridden by legal requirements, such as a properly executed search warrant. Another interesting scenario might be when medical examination is necessary to prevent harm to other members of society.

The following are principles which may be applied in handling ethical issues related to patient care in the ED:[2,4,5]

A. Beneficence

EPs serve the best interest of their patients by treating and managing as well as informing them of their conditions. EPs respond quickly to acute illnesses, treat injuries to prevent and minimise suffering, minimise loss of function and protect life. In delivering these goals, the EP serves the principle of beneficence, i.e. the obligation to contribute to the welfare of the patient. When a patient is unable to make an autonomous choice, the EP has a duty of beneficence. Beneficence is usually considered to rely on an objective view of what would be best for the patient, whereas respect for autonomy (see below) identifies what the patient subjectively considers to be his best interest. The concept of 'best interest' is linked to well-being/ beneficence but includes considerations wider than purely medical risks and benefits, such as the religious and cultural interests of the patient, e.g. a Jehovah's Witness patient who refuses treatment using blood products. Does the principle of respect for patient autonomy override that of beneficence? If a patient becomes unconscious in the ED, then knowledge of what he would have wanted in the circumstances is part of the assessment of what is in his best interest. In a cardiac arrest situation, the EP will carry out a wide variety of procedures and treatment, often without seeking formal approval and consent from any legal representatives of the patient. All this is done with the good of the patient in mind and reflects beneficence.

B. Autonomy

This refers to the obligation to respect the choice of others, e.g. the patients' right to have sovereignty over matters pertaining to their bodies. The EP must instill trust with respect to privacy and confidentiality in the minds of patients (and/ or family), so that information will not be withheld. At times, under certain circumstances, it may be necessary to separate the patient from the family. By the same token, to act autonomously, ED patients must receive sufficient, pertinent and accurate information. It is the EP who conveys this information to them in order for them to make rational, informed choices, among the various diagnostic options. EPs should not overstate their experience or abilities or those of their colleagues. Nor should they overstate the potential benefits or success of certain procedures. They may have to treat without getting informed consent if the intervention is necessary to prevent death or serious harm. However, when initiation of treatment can result in serious harm, informed consent must be obtained. Special moral issues may arise in the care of the terminally ill or in those with certain strongly held beliefs (e.g. Jehovah's Witness). Their decision may appear irrational to the EP managing the acute condition, but this is internally consistent with the beliefs of the patients. EPs must be willing to respect a terminally ill patient's decision to forgo life-prolonging treatment, as expressed in a living will or a "Do Not Resuscitate" order, appropriately executed on behalf of the patient. EPs can also assist families in decision making regarding organ donation, by themselves understanding the established criteria of the state or country.

C. Fairness

EPs should act fairly towards all persons and respect all regardless of gender, socio-economic status, cultural background or ability to pay. No patient should receive sub-standard care. The concept of 'fairness' is indeed broad and must be taken into consideration together with all the other ethical principles.

D. Nonmaleficence

Nonmaleficence means ‘not to harm or cause harm to patients’. It represents the key to maintaining physicians’ integrity and patients’ trust. EPs must ensure the safety of the patients in their care as far as possible within their capability. An additional responsibility for EPs is to protect themselves and their co-workers and patients against violent acts by any known perpetrators, other patients and visitors. When violence is beyond that which they can manage, the authorities (e.g. security officers or police) may have to be brought in. EPs must protect patients from third parties who place these patients’ health at risk in any way. Physicians who lack training in the practice of EM should not practice unsupervised in the ED setting.

In certain circumstances it will be necessary to call upon an inpatient colleague or specialist from a certain clinical discipline, when the knowledge and skills of the EP in the management of a particular patient becomes limited. This might be needed, for example, in a case with a leaking abdominal aortic aneurysm (following the diagnosis having been made) or the need for cardiovascular intervention (e.g. PTCA) in an acute myocardial infarction patient. This principle is commonly applied in many institutions and should not be viewed as ‘weakness’ or result in an inferiority complex among EPs. It relates to the issue of patient safety and collaborative teamwork across the disciplines.

E. Patient Responsibilities

There are two sides to any relationship. Patients too have an ethical responsibility towards the EP in the EP-patient relationship. They must foster a sense of understanding and trust in the EPs in order to achieve a satisfactory relationship. They must participate actively in their care and collaborate and cooperate with their EPs. Patients must also strive to respect triage decisions and the need to prioritise ED patients.

F. Informed Consent [6]

Consent to treat lies at the heart of the patient-doctor relationship. The patient in the ED relies on the EP’s knowledge, advice and expertise, but he must also decide whether to accept or reject the options put forth. In the ED, another unique factor is the limited time for such decision making processes. Informed consent is the process by which a patient receives all pertinent information necessary to make a rational, autonomous choice. Patients have to comprehend and make the choice free of control of others (voluntary action). This can be achieved when patients are competent to accept or dissent to all or part of a proposed intervention and are thus able to sign consent forms. For those who are not competent to make the choice, a surrogate or appropriately assigned next of kin will assume the responsibility. When the next of kin is not immediately available, attempts are made to contact them by acceptable modes of communications. In fact, most patients in the ED are encouraged to confer with their families or next of kin who accompany them. At times, patients may request for the EP to make the decision for them.

In implied consent it is presumed that every rational human wants to live as long as possible. Some however, may choose not to if life is 'not worth living'. When a patient incapable of giving consent (e.g. altered mental state, head trauma, under the influence of drugs or alcohol) is brought to the ED, the EP has no way of knowing whether the person he is trying to save, when saved, will have life worth living. What does the EP do in these circumstances? The best action in the ED would be where the 'greatest good is done for each individual patient' by applying the principle, 'what would I choose to do if I were the patient?' and at the same time adhering to the standard ethical principles in practice.

G. Futility

The exact definition of futility is still being argued in the literature. It is often based on common-sense notions and widely accepted statistical assumptions about acceptable levels of probability. Futile treatment refers to that which merely preserves permanent unconsciousness or that fails to end a patient's total dependence on intensive medical care. In the ED, EPs have to be vigilant and aware of this fact because due to factors such as time constraints, absence of relatives and inability of patients to communicate, many end up with certain treatment being carried immediately upon arrival of the patient, even before a detailed history is obtained. Thus, the importance of electronic medical records which are readily accessible to the EPs cannot be over-emphasised, though in many cases today they are still unavailable. Discharge summaries and well-informed relatives also play crucial roles. EPs must also remember that the judgement that further treatment would be futile is not a conclusion or a signal that all care should cease. Often supportive care to ensure comfort of the patient is required. When certain interventions are appropriately withheld, a concerted effort should be made to maintain effective communication, comfort, support and counseling for patients, friends and families.

H. Refusal of Care

In terms of ethics and morality, a patient has the right to refuse care for himself. The EP, however, should ascertain the reasons for this. If the reasons are irrational, the EP has the responsibility to dispel the decision by proper explanation and advice. When it comes to decision making by next-of-kin, EPs have the added responsibility of persuading the appropriate guardians with the acceptable decisions, even as he has reasonable belief of the beneficial effects of care. Prognostication, with or without treatment, is not always an exact science and coercing is not ethically acceptable either.

There are occasions when getting the courts to approve consent may be required, but once again unlike other disciplines of medicine, time is an important consideration in EM. To date, locally in Singapore, there has not been any documented cases where the court decision/ consent had to be obtained in the management of an ED patient.

Solving Ethical Problems

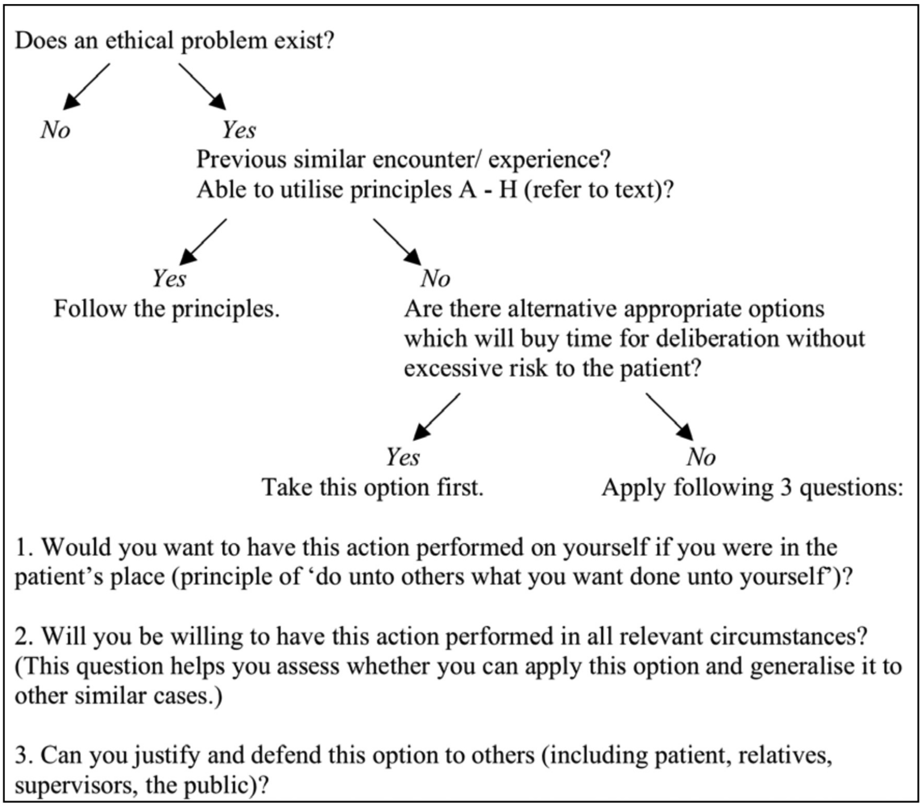
How do EPs deal with other difficult or highly stressful situations in the ED? EPs have developed a framework for thinking and acting in such situations, e.g. algorithms for management of cardiac arrest or approach to the patient with multiple injuries. Clear, procedural guidelines are available. Having said that, each clinical situation and each individual patient is unique and often demands appropriate deviations from or adaptations to these guidelines. The same can be applicable in ethical problems: a framework for ethical decision making.

Ethical problems, like clinical problems, require action for resolution. In an ideal situation, extensive discussion and time to reflect on each ethical decision is possible before being called to act. This of course is not possible in many emergency care decisions. Efforts to anticipate recurring types of problems by subjecting them to ethical analysis in advance, by conscientiously reviewing previously made decisions, can help EPs fulfill their ethical responsibilities. The fact that an EP has an *emergency* decision does not remove it from the realm of ethical evaluation. When faced with an ethical issue, EPs can incorporate one or more of the principles discussed earlier into the foundation for resolution.[1,4,5,6] Thoughtful and careful analysis of the circumstances is necessary. A series of systematic steps to consider includes:

1. Who are the persons involved; patient, relatives, others?
2. Do time constraints apply?
3. What is the chronology of events?
4. What medical, social and legal information will be required to facilitate decision making?
5. What is the best communication pathway to follow?
6. Which family values have to be considered?
7. Is there any consensus that exists with any of the persons involved?

