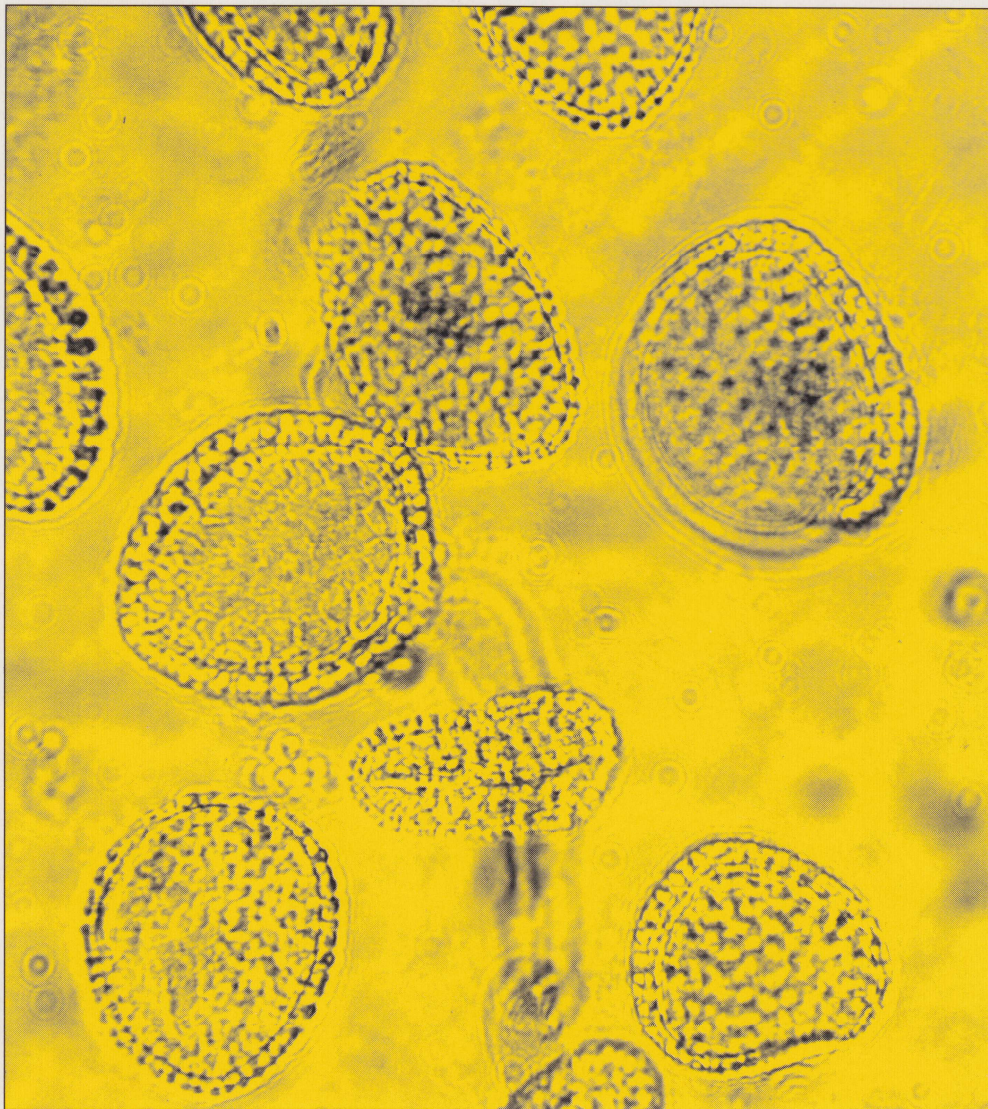


CELEBRATING 20 YEARS

Ethics & Medicine

An International Journal of Bioethics



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CELEBRATING TWO DECADES OF PUBLICATION

Several convergences make this issue of the journal momentous. First, as the journal goes to press, the world is awaiting confirmation of whether the Raelians—a sect that teaches that human beings were deposited on earth 25,000 years ago by extraterrestrials—have cloned a human baby or whether they are guilty of a pernicious hoax. While we may never know for certain what they actually did, the Raelian announcement of a cloned baby born on 26 December 2002 may have awakened a sleeping world, or at least parts of the world, to the potentialities of this biotech century.

Another momentous event is the 20th anniversary of *Ethics & Medicine*. While perhaps not as earth-shattering as a cloned human, the birth of *Ethics & Medicine* two decades ago demonstrated the prescience and creative vision of its founding editor, the indefatigable Nigel Cameron, and the Ethics & Medicine Trust. The vision of Cameron and the Trust was incarnated in a journal which remains sui generis. There is still no other peer-reviewed journal devoted to exploring the implications of the demise (or at least substantial erosion of) and revival of Judeo-Christian Hippocratism in medicine.

While we are in the celebratory phase, another announcement seems in order. In the next issue (19:2), the journal will undergo yet another alteration. While we believe we must maintain the peer-review nature of the journal, providing a venue for academically credible contributions to the literature of bioethics, we also sense the need for additional news and commentary. Peer-reviewed articles will continue to anchor the journal, but other, more timely contributions, will provide the ballast.

Thus, in subsequent issues of the journal the front matter will contain not only an editorial, but several commentaries on various topics of interest to readers. These commentaries may be reprinted (with permission) from other sources or may be original. Without exception, they will be timely and focused. We would, therefore, invite readers to submit 500-1000 word commentaries to be published at the editor's discretion.

Likewise, a biotechnology update will be added to each issue of the journal. Nearly everyone recognizes that the emerging biotechnologies portend both incredible goods for human health and insidious threats to our understanding of what it means to be human.

Ethics & Medicine

We hope this new section will help readers keep up with developments in the biotechnological arena.

As editor of the journal, I want to express my gratitude to the Ethics & Medicine Trust for their creative vision of 20 years ago and to both the European and North American Advisory Boards for their able assistance with the journal over the years. I would also be remiss if I did not especially thank the founding editor for his unflagging commitment to seeing the journal flourish. To all of those who have had a part in the success of *Ethics & Medicine*, not least to our contributors and subscribers, we are most grateful. **E&M**

Soli Deo Gloria

C. Ben Mitchell, Editor

ALONE NO MORE: PAIN IN PREMATURE CHILDREN

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Abstract

It is only recently that newborns have been recognised to feel pain. To avoid the drawbacks of common analgesics, alternative analgesic methods (e.g. sucking and/or oral sugar) have been proposed. We showed that these methods are of little effect without the relaxing, distracting, comforting presence of a person at the cribside who talks to and massages the baby. This is a further demonstration that newborns, including premature babies, look for a reassuring presence when experiencing pain. This is surprising as premature babies are relatively unreactive, often completely isolated in an incubator and considered incapable of social behavior. To the attentive observer, however, they reveal an unsuspected emotional world. Not only do they feel pain, but they are also capable of suffering, distress, anxiety and fear. This needs to be considered in neonatal analgesic treatment, even for extremely premature children. It is mandatory for caregivers to be a reassuring presence during painful procedures: premature babies are exacting patients. They not only feel pain, they even suffer; they request not only drugs, but a human presence nearby.

Key words: pain, premature baby, neonate, ethics, suffering.

... mais restaient muettes sur la souffrance, la détresse, ou la volonté de vivre à tout prix qu'animaient certains bébés.

JP Relier, *Adrien, ou la colère des bébés*, 2002

Until twenty years ago neonatal pain was widely underestimated. Analgesics were rarely used even for surgery¹ and there was a widely accepted theory that neonates do not feel pain². Pain has been defined by IASP as “a sensory and emotional experience based on actual or potential tissue damage or described in terms of such damage”³. Neonates were considered unable to express their feelings and were supposed to feel no pain.

Nowadays it is commonly accepted that neonates feel pain⁴. But do they only feel pain, or even suffer? This question is important for our approach to alleviating pain: shall we only arrest the transmission of painful stimuli or shall we also try to prevent the suffering and distress associated with pain⁵?

Englehardt approved the practice of subjecting newborn infants to painful procedures on the grounds that they cannot integrate the experience of pain sufficiently to actually suffer⁶. This concept is echoed in more recent literature. For reasons we will explain later and from personal experience with hundreds of suffering neonates, we believe that suffering should also be considered, even if it is expressed in a very particular way.

Newborn Babies Feel Pain

There is much evidence that neonates feel pain.

Physiology

Neonates have all the structures necessary to transfer the sensation of pain to the higher centres and brain cortex. Cutaneous sensory receptors develop in the seventh week of gestation. The thalamo-cortical connection, which is crucial for cortical perception, occurs at weeks 20-24. Lack of myelin (a sheath which isolates nerve fibres) is often invoked as evidence that premature neonates do not perceive pain. However, even in adults, nociceptive impulses are transmitted by unmyelinated fibres⁷. Moreover, neonates produce substance P, a pain mediator and have low levels of endorphins (natural analgesics)⁸.

Behaviour

During painful experiences, newborns have facial expressions⁹ and undergo changes in physiological parameters (heart rate, oxygen saturation, intracranial pressure)¹⁰ clearly indicative of pain. These may be conditioned by factors such as behavioural state during pain and gestational age, but a lesser reaction does not mean less pain: it only means less expression of it.

Clinical

Pain can have consequences. The release of excitatory aminoacids and increases in blood pressure may lead to brain damage^{9,11}. At several years of age, children who underwent multiple painful events in the neonatal period have lower pain thresholds¹².

As a consequence of these observations Anand & Craig proposed a wider definition of pain for newborns than the IASP definition for adults¹³.

Reducing Pain

In the last few years research for analgesics without side-effects has continued. Pediatricians have been urged to use existing analgesics and non-pharmacological methods of analgesia¹⁴. Two non-pharmacological methods, sucking and sugar administration, have been tested.

Sucking during blood sampling was found to reduce manifestations of pain, as was instillation of sweet fluids (milk, sucrose, glucose, sweeteners) on the tip of the tongue. Sugar is thought to work through release of β -endorphins¹⁵.