An ethical problem is one where a clear “right thing to do” does not exist. Previous experience at solving a similar problem can offer guidance. The EP should never hesitate to get help or input from a senior colleague or supervisor when necessary. The following algorithm (Figure 1) may serve as an initial framework for approaching an ethical problem or issue:

Figure 1: Algorithm for Approaching an Ethical Problem in the ED



Does an ethical problem exist?

No *Yes*

Previous similar encounter/ experience?
Able to utilise principles A - H (refer to text)?

Yes
Follow the principles.

No
Are there alternative appropriate options which will buy time for deliberation without excessive risk to the patient?

Yes
Take this option first.

No
Apply following 3 questions:

1. Would you want to have this action performed on yourself if you were in the patient's place (principle of 'do unto others what you want done unto yourself')?

2. Will you be willing to have this action performed in all relevant circumstances? (This question helps you assess whether you can apply this option and generalise it to other similar cases.)

3. Can you justify and defend this option to others (including patient, relatives, supervisors, the public)?

Application of the Ethical Algorithm

Consider the following scenario of a patient presenting to the ED. A 56 year old lady, Madam T, has learning disability and lives in a nursing home. Her only relative is a niece. She comes to the ED with severe abdominal pain and upon examination, investigation and bedside ultrasound is found to have an ovarian cyst which is causing pressure on the ureter. She has refused admission and claims to be afraid of the injection needle which is required to be inserted before she can be given anaesthesia for the surgery. She now wants to leave the ED.

1. As she has disagreed to treatment due to her beliefs and fear, there arises an *ethical dilemma*.
2. Applying the principles of *beneficence and autonomy*: She may not be able to make an autonomous decision in view of her learning disability and moreover is overcome by her fear for needles and hospitals. The EP managing her must thus apply beneficence (an objective view of what is best for her). He would need to advice, explain and cajole her, using simple terms and language so that

she is able to understand the issues and serious consequences if she does not have the surgery (which include renal impairment).

3. The EP has to act in *fairness* at all times. Even as she is a patient with learning disability and may not be contributing actively to society, she must be given the same options and chances as any other patient with the same problem. Her *best interest* must be at heart.
4. All the attempts to explain and advise in simple terms is geared towards helping her 'not to harm herself' and to ensure safety and good outcomes as mush as possible (*nonmaleficence*).
5. All the actions and words are in the hope she will give her *informed consent*, with good *comprehension* and thus satisfying a '*voluntary action*'. Her niece who is present would also play a role in the event a *surrogate decision maker* is needed. It is also important to understand the severity of her learning disability, her level of understanding and insight, as well as how much of the simple explanation she can comprehend. Otherwise the niece may have to take over in giving consent.
6. Patients have a right to *refuse care*, but as discussed earlier, if the reasons are irrational or can lead to harm, attempts must be made to dispel such fear or beliefs.

As we follow all these principles, are there alternative options for her to 'buy time' for deliberation without increasing the risks excessively?

As this represents a real case scenario encountered in the ED, the EP concerned tried to clarify the facts further with her, with the use of simple dialects as well as diagrams and drawings. The important thing to get across to her was what the treatment was and what the outcomes would be if she did not have it. Her fear of needles was alleviated by explaining to her that local anaesthetic would be utilized before the needle was inserted and that there was an option of inhalational anaesthetic at the initial phase. With the help of her niece, she was convinced to sign the consent, and as a back up, her niece also signed the next-of-kin consent form simultaneously.

Madam T agreed to admission and surgery and recovered well with no need for post operative dialysis. This example is just one of the multitude of cases evaluated in the ED. Each case has to be treated on its individual merits and details, using the suggested algorithms, together with the application of the ethical principles (A–H).

Research in the Emergency Department

Innovations in EM have been critical to improving clinical outcomes for patients and have led to the development of new techniques to save the most vulnerable patients. Yet, clinical research in the ED is plagued by the inherent difficulties in obtaining informed consent from patients or surrogates. This is in conflict with a successful trial protocol.[1,6,7-9] Codes of ethics in human subject research, most notably, the Nuremberg Codes (1946),[10] the five versions of the Declaration of Helsinki (1964, 1975, 1983, 1989, 1996)[11-14] and the Belmont Report (1978),[15] place strong emphasis on informed consent. For all research in certain countries, approval must be obtained from the relevant institution's Ethics Committee, Institution Review Board (IRB) or some similar committee.[7-9,16] There is some research where informed consent is not possible or feasible, where the alternative is to have substitute authorisation obtained as soon as possible.

In some research that which has rendered the patient incapable of offering consent is a key element of the trial, e.g. initial management of severe traumatic brain injury. However, the exceptions to informed consent requirements is not a waiver of informed consent; if a potential subject might be able to provide this, provision for prospective consent for enrollment must be attempted whenever possible.[1,4,6] Certain requirements in EM related research have included consultation by the investigators with the community in which the trial will take place. The public notification of the study to the community is done simultaneously.[4] This concept was utilised at the Department of Emergency Medicine, Singapore General Hospital, in a trial involving the use of low versus high energy shocks in managing certain cardiac arrest patients (The HiLoBED Trial). Investigators for this trial conducted public forums and met with representatives from the different religious groups in Singapore. With this type of community consultation, an effective and appropriate communication method has to be planned and executed cautiously. Other considerations include the use of post-recruitment consent or retrospective consent. Again, this may present other social, ethical and cultural consequences, especially in a multiracial society like Singapore.

Conclusion

Being a professional and ethical EP involves more than just following rules. Core values such as prudence, courage, temperance, vigilance, trustworthiness, compassion and justice as well as unconditional positive regard are important.[17] Would patients in the ED rather be treated by an EP who rigidly follows rules or by one with good character who has their best interest in mind? These values, on the other hand, do not replace the need for ethical principles. Serving patients effectively requires scientific and technical competence, but moral competence and the practical knowledge of what should be done also contributes to decision making in the practice of EM.[17,18]

Regardless of future challenges, ethics will remain central to EM, and thus advanced preparation and training will come in helpful. Today, topics of ethics and professionalism have been formally added to both the undergraduate as well as residency curriculum in many institutions. EM trainees and residents are also provided with some ethics training in preparation to handle such situations in real life. While on the job training and discussions contribute effectively towards this learning process, thoughtful consideration away from the bedside and reflection on issues arising in clinical practice must also contribute towards the EPs' experience. Through this reflection and deliberation, EPs will become empowered to base decisions on a sound moral framework.

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DISPENSING WITH CONSCIENCE: A HISTORY OF DIFFERENCE

JEROME WERNOW, PHD

Introduction

Our continuing surge in new technology has awakened conscience-clause issues after a twenty-year quiescence.[1] The awakening has brought about gubernatorial edicts, state administrative position statements, court decisions, and a spate of professional and media opinion pieces questioning a pharmacist's right to practice according to conscience.[2] The current dispute brings a healthcare professional's right to practice according to religious conscience and a woman's right to Plan B contraception into sharp relief. Most of these writings address mid-level issues, particularly conflicting rights and conflicting principles. Little has been written about the core from which these conflicts derive, that is, conflicting worldviews. The following reflection analyzes an underlying historical shift in worldview that dominates political, legal, and ethical discourse in the emergency contraception debate in the United States. This article attempts to clarify the terms, issues, and worldview changes, revealing a shift in the ethical voices that dominate the healthcare practice. The goal is to promote a better understanding of why difficulties exist in finding suitable points of compromise as a starting point for resolution.

Clarification of Scope

The author recognizes that the very principle behind conscientious refusal to participate in pharmacy activities transcends the boundaries of emergency contraception and includes refusal to participate in abortion, euthanasia, assisted suicide, fetal and stem cell therapy, and sterilization.[3] For the purpose of brevity and except where outside factors or principles are significant, the scope of the discussion will focus on the place of conscience in the dispensing of medicinals that prevent pregnancy in all phases. In the section addressing current considerations, Plan B Contraception will take precedence over abortifacients like Mifeprex™ since they are not as time sensitive and do not place an immediate demand for action on moral agents like the pharmacist.

This article takes the phrase "Plan B contraception" to mean the use of large doses of estrogen and levonorgestrel or a progestin congener in one or two doses to prevent pregnancy. Their proposed mechanisms of action that prevent pregnancy follow: (1) primarily a prevention or delay of ovulation, (2) interfering with tubal transport of sperm, (3) interference with fertilization, and (4) possibly prevention of implantation of the fertilized egg.[4] The early part of the study will view the dispensing of medicinals for the prevention of pregnancy through the lens of abortifacients. There are at least two difficulties

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in such a study: (1) an assertion of faulty comparison of contraceptives with abortifacients and (2) an assertion of anachronistic comparisons.

In the first assertion, reproductive access advocates, such as Planned Parenthood (PP), may object to equating Plan B contraceptives with abortive drugs.[5] It will be shown that their position is understandable and valid if one accepts an interpretation of reality from a naturalist worldview. In contrast, for orthodox Roman Catholics interpreting reality from a supernaturalist worldview, the underlying principle precipitating moral repugnance toward abortifacients and disruption of the process of implantation of a fertilized egg is the same. It is the voicing of this principle that we will explore historically. I suggest that since post-coital prevention of pregnancy through emergency contraception is only a recent development, we can do little more.

As for the second assertion, uncovering parallels in conscientious objection in ancient western traditions that relate twenty-first century practice of dispensing to practices in antiquity presents perils of anachronism. These dangers are recognized particularly when associating current practice with that of ancient Greco-Roman medicine, since the profession of medicine and pharmacy practice were commonly one and the same. This reflection attempts to avoid that peril by limiting the study to the mores associated with the dispensing of medications to prevent pregnancy.

Clarification of Depth

The sheer enormity of information found in the historical development discussion of western worldviews that might be associated with the practice of the prevention of pregnancy necessitated a careful selection of data-points germane to time periods where norms were established or clear shifts occurred. Pellegrino's schema found in the "The Metamorphosis of Medical Ethics" was generally followed to facilitate that selection.[6] Some periods, like that of the Renaissance, although fostering fundamental shifts in worldview, revealed little by way of data that demonstrated impact on medical ethics and conscientious objection. Consequently, such historical periods are left for a more nuanced discussion.

The author recognizes that there are a diversity of opinions and nuanced positions on contraception in socio-political milieu of women's reproductive rights, Roman Catholic Theology, and Protestant Theology. In order to be concise, the author has limited citations to represent opinions that appear to be prominent in the current debate over conscientious objection. Areas where citations appear to be thin provide opportunity for further research that fortifies or refutes the author's various assertions.

Clarification of Terms

The phrases "conscience clause" and "refusal clause" represent two opposing positions. The choice in the use of one phrase over the other is a choice, consciously or otherwise, to embrace the position attached to it. By the end of the article it should be apparent that the phrases are not interchangeable.

This author uses the term "conscience" in the phrase "conscience clause" to mean "the medical providers' right to exercise conscientious refusal to provide services to which they have religious or moral objections."[7] The term "conscience" reveals an innate moral character expressed in an objective moral confession that responds to a morally challenging circumstance. My formulation comes specifically from O'Connell and Curran's chapters in *Conscience*.[8] This is admittedly a Roman Catholic construction of Christian theology, but since the majority of those currently affected in the debate are of Roman Catholic tradition or hold to positions similar to this tradition, the formulation seems admissible.

The author also adopts the meaning of the phrase "refusal clause" from the definition provided by Weiss *et al* of the American Civil Liberties Union (ACLU):

> A refusal clause (sometimes also called a religious exemption or "conscience clause") is a law that allows entities and/or individuals to refuse to provide or cover certain health services based on religious or moral objections.[9]

Although the definitions for conscience clauses and refusal clauses seem the same, it is very important to disclose the nuance and lack of interchangeability before launching into their usage in this article. The emphasis of those using 'refusal clause' terminology is on the act of refusing service and on those to whom service is refused. It will be shown that their worldview minimizes and/or denies the reality or value of God-given innate moral character as well as enduring objective moral law. Rather, it is a worldview that emphasizes and values empirical-rational and naturalistic cause-effect relationships. In contrast, those using 'conscience clause' terminology emphasize the reality or value of God-given innate moral character and/or enduring objective moral law. To summarize, the difference in the use of terminology betrays a difference in the way conflicting sides view reality. The rest of this article will consider this difference through the flow of history in the contexts of dispensing pregnancy-preventing medicinals.

Historical Legends

A brief historical study reveals that the presence of conflicting ethical values results in either an acceptance or rejection of the use of chemical abortifacients. Further, the presence of these different ethical values exists because of differing worldviews. Examples are evident in Greco-Roman, medieval, modern, and postmodern practices. Early practice histories focus on the abortion, since effective contraception was a late mid-twentieth century development.

Greek Period

Those practicing medicine in concord with the Hippocratic Oath represent the closest approximation to our current discussion. The well-known injunction against termination of pregnancy found in the Hippocratic Oath reads:

> I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain

> from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any counsel; and in like manner I will not give to a woman a pessary to produce abortion.[10]

Two common ethical values are accepted by ethicists when examining the Oath. First, most concur that the Oath enjoins practitioners not to harm or have the intention of doing harm to the patient. The Oath enjoined those practicing the art of ancient "pharmacy" to emphasize that art's end as treating to preserve life, rather than applying the knowledge of various poisons to facilitate death.[11] Secondly, practitioners adhering to the Oath constructed the meaning and value of non-maleficence using the stories of "deities concerned with healing."[12] Arguments abound between those who believe that the Oath and its adherents were a small sect producing a countercultural document and those who believe it represented a larger movement promoting a mainstream practice.[13] Whatever their influence, the adherents grounded their value system upon the metaphysical *mythos* of the Greek god and goddesses of healing, Æsculapius, Hygeia, and Panacea.

In contrast to Hippocratic medicine, the utopian notions of Plato and later Aristotle suggest an apparent acceptance of abortion and infanticide. Plato valued such practice as acceptable for population control in order to promote the common good through limiting the practical strains of the infirmed on the flourishing of Greek society.[14] Further, what little was known about the fertilized egg or embryo left them known "as merely of animal species and part of the mother until it falls as fruit from the tree;" the fetus having thus no inherent value.[15] Neither Plato nor Aristotle addressed the necessity of a practitioner to participate or to opt out of dispensing abortifacients. We only see a contrast of the Hippocratic practitioner choosing not to dispense abortifacients in the setting of a cautious yet permissible public norm for those who willingly accepted the practice.

Roman Period

The acceptability of dispensing abortifacients in Roman medicine paralleled that of earlier practices in Greece. The use of the abortifacient silphium as a pessary was apparently common and recorded by natural philosopher Pliny the Elder.16 Opposition to the use of abortifacients was described in the writings of Scribonius Largus, supposed personal physician of Claudius (c. 47). He attached a Stoic ethic to Hippocratic notions of beneficence that forbade abortion.[17] Largus wrote: "No physician should give or even show an abortifacient to a pregnant woman."[18] Except for allusions to 'drugs being like divine hands and their effects like divine intervention,' no findings revealed his underlying worldview.[19]

Germane to our discussion is the fact that abortion was occurring in this epoch. There is no clear indication of the number of practitioners that opted out of the practice due to conscience, however. For instance, well known physician-gynecologist Soranus is recorded as objecting to those seeking abortion for aesthetic reasons or because of adultery. Then in contrast "he lays down a complex and perhaps efficient method of inducing abortion."[20] No evidence was found of negative repercussion from their community of practice when the practitioner provided or denied patients abortifacients. After a lengthy discussion providing evidence that physicians of the Greco-Roman period practiced medicine outside the boundaries of the Oath, medical historian Darrel Amundsen concludes that the Hippocratic author(s) promoted an esoteric document not commensurate with the practice of that day or of pre-Christian Rome. Amundsen expresses one other important observation in his article. He believes that beneficence and non-maleficence were the only common duties in the Greco-Roman Period.[21] From his observations, I suggest that a practitioner's decision to use abortifacients, like euthanaticums, was not uncommon, but was left up to the individual's own conscience. The only negative consequences seemed to be attached to poor outcomes of the practice; in the case of abortifacients, the woman's death.

One of the most influential writings opposing the use of abortifacients came from Claudius Galenus (129-201 AD). He was primarily responsible for the transmission of the written Hippocratic tradition into contemporary times.[22] His position implied that practitioners opted out due to conscience. His opposition was based upon the principle of beneficence sourced in the Hippocratic Code. Interestingly, his expression of beneficence and opposition to the use of abortifacients, although not based upon Christian suppositions, was founded on a worldview of some superior being that ordered nature. In Hankinson's translation of Galen's Therapeutic Method: Books I and II, he addresses Galen's Platonic metaphysic. Hankinson recalls the hymn that Galen wrote to "the goodness and ingenuity of the Creator."[23] Hankinson correlates the creator in this hymn to 'the Demiurge' of Plato's Timaeus. The commentator then posits that Galen's philosophical outlook was primarily teleological, based upon a natural order crafted by a supreme being. He describes Galen's view on nature as follows:

> Not only does nature do nothing in vain, it could not do so; the regularity of the universe clearly shows that it is designed, and designed by a craftsman of supreme skill — and it is inconceivable that such a craftsman could make mistakes, at least in nature in general.[24]

It is proposed that Galen's opposition to the dispensing of abortifacients was based upon the idea that a pregnancy was a created "good" designed by some supreme supernatural craftsman. His position seems to be in contrast to the acceptance of the use of abortifacients by utilitarians, like the Sophists or Epicureans, who valued the primacy of personal pleasure.

Conclusions from my investigation concur with the older research of A. E. Crawley. A devaluation of fetal and newborn life in the Greco-Roman time period was still apparent, as seen by the acceptance of "foeticide and infanticide."[25] The unborn was apparently not considered human until birth, but merely an animal form attached to the mother. Such opinions seem to reflect an earlier Aristotelian anthropology. Population control, eugenics, economic burden, vanity, and consequences of sexual excess factored into abortive choices by the woman.[26] Underpinning these choices was a mosaic of worldviews from the Sophists to the Epicureans and Stoics. No information was discovered, however, that indicated a dominant worldview whereby the physician-pharmacist was either compelled to provide, or forbidden from dispensing, abortifacients. Apparently, choices were left up to each practitioner.

Judeo-Christian Period

Compatibility of mid-level principles made Galen's rendition of a Hippocratic Ethic easy for a Christian synthesis, a synthesis that would dominate western healthcare ethics for the next seventeen centuries.[27] The Christian turn and ethical dominance in western healthcare practice brought negative repercussions upon those choosing to dispense abortifacients or practice any other method of abortion. This change came as Christian influence increased in the Roman Empire and the so-called pagan influence waned. A supernatural worldview slowly displaced a myriad of competing worldviews as the foundation of knowledge, meaning, and ethical valuation in healthcare practice. Among other notions, the displacement affected how the fetus was valued and thus treated. According to one account, Christian philosophy and, consequently, Christian-based law applied from the first 'the healthy sense and value of infant life which so broadly distinguishes Christian from pagan societies.'[28] The Christian approach attached ethical valuations to supernatural realities rather than valuing reality from a rationality that emphasized material philosophies and social utopias, like that of Aristotle or the Stoics. Basil of Cappadocia, Jerome, Augustine, Tertullian, and Gregory of Nyssa are examples of early Christian writers whose valuations of the pre-born shaped medical ethics for centuries to follow.[29] Basil of Cappadocia represents one of the more definitive voices in this valuation:

> The woman who purposely destroys her unborn child is guilty of murder. With us there is no nice enquiry as to its being formed or unformed. In this case it is not only the being about to be born who is vindicated, but the woman in her attack upon herself; because in most cases women who make such attempts die. The destruction of the embryo is an additional crime, a second murder, at all events if we regard it as done with intent. The punishment, however, of these women should not be for life, but for the term of ten years. And let their treatment not depend on mere lapse of time but on the character of their repentance.[30]

Although evidence for punishment of physicians or pharmacists who facilitate the action of the "destruction of the unborn" is not discussed, the apparent seriousness of the woman's punishment suggests that facilitation of abortion was proscribed. Noonan, among many authors, makes a probable argument that a pro-natalist ethic based upon Christian foundations suppressed the use of abortifacients through the middle ages and through the enlightenment.[31] The domination of the Roman Catholic expression of Christian ethics is seen even as the ethic's content became part of the code of ethics adopted by the American Medical Association in 1847.[32] There was little need for a conscience clause regarding choice in participation in the dispensing of abortifacients, for the practice had little support in the western healthcare community through the mid-nineteenth century.

As enlightenment philosophy and rationality leavened the bread of moral philosophy in the medical schools, studies in humanist psychology began to be substituted for Christian ethics and with it a change away from medical practice based upon Judeo-Christian Hippocratic Ethics.[33] The change was a harbinger of new emerging voices vying for dominance in the coming post-Christian Period, and as part of that change came a widespread acceptance of contraceptive practice by health care professionals.

Post-Christian Period

The factors contributing to a wide public acceptance of contraception and abortifacients are multi-faceted and difficult to isolate. Five areas of change are forwarded as pertinent factors in this acceptance: (1) drug effectiveness, (2) worldview, (3) epistemology, (4) socio-political factors, and (5) ethics.

Our historical analysis suggests that lack of drug effectiveness or common death of the woman contributed to diminished dispensing of drugs that prevent pregnancy. The drug efficacy issue changed in the mid-twentieth century. That change was officially inaugurated on June 23, 1960, when the Federal Drug Administration approved the first oral contraceptive, marketed as Enovid™.[34] The product was released after ten years of research showed the drug effective in inhibiting ovulation. The formulation provided an easy-to-use and affordable option to the public. It has been generally estimated that half of a million women used the product during the three-year trial period prior to the drug's release for sale as a contraceptive.[35] Marketing at the product's release revealed a change in the dominant moral valuations of society as well as the worldview supporting those valuations. The advertisement pictured the Greek mythological princess Andromeda "free from her chains" that shackled her to the rock and exposed her to the monster of Poseidon. The script declares that a woman, as Andromeda, was now through Enovid

> unfettered…from the beginning woman has been a vassal to temporal demands—and frequently the aberrations—of cyclic mechanisms of her reproductive system. Now to a degree heretofore unknown, she is permitted normalization, enhancement or suspension of cyclic function and procreative potential.[36]

The advertisement disclosed a market in the public square that preferred associating sexual intercourse with an 'option' to procreation rather than the 'openness' to procreation that was taught by the Roman Catholic Church. An option to procreation split the pleasure of sexual intercourse from the spiritual aspect of unity and procreation. It expressed a naturalist worldview that increasingly valued the utility of experiencing the pleasure of a sexual relationship without the fetters of bearing children or the restraints of a marriage. Heightened opposition to this option by the Roman Catholic Church contributed to a slowing of the acceptance of oral contraceptives. More important, however, were barriers that state laws imposed for prohibiting usage, barriers based upon the vestiges of Judeo-Christian values. These barriers were removed when the Supreme Court (1) sided in favor of the "right to marital privacy" in the landmark *Griswold v. Connecticut* case of 1965 and (2) ruled that a Massachusetts law that prohibited the distribution of contraceptives to unmarried people violated the Equal Protection Clause of the Constitution (1972).[37] These rulings removed the legal barriers and so provided the catalyst for a wider acceptance of oral contraception by the public.