Though commendable, these methods raise clinical and ethical problems. They produce a decrease in pain, but do not eliminate it (figure 1). In some cases the percentage of babies crying was high^{16,17,18}. With regard to ethics, administration of analgesics is only a partial measure if human presence is withheld.

It may well be asked why newborns are treated differently from other children or adults during painful procedures: an older baby is reassured before, distracted during and soothed after blood sampling or injections. Are there physiological or psychological reasons preventing the same care for premature babies? According to Als, preterm infants are neurobiologically social¹⁹: the fact that they have needs, fears and feel pleasure seems a good reason to try to reassure, distract and soothe them. Moreover, their sensorial pathways are mature: massage, postural holding, flexing arms on the median line to create

reference points (as in utero), are the basis of modern care of prematures. Newborns have their own preferences for odours²⁰, they see better than was thought and can have brief eye contact with their mothers²¹. Sucking and sweetness have been shown to relax them. All these sensory pathways can be used to give pleasant sensations to premature babies during pain.

In a recent study²² we exploited all these sensory pathways to stem pain. We studied premature babies during blood sampling using a technique of sensory stimulation to comfort the baby. We called it Sensory Saturation (SS). It consisted in distracting and comforting babies by massaging them, speaking to them, establishing eye contact, offering a fragrance and instilling 10% glucose on the tongue before and during heel-pricks.

We recorded a reduction in crying time and pain score with respect to the control group and with respect to the groups in which only oral sugar, only sucking or a combination of the two were used. We repeated the experience with term newborns and obtained similar results²³. We attributed these results to the gate control theory of pain²⁴ but as this theory involves affective-motivational dimensions of pain experience²⁵, some further observation is necessary.

Pain Demanding Human Presence

In the last few years, relationship-based developmentally supportive neonatal intensive care has been recognised to improve outcome of preterm infants. As Neonatal Intensive Care Units begin to define themselves not only as physical care settings, but also as settings that support developmental and emotional well-being, infants, families and staff will grow in an environment where strengths are emphasised and vulnerability partnered²⁶.

In practice this partnership is often reduced to fulfilment of a task²⁷. The caregivers rarely give adequate relationship-based care to the baby, or help the couple to actually become parents, to say “you” to the little premature whom they see through the incubator walls²⁸; this only happens if the couple sees caregivers saying “you” to their baby, i.e. recognizing he is a person (even though he may weigh 500 grams or less), recognising his wishes, fears and suffering. Nurses and neonatologists should teach parents not to be deceived by their baby’s apparent fragility, immaturity and lack of reactivity which make relief and suffering difficult to decode; suffering is not related to length, weight or consciousness, but can be expressed in many ways, e.g. as hinted consolation-seeking, sometimes as a desperate need to recognise the presence of the caregiver. Newborns not only feel pain, but also suffering and anxiety²⁹, and anxiety calls for presence and involvement, not only analgesia.

Giving sugar two minutes before the heel stab or mechanically putting a pacifier in the baby’s mouth before taking a blood sample produces little analgesia. Analgesia is more effective when newborns feel a presence nearby. This happens to some extent when sugar administration is accompanied by other manoeuvres (e.g. when sugar is given not only before, but also on a pacifier held and moved in the mouth during heel-prick³⁰, or when sugar instillation is repeated more than once during the sampling³¹); much more with SS, because more relationship is established and babies do not feel alone and abandoned during the painful experience.

The Capacity for Wonder

A recent editorial of *J Med Ethics* suggested that “one source of both moral and intellectual renaissance for the contemporary physician lies in recapturing a sense of wonder at the human body, its place in the natural realm, and its miraculous functioning as the fount and medium of embodied human experience”³². Without wonder there is no possibility of alleviating suffering, because wonder makes it possible to understand what suffering requires: empathy and respect (but not sentimentalism: sentimentalism is “to be emotional without sharing”³³). What a wonder it is to recognise that a hand-sized baby is communicating pain and that in his small way he aims at health. Schopenhauer defined suffering as the gap between what we demand or expect from life and what actually comes to us³⁴. Newborns feel pain and have demands: they suffer. That is why we sustain that medical intervention should not be limited to drugs and technical procedures. The keyword is “presence”, because that is what is requested and needed. It is difficult to administer, because it is not a drug, and cannot be given by an uncaring caregiver. However, it is the only way to effectively acknowledge the patient’s and the caregiver’s dignity.

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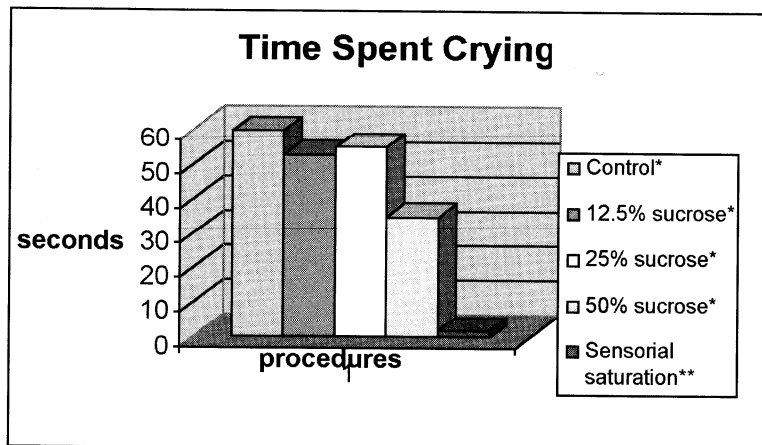
Legend of Figure 1

Oral sucrose was associated with a slight decrease in crying time with respect to controls. Sensory saturation was associated with almost an absence of crying.

*in the first 60 seconds after heel-prick³⁵

**in the first 30 seconds after heel prick (no crying in the following seconds)³⁶ E&M

FIGURE 1



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THE CONCEPTION VIEW OF PERSONHOOD: A REVIEW

DENNIS M SULLIVAN, MD, FACS

Introduction

Man's metaphysical pretensions...are preposterous. A miserable bit of protoplasm, full of ugly little concepts and mean little emotions – and it imagines itself important! Really, you know, that is the root of all the troubles in the world (Rand, 1957, p. 129).

Ayn Rand's imaginary philosopher Dr. Pritchett summarizes the dominant mood of modern society in its understanding of human nature. There is a general cynicism about man's condition in today's world, a view derived from two sources: philosophical naturalism in the scientific community and the postmodern drift of popular culture.

In the first case, naturalism has led to a devaluation of human beings, who no longer have inherent dignity and worth, and there is no ultimate purpose for man.ⁱ Since we are all just the random result of evolution, there is no basis for law or morality, and death is the end of personal existence. In the second case, postmodernism has promoted the idea that meaning and purpose are illusory goals not even worth pursuing.

The Christian worldview offers a startling contrast, with a view of human beings made in God's own image, the highest achievement of God's creative impulse. Such a view gives us worth, dignity, and hope. It is the basis of all law, morality, philosophy, art, and science, and offers hope to a jaded, materialistic society.

So the philosophical battle rages between a naturalistic worldview that defines man in the most reductionist terms, and a high Judeo-Christian perspective that defines him as a valued person. The personhood question is central to biomedical ethics, where the nature of humanity touches every issue at hand: abortion, reproductive technologies, human stem cell research, cloning, assisted suicide, euthanasia, genomics, and resource allocation.

By *personhood*, I mean something more than mere biological life. *Person* denotes a being that is a member of "the moral community" (Fieser & Dowden, 2002). This implies having rights and duties of a moral nature. This paper will analyze and defend the conception view of personhood: a human being is a person from the moment of conception and at every subsequent moment.

I will examine the biblical bases of this view, and show how Scripture affirms man's value through the image of God. I will then show the biblical evidence for the conception view, as well as the limitations of using Scripture in this regard.

I will next discuss the philosophical underpinnings of personhood, and show how secular, functionalist views are basically flawed. I will compare this with an ontological view that sees personhood as intrinsic to man, a perspective compatible with Judeo-Christian thought.

Finally I will examine the biological bases of the conception view and will look at several “decisive moments” in biological history. I will show that syngamy, the moment when the full complement of genetic material is established in human beings, is the only biologically unique point in time on which to base personhood. This moment corresponds with the union of sperm and egg in conception.

My goal is a comprehensive, holistic view of personhood, intrinsic to the nature of human beings, and beginning at conception.

The Biblical Basis of Personhood

Psalm 8 begins and ends as a hymn of praise to the Creator God: “O LORD, our Lord, How majestic is Your name in all the earth, Who have displayed Your splendor above the heavens! (NASB)” David then considers himself in light of God’s awesome creation: “When I consider Your heavens, the work of Your fingers, The moon and the stars, which You have ordained; What is man that You take thought of him . . .” (vv. 3, 4a). David’s awe in light of God’s creation does not, as might be expected, diminish man; rather it makes man the greater for it. He is saying that the all-powerful God Who created the universe nonetheless values man highly. This is reiterated in v. 5: “Yet You have made him a little lower than God, And You crown him with glory and majesty!” The word translated here as “God” is the Hebrew word *‘elohim*, which in the King James tradition was rendered as “the angels,” an understanding dating back to the Septuagint. Leupold, in his classic commentary on the Psalms, has said: “We are strongly of the opinion that *‘elohim* should here be translated in its plain and regular meaning ‘God,’ a meaning which it has almost without exception” (1981, p. 107). Another Old Testament scholar put it this way:

The rendering “angels” for the Hebrew term *‘elohim* seems to have been a desperate attempt on the part of the translators of the Septuagint to avoid what they determined to be a difficulty in their own culture. Had they translated “a little lower than God,” would not their pagan neighbors accuse them of worshipping demigods? Where would the great Jewish declaration of monotheism go if they admitted to this high view of man? (Allen, 2000, pp. 64-65).

Modern translations have not all relied on this traditional rendering. Whereas the New King James (NKJV) and New International (NIV) Versions retain the sense as “angels” or “heavenly beings,” the New American Standard (NASB) and Revised Standard (RSV) translate the term as “God.” This implies that man has so much worth that he is only a little lower than God Himself. This idea is amplified by the subsequent context: “And You crown him with glory and majesty! You make him to rule over the works of Your hands; You have put all things under his feet.” (vv. 5b, 6a).

Regardless of the interpretation of *‘elohim*, Psalm 8 is clearly a song of praise to God Who has given great worth and authority to man. This value comes not through man’s effort, but is a gift from the Lord of creation.

The value of man is also seen in the Genesis account of creation, where God’s creative work on each day is declared good, but with the creation of man

on the sixth day, He declared it “very good” (Gen. 1:31). The passage that outlines man’s creation is Genesis 1:26-27:

Then God said, “Let Us make man in Our image, according to Our likeness; and let them rule over the fish of the sea and over the birds of the sky and over the cattle and over all the earth, and over every creeping thing that creeps on the earth.” God created man in His own image, in the image of God He created him; male and female He created them. God blessed them; and God said to them, “Be fruitful and multiply, and fill the earth, and subdue it; and rule over the fish of the sea and over the birds of the sky and over every living thing that moves on the earth.”

The word translated “image” is the Hebrew *tselem*. It appears sixteen times in the Old Testament, five of which refer to man as created in God’s image. In most of the other cases, *tselem* refers to an idol (Zodhiates, 1990). The root sense is that of a representation or resemblance (Harris, Archer, & Waltke, 1980).

“Likeness” comes from the Hebrew root *demûth*. This appears twenty-six times in the Old Testament, often in conjunction with theophanies, or appearances of God. It is worth noting that Ezekiel and Daniel never claimed to have seen God, only the likeness of God as in Ezek. 1:26, 28 or Dan. 10:16 (Harris et al., 1980). Two key uses of *demûth* to describe man’s resemblance of God are in Gen. 1:26: “Let Us make man in Our image, according to Our likeness” and Gen. 5:1: “In the day when God created man, He made him in the likeness of God.” Additional insight comes from Gen. 5:3 where Adam’s son Seth is “in his own likeness.”

Thus man resembles God, yet not in any physical or visible characteristics and not so as to make man equal to God. That being said, there has been considerable historical debate over the concept of the “image of God.” It is clear, however, that this is some quality or aspect whereby created man is like God. This makes man distinct from animals, for the Bible declares that only man is made in God’s image.

In the Jewish tradition, the term “image” denotes a resemblance, yet clearly of lesser degree than God Himself. This has been interpreted most often as the capacity for rational thought (Goldberg, 1990). Among the early Church Fathers, Irenaeus made a distinction between “image,” which he related to man’s reason and volition, and “likeness,” referring to man’s holiness and relation to God (Ware, 2002).

Augustine taught that God’s image relates to memory, intellect, and will, capacities that he implied were analogous to the triune persons of God (Augustine, 396). Thomas Aquinas rooted the image of God in man’s intellectual capacities (Aquinas, 1274), though theologian Anthony Hoekema reasonably feels this was overly influenced by the writings of Plato and Aristotle (Hoekema, 1986). In his *Institutes*, John Calvin wrote that the human soul is the image of God (Calvin, 1581). More recently, some theologians have emphasized unique aspects of personality, such as self-awareness and emotion, that separate men from animals (Eichrodt, 1967).

In this short historical overview, note that Irenaeus is somewhat unique in his desire to separate “image” from “likeness” as having different meanings,

though some other theologians have also adhered to this idea. A full treatment of this question is beyond the scope of this paper. For my purposes, I will treat “image” and “likeness” as synonyms.

Of interest is the impact of the fall of man on the image of God. Luther, who equated the image with man’s original righteousness, taught that fallen man had lost God’s image and that the goal of salvation is to restore it in Christ. Calvin took the broader view that the fall of man has corrupted God’s image to a greater or lesser degree, but that some aspect of the image of God remains (Hoekema, 1986). Scriptural support for this comes from Gen. 9:6, James 3:9, and Col. 3:9-10, all of which refer to the image after the fall.

The preceding historical ideas come under the category of so-called *structural* views, i.e., ways in which human nature is structurally related to God’s nature (Saucy, 1993). More recently, Karth Barth proposed another concept, the *relational* view. This idea emphasizes the social character of man in his ability to relate to God. Others have taught a *functional* view, wherein the emphasis is on man’s stewardship over creation as the function for which he was created (O’Mathuna, 1995).

Though there are multiple interpretations of the image of God, one thing is clear: the scriptural context relates to man’s high value as taught in Psalm 8. For example, Genesis 9:6 states: “Whoever sheds man’s blood, by man his blood shall be shed; for in the image of God He made man.” Thus, capital punishment is an appropriate penalty for the destruction of an image-bearer. In the New Testament, James 3:9 condemns the tongue as evil, because it curses men “who have been made in the likeness of God.”

Historical Judeo-Christian conceptions of the image of God are *inferences* from biblical texts. It may seem surprising that such an important concept is never explicated in full, until one realizes that such is not the purpose for which Scripture was written:

Just as one cannot find a biology or geology worked out in Scripture, so one cannot find a psychology or anthropology there either. This does not mean that there are no statements about the human person. Scripture makes it plain that humans are to be seen from the perspective of God and His purposes. But these insights are not developed into a systematic theory about persons considered in abstraction. Philosophical considerations only tacitly underlie other concerns (Anderson & Reichenbach, 1990, p. 199).

If the image of God determines personhood, then there is a great danger in attempts to arrive at conclusions about this important concept from a list of characteristics. This may open up a real temptation to declare some human beings as “non-persons” when they cannot fulfill all the elements of such a list. For example, Christian theologian Robert Rakestraw uses the criterion of rationality to claim that an individual in a persistent vegetative state (unresponsive coma) has lost the ability to be an “imager of God,” and thus may be declared dead (Rakestraw, 1992).

On the contrary, the image of God in man must surely be an intrinsic feature, not separable from his humanness. Though the image may be tarnished by sin, it is never lost, and it may be renewed through Christ (Eph. 4:22-24; Col. 3:10).

As shown, the image of God in man has an *ontological* correlation with the Divine nature, such that man is a representation of God, though not equal to God. The New Testament, in such passages as Rom. 8:29 and 2 Cor. 3:18, also teaches the spiritual principle that a Christian is *conformed* to the image of Christ as he or she matures spiritually:

The goal of our redemption in Christ is to make us more and more like God, or more and more like Christ who is the perfect image of God. The fact that the image of God must be restored in us implies that there is a sense in which that image has been distorted . . . We should think of the image of God in this sense, therefore, not as a noun but as a verb: we no longer *image* God as we should; we are now being enabled by the Spirit to *image* God more and more accurately; some day we shall image God perfectly (Hoekema, 1986, p. 28).

John 1:14 reveals the ultimate validation that God confers great worth on fallen man through His image: "And the Word became flesh, and dwelt among us." Hoekema has again expressed this well:

That God could become flesh is the greatest of all mysteries, which will always transcend our finite human understanding. But, presumably, it was only because man had been created in the image of God that the Second Person of the Trinity could assume human nature. That Second Person, it would seem, could not have assumed a nature that had no resemblance whatever to God. In other words, the Incarnation confirms the doctrine of the image of God (Hoekema, 1986, p. 22).

In summary, the image of God relates to some way that man resembles his Creator, and defines man as a morally significant entity (person). It is the image of God that separates humanity from the animal world. Among structural views, this includes such traits as intellect, emotion, volition or will, and conscience or morality. Relational views stress the social character of man, while functional views emphasize man's stewardship role over the created realm. All of these concepts are limited expressions of an ontological or intrinsic relationship to the Divine that may not be fully expressed by a list of traits.

In the broader context, then, God as divine Person has given great value to the person of man. Just when does this valuing begin? In other words, at what moment in life does personhood originate?

Scripture teaches that God values persons yet in the womb. A beautiful expression of this is found in Psalm 139, vv 13-16:

For You formed my inward parts; You wove me in my mother's womb. I will give thanks to You, for I am fearfully and wonderfully made; Wonderful are Your works, And my soul knows it very well. My frame was not hidden from You, When I was made in secret, And skillfully wrought in the depths of the earth; Your eyes have seen my unformed substance; And in Your book were all written The days that were ordained for me, When as yet there was not one of them.

Through rich poetry, David describes God's formation of him in the womb as an intimate and personal process. The word "formed" comes from the Hebrew word *'âsâ*, which means to fashion or to build. This is a different term than the word *bârâ'* (as in Genesis 1:1), which implies an original creation *ex nihilo* (Harris et al., 1980; Zodhiates, 1990). This sense is amplified in constructive parallelism by the word translated "wove" in the NASB, which is the Hebrew *cakak*, rendered as "knit" in the NIV or RSV (Strong, 1996).

Though not referring specifically to the womb, this same sense of a personal fashioning and weaving of an individual is also seen in Psalm 119:73: "Your hands made me and fashioned me," or in Job 10:10-11: "Did You not . . . clothe me with skin and flesh, and knit me together with bones and sinews?"

Thus, David's sense of awe and wonder in Psalm 139 relates to a personal, intimate, hidden process. Though made in secret, God knew him, and His eyes saw him, before he was completely formed. God also knew David's history, and the length of his days.

Jeremiah also describes God's personal involvement with him as an unborn child (1:5): "Before I formed you in the womb I knew you; And before you were born I consecrated you; I have appointed you a prophet to the nations." Some have criticized this interpretation by saying that the text only refers to God's knowledge of Jeremiah's pre-birth destiny as a prophet. However, the word "formed" here, from the Hebrew *yatsar*, has the primary meaning of "fashioning," as with a potter and his clay (Strong, 1996). This implies an intimate level of involvement.

A subtler, though nonetheless valid, example is in Genesis 25:21-24:

Isaac prayed to the LORD on behalf of his wife, because she was barren; and the LORD answered him and Rebekah his wife conceived.