The historical analysis also traced a change in worldview away from a dominant Judeo-Christian construction of reality toward one having elements similar to the Sophists, Epicureans, and Atomists of the Greco-Roman Period. A change in explanations of what things exist and what things are imaginary contributed to the moral acceptance of contraceptive use. An ever-increasing acceptance of a materialist-based ontology informed by various versions of Darwinian naturalism began to displace the Christian supernaturalist worldview at all levels of education. This means that society viewed the physical world, its development, and the material ways it should work as what is real and valued. Prominent Darwinian ethicists, like Peter Singer, dismissed traditionally established meanings and morals ascribed to supposed supernatural realities as "religious mumbo jumbo."[38] Singer's opinion represented the trend that would eventually limit the place of conscience when it came to moral judgments. Like many naturalists he believe that valuations, such as that placed on dispensing or using contraceptives, should be derived from external material observations and not from intuiting an intrinsic good or evil based on divine principles or narratives.

Coupling ontology with the comfort and conveniences provided through the advances in science reinforced modernity's epistemological drift as well. For seventeen centuries the dominant explanations of how things are known in western culture were sourced in the God of Christianity as revealed in the Bible. In modernity's early epistemological drift, contributors such as Isaac Newton embraced the mutual influence of Christian theology and scientific belief.[39] Later, physician and philosopher John Locke, split empirical knowledge from that of the world of faith. The drift became a torrent from David Hume and Kark Marx to Peter Singer and Richard Dawkins. These represent modernity's move not only toward a non-theistic view of reality but to one hostile toward those holding to Judeo-Christian expressions of reality. The emphasis of this empirical way of knowing meant that the Judeo-Christian Scriptures no longer served as the narrative through which truth, meaning, and behavior were gauged. Rather, the '*mythos*' of evolutionary materialism explained what exists through empirical observation of the material world. The new *mythos* not only determined what we know, but fixed limits on human behavior and promulgated rights based upon the mores of those in power.[40] The *mythos* affected both the sacred and the secular world of healthcare practice. It may also provide part of the explanation for the confusing dichotomy of why some Protestant Christians will dispense contraceptives but not abortifacients while orthodox Roman Catholic Christians will dispense neither. When materialists such as Margaret Sanger pleaded for contraception to improve the human condition, mainline Protestant churches, such as the Lambeth Conference of Bishops of the Church of England and the Methodist Episcopal Church, accepted careful and restrained use to ensure responsible parenting.[41] Surprisingly, as the use of contraception became commonly accepted, conservative Evangelicals followed suit. It appears that using an Evangelical hermeneutic, which emphasizes accessibility to objective truth, may have unintentionally created a penchant toward a materialistic objectification, interpretation, and application of Scripture in the sphere of procreation.[42] In contrast, Roman Catholic Magisterial teaching interpreted the optional openness to procreation provided by contraception as sheer objectification of sexuality and a splitting of the unitive aspect of love apart from God's intended openness of humanity toward the transmission of life.[43]

The current socio-political milieu of women's reproductive rights that developed from the women's suffrage movement of the mid-nineteenth century serves as another powerful factor in the public acceptance of contraception and abortifacients. It is a factor that demonstrates a clear shift away from the traditional Judeo-Christian worldview. Two advocates, Susan B. Anthony and Elizabeth Cady Stanton, stand out as well-known founders of the suffrage movement. The import of Christian values affecting Susan B. Anthony, president of the National Woman Suffrage Association (1892), is commonly debated.[44] Whatever one's position regarding Anthony's changing religious and moral groundings, her shift away from oft oppressive misunderstandings of scriptural teachings seems easily sustainable. Further, the shift of the movement away from traditional Judeo-Christian ethical foundations mirrors that of the late nineteenth century as displayed by the founder of the Suffrage Association and friend of Anthony, Elizabeth Cady Stanton. One striking statement from Stanton illustrates the point:

> I see that Mr. Higginson belongs to the Jeremy Bentham school, that law makes right. I am a disciple of the new philosophy that man's wants make his rights. I consider my right to property, to suffrage, etc., as natural and inalienable as my right to life and to liberty. Man is above all law. The province of law is simply to protect me in what is mine.[45]

Stanton's apparent drift toward "sociological law," the arbitrary rules that dominant forces in the community want and deem socially helpful, resonated with iconic figure Margaret Sanger, founder of what is now Planned Parenthood.[46] Her advocacy for reproductive rights was juxtaposed to her opposition to the Christian sexual morals of the time and is well attested in her writings such as *The Rebel Woman*.[47] Eventually, her position on contraception became folded into the broader expression of women's rights and is commonly quoted by advocacy organizations like the National Organization of Women (NOW), as indicated by the lauding of Sanger's theme: "No woman can call herself free until she can choose consciously whether she will or will not be a mother."[48] The common drift toward a more utilitarian naturalist ethic seems complete with major women's rights organizations denouncing moral opinions based on Judeo-Christian traditions and in particular the pronouncements on emergency contraception by the Roman Catholic Church. The Church's pronouncements and the actions of their pro-life pharmacists, physicians, and hospitals are framed as biased and intolerant intrusions upon a woman's reproductive destiny from NOW's perspective. As stated in a NOW campaign addressing emergency contraception:

> We will be launching an Emergency Contraception Campaign at the national, state and local level to ensure that girls and women of childbearing age have control over their reproductive destiny. Nothing rings truer than the old NOW rally chant, "Not the Church, not the State—Women will decide our fate."[49]

NOW Political Action Committee leaders such as Gloria Steinem advocate a feminist post-structuralism and socialist expression of naturalism that sought with success to usurp the power players of the so-called dominant Judeo-Christian paradigm, like former Senator Rick Santorum.[50] In regard to contraception, their position demands material cooperation of providers who have issues of moral conscience. For example, NOW recently sought to pass legislation that demands "immediate referral to another pharmacist or another pharmacy and a penalty for not filling and/or returning a prescription to the customer."[51] Politicization of the practice seems to have trumped questions concerning the safety or effectiveness of the practice arising from studies by their own colleagues.[52] To question the practice is often conflated with an attack on women's rights. That in our culture and time is a socio-political taboo, particularly if the question comes from authors grounded in the Judeo-Christian worldview. Reflections on these observations suggest not only a shift in the current operative epistemology and ontology in healthcare but also an ethical shift from those longstanding foundations as well.

The ethical shifts and continued separation of the orthodox Roman Catholic and conservative Protestant communities in moral theology have left the longstanding ethical foundations of Judeo-Christian Hippocratic medicine on eroding ground. Pellegrino posits that this ethical erosion became conspicuous in the moral upheaval of the 1960s.[53] He proposes that this upheaval left medical ethics confused as to which model to apply. A litany of "alternative models of medical ethics" including principlism, feminist ethics, and casuistry vied for dominance.[54] He contends that the emphasis on modern psychology, coupled with a lack of any comprehensive philosophical underpinning to great moral traditions, renders these alternatives incapable of dealing with an encroaching Nietzschean nihilism and skepticism.[55] His contention and proposal can be tested for credibility by determining the extent to which (1) truth is considered merely subjective and (2) moral decision making is only a function of will to power. These two criteria serve as a 'litmus test' to establish if his concern that western medical ethics is in a state of crisis is true.

An application of the 'litmus test'

In the State of Washington, a recent controversy arose in accommodating both a pharmacist's right to practice according to conscience and a patient's right to prescription access. In the midst of this controversy, the Washington State

Pharmacy Association (hereafter WSPA) attempted to develop a policy to avert confrontations that might jeopardize a pharmacist's employment or license to practice as well as inconvenience a patient to prescription access. According to a WSPA timeline paper, they reacted "proactively" to create a Conscience Clause Task Force in response to failed legislation introduced by Planned Parenthood. That legislation sought to force pharmacists to dispense "all legal prescriptions."[56] After researching and assessing national position statements and meeting with Planned Parenthood and the Northwest Women's Law Center, the task force formulated and presented a white paper for WSPA membership.[57] In May of 2006, the WSPA Board of Directors sent their "Position Statement on Conscientious Objection" to Washington Governor Christine Gregoire."[58] In an open letter, Mr. Lynch, then president of the association, summed up the policy, stating:

> The essence of the policy is that when a pharmacist is presented with a legal and therapeutically appropriate prescription, the patient's needs must be met first and foremost. The policy also stated that WSPA would support a system or process that accommodated a pharmacist's moral, ethical or religious belief while still meeting the patient's needs in a timely manner.[59]

The position evoked intense opposition when the Washington State Board of Pharmacy incorporated some of the language into its administrative rules. At their June 1, 2006 meeting the board drafted rule language that stated:

> (1) Pharmacists and pharmacy ancillary personnel shall not obstruct a patient in obtaining a lawfully prescribed drug or device. If a pharmacist cannot dispense a lawfully prescribed drug or device, then the pharmacist must provide timely alternatives for the patient to obtain treatment.[60]

The Washington State Pharmacy Association found the rule acceptable, according to their open letter to their membership; however, the recommendation set off a flurry of opposition by women's reproductive rights groups, such as Washington Alliance for Reproductive Choice.[61] Further, it evoked the ire of Washington Governor Gregoire, who threatened to remove the entire board.[62] The furor of opposition overshadowed a small e-mail response to the board from pro-life activists that was apparently stimulated by a general e-mail to their constituency.