But the children struggled together within her; and she said, "If it is so, why then am I this way?" So she went to inquire of the LORD.

The LORD said to her, "Two nations are in your womb; And two peoples will be separated from your body; And one people shall be stronger than the other; And the older shall serve the younger."

When her days to be delivered were fulfilled, behold, there were twins in her womb.

The word translated "children" is the common Hebrew word for son or child, though here they are still in the womb. Their struggle presages a lifetime of conflict (Keil & Delitzsch, 1978). A sense of personality and character is clearly in view for the yet unborn Jacob and Esau.

The New Testament also teaches the personhood of the unborn. The most notable instance of this is in Luke 1:41-44, where Elizabeth, five months pregnant with John (who would become the Baptist), meets Mary, the pregnant mother of Jesus:

When Elizabeth heard Mary's greeting, the baby leaped in her womb; and Elizabeth was filled with the Holy Spirit. And she cried out with a loud voice and said, "Blessed are you among women, and blessed is the fruit of your

womb! And how has it happened to me, that the mother of my Lord would come to me? For behold, when the sound of your greeting reached my ears, the baby leaped in my womb for joy.”

Two issues become clear from this marvelous passage. Though the events have miraculous overtones, the personhood of John the Baptist is evident from his expression of joy at the Savior’s presence. Furthermore, Jesus is seen as a person as well.

Though it affirms the value of persons before birth, nowhere does Scripture explicitly declare that personhood begins at conception. Attempts to make it do so commit the error of interpreting biblical data from a modern scientific framework. The Scripture writers, though infallibly inspired by the Spirit of God, wrote within their own cultural context, and would not, for example, have been familiar with such modern concepts as *embryo*, *sperm*, and *ovum*, nor the term *person* as it is used in modern bioethical debate.

An example of this error can be seen in interpreting in Psalm 51:5, where David expresses his repentance for his great sin with Bathsheba: “Behold, I was brought forth in iniquity, And in sin my mother conceived me.” It is tempting to claim that sin is here assigned to the unborn child from conception. Since sin is a moral quality, so the argument goes, it can only apply to persons. Therefore, this implies that David was a person from the moment of conception.

This would be true if the Hebrew term translated “conceived” were used in some technical sense, e.g., as in the biological joining of gametes. However, there are a variety of Hebrew words used to denote the idea of conception, and the meaning is never that technically precise. For example, the word translated “conceive” in Psalm 51:5 could be translated “mated” in Gen. 30:30 (NIV). The word “conceive” in Judges 13:3 and 13:7 comes from a Hebrew word that means “to become pregnant” or “to be with child.” This same word is used metaphorically in Job 15:35 to refer to conceiving trouble (NIV) or mischief (NASB). The word “conceive” in Numbers 5:28 comes from a Hebrew word that means “to bear” or “to yield” (Strong, 1996). Literally or metaphorically, these Hebrew words all refer simply to the state of pregnancy resulting from sexual union (Harris et al., 1980). In some contexts, to “conceive” is separated from actual birth (i.e., it is an earlier stage of life). But to make these Hebrew terms imply more than this would be overreaching.

In summary, the Bible affirms that man has great value to the Creator-God, and that he is made in God’s image. In both the Old and the New Testament, personality is ascribed to the unborn child, whom God forms in the womb by an intimate and personal process. Although the Bible does not directly state that personhood begins with conception (in the technical sense), such a conclusion is warranted by an appeal to common sense and continuity. In order to make this point clear, I turn next to philosophical considerations.

The Philosophical Basis of Personhood

Empirical functionalism is the view that human personhood may be defined by a set of functions or abilities. Such abilities must be present in actual, not potential form. The classical expression of this view is that of Joseph Fletcher,

who in 1972 outlined twenty criteria for human personhood. These included such hallmarks as minimum intelligence, self-awareness, a sense of time, and the capacity to relate to others (Fletcher, 1972). In response, Michael Tooley weighed in with the idea of self-awareness (1972), and McCormick with the concept of “relational potential,” based on the ability to interact socially with others (1974). Fletcher then decided, based on feedback from these and other writers, that the *sine qua non* for human personhood was neocortical functioning (Fletcher, 1974). Neocortical functions are those “higher brain” processes of the cerebral cortex necessary for active consciousness and volition. This should be contrasted with whole-brain functioning, which includes activities of the brainstem as well as the cortex.

Note that there is no significant disagreement over “whole-brain” definitions of personhood, or more properly, when it has ceased. For example, at the end of life, when both higher centers *and* the brainstem no longer function, the individual falls under the guidelines now legally accepted in most states for brain death (“President’s Commission,” 1981). This means that death has occurred in the same sense as when the heart has stopped beating and respirations cease. Disagreement arises, however, in using neocortical functioning as the determining factor for death while the brainstem and many autonomic bodily functions are still intact. Such a criterion might be used, for example, to determine the end of meaningful personhood in someone in a persistent vegetative state (PVS), i.e., a state of deep, irreversible coma. At present, the law does not permit such persons to be declared dead. Some secular bioethicists have proposed that neocortical definitions of death be adopted, on the basis of a presumed loss of personhood (Veatch, 1981).

Functionalists would extend the above argument to deny personhood to the unborn child, since she lacks rationality or self-awareness. However, by this criterion, one could argue that adults also lack self-awareness when asleep or under anesthesia, yet no one questions their personhood during such moments. One way to circumvent this objection is to use Tooley’s idea that only “continuing selves” have personhood, which includes both self-awareness and a sense of the future (Tooley, 1983). This would nonetheless deny personhood to the unborn and justify abortion on that basis.

Michael Tooley, and more recently, the Princeton philosophy professor Peter Singer, have both advocated the next logical step: infanticide (Veith, 1998). If the fetus has no right to personhood because it is not yet self-aware, then neither does the newborn: “Infanticide before the onset of self-awareness . . . cannot threaten anyone who is in a position to worry about it” (Singer, 1985, p. 138).

Wennberg finds such a position objectionable, and argues that there is a difference between those beings with a *potential* capacity for rationality and those with a *developed* capacity. Though the former are not persons (in his view), both are entitled to a right to life, with that right growing with greater and greater development of potential (Wennberg, 1985). Becker compares personhood to a process: “When can we say that the fetus is a human being rather than a human becoming? Surely only when its metamorphic process is complete” (Becker, 1988, p. 60). Both Wennberg and Becker would imply, therefore, that there are *degrees* of personhood, i.e., that some human beings have more of it than others. On this view, there can be such an entity as a *human non-person*.

All of these variants of empirical functionalism suffer from the same defect as discussed earlier with Christian perspectives on the image of God. If a list of functions or abilities defines personhood *or* the image of God, then those who lack such traits may be declared non-persons. Of course, a functionalist would not see this conclusion as morally defective. However, as I have attempted to show earlier, functionalism is incompatible with a scriptural view of persons. I will now try to show why it is untenable philosophically.

Ontological personalism states that all human beings are human persons. On this view, the intrinsic quality of personhood begins at conception and is present throughout life (O'Mathuna, 1996). Such individuals are not potential persons or "becoming" persons; they are persons by their very nature. There is no such thing as a potential person or a human non-person.

In order to understand this it will be helpful to reflect on the worldview assumptions that underlie both personhood views. Since the Enlightenment, society in general has been dominated by a high regard for science and the secular tradition of naturalism. Naturalism is the concept that only observable data has reality. A scientist who adheres to this view is free to have any metaphysical or philosophical opinion he would like, as long as it does not influence his practice. In other words, he need not hold to naturalism as a philosophy, but he must adhere to it in his methodology (Plantinga, 1997). However, the Christian scientific community should not be bound by the constraints of methodological naturalism.

Herein lies the tension between the two ideas of personhood. The influence of naturalism has led secular science away from a reverence for life, replacing it with a reductionism that claims the human organism is no more than the sum of its chemical parts. The empirical functionalism idea of personhood is compatible with this view, which makes man simply a collection of parts and functions, or a *property-thing*. Put together enough chemical molecules in the right way, and you have a human being; put another set of parts together, and you have a 1957 Chrysler. Philosophically, it makes no difference.

Ontological personalism, on the other hand, is based on the premise that a human being is a *substance*. A substance is a distinct unity of essence that exists *ontologically prior* to any of its parts. This traditional concept dates back to Aristotle and Thomas Aquinas. This view has been well summarized by the Christian philosopher J. P. Moreland (1995), and is discussed in great detail in the book *Body and Soul* (Moreland & Rae, 2000). For this review, I will focus on two implications of the idea of substance: the parts v. whole distinction, and continuity.

To expand on my earlier illustration of a classic automobile, consider a nicely restored 1957 Chrysler. Many of the original parts have rusted away and have been replaced, so that this vintage car is a collection of old and new. Although many will refer to it as the same car as when it was new, intuition tells us that this is not the case. In fact, as stated earlier, remove the wheels, the motor, the seats, and the body, and the result is no longer a 1957 Chrysler; it is not even a car. To go still further, imagine adding other parts to the original chassis, such that the result (God forbid) is a 1972 Volkswagen Beetle! There was no continuity of essence between the two vehicles; each is nothing more than a collection of parts (my apologies to VW lovers).

Try to do the same kind of thought experiment on a human being. Remove an arm or a leg from John Doe, and he remains a person, in fact, the *same* person. You can amputate all of John's extremities and even remove many internal organs; as long as he remains alive, his substance will never change. You can even "add new parts," by transplanting organs from other persons, yet John Doe will never become James Smith; his substance is not defined by his component parts. He will always remain the same person.

Consider the argument from continuity. The cells of the human body are constantly being replaced. As nutrients are taken in and waste products given off, new chemical molecules enter and leave on a daily basis. The outer skin is completely replaced every four weeks. The lining of the gastrointestinal tract is replaced even more rapidly, every 5-7 days (Tortora & Grabowski, 2003). It is reasonable to claim that all of the chemical parts of the body are completely replaced, say, every few years.

Yet an individual, as substance, has continuity from one moment to the next. She is the same person as she was one week ago, one year ago, or ten years ago. She has memories that give her continuity with her present state. She relates to her childhood; she can give the date of her birth. Even if she lacks such memories because of disease or injury, she has a continuing self that is identical to her earlier self.

Naturalism has its greatest difficulty here. To hold to a property-thing view of persons is to deny the commonsense understanding of personal continuity, with a host of attendant problems for law and morality. Mortimer Adler has cited the denial of human nature as one of the great philosophical mistakes of our age, with serious consequences for moral philosophy (1985).

A concrete example may make this clearer. On June 11, 2001, Oklahoma City bomber Timothy McVeigh was executed by lethal injection in Terra Haute, Indiana. As a society, we held him morally accountable for an act committed on April 19, 1995. Even though over six years had elapsed, there was moral continuity. In other words, the *same* Timothy McVeigh that committed the crime was the person punished. If a property-thing view is applied, then there was no continuity over time, and McVeigh was a different person (in that he was made up of different molecules) in the intervening period, and the "wrong person" was executed. This is clearly nonsense, and flies in the face of intuition.

Though it has limitations, intuition can be a powerful guide, even in discussing abstract metaphysical principles. The English philosopher John Locke called our shared intuition "natural law" (Budziszewski, 1997). Even Scripture affirms that the Gentiles, ignorant of the Hebrew God, have an internal law they all hold in common: a "law written in their hearts" (Rom. 2:14-15).

Turning our attention to the unborn child in the womb, we can use intuition and continuity arguments to persuasively argue for personhood. For example, Francis Schaeffer used such an argument when he posed a rhetorical question: "Would you kill this infant a minute before he was born, or a minute before that, or a minute before that?" (Schaeffer & Koop, 1979, 37) Using common sense, there is no *prima facie* (at first impression, or self-evident) reason to assume that a baby changes its essential nature by virtue of geography (namely, in the womb

or out of it). And there is no *prima facie* reason not to extend such humanity further back in time. In fact, the continuity argument argues for the personhood of the fetus all the way back to the moment that it became a *substance*, i.e., the moment of conception.

The continuity argument is also consistent with the biblical data on personhood. Although I am uneasy about using Psalm 51 to directly affirm the conception view, David clearly has an intuitive idea of moral continuity in mind when he states, “in sin my mother conceived me” (v. 5). He relates his sinful nature to his origin in the womb. Likewise, Jer 1:5 (the call of Jeremiah) expresses moral continuity with the womb, as does the story of the yet-unborn Jacob and Esau in Gen. 25: 21-24. Luke 1:41-44 clearly depicts *the persons who will become the adult John the Baptist and Jesus*.

In summary, the idea of ontological personalism avoids the error of viewing persons as property-things. It relies on the substance view of persons, which, far from being an esoteric philosophical construct, follows from simple intuition: persons are more than the sum of their parts, and have continuity with their past. This is compatible with the scriptural portrayal of persons.

I might add that this view is also compatible with biblical teaching on the image of God. It allows us to explore the way human beings resemble the Divine (rationality, volition, social nature, etc.), while helping us to avoid the dangers of a strictly functional definition. On this view, the image of God is *intrinsic* to the nature of persons. Thus, Scripture teaches the value of man from the womb, whereas intuition and philosophy help us to affirm that such valuation begins at conception.

The philosophical idea of a human being as substance arises out of a broader philosophical principle, that of *substance dualism*. Substance dualism holds that there is an entity called a *soul*, and that the mind is a faculty of the soul. Body and soul (mind) are *functionally holistic*, which means that the two entities are deeply integrated and functionally interdependent. Yet they are *ontologically separate*, which means that the soul can exist independently of the body. This allows for a personal existence after death (Moreland & Rae, 2000). Another implication of this idea is that if personhood begins at conception, then that is when the soul originates as well.

What exactly is conception? What happens at this key moment? Are there other moments worthy of consideration as to when personhood begins? I now turn to the viewpoint of biology, with insights derived from anatomy, physiology, embryology, and genetics.

The Biological Basis of Personhood

In an earlier era, common terminology implied personhood in the womb, and this habit has continued to the present. Imagine a pregnant woman visiting her physician and saying, “Doctor, is my fetus healthy?” Or, “Is this a male fetus or a female fetus?” No, she will ask, “How is my baby?” And, “Is it a boy or a girl?” These are terms that relate to a person, not a thing.

Yet advancements in science and medicine have led to the ability to peer into the womb and to manipulate the pre-born to an amazing degree. This has led to

the impulse to derive a functional / biological definition of personhood based on the level of fetal development.

In this discussion, I have argued in favor of ontological personalism, which holds that human beings are persons from conception onward. Yet empirical functionalism derived from naturalistic presuppositions has been the dominant view of secular science. It will therefore be useful to use these two viewpoints to analyze various biological “decisive moments.” I will begin with the moment of birth and work backwards. Wennberg has presented a similar analysis from the viewpoint of functionalism (1985), though my approach is presented in the reverse order.

A few definitions are in order before I begin. The period from *conception* (fertilization of an human egg) to birth is a 38-week span of time called the *gestation* period. Although these terms are sometimes used interchangeably, the conceptus is properly referred to as an *embryo* up to two months of development, and as a *fetus* after that (Tortora & Grabowski, 2003).

Birth

It seems intuitively evident that a newborn baby is a person. Yet Wennberg does not concede this commonsense idea, arguing from a functionalist perspective: “While the newborn infant is on the verge of personhood, it is not yet a person in the strict sense. It will shortly begin to acquire personal characteristics, but at birth its mental and sensory functioning is often below many newborn animals (the horse, for example)” (1985, p. 78).

For Wennberg, a human person is defined by a list of functional traits that exclude a newborn baby by definition. And as mentioned earlier, Tooley, Singer, and others would use this as a justification for infanticide. However, Beckwith would counter that human beings have certain inherent capacities, which may currently not be fully realized: “It does not make sense to say that a person comes into existence when human function arises, but it does make sense to say that a fully human person is an entity who has the natural inherent capacity to give rise to human functions” (1993, p. 109). In this respect, the newborn will realize its inherent capacity in the near future, just as will the reversibly comatose and temporarily unconscious. The idea of natural inherent capacity may be the *biological equivalent* of the substance-dualism of Moreland and Rae.

It seems clear then, that the newborn baby is a person. This is a position on which Christians and (most) secularists can agree. What is unique about this decisive moment?

Prior to birth, the baby is completely dependent on the mother for oxygen, nutrients, and for the elimination of carbon dioxide and other wastes. The lungs are collapsed and partially filled with fluid, and there are no breathing movements. Exchange of gases, nutrients, and wastes takes place in the blood that passes through the umbilical cord and placenta, attached to the side of the uterus.

At the moment of birth a number of fascinating changes take place. The umbilical cord is clamped or tied off at delivery, and the placenta separates from the uterus. This complete cessation of blood from the mother stimulates the respiratory center in the brainstem, and the baby takes his first breath. At the same time, changes take place within the heart that allow blood to flow to the lungs (Tortora & Grabowski, 2003). The newborn baby is now “on his own.”

Ethically it may seem attractive to make biological independence a determinant of personhood. In other words, it may appear that a baby immediately prior to birth does not have an independent existence, and therefore should not strictly be considered a person. This would have the added appeal of conforming to current legal usage, which attaches legal rights such as inheritance and property ownership to the time of birth.

But a moment of reflection will show the fallacy of this approach. The actual moment of birth is not totally dependent on biological maturity. For a number of reasons (not all of them medical), a woman may undergo Caesarian section or induced labor to deliver a baby at a predetermined moment and not strictly by "nature." Legal rights accrue from the moment the newborn appears. Furthermore, ascribing legal rights to a newborn is merely a Western social convention. Certainly that which is legal is not necessarily ethical (abortion is a good example of this).

Therefore, independent biological existence cannot be a morally relevant criterion for personhood. From the standpoint of abortion, the arbitrary nature of this moment is clear. Recall Schaeffer: "Would you kill this infant a minute before he was born, or a minute before that, or a minute before that?" (Schaeffer & Koop, 1979).

Before leaving this part of the discussion, it is interesting to note the viewpoint of some, that the first breath determines personhood, from the biblical account of the creation of Adam: "Then the Lord God formed man of dust from the ground, and breathed into his nostrils the breath of life; and man became a living being" (Gen. 2:7). However, this case is unique, in that it was the creation of the first man, whose first breath coincided with his biological origin. This would not be true, of course, of any other human being except Eve. Also, as we have already discussed, other scriptural texts affirm the personhood and value of those in the womb, i.e., before the first breath.

Viability

One reason that the 1973 *Roe v. Wade* abortion decision denied personhood to the fetus was its lack of "independent viability:"

With respect to the State's important and legitimate interest in potential life, the "compelling" point is at viability. This is so because the fetus then presumably has the capability of meaningful life outside the mother's womb. State regulation protective of fetal life after viability thus has both logical and biological justifications. If the State is interested in protecting fetal life after viability, it may go so far as to proscribe abortion during that period, except when it is necessary to preserve the life or health of the mother (Roe, 1973).

Yet as we have pointed out elsewhere, the decisive moment of viability is a "moving target" (Sullivan, Francis, & Sellers, 1999). In 1973, the presumed limit on viability was 28 weeks, with an occasional infant surviving birth at 24 weeks gestation. Now such survivals are much more routine and some can live outside the womb as early as 20 weeks.

Although there are many complications related to prematurity, the most significant issue is inadequate lung maturation. Surfactant, a detergent-like

chemical that aids in lung flexibility, is lacking in lung tissue too undeveloped to produce it. This makes the lungs stiff, making it difficult for “preemie” babies to breathe on their own. Newer developments in drug therapy, as well as the use of artificial surfactant, have greatly improved the function of premature lungs (Sweet & Halliday, 1999).