In the midst of the controversy, the WSPA remained the most vocal supporter for conscientious objection, as exemplified by a statement from Mr. Rod Shafer, their executive director. The *Seattle Post-Intelligencer* quoted him as saying: "Pharmacists should have the right to decline work that conflicts with their beliefs as long as they respect the patient."[63] Reporting staff then quoted him as saying: "We are not dispensing machines, we are professionals who have as many rights as anybody else."[64] In their response to antagonists against conscientious objection, the WSPA released a statement saying that the letter "did not adequately convey our belief that the patient's needs do indeed come first."[65] A reading of their position statement seems to convey the primary importance of the patient and intimates that political pressure from Planned Parenthood, NARAL, the governor, and the media provoked a re-crafting of their position. Under pressure from these groups, the WSPA support for conscientious objection waned. The diminishing support appeared to negatively influence proponents for conscientious objection on the Washington State Pharmacy Board, leading the board to remove language permitting that option.[66] This is readily evident by the absence of any language permitting conscientious objection and the adoption of language that could be interpreted as discrimination by pharmacists against those demanding the 'morning after' pill.[67] In the end, the WSPA also re-crafted their position statement to strengthen demands of contraceptive access, which weakened a pharmacist's right to refuse to dispense contraceptives on the basis of conscience. The tension in the position can be seen in WSPA's following statement of support: "WSPA supports: the reasonable accommodation of a pharmacist's right to refuse without obstructing patient care."[68]

Where is the tension? It can be found in the meanings attributed to "reasonable" and "obstructing." Uproar by abortion rights advocacy groups regarding the Washington State Board of Pharmacy's draft of conscience clause language similar to the recommendations of the WSPA suggests that accommodating a pharmacist's right to refuse was unreasonable and obstructive to reproductive rights and access. This led to the removal of the draft pharmacy conscience language and access language altogether in August 2006. The Washington State Board of Pharmacy removed all of the draft language addressing both pharmacy conscience language and patient access language. The vagary of the language left the governor, pharmacy conscience advocates, and abortion advocacy groups dissatisfied, along with at least one of the board members.[69] As previously mentioned in their December 2006 statement, they adopted language friendly toward reproductive access advocates and silent regarding a pharmacist's right to practice according to moral conscience. A pharmacist's right to opt out of dispensing Plan B emergency contraception based upon truth claims of its effect as an abortifacient or violation of openness to procreation was never entertained as valid or considered worthy of argument by policymakers or antagonists.

Conclusion

In conclusion, anecdotal evidence seems to support Pellegrino's concern that western medical ethics is in a state of crisis, but a crisis for whom? Our historical study revealed two strongly competing views regarding the acceptability of medical facilitation in the prevention of pregnancy. One was based upon meanings and values drawn from some form of theistic commitment, and the other was drawn from a form of naturalistic commitments. Basic commitments today seem to reflect the same divergence and the same conflict. On the one hand, there is an emphasis on the current existing material needs, wants, and values of the community. On the other hand, there is an emphasis on the inherent dignity of human life at all stages of their story. The ontological status of fetus or pre-born as only animal and not yet human did not figure into the discussion in Greco-Roman history. What did figure was the virtue of medicine as a healing art. The contemporary experience differs from the

Greco-Roman in that no data indicates pressure was applied to Greco-Roman physicians to either provide or deny services that interfered with pregnancy. This may have been partly due to the dangers of death to the mother from an inexact science, lack of antibiotics, or blood replacement. A shift seems to have occurred in Roman medicine. Natural law and Hippocratic Oath spoken of by Galen were soon taken up, modified, and ethically 'baptized' into an evolving Christian ethic. The shift included a move from a variety of secular ontological and epistemological commitments to a dominant Christian voice. It resulted in a change to an attitude of intolerance toward terminating pregnancies in the *polis*. Patients who were found to have intervened in their pregnancies could experience untoward consequences by those in positions of authority.

The domination of the Judeo-Christian Hippocratic ethic for the last seventeen centuries appears to have ended by the 1990s. No particular ethical commitment seemed dominant; hence Pellegrino's assertion of a moral crisis in medicine. The crisis appears to be resolving for one group as change in the socio-cultural hegemony of the west from Judeo-Christian commitments to material naturalistic commitments seems to be playing out in their favor. The refusal/conscience clause debate is a possible indicator that bears out this conclusion. It may well be that the shoe is now on the other foot, and that repercussions are now falling upon those who adhere to the Christian worldview rather than upon those who violate that ethic. For those advocating reproductive access there is no ethical crisis, since they are actualizing their position. In contrast, the degree to which tolerance will be extended to providers practicing with Christian conscience will depend upon the identity of those who occupy the places of dominance as the power structures shift. Of course, the question must be raised: Were the decisions against conscientious objection in the State of Washington just another common example of sheer 'will to power' of the new hegemony, or were they just anecdotal evidence from an isolated incident?

A thorough analysis of current legal trajectories might reveal whether our litmus test uncovers an isolated incident or a growing precedent that discloses a newly emerging ethic of dominance. Further, a study of the worldviews that underpin the mid-level principles of the reproductive access and conscience clause advocates would substantiate if there were a shift in those voicing worldview dominance, as suggested in this article. For now, the underlying philosophical commitment seems to determine both where the accent falls and what the words mean in the phrase "dispense with conscience."

Endnotes

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E. Gee: “Plan B, Reproductive Rights, and Physician Activism,” *New England Journal of Medicine*. July 6, 2006, 355/1 pp. 4-5; Elizabeth Hovde: “Pharmacists have right to choose, too,” Opinion, June 8, 2006, *The Columbian C7*.

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8 Charles E. Curran, ed., Conscience, in Readings in Moral Theology Series no.14. (New York·Mahwah, NJ: Paulist Press, 2004) pp. 3-38.

9 ACLU Reproductive Freedom Project 2002, p. 6.

10 Hippocrates: *Hippocratic Writings*, in The Great Books of the Western World Series, chief editor Robert Maynard Hutchins, trans. by Francis Adams (Chicago: Encyclopedia Britannica, 1952) volume 10, p. xiii. A pessary was a medicated medicinal, like silphium, used by vaginal insertion to prevent or terminate pregnancy.

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THE NECESSITY OF SPIRITUAL CARE TOWARDS THE END OF LIFE

SYED QAMAR ABBAS, MD, PGD, AND SIBTAIN PANJWANI, BDS, MA, PHD

Abstract

This introductory essay seeks to convey the message that spirituality is a core human concern at the time of death. People may feel physical, emotional, psychological and spiritual distress as they near the end of their life. However, not enough weight is placed on the way in which a human being can cope with these different states by accessing and understanding their spirituality. We argue that it is prudent to gain some understanding of patients' spirituality early on, as it would be difficult to accomplish this solely near the time of death. Ultimately, there is a need to carry out more research on the complexities surrounding patients' spiritual mechanisms toward the end of their life so that they may better understand themselves beforehand and cope with the fact of death.

Key words: end of life distress; human spirituality; concept of death; spiritual care

Introduction

One of the most important recent developments in healthcare is the growing awareness and focus on the concerns of dying patients relating to the quality of their end of life care. Despite rapid advances in healthcare science and technology, the concerns of dying patients have remained the same throughout human history. Little has changed in terms of human behaviour, attitudes, and symptoms towards the end of life. In other words, the process of dying may be shortened or prolonged with the advances of technology, but the concerns remain the same: adequate pain and symptom management, avoiding inappropriate prolongation of dying, achieving a sense of control, relieving burdens and strengthening relationships with loved ones, and dealing with the deep anguish of one's spiritual accountability and consequent uncertainty after death.

The demands of the human spirit giving its full expression at the end of life are primarily focused on contentment and security. Yet the nurturing of one' spirituality during the prime of life is often sadly forgotten. While we must continue to explore new medical methods to treat patients, we must at the same time also assess patients in the most holistic way possible, which includes exploring humans' spiritual needs. This exploration must be done with equal measure and vigour. Failure to provide appropriate spiritual care means failure in holistic care. As Andrei Gnezdilov, the co-founder of Russia's first hospice for palliative care aptly states, "towards the end of life, everything is united around spirituality."[1]

Ethics & Medicine, 24:2 (2008): 113-118.

Spirituality and the Role of Palliative Care

Palliative care has been around for millennia, usually provided by family members and community institutions. However, it was first recognised by the World Health Organisation in 1990. In 2002, the World Health Organization defined palliative care in a consensus document and made a specific reference to spirituality:

Palliative care is an approach that improves the quality of life of patients and their families facing the problem associated with life-threatening illness, through the prevention and relief of suffering by means of early identification and impeccable assessment and treatment of pain and other problems, physical, psychosocial and spiritual.[2]

Today, palliative care is not just a healthcare discipline but is also recognised as a movement in response to medical science's more technical emphasis and the view that spiritual distress is a bothersome end of life issue that can be reduced to a physical and/or psychological problem. In many ways, palliative care has thus been the impetus for further exploration into the importance of spirituality at the time of death.

Spirituality and Death

Various scholars have tried to define spirituality. One definition comes from Puchalski.

> Spirituality can be defined as whomever or whatever gives one a transcendent meaning in life. This is often expressed as religion or relationship with God, but it can also refer to other things: nature, energy, force, belief in the good of all, belief in the importance of family and community. The spirit is the essence of the person – what makes him or her unique.[3]

Building on such definitions, Hay seeks to offer a way for healthcare staff to achieve a spiritual diagnosis in terms of:

- Spiritual Suffering – interpersonal and/or intrapsychic anguish of unspecified origin
- Inner Resource Deficiency – diminished spiritual capacity
- Belief System Problem – lack of awareness of one's personal meaning system
- Religious Request – a specifically expressed religious request[4]

There have been other attempts to find out what is actually meant by spirituality, and different tools have been produced. Paloutzian and Ellison devised a 'Spiritual Well-being Scale,' which actively sought to differentiate between Spiritual well-being, Existential well-being and Religious well-being.[5]

Another attempt is made by Galek et al, who conducted an analysis of the literature considering spiritual needs and concluded with seven main constructs:

- Love/Belonging/respect
- Divine
- Positivity/Gratitude/Hope/Peace
- Meaning and purpose
- Morality and ethics
- Appreciation of beauty
- Resolution/Death
- Control
- Other (needing comfort, needing to cope with pain)[6]

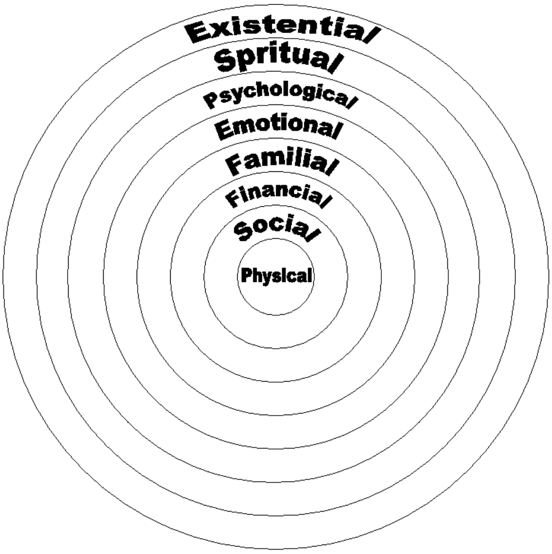
It is interesting that these authors have found such a long list of reasons for distress. However, unravelling these words/constructs could make it more complicated than helpful. One of the reasons there is an argument over the definition of spirituality is because there is little agreement over about the definition of life and the soul. The secular opinion on death is that existence becomes non-existence. Contrary to this are mystical views that every existence should be continuous, that nothing can change to being and so being cannot change to nothing. According to mystics, death is not lack of existence or non-existence but a kind of existence, and every existence should be continuous and pass through different levels—hence the notion that 'we are spiritual beings having a human experience.' According to Abrahamic traditions, however, life is from God. He is the source of awareness and thinking. The soul is a special grace from God that is breathed into all of us, giving us life and being. Every human being has a relationship of love, trust and responsibility with God, and with these values every human being is encouraged and guided to be a righteous and dignified person. Whatever beauty a human being feels for his God, this is reflected at the human level.