In short, viability as a criterion for personhood is arbitrary and depends on the current state of medical therapy: “Viability measures medical technology, not one’s humanity” (Beckwith, 1993). Yet even if one would grant this criterion of personhood, it has not been legally determinative in the abortion issue. From a legal perspective (as reaffirmed by the 1992 Casey decision), there has always been an exception clause that operates after the point of viability, for “pregnancies endangering a woman’s life or health” (Casey, 1992). This has made abortion essentially legal up to any moment before physical birth.

Quickening

Quickening is the traditional term for the decisive moment when fetal movement is first detectable by the mother. This usually corresponds to 16 to 20 weeks gestational age. From a pre-scientific viewpoint, this decisive moment was often when the fetus was first considered “alive,” in the sense that it gave mother an emotional identification of her unborn child. This moment might resonate with such writers as Marjorie Maguire, who believes that a fetus only becomes a person when emotionally accepted by the mother (Maguire, 1988).

Nonetheless, scientific knowledge has demonstrated quickening to be an arbitrary measure of fetal personhood. Indeed, a simple ultrasound examination may demonstrate fetal movement as early as 9 weeks. Whether or not the mother detects such movement should have only emotional significance.

Of course, the idea of quickening has enormous practical importance in the abortion issue: the emotional bonding that results from quickening may help prevent second-trimester abortions. As Furedi points out, “There is much anecdotal evidence to support the claim that even women who are quite determined that their pregnancy was unwanted at the beginning may find, where access to abortion is delayed to the point when they can feel fetal movements, that they become more ambivalent in their attitude to abortion” (1997). Though quickening has no merit in the defining of personhood, it has great impact from a practical perspective in reducing the number of abortions.

Sentience and Neurological Functioning

Some have proposed that sentience, or the ability of the fetus to experience pain, should be a determinant of personhood. However, since pain is a subjective phenomenon, it would be difficult to be certain at what stage it may be experienced by the unborn. Certainly, the perception of pain depends upon the development of spinal cord sensory pathways (e.g., the spinothalamic tracts) to carry such impulses to the brain. Further, the thalamus, which is the major sensory coordinating center of the central nervous system, must be sufficiently developed to allow for *cognition*, that is, the conscious awareness of pain or any other sensory signal. Cognition depends, in turn, on an intact cerebral cortex. Anand and Hickey have pointed out that functional maturity of the cortex may be revealed by electroencephalographic (EEG) information. Since short bursts of

EEG activity begin as early as 20 weeks (1987), this may be the earliest possible moment that pain may be experienced by the fetus.

There are two major reasons to consider the decisive moment of sentience/neurological development in our discussion of human personhood. First of all, some have argued that an entity that does not experience pain cannot be harmed. But this confuses the awareness of harm with actual harm. Real injury can take place to a person without her awareness, such as stealing, bodily damage to a loved one, etc. Furthermore, as Beckwith points out, "If sentience is the criterion for full humanness, then the reversibly comatose, the momentarily unconscious, and the sleeping would have to be declared non-persons" (1993, p. 103). This idea is clearly absurd.

A second major reason to consider sentience / neurological development as determinative is because of the use of neurological criteria for declaring a person dead. The idea here is that, for transplant purposes, "brain death" (a better expression is "death by neurological criteria") is defined as the cessation of brain function. This can be determined by an EEG or by cerebral blood flow studies. By analogy, Goldenring proposes that "brain birth," the beginning of a fully integrated nervous system, is the point at which humanness begins: "When the coordinating and individuating function of a living brain is demonstrably present, the full human organism exists" (1993, p. 45).

Yet the analogy fails because the two situations are vastly different. As one writer points out, "There is a world of difference between no brain activity in the sense of no more and in the sense of *not yet*" (Schwarz, 1990, p. 52). In other words, the brain dead person has ceased to have any potential for brain activity, while the unborn child has a future capacity, yet unexpressed, for mental functioning.

It is worth reminding the reader at this point that the decisive moments we have considered as possible criteria for personhood are examples of empirical functionalism, i.e., landmarks for protectable humanity that depend upon a list of functions. I have argued on the other hand for the viewpoint of ontological personalism, which sees personhood as an intrinsic or inherent property of being human. This distinction is important in any discussion of sentience/neurological development because of the problem of *anencephaly*.

Anencephaly (meroanencephaly) is a congenital anomaly that occurs in about one in 1000 births. It usually involves the complete absence of the cerebral cortex, with the presence of only a rudimentary brainstem. Infants with this lethal disorder are often stillborn, or survive at most for a few hours after birth (Moore & Persaud, 1998). Some have proposed that the absence of sentience or of the possibility of it ever occurring argues strongly for declaring the anencephalic a non-person. This would allow some "good" to come from a bad situation, and allow the baby's organs to be used by other infants in need. This extends the brain death / brain birth argument, for it would treat an anencephalic infant as brain dead. Indeed, in 1994 the Council on Ethical and Judicial Affairs of the American Medical Association gave its approval to remove organs from infants with this condition prior to their death ("AMA Council," 1995). Though the Council has since reversed its decision, the functionalist approach remains persuasive in general bioethical discourse.

As persuasive as this argument is, and as sympathetic as I am with the terrible dilemma such infants present, I must object to this conclusion. From the viewpoint of ontological personalism, an anencephalic infant is fully human, therefore fully a person. It is unacceptable to deny such infants status as persons for the same reason that such status cannot be denied to those in a persistent vegetative state. Anencephalics, like PVS patients, are not *dead*, i.e. they still have brain-wave activity (however abnormal). In philosophical terms, the ontological substance is present, even if the full expression of its potential cannot take place.

Further, the functionalist view devalues such lives, claiming that the only way they can have value and dignity is for the *parts* they can provide to others. This is the ultimate functionalist error that treats persons as commodities. Such a view is an offense to the God Who allows anencephalics to be born, and implies that He can make mistakes.

I would not argue for extraordinary medical measures to maintain the life of anencephalic infants. These children are terminally ill, and should not be subjected to futile treatment. Such a stance does not deny their inherent dignity.

Human Appearance

By the end of the eighth gestational week, the developing embryo has a distinctly human appearance (Moore & Persaud, 1998). As mentioned earlier, this is when the scientific term changes from embryo to fetus. Could this be an indicator of personhood?

There is no doubt that, like quickening, human appearance causes an emotional response. I can confirm this from personal experience. I once worked in sub-Saharan Africa as a missionary surgeon, and ran a hospital that was the only medical center for a large region. On several occasions, a young woman would present in profound shock from blood loss. Such a patient was usually in her middle twenties, with a very low blood pressure and an abdomen full of blood. The disorder is called an ectopic or tubal pregnancy, where scarring of the Fallopian tubes has caused a fertilized egg to implant there rather than in the uterus. Unfortunately, as the pregnancy grows, it ruptures the tube, leading to massive bleeding. Treatment of the mother involves a blood transfusion, followed by immediate exploratory surgery to remove the ruptured tube containing the (now dead) embryo.

There is a rhythm to the routine in a busy operating room. Our African nursing staff would rush in and out with supplies and equipment. Many in the room would be speaking at once, as together we bent our efforts toward saving the woman's life. But as we stabilized the patient, and sent her to recovery, there was invariably a hush in the room. All eyes would turn to me, as I walked to the supply table. There, in the bottom of a metal basin, was the discarded Fallopian tube. My habit was to cut it open, exposing the embryo inside. There, in a tiny, fluid-filled sac, was a tiny, usually perfect-appearing human being, not much longer than an inch in length. The reaction of those crowding around me was always to gasp in awe and wonder.

I do not lightly regard this emotional connection to unborn humanity. Our Creator has given us such intuition, sometimes called natural law, otherwise known as conscience. It is a powerful, internal reminder of the humanity of the

unborn. Yet appearance can be deceptive, for other mammalian species may resemble human beings in their embryonic form, and we would not grant them personhood. Further, congenital defect or disease may cause certain adult persons to be so disfigured that they no longer *appear* human. I do not wish to support simple prejudice, as in the case of certain disfiguring diseases of adults. Nor do I wish to encourage abortion of the early embryo / fetus, simply because it does not *yet* appear human. There is therefore a limit to the human appearance argument, even though it may help our intuition to appreciate the humanity of the unborn.

Blood Circulation

In this survey of decisive moments in gestational development, surely an important landmark is the formation of the embryonic circulation and blood cells. Angiogenesis, or blood vessel formation, begins in the third week after conception, and blood cells begin to form in the embryonic liver, spleen, and bone marrow around the fifth week. At this time also a heartbeat can be detected by ultrasound (Moore & Persaud, 1998).

In the Christian tradition, the blood is an important biblical metaphor for life itself:

Lev. 17:11: "For the life of the flesh is in the blood . . ."

Lev. 17:14: "For as for the life of all flesh, its blood is identified with its life."

Gen. 9:6: "Whoever sheds man's blood, by man his blood shall be shed, for in the image of God He made man."

As discussed earlier, the "shedding of blood" is equivalent to the taking of human life, as prohibited by Gen. 9:6. Since blood is so intimately tied to life, could a Christian position allow abortion at an earlier point, on the basis that blood cells and a heartbeat have not developed before say, five weeks? In other words, would we be justified in declaring the embryo a non-person prior to this decisive moment because "the life of the flesh is in the blood?"

In response, let us take note of the biological functions of blood. Fresh oxygenated blood from the mother brings oxygen and valuable nutrients (glucose, amino acids, etc.) to the embryo, and removes wastes such as carbon dioxide and urea. This function is present *whether or not* blood circulation is present. In other words, in an earlier stage of development, gases, nutrients and wastes pass to and from the embryo via simple diffusion. When the embryo is small enough, it does not need blood and vessels to carry these products to and fro, but it is still vitally dependent on them. Without such nutritive and eliminative functions, the developing embryo would perish.

Biblically, the rich imagery of blood in the Old Testament is a prophetic type of the bloody death of Jesus Christ on the cross of Calvary. Both in the sacrificial system of animals and in the death of Christ, the main issue is the substitutional atonement for sin by way of a bloody death. In its context, these portions of scripture were never intended to denote the moral status of an individual nor to comment on the technical functions of blood. To attach such moral or scientific significance to the words of Hebrew writers would be overreaching (see the earlier discussion on Psalm 51: 5). Further, the declaration of personhood of the

embryo based on blood circulation would be just as arbitrary as any of the other decisive moments I have already discussed.

Implantation

The decisive moment of implantation is of great interest in the personhood debate. Implantation of the embryo into the wall of the uterus occurs at seven to ten days after conception (Ahokas, 1998). We have discussed elsewhere our objection to defining personhood from this point:

Conception, defined as fertilization of the egg, has historically been considered the beginning of life. Yet there has been an attempt, in recent years, to redefine the point at which human life begins, an attempt driven more by social ideology than science. This is no mere philosophical question, for society must understand how far to extend the right to life to an individual (Sullivan et al., 1999).

Ideological commitments to the right to abortion have driven a movement in the medical community to define “pregnancy” as the moment when implantation takes place, relegating the embryo to inconsequentiality prior to that point. In fact, the pre-implantation embryo is often called a “pre-embryo,” which may serve as a helpful euphemism to justify its destruction: “A legal and ethical consensus is emerging that preembryos are not legal persons or moral subjects” (Robertson, 1992). Notice how this distinction is the key to promoting emergency “contraception” on a Princeton University Web site:

Emergency contraception does not cause an abortion. In fact, emergency contraception prevents pregnancy and thereby reduces the need for induced abortion. Medical science defines the beginning of pregnancy as the implantation of a fertilized egg in the lining of a woman’s uterus. Implantation begins five to seven days after fertilization (and is completed several days later). Emergency contraceptives work before implantation and not after a woman is already pregnant. When a woman is already pregnant, emergency contraception does not work. Emergency contraception is also harmless to the fetus and the mother. (*Emergency Contraception*, 2002).

Obviously, “harmless” would not apply to what happens to the pre-implantation embryo, the fate of which is not mentioned here.

Some might argue that the hormonal interaction of an implanted embryo is necessary for a woman to “feel” pregnant. This is surely true. Yet this cannot be the basis for the ontological determination of personhood. Beckwith has summarized this well: “There is no essential difference between an unknown conceptus . . . it seems counterintuitive to assert that one’s essence is dependent on another’s knowledge of one’s existence” (1993, p. 95).

In fact, basing personhood on implantation is merely a variation on the viability argument discussed earlier. The naturally conceived pre-implantation embryo is totally dependent on the possibility of implantation. Without this event occurring, it will die. This is also true for embryos conceived by artificial means (e.g. in-vitro fertilization). Unless they are frozen (which in effect “freezes them in time”), they must be implanted to continue developing, or they will die.

Ontological personalism would claim that such embryos are de facto persons by nature. As stated earlier, there is no such thing as a potential person or a human non-person. Thus the mere fact of implantation, just like the awareness of its existence, cannot reasonably be a determinant of personhood.

Conception

Conception is the only true, unambiguous decisive moment for personhood. For one thing, it is the only true *moment*, unlike all the other “moments” that represent poorly or vaguely defined ranges or periods of time (even implantation takes several days to occur). For another thing, conception is when *syngamy* is established, a moment unlike any other. This is one of several terms that I will define in the following discussion.

To begin with, *chromosomes* are structures within the nucleus of each cell that contain the genes responsible for human hereditary characteristics. Most body cells have 46 chromosomes, or 23 pairs. In terms of heredity, one set of 23 chromosomes comes from the father, the other from the mother. This pairing, technically referred to as the *diploid* condition, is necessary for life.

Reproduction, either through sexual intercourse or assisted procreation, involves the union of male and female *gametes* (reproductively capable cells). Male gametes, or *sperm*, develop within the male testicle, and are genetically *haploid*, in that they contain only one set of chromosomes. Female gametes, or *ova* (singular *ovum*, often referred to loosely as a female egg) develop within the female ovary, and are also genetically haploid.

Left to itself, an individual sperm or ovum is incapable of cell division; it cannot exist for more than a short time (48 hours for sperm, 24 hours for the ovum). However, when fertilization (conception) occurs, sperm and ovum unite, and their nuclei fuse. This restores the full complement of chromosomes (46 pairs). The two formerly haploid cells have united to form a genetically new and distinct diploid cell. This new cell has the full potential to become a new individual, and begins to divide within 24 hours.

The restoration of the diploid number of chromosomes is an event called *syngamy*. Only one sperm can combine with one ovum. In fact, within three seconds of penetration by a sperm cell, the cell membrane of an ovum “hardens,” so that no other sperm can combine with it. This so-called block to polyspermy (fertilization by more than one sperm) ensures that the new entity will be diploid (Tortora & Grabowski, 2003). No twinning can occur at this moment, and triploidy (having three sets of chromosomes instead of two) is prevented.

Syngamy is the biological moment when human life begins – there is no scientific disagreement about this fact. Does human personhood also begin at this moment? The following five reasons argue for syngamy as the true decisive moment.

Unlike other decisive “moments” we have considered, syngamy takes place over a short period of time, and is truly unique. Syngamy results in the formation of a genetically new individual, where prior to this moment one did not exist.

If substance dualism is true, then human beings are greater than the sum of their parts. No gradualist or functionalist approach could assemble parts to later

become a person. In other words, human beings are persons by their very nature.

If substance dualism is true, then the idea of continuity with the later born child or adult makes sense. All human persons can date their origins to one moment, and one moment only. Stopping to consider any decisive moment during gestation, we will always find that the human substance (person) was ontologically prior to that moment, except at syngamy.

Scripture affirms the value of persons in the womb, even from their earliest origins (even if this is not precisely defined in the Bible). In the light of science, it is only logical to date such metaphysical value from conception.

Intuition tells us that persons begin at their biological origins. In other words, since biological life begins at conception, it is reasonable to date personhood from that moment.

Several objections might be raised against this view. First of all, about 45% of all conceptions are lost by early spontaneous abortions. In many cases, these early embryos are abnormal and could not have developed normally (Moore & Persaud, 1998). This high rate of loss has led some to argue that embryos cannot be persons. However, a brief comparison will show the weakness of this assumption. In some countries of the world, waves of "ethnic cleansing" take place on religious or nationalistic grounds, wherein many children are killed. No one would seriously argue that American or British children are persons, whereas these other unfortunates are not, simply because they were born elsewhere, or because they were less valued by certain members of their society. Also, many more children in developing countries die of infectious diseases than in the Western world, yet we do not seriously claim that they are not persons. If a higher mortality rate does not affect the moral standing of children, how can it be used to argue for the moral standing of children at an earlier stage, when they are still embryos?

Sometimes this argument is expressed as a theological dilemma: how can a good God allow the loss of so many human persons? Or, will there be huge numbers of unborn embryos / children in heaven? These are interesting and difficult questions, but they are theological ones that the Bible does not address. One cannot argue persuasively against the personhood of human embryos from theological silence.

Another objection is the matter of identical twins. Some may claim that, since an embryo can split at seven to ten days to produce twins, this casts doubt on the personhood of the original embryo. At the very least, they claim, personhood can only attach to the twins from the moment that they split. Once again, a brief counterexample may help to show the defect in this argument.

Let us perform another thought experiment. Imagine, if you will, a day in which cloning has been medically perfected, and that I have consented to be cloned (in fact, I would never give such consent, for cloning is morally repugnant to me, but this is only imaginary). One of my skin cells is removed, and its diploid nucleus (containing all the potential for a new human being) is inserted into a female ovum whose nucleus has been removed. If successful, the resulting clone would be genetically my twin, albeit created many years after my own birth. Could one seriously argue that I was not a person prior to the creation

of my twin? A small part of my body “split” away to create a new embryo (the female ovum was just a passive carrier).

In a similar way, an embryo that splits is fully a person prior to twinning; a *second* person (also possessing the diploid condition) begins at the moment of the split. One of the two resulting embryos (it does not matter which) is ontologically continuous with the original fertilized ovum.

By the way, it is worth noting that if human embryos are ever created by cloning they would be full human persons. A cloned embryo’s existence would begin at the moment *equivalent* to syngamy (i.e., the moment that the diploid order is established) even if such were achieved outside the normal bounds of human reproduction.

Earlier, I stated that intuition infers that persons begin at their biological origins. Intuition, however, also raises another objection, namely that of appearance: a tiny embryo does not *look like* an adult human being. Yet our society places strong moral value on inclusion and tolerance; those with handicaps should be fully welcome. Prejudice on the basis of color, religion, or ethnicity has no place. How then can we justify prejudice on the basis of *size*? Clearly, if we exclude some members of the human family on the basis of appearance or size, we are being morally inconsistent.

Conclusion

In this paper, I have attempted to outline the major reasons for the conception view of personhood. I began with the biblical basis, analyzing how Scripture affirms the inherent value and dignity of man, and that this value begins in the womb. I then discussed philosophical ideas of personhood, and showed that functionalist views are inadequate, and that a substance / dualist view of persons is philosophically and intuitively consistent, and conforms to Judeo-Christian thought. Finally, I examined several decisive moments in the biological development of human beings, and showed that syngamy is the only unique point in time on which to base personhood. In short, a human being is a person from the moment of conception. This unique dignity attaches to every subsequent moment.

There are many forces driving a desire to redefine humanity. There are many apparent goods to be obtained, from the elimination of genetic defects to the cure of a whole host of diseases through embryonic stem cell manipulation. However, in all of our discussion about human nature, we must never succumb to the objectification or commodification of persons. We cannot allow the cold calculus of utilitarianism influence our inherent, intrinsic understanding of who and what we are. The eighteenth-century philosopher Immanuel Kant saw this clearly, when he argued from non-theological grounds: “Now I say that human beings, and in general every rational being, *exist* as ends in themselves, *not as mere means* for arbitrary use by another will.” (Kant, 1793).