Spiritual Distress

Dame Cicely Saunders,[7] the founder of the hospice movement, describes the intense suffering by dying patients and their family members as "total pain." This includes physical, social, psychological and spiritual pain, which all interact with each other. Taking into account the analogy of a spiral circle (see figure 1), the dying patient's experience of distress from the inside out is described in the following terms:

1. Physical – One gets a physical ailment.
2. Social – Due to the ailment, one starts losing social contacts and cannot go to work and engage in society.
3. Financial – One loses his/her job.

4. Familial – One's family relations become strained due to the time and effort required to cope with the illness and another member of the family has to take on the responsibility of providing and caring for the family.
5. Emotional – One may experience fluctuating moods and in turn, his/her family may be under immense stress to remain balanced and calm.
6. Psychological – One feels lonely, lost and useless.
7. Spiritual – One may critically question his/her relationship with God or another Supreme Being(s).
8. Existential – One questions his/her existence: "Do I deserve/need to be here?"



Illness brings about a profound and radical point of self-evaluation and realisation; "illness is both soul-shaking and soul-evoking for the patient and for all others for whom the patients matters. We lose innocence, we know vulnerability, we are no longer who we were before this event, and we will never be the same."[8] Given this complex diversity of distress, would it not be sensible to directly address spirituality (as distinct from the psychological and existential) so that a patient's distress can be managed in an effective and structured way? It appears that due to a number of confusing definitions of spirituality, we fail to identify the profound significance the spiritual aspect of the patient. As a result, we leave the patient in distress for a prolonged period of time, and healthcare staffs struggle to the find the right tools to manage this distress.

More Research Needed on Spiritual Care

On an academic level, we can continue to debate about what spirituality is and whether faith and spirituality need be necessarily connected. However, it already acknowledged that religions (whatever their nature) tend to offer more answers to spiritual distress than any other institution. Does that mean people affiliated with a religion have less spiritual distress towards the end of life than those who do not? What about those who may be spiritual without adhering to any religion? Studies show, for example, that people who profess stronger religious and spiritual beliefs appear to resolve their grief more rapidly and completely after the death of a loved one than do people with no spiritual beliefs.[9] However, in many instances those who are religious may question the very foundations of their religion, which attempts to offer answers relating to their spirituality. This spiritual distress is often manifested in physical or psychological problems.[10] At the same time, however, it is noted that physicians rarely enquire about spiritual concerns. Could this be because physicians fall within the general secular society that struggles with the idea of spiritual suffering?

There seem to be attempts to revive the issue of spirituality under the subject of 'Secular Spirituality.' This shift may need to involve a change in vocabulary from 'spirituality' to 'practicality' in order to encompass the psychological issues one faces near the time of his/her death. For example, one may have no idea what spirituality is and find it difficult to grapple with such a concept. Yet one may still understand that he/she is physically suffering and that such suffering affects him/her mentally. In such cases, doctors or relevant experts may pose more practical rather than spiritual or religious orientated questions to help the sufferer:

1. Tell me, what distresses you most about the illness?
2. What do you feel is your source of strength when dealing with the illness?

Interestingly, a study has concluded that the reasons healthcare professionals are unable to deal with these issues include the threat to one's own existence, coping mechanism or spirituality.[11] The debate on mercy killing or euthanasia in western countries also shows that healthcare professionals supporting this idea have found the root of their argument in the concept of 'annihilation of self.'

This poses an interesting question. Can spiritual distress assessment be done properly with a secular approach in mind? While healthcare professionals may have a vocabulary recognising that spiritual distress is not necessarily tied to religion, a layperson or patient may struggle with such an idea. The general population often relates *spiritual* distress to *religious* individuals only. Thus, in order to make an assessment robust, we suggest that after enquiring about psychological and emotional distress, relevant questions regarding spiritual distress should be posed to patients in their own language. If they do not identify themselves as religious or spiritual, then we can address their existential suffering apart from spiritual suffering.

Conclusion

Death is inevitable and dying is a complex process that affects a human being's material and spiritual existence. Hence, there is a need for health and social workers to acknowledge that death is not just a physical but also a holistic affair, with a spiritual dimension at its core. Thus, healthcare professionals must be able to understand such spiritual suffering. However, living in a secular society, it is becoming harder for people to admit that their fears have a religious or spiritual origin. Separating spiritual and existential problems will help us clearly identify various distresses and manage patients more effectively. This in turn may foster further discussion in our society about life, death and the needs of the soul.

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BOOK REVIEWS

A Concise History of Euthanasia: Life, Death, God and Medicine

Ian Dowbiggin. Lanham, MD: Rowman & Littlefeld Publishers, Inc., 2007.

ISBN 978-0742531116; 176 PAGES, PAPER $19.95

It is difficult to pull off anything concise in the world of intellectual debate, but Ian Dowbiggin, Professor of History at the University of Prince Edward Island, attempts to do so in *A Concise History of Euthanasia*. He begins in the eighteenth century, hitting the twentieth half way through the book. From then on the account largely details euthanasia in North America during recent times. The author emphasizes the modern concept of a 'right to die' emerging from fundamental shifts in the way human life is viewed – when hell was feared more than death itself to a time when the value of life is weighed outside the moral framework regnant in Christian Europe. The author writes as one convinced that this is a sad loss and concerned that the secular advocacy of euthanasia brings sad days.

The reader will find in this volume a blend of the familiar with the less familiar; broad claims and detailed incidents course their way and are interwoven throughout the account. It is certainly accessible and can be commended as a very general orientation to the history of euthanasia; one becomes familiar with the broad contours of its history. But I have at least three reservations.

First, one does not expect an excess of detail in a book that sets out to be general, but we could do with clearer distinctions. Euthanasia can be variously defined and its relation to suicide conceptualized in diverse ways. An historical account may emphasize the concept of euthanasia or its practice; it may be about something that does or does not go under that heading. The author does not always alert us to these distinctions, which makes it difficult to track his account, especially as the distinctions are not laid out systematically at an early stage.

Second, one does not expect an excess of scholarship in a book that sets out to be such a broad survey, but we could do with greater accuracy. The accounts of Augustine and Hume are misleading. Checking the primary sources against the author's account, we find either that they do not bear it out or that the account gives the wrong emphasis. Regarding the twentieth century, a major and indispensable treatment such as that of John Keown on Dutch euthanasia is not mentioned at all. A discerning reader might distinguish a thesis about broad trends from a number of particulars in the story, but a relatively uninformed one might not be able to do so. However, I do not wish to exaggerate this point.

Third, one does not expect merely dispassionate description in a book about whose subject-matter the author feels strongly (and rightly so), but we could do with a more disciplined approach to evaluation. From the 'Introduction,' we know where the author stands, but he risks giving the impression of being involved in a wider campaign with the result that he may not be properly heard for what he says. For instance, while it may be true that Maurice Genereux was convicted by a College of Physicians and Surgeons for fondling six male patients and had problems with alcohol, this is not pertinent in a short history and may be distracting even if the objective is to place euthanasia in a wider cultural context.

As someone in agreement with Dowbiggin's basic position on euthanasia, I welcome an expression of his beliefs and the attempt to tell a concise story. His contribution should confirm us in our conviction about the importance of these issues.

Reviewed by Stephen N. Williams, PhD, who has lectured and written on issues in medical ethics, including euthanasia, as Professor of Systematic Theology at Union Theological College, Belfast, Northern Ireland.

Biotechnology and the Human Good

C. Ben Mitchell, Edmund D. Pellegrino, Jean Bethke Elshtain, John F. Kilner, and Scott B. Rae. Washington, D. C.: Gerogetown University Press, 2007.

ISBN 978-1589011380, 210 PAGES, PAPER $24.95

By declaring '. . . we believe biotechnology should be used to relieve human suffering and to protect human dignity, without relieving humans of their very humanity' (x), Mitchell, et. al. set the tone for their collaborative effort *Biotechnology and the Human Good*. The authors set up a logical sequence within their book to evaluate not only the role of technological innovation, but how it is perceived and how it might affect human dignity and, in turn, medicine. They conclude with a proposed set of guidelines intended to focus the reader's attention on ways to become good stewards of technology while limiting its often avoidable potential for harm. Admitting their Judeo-Christian theistic perspective, they advocate a vibrant role for the Christian community.

'… technology is not an unqualified good… so the values that shape, inform, and provide the impetus for technology must be examined.' (15) Because Westerners remain unqualifyingly optimistic about the potential good of technology, new innovations are rarely subjected to a thorough examination of their potential for disaster. To begin this quest, one must begin by reflecting on how technology is viewed in general (the technological narrative) and how one explains humankind (worldview). The authors skillfully pare these complex philosophical constructs to an understandable size, give an objective evaluation of their strengths and weaknesses, and then argue for responsible technological stewardship within a Judeo-Christian worldview. They lament that the assumptions surrounding discussions of biotechnological innovation are rarely examined – vitally important when considering potential consequences. For example, whether or not one views an embryonic baby as a person affects how one views her destruction.

Guaranteeing human dignity is often a common goal for proponents of differing ethical outlooks. By approaching the concept of human dignity through these differing ethical constructs, the authors conclude that '. . . a biblical approach…fares well . . .' (86) This concept of dignity is most important when evaluating technologies with the potential for altering our very being – a quest for human perfection through such things as genetic manipulation or cybernetics. Many of these innovations would interface with humanity by way of the medical field, now in its own post-Hippocratic crisis. So, concepts of health/disease and finitude become relevant.

Overall, *Biotechnology and the Human Good* is a very understandable discussion of many of the issues we face in the twenty-first century, credibly reviewing the various approaches to their resolution. One finishes with their conclusion that Judeo-Christian theistic precepts provide a comprehensive and reliable basis for struggling with the potential for missteps as well. Indeed, 'Humankind's biggest problem is not a lack of ingenuity but a lack of responsible stewardship that attends to our fallibility and that respects the propensity of technological artifacts to misfire.' (27) While best suited as an introduction to these complex issues, it certainly invites thoughtful reflection and deserves a spot on the bookshelf of anyone involved in the current biotechnological tsunami.

Reviewed by Sharon F. Billon, MD, FAAD who is in the private practice of dermatology in Arroyo Grande, California, USA.

Commitment and Responsibility in Nursing: A Faith-Based Approach

Bart Cusveller, Agnes Sutton, Donal O'Mathuna, Editors. Sioux Center, Iowa:
Dordt College Press, 2003.
ISBN 978-0932914514; 184 PAGES, PAPER $16.00

America is currently in a nursing crisis defined as a shortage of nurses. But, isn't the crisis really about why there is a shortage? Why should there be a shortage in one of the greatest aspiring professions within a democracy? How does any profession survive within an egalitarian democracy? Did managed care destroy nursing? Why didn't the 'invisible hand' of the market save nursing? Might this still happen? What relationship is there between Christian faith and nursing with its crisis in America and the rest of the world? Will globalization save nursing or simply add to the crisis? This book contributes to an understanding of this controversy, especially as the crisis in nursing relates to Christian faith.

Readers of this journal might recognize all three editors, especially Agneta Sutton and Donal O'Mathuna (who previously supervised book reviews for this journal). Their overall purpose was to help nurses in this time of crisis by promoting self-understanding and confidence in Christian values while communicating these values at work. Each of the nine authors follow one method in each essay – identifying the professional nurse's responsibility in specific cases and situations, clarifying the moral issues, and recommending logical thinking and responsible action within each context and case.

For example, O'Mathuna wrote Chapter Nine on 'Professional Responsibility Concerning Alternative Therapies.' He begins with a specific case of a nurse using an alternative treatment. Subsequently, he provides abundant evidence from reputable sources about the extensive and expensive use and misuse of alternative treatments, offers a very useful set of five categories to describe and define the widespread practice of alternative therapies, shows that nurses are at the forefront of this controversy among health practitioners, and concludes with a specific proposal showing the relevance of Christian faith and the decisive function of science in sorting out this complex and serious life or death issue. We see the commitment and responsibility of the nurse summarized in this chapter and developed throughout the book by three editors and six authors.

Contributors are from the Netherlands, United Kingdom, and the United States giving the book an international Christian perspective. The unity of the book is maintained by focus on the professional responsibility of nurses in their varied relationships and challenges in dealing with death and human sexuality. While some readers may be disappointed that there is no index, the chapters are clearly identified with provocative questions at their end.

Reviewed by Jack T. Hanford, MDiv, MA, ThD who is a professor of Biomedical Ethics at Ferris State University in Big Rapids, MI, USA.

Ethics Consultation: From Theory to Practice

Mark P. Alusio, Robert M. Arnold, Stuart J. Youngner, eds. Baltimore, MD: The Johns Hopkins University Press, 2003.

ISBN 978-0801871658; 241 PAGES, CLOTH $45

It has been said that the practice of medicine is a moral enterprise. Yet, for those who do ethics consultations in hospitals, this idea must be approached with caution, according to the authors of this provocative and instructive volume. Achieving 'moral consensus' in specific situations is what ethics consultants are charged to do, regardless of their own preferred moral frameworks within bioethics. However controversial this charge may be, this book provides many realistic and practical insights for approaching clinical ethical dilemmas.

With the American Society for Bioethics and Humanities report on Core Competencies for Health Care Ethics Consultation as a background, several chapters expand on the following questions: Is there really a need for ethics consultation? If so, how should it be structured? What training is needed? What approach will fit in a pluralistic, liberal democracy? Should ethics consultants be licensed or certified?

The authors open by establishing the need for ethics consultation in the first chapter, citing three salient features of modern health care: complexity of decision making (related both to technology and to fragmentation of care), 'value heterogeneity' (people 'just don't agree'), and the growing recognition of the rights of individuals (autonomy, or self-determination). The consultant is advised to avoid authoritarianism by knowing 'what's best' and striving for a particular *outcome*, or by 'riding roughshod' over an inclusive *process* while failing to fully open lines of communication. On the other hand, consultants should also avoid pure facilitation, getting folks to come to *any* consensus as the only goal. Rather, 'ethics facilitation' is the preferred approach, where the goal is consensus within the context of social and political realities – societal values, law, and institutional policy.

Acknowledging that frequently an ethics consultant's role is primarily to resolve conflict, the second chapter addresses 'avoiding moral relativism and spiritual bankruptcy.' While limited in the hospital setting, foundations do exist, and 'some moral choices are better than others.' However, this author emphasizes process and consensus rather than the good of the patient as the primary value, arguing that the ends are really the same.

Included is an exhaustive discussion on the nuts and bolts of a complete consultation for clinical cases. Especially helpful are outlines both for a brief chart note as well as a highly detailed report. Structures for doing consultation are presented, with the small team approach somewhat preferred. There follows an intriguing and rather humbling presentation of several cases in which ethics committees stumbled, with suggestions on how they could have done better.

There is an excellent chapter outlining the challenge of organizational ethics, an area beyond the comfort zone of many clinically oriented persons. The community and boardroom must be added to the bedside as domains with stakes in ethical decisions. Finally, a chapter arguing against licensing and certification is much more interesting and fervently presented than one might expect.

This should be required reading for clinicians, chaplains, social workers, and anyone interested in the ethics consult process. While other sources provide stronger foundations promoting the good of the patient, I recommend this book highly both for its practical value and for its reflective discussion on the nuances of clinical ethics.

Reviewed by R. Henry Williams, MD, MA (Bioethics), FACP, who is in the private practice of internal medicine and serves on the ethics committee at Memorial Hospital in Chattanooga, TN, USA.

Total Truth – Liberating Christianity from Its Cultural Captivity

Nancy Pearcey. Wheaton, IL: Crossway Books, 2005.

ISBN 978-1581347463; 512 PAGES, CLOTH $25.00

Each serious student of ethics and philosophy has a small handful of books within a reflexive grasp for ready reference. Such tomes are rare and many may not agree which fit into such a category. This book – however – deserves your serious consideration.

Don't let the '2005 ECPA Gold Medallion Award' and the 'Award of Merit' from *Christianity Today* scare you off! Nancy Pearcey has produced a substantial work that is extraordinarily well-researched and well-referenced. The Appendix (distinct, and yet connected to the body of the work) deals with the polemic social issues of American politics, the New Age Movement, and the divide between Christianity and materialism. In addition, the Notes are illuminating and the Recommended Reading is segregated according to the several sections of the book. If you are fortunate enough to have a Study Guide Edition, further discussion and dissemination of the information contained within this book is at your fingertips.

In the Introduction, Pearcey notes that whereas a 'world-view perspective' (notions such as 'where did I come from?' and 'where am I going?') is important, application of this notion helps to define 'who am I?' and 'what can I do?' In acknowledging the evangelical quest to impact the world, the author observes that some Evangelicals seek political activism '…failing to realize that politics tends to reflect culture, not the other way around.' (18) Whereas politics can be 'flashy,' it can also be a 'flash in the pan.' Pearcey encourages us to selectively engage the political forces at hand, and yet, to be wary of making alliances with these powerful institutions.

The absolute gem of this book is the middle section entitled 'How We Lost Our Minds.' Here, we get a backwards glimpse at the social and religious history of our country. Pearcey guides us through a maze of religious agendas juxtaposing the New England heritage – consisting largely of education, scholarship, and covenant theology – against the Revivalist awakenings that emphasized feeling, emotion, and the experience of conversion. The author aligns this religious adaptation, in part, to the social milieu of the rhetoric of independence evolving from the American Revolution. But, the upheaval of the time continues as Americans blast into the Industrial Revolution where compassion, spirituality, and moral sensitivity were emulated and preserved in the home (mostly by the women) and the industrial production was guided in the workplace by the spirit of capitalism (higher education and critical thinking generally being unnecessary). Through examples such as these, Pearcey convincingly demonstrates the segregation of religion from the daily work of living and shows how 'religious' people abandoned critical thinking.

Through Pearcey's metaphor of a two-story house, she posits that religion is relegated to the 'upper floor' which represents the private sphere of personal preferences which includes personal values and private choices and is therefore segregated from the 'lower floor' housing the public spheres of scientific knowledge, facts, and other scientifically verifiable details. The author boldly challenges us to unite our Christianity with good thinking, thereby getting out of the attic so that we can answer the knock at the front door.

Reviewed by Ferdinand D. (Nick) Yates, Jr., MD, MA (Bioethics) who is a pediatrician and consultant on Pediatric, Adolescent and Neonatal Issues in Buffalo, New York, USA and a Fellow at the Center for Bioethics and Human Dignity.

Into the Jaws of Yama, Lord of Death: Buddhism, Bioethics, and Death

Karma Lekshe Tsomo. Albany, NY: State University of New York Press, 2006.
ISBN 978-0791468326; 270 PAGES, CLOTH $83.50, PAPER $27.95

The growing prominence of Buddhism within the American religious and cultural landscape is indicative of increasing diversity in American society. Though introduced in the nineteenth century by Asian immigrants, Buddhism has since attracted converts including prominent academics and entertainers. While numbers remain small (perhaps four million), Buddhism's cultural significance is disproportionate to its size.

Originating 2500 years ago in northern India, Buddhism quickly spread throughout South and East Asia, adapting to local environments as it established itself in Sri Lanka, Tibet, China and Japan. As the Buddha's teachings are applied today to Western societies shaped by modern science, ancient teachings continue to be adapted to new issues, including contemporary bioethical debates. Karma Lekshe Tsomo, Assistant Professor of Theology and Religious Studies at the University of San Diego, has written a fascinating and helpful book which both introduces Buddhism to Western audiences and shows how Buddhism might respond to contemporary bioethical questions.

'Until recently, discussions about biomedical ethics have been based upon theories of self and moral agency that have developed within a Western context. The primary goal of this book is to expand the conversation by exploring the issues of death, identity, and bioethics within a Buddhist framework, focusing especially on Tibet.' (10). The first seven of eleven chapters are devoted to the basic teachings of Buddhism and provide a remarkably clear and accessible introduction to a sophisticated and often confusing metaphysical system. The final four chapters examine a variety of bioethical issues from Buddhist perspectives.

Contrary to other Indian religions such as Hinduism and Jainism, Buddhism rejects the idea that there is an enduring, substantial self or soul. 'In the Buddhist view, there is no fixed concept of self; instead, there is a sequence of impermanent, dependently arising moments of consciousness.' (10) This, of course, raises difficulties for moral theory: 'If the self is contingent and has no ontological status . . . this raises questions about how to develop a viable theory of moral agency and moral efficacy.' (10) Tsomo's discussion explains and defends Buddhist teachings on 'no-self' while acknowledging the difficulties it presents for moral theory. One of her merits is her refusal to follow many in the West who are attracted to Buddhist practice (meditation as therapy) while minimizing or reinterpreting metaphysical commitments of classical Buddhism. Tsomo maintains that a genuinely Buddhist approach to bioethics must flow from an identifiably Buddhist understanding of self, life and death.

Early Buddhism adopted clear positions on some ethical issues, such as abortion and suicide. Abortion, for example, was condemned because taking the life of a fetus was understood to be taking the life of a human being. (146) While conclusions of Buddhists and Christians may be similar, their reasoning often differs as is evident from the following summary statement:

> Taking life is undesirable because it causes suffering . . . To deprive a sentient being of its life not only causes suffering, but also interrupts that being's life cycle and its migration within cyclic existence, which is an unwarranted imposition of one being's wishes upon another. Further, taking life is a grievously unwholesome action that results in unfortunate consequences for the one who kills. The combination of these factors leads Buddhists to refrain from taking the life of any sentient being, no matter how small. Based on the injunction to refrain from taking life and the premise that life begins at conception, Buddhists typically avoid abortion, euthanasia, suicide, or any other action that involves intentionally killing a sentient being, whether human, animal, or insect. (131)

Since Buddhism is atheistic, life is not valued because it is a sacred gift from God. Rather, 'In place of sanctity as an intrinsic quality of life, there is respect for life, a recognition that no being wishes to suffer.' (175) Not all Buddhists adhere strictly to these principles, something acknowledged by Tsomo in her discussions of self-immolation as an act of social protest (140-45) and Buddhist temples' complicity in the Japanese abortion industry through widespread commercialization of *mizuko kuyo* or rituals performed for the 'souls' of aborted fetuses (152-55).

Other issues, such as assisted suicide, organ transplantation, and stem cell research, are less clearly defined and require the application of ancient principles to a radically different world. In discussing these issues, Tsomo adopts a cautious approach which is generally concerned to promote and preserve life. One major difficulty is determining, from a Buddhist perspective, the beginning and end of life. (209) Traditionally, Buddhism has held that the presence of subtle or latent forms of 'consciousness' mark life (218), the identification of which has never been an easy matter. However, this becomes especially problematic with modern science.

This is an important work which should be read not only by those interested in Buddhism but also by those involved in providing health care and in shaping public policy on bioethical issues. Since many patients in Western hospitals are Buddhists, clinicians may find it helpful to learn Buddhist views on life and death. Moreover, given its influence in the academic and entertainment sectors, we can anticipate Buddhism's role in shaping future public opinion about bioethical issues.

Reviewed by Harold Netland, PhD, who is Professor of Philosophy of Religion and Intercultural Studies and the Naomi A. Fausch Chair of Missions at Trinity Evangelical Divinity School, Deerfield, Illinois, USA.

Genetic Ties and the Family: the Impact of Paternity Testing on Parents and Children

Mark A. Rothstein, Thomas H. Murray, Gregory E. Kaebnick, and Mary Anderlik Majumber, Editors. Baltimore, MD: John Hopkins University Press, 2005.

ISBN 978-0801881930; 264 PAGES, CLOTH $ 50.00

We've entered a new era in the determination of parenthood – or at least of fatherhood. Gone are the days of the 'marital presumption' where the husband of the mother was the presumed father of her child: biotechnology has provided us with readily available, highly accurate tests to determine whether a given individual is indeed 'dad.' But, is fatherhood primarily a biological or a social relationship? Should 'genes' trump 'relationships' in the determination of parenthood? On what basis should public policy concerning the determination of fatherhood be grounded? These are the questions addressed in the book *Genetic Ties and the Family: the Impact of Paternity Testing on Parents and Children*, a compilation of essays examining the biological, relational, and legal aspects of 'parentage determination.' Providing no solution to the problem, *Genetic Ties* nonetheless effectively raises one's awareness of the scope of this complex, multi-faceted issue.

The essays cover a variety of perspectives, but all are quite accepting of the mutable nature of contemporary definitions of 'family.' Even the use of the gender-neutral term 'parentage determination' is a curious attempt at political correctness in a situation where the parenthood of the mother is rarely, if ever, in question. Of particular interest is a presentation of the legal history of child custody laws developed to eliminate the now archaic stigma of illegitimacy, and the demonstration that current interest in genetic testing rests in federal laws seeking to identify genetic paternity in order to determine financial responsibility for the child's support. But, the fallacy that genes trump relationships is challenged by Lori Andrews in her review of the current state of reproductive technology. She argues that if we can use donor egg, donor sperm, and/or donor uteri to parent a child, then genes aren't nearly as important as we otherwise believe.

Historically and ontologically parenthood is a responsibility; the invocation of parental rights is a contemporary phenomenon serving only to muddy the family waters. As one essayist states: '…the true parent is the one who can elevate the best interests of the child over his or her own best interests' (180) – a thought reminiscent of a judgment rendered by King Solomon.

This book raises important questions regarding the natures of family and parenthood, but unfortunately leaves one hanging with no cogent solutions – perhaps due, at least in part, to the ambiguity of case law surrounding these issues and the nebulous nature of the contemporary family. While the final chapter attempts a synthesis of the preceding essays, it provides no analysis of the strengths and weaknesses of the underlying values that inform the clash between a child's needs and a father's rights.

Genetic Ties poignantly portrays the 'tangled webs we weave' and raises issues on which anyone with a family should ruminate. If our notions of family and parenthood are mere social constructs which are molded to the needs of a particular moment and change with the tide of public opinion, then we will indeed need the Wisdom of Solomon to navigate the muddy waters of parentage determinations.

Reviewed by Susan M. Haack, MD, MA (Bioethics), FACOG, who a consultative gynecologist at Hess Memorial Hospital and Mile Bluff Medical Center in Mauston, Wisconsin, USA.

Quality of Life and Human Difference

David Wasserman, Jerome Bickenbach, and Robert Wachbroit, Editors. New York: Cambridge University Press, 2005.

ISBN 0-521-83201-2; 273 PAGES, HARDCOVER, $70.00

Quality of life is a concept often used in the clinical setting to assist in decision-making. Caregivers, patients, and family members give much consideration to the quality of one's life, both present and future, when offering or consenting to treatment. This assessment may also lead to the decision to withdraw or withhold life-sustaining treatment. Decisions regarding the worthiness of one's life are value-laden and best left to the patient or to those with the most intimate relationship should the patient be unable to decide.

A second clinical arena giving consideration to quality of life is prenatal genetic testing, the primary focus of the collection of articles collated in this volume. The introduction traces the history of the concept of quality of life both in a general sense as well as health-related quality of life, bringing into the discussion what this entails for those with disabilities. The first essay considers the clinical uses of quality of life against its use in health policy; the second brings disability into the picture arguing that disability has an important place in human flourishing.

Subsequent essays move on from these considerations to those raised by the practice of prenatal genetic testing and the decisions that arise when the possibility of genetic disability is brought to light. Discussion centers on how disability is defined and the satisfaction those with disabilities have with their lives. Answers to these questions change with perspective - those who have a disability bring a different view to the table than those who do not.

Other dilemmas raised in light of prenatal genetic testing include: the decision not to conceive knowing a predisposition for having a disabled child exists, the decision to delay conception if disability can be prevented by doing so, and the decision to terminate the life of a fetus that tests positive for a disability when the severity of such is not yet certain. The perceived and potential impact of the answers to these questions on the disabled community is also considered. Arguments both for and against prenatal genetic testing are presented, as well as one argument that takes a relativistic approach, a position which varies with the circumstance.

This collection of essays will appeal to those involved in prenatal genetic testing and genetic counseling. Considerations about quality of life as they are presented in this volume add to the discussion about the value of human life, disabled and nondisabled. Each of the authors offers a perspective from a secular viewpoint coming down on each side of the argument for and against prenatal genetics testing. But, for the Christian, another dimension exists - that of one who acknowledges a God sovereign over all aspects of life, including that life which does not yet exist. The God who created life gives meaning and purpose to our lives and the lives of our offspring; He is a God who gives wisdom and guidance if we call on Him as we face these difficult decisions.

Reviewed by Jeffrey G. Betcher, MD, FRCPC, MA (Bioethics), who practices anesthesiology and critical care medicine at the Regina Qu'Appelle Health Region in Regina, Saskatchewan, CANADA.

Transforming Care: A Christian Vision of Nursing Practice

Mary M. Doornbos, Ruth E. Groenhout, Kendra G. Hotz. Grand Rapids, MI and Cambridge, UK: Wm. B. Eerdmans, 2005.

ISBN 0-808-2874-4; 211 PAGES, PAPER $18.00

From the outset, one anticipates that this book will present a normative Christian vision of care for nursing theory and practice. It does just that and suggests that this vision of care will transform present views and practice. According to authors, the transformation can be realized by the source of the normative vision, namely, a robust theological proclamation of Calvinist Christian faith. The authors' argument and appeal continues by affirming that Christian faith provides the motivation and structure needed for a new vision of the theory and practice of nursing. In order to illustrate, but also to guard against losing their appeal in abstraction, the authors provide abundant and realistic cases containing specific clinical relationships and their meaning.

The book is organized into two parts: the first, consisting of four chapters, presents the powerful claims and doctrines of Christian faith linked to and interpretation of nursing theory. Part Two, consisting of three chapters, shows how the same emphasis on faith can structure a normative vision of caring in nursing practice, specifically in psychiatric, community health, and acute care nursing.

One learns from the acknowledgements that the book was composed through a collaborative effort of nine authors. This collaboration adds to its appeal because it allows for a multidisciplinary approach: Doornbos is a psychiatric nurse, Gorenhout is a philosopher, and Hotz is a theologian. The overall production model appears similar to the book by H. Bouma, *Christian Faith, Health, and Medical Practice*, 1989. Allen Verhey contributed to both texts, adding to the particular theological vision of both.

The strength of the vision for *Transforming Care* is in the collaborator's interpretation of care and justice. The content of care is concern and love for 'the other' which provides a normative vision for nursing theory and practice. The content of justice includes the Biblical voice of the prophets in guiding the normative vision for nursing theory and practice.

Just as the model text was successful, I anticipate that *Transforming Care* will be very successful in providing a guiding vision for nurses and other health practitioners.

Reviewed by Jack T. Hanford, MDiv, MA, ThD who is a professor of Biomedical Ethics at Ferris State University in Big Rapids, MI, USA.

Epidemiology and Culture

James A. Trostle. Cambridge, UK: Cambridge University Press, 2004; New York: Cambridge University Press, 2005.

ISBN 978-0521790505 (CLOTH), 978-0521793896 (PAPER), 978-0511110009 (E-BOOK); 228 PAGES, CLOTH $70.00, PAPER $27.99

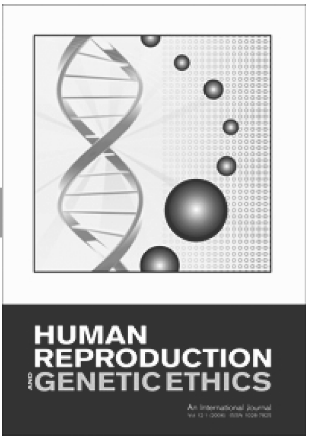
Have you ever wondered whether the study you're reading in the medical literature has any 'real world' validity? If so, reading *Epidemiology and Culture* will be time well spent. Its main goal is to convince readers that anthropology is often essential to good epidemiology. While anthropology is largely observational and studies patterns of human and cultural behavior, epidemiology is observational as well as interventional and studies patterns of disease. The main value of *Epidemiology and Culture* for most readers, however, may be to alert them to important considerations while reading scientific studies.

Trostle explores the varied meanings of epidemiological terms and concepts (which can vary not only across, but also within, cultures) while outlining the effects these variations can have on research outcomes and study validity. He recognizes that what researchers choose to measure and compare is often a surrogate for what they truly seek to evaluate. *Epidemiology* systematically examines parameters (such as person, time, place, and risk) and the degree to which they are true reflections of a study's goals (such as the relationship between exposure/ environment and disease). This assessment is essential to judging the value of a scientific study.

It is important to remember that what researchers see may be merely a reflection of what they are looking for and what they measure may depend upon the definitions they use. Trostle outlines the major types of bias affecting study design, data selection, and validity while emphasizing something often forgotten – associations between variables, even if consistent, do not necessarily reveal causation, particularly when no plausible hypothesis or mechanism links them. Throughout the text, studies complement and demonstrate the author's concerns.

While the book is a quick read, its implications for research design are demanding. While the stated goal is to focus on the essential link between anthropology and good epidemiology, this is often overshadowed by an analysis of epidemiological study design – a 'flaw' which makes the book particularly valuable for anyone studying epidemiology or seeking to improve their ability to knowledgeably read scientific studies.

Reviewed by Sharon A. Falkenheimer, MD (Aerospace Medicine), MPH, MA (Bioethics), who teaches at the International Academy of Aviation and Space Medicine, is a Fellow of the Aerospace Medical Association, and is a Fellow at the Center for Bioethics and Human Dignity.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