This age of moral confusion cries out for a reaffirmation of that which makes human beings unique and worthy. Such “metaphysical pretensions” are not preposterous, as Ayn Rand would have us believe, but are the only basis for human dignity. **E&M**

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1 By man, I refer here to humanity, without distinction between male and female. Where possible, I will use *humanity* or *humankind* to refer to human persons collectively.

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THE FIDUCIARY COVENANTAL RELATIONSHIP: A MODEL FOR PHYSICIAN – PATIENT RELATIONSHIPS

G. STEVEN SUITS, MD

Introduction

The two principle players in the delivery of health care are the physician and the patient.¹ The relationship between these two suffers from the effects of societal transformation. Advances in medicine have brought about unprecedented ability to address disease. Information systems allow physicians and other health care workers to better educate and inform patients. These have led to greater expectations by patients. No longer do patients approach the physician hoping he has a cure for their ailment. They expect him to! These increased expectations lead to increased demands. Appendicitis is treated with simple outpatient surgery and is almost never life threatening as it was just five decades ago. Streptococcal pharyngitis requires but a single injection and is rarely complicated by scarletina or rheumatic fever. So why should patients not expect and demand successful treatment of carcinoma of the pancreas? Added to the successes of medicine is the popular propagation of medical information through the media. Anyone can see open heart surgery (the easiest, uncomplicated cases) and walk away with no sense of the minute details that allowed the successful operation. Television newsmagazines report on “advances” in medicine before the profession has had time to verify preliminary results. Commercialism, especially pharmaceutical companies pushing “consumers” to ask their physicians to prescribe them Product X, fuels the flames of patient demand.

Yet many surveys and commentators have reported patient distrust for the medical profession more than in the recent past. “The decrease in trust between patients and physicians, along with other factors, has demoralized physicians . . . diminished trust probably also accounts for the increased number of malpractice claims against physicians.”² Decreased trust makes the physician and the patient moral strangers. “As moral strangers, the physician and patient must be extremely careful in their relationship with each other. There is no longer any room for assumptions as patient meets physician and as physician meets patient.”³

The degeneration of culture has challenged the physician – patient relationship and it suffers under the burden of societal agony.⁴ Western culture is characterized by the loss of transcendence. Spirituality, which informed Everyman until the past half century, has taken its culture “willing to sacrifice pleasures and immediate goals for the sake of its high principles.”⁵ In its place is the demand for immediate release from the displeasure of illness, for remaking the self through the skilled knife of the “plastic” surgeon, for the sensual pleasures (e.g., Viagra®) that alone are left when transcendence is lost.

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Our sensate culture thrives on those things that stimulate the senses; “it encourages self-indulgence.”⁶ Because of this, the predominant approach to ethics is utilitarianism: maximizing pleasure and minimizing suffering. This has pushed the concept of the physician as the reliever of suffering rather than as the healer. As such, the sensate culture regards dismembering a fetus that gives *angst* to his mother or injecting drugs into a patient with amyotrophic lateral sclerosis to bring about his death (and his relief from suffering!) appropriate for the physician.

There are signs that our culture has entered a stage that Pitirim Sorokin described as a “late, degenerate sensate culture.”⁷ This is essentially equivalent to what others call “postmodernity.” A “postmodern medical world sets off a whole series of elaborate scenarios concerning physician and patient.”⁸ In this stage, the culture has lost faith in its source for truth: scientific materialism. Up until now, our culture has been “underwritten by the conviction that knowledge gained through the scientific method is secure.”⁹ But in this century Einstein’s relativity theory and Heisenberg’s uncertainty principle combined with a general realization that there can be no observation without subjectivity to disarm scientism as infallible.¹⁰

Another characteristic of our postmodern culture is the loss of metanarratives. This has impacted medicine as a system, especially Hippocratic medicine. “Insofar as biomedicine inherits these assumptions [that knowledge gained through the scientific method is secure] it becomes fair game for postmodern deconstruction.”¹¹ For over two millennia in Western culture the Hippocratic Oath has provided the metanarrative within which the profession of medicine found value and direction for the healing arts. Challenged in the late nineteenth and early twentieth centuries, it was not dismissed as the medical metanarrative until the past half century. Although vestiges of the Hippocratic tradition remain, it is individualized in physicians who hold to its principles. It does not provide the worldview for any system of health care in our postmodern culture. This is plain to see in the commonplace of abortion and the permissive attitudes regarding physician-assisted killing among medical professionals.¹² Prohibitions against these are two of the strongest duties of the Hippocratic physician.

In place of the Hippocratic (or any other) metanarrative, pluralism challenges medical science’s supremacy in the deliverance of healing arts. “The postmodern world is one of plurality and diversity, full of voices clamoring allegedly with equal justification, if not equal power, to be heard.”¹³ Along with this pluralism and the loss of faith in any medical metanarrative, the commodification of healthcare “means that consumers of health will increasingly seek diverse health products.”¹⁴ This means “contradictory approaches to health . . . garner support and acquire supremacy through consumer choice and media manipulation rather than evidence-based science.”¹⁵

Postmodern truth-as-manipulation is readily seen in western medicine, which has become increasingly manipulative in dealing with human lives, from the facile abortion of unwanted babies to the increasingly accepted termination of elderly and chronically ill patients, the material value of whose lives seems to have become inadequate. In a purely sensate culture, especially in its degenerate phase, nothing is more natural than for medicine to

cease being a healing art dedicated to the gods and to the dignity of the individual and to become a utilitarian technique for limiting social costs and improving social utility.¹⁶

Individual patients have “become ciphers in the calculus of societal utility...treated and healed when it is possible and economically feasible, but painlessly disposed of when it is not.”¹⁷ Existential examples of this are glaringly obvious in demands by insurance companies for pre-certification and second opinions and the limitation of access to specialists, the goal of which is to save money not improve patient care. (Not that these are mutually exclusive, the point is the *telos* of the requirements is financial, not fiduciary.)

The loss of transcendence added to the loss of the certainty of the scientific method ushered in the death of truth. Nietzsche, who claimed to show that issues of truth were no more than issues of value and power, predicted this.¹⁸ Interpretations are all that exist, and these interpretations “readily lend themselves as tools of self-interest, deception and manipulation.”¹⁹ In place of truth, postmodern man sees manipulation. The sense of being manipulated leads to a predominance of suspicion. If truth claims are merely manipulations, then the self is no more than a passive victim. For “to be manipulated is to be treated as less than a personal self.”²⁰ The postmodern self is “mere flotsam, driven by the surface currents of the power-interests . . .”²¹ The response to this is an intense distrust of anyone or any system that makes truth claims about the passive victim. When this victim is a patient, the aforementioned distrust of the physician is evoked. Distrust leads to insecurity, defensiveness and hostility – too often components of the physician’s encounter with patients.

Suspicion, distrust and hostility characterize the physician’s encounter with patients on an increasingly common basis. Existentially, patient demands for narcotics and other hedonistic prescriptions declare their sensate origins. Philosophically, calls for new physician – patient relationships (commonly referred to as “patient – physician” relationship for not so subtle reasons) suggest that “traditional” approaches manipulated the patient. The physician – patient relationship can take one of three basic patterns (as can any relationship): physician-dominated (paternalistic), patient-dominated (autonomous) and mutual. Throughout much of the twentieth century the relationship has tended toward physician dominance, according to widespread opinion.

Calls now are resounding from across the culture for more “consumer” sovereignty models of health systems. This is driven by “two divergent theories: (1) the recent movement to increase patient autonomy and decrease physician paternalism, and (2) classic economic theory.”²² The economic theory behind this is a contractual one, and self-interest inherently drives it. However, a purely contractual basis does not bring about patient (or “consumer”) sovereignty because the physician is at an advantage: the “physician possesses far more bargaining power and information than the patient, and their relationship is intimate rather than business-like. In addition, it is difficult for the patient to evaluate the quality of the physician’s services...”²³ This self-interest on the part of physicians can negatively impact his fiduciary relationship with patients: “greed drove up costs in fee-for-service medicine, and now greed is driving down services in the managed-care system.”²⁴

A consumer sovereignty model also relegates the physician to the role of mere fact provider. In such a system the physician is merely a “body mechanic.”²⁵ He is to inform the patient what is wrong and what *can* be done about it.²⁶ What he is not to do is provide a value-laden recommendation about what *ought* to be done. This is the role of the sovereign consumer. It is his choice, and his values alone must found the decision and then determine what, in fact, *will* be done. “The patient’s role in this division of labor is to provide the values, his or her own conception of the good, with which to evaluate these alternatives and to select the one that is best for himself or herself.”²⁷ Problems immediately arise when the patient is indecisive. The story of an anesthetist illustrates this: “I have had many patients who have been unable to decide between epidural or patient-controlled-analgesia for post-operative pain relief. I am unsure of the best course of action for such a situation, but by abrogating their responsibility for choice these patients endanger their continuing existential autonomy.”²⁸ Patient self-determinism is the *summum bonum*. In addition, such a model inflates patient autonomy over against autonomous professional decisions of the physician. If self-determinism is indeed the highest good, there must be some provision for the professional in this regard. Mutual autonomy is a self-contradiction. As the poet reminds us, “No man is an island.”

A Fiduciary Covenantal Physician-Patient Relationship Model

The problems inherent with patient sovereignty and contractual models cry out for a model of physician-patient relationships that upholds the dignity of the patient and the integrity of the physician. A fiduciary covenant between physician and patient satisfies this. The fiduciary aspect of this model is based on the dignity of the patient, the physician’s role to “safeguard the patient’s interest in his or her health[,]”²⁹ the imbalance of medical knowledge between the patient and the physician, and the vulnerability of the patient.³⁰ But there is more to this model than a fiduciary aspect. The same dignity and vulnerability demand a covenantal bond as well. Such a bond is a “fundamental commitment . . . that shapes and constrains” the physician³¹ in his fiduciary role, as well as the patient in her demands on the physician.

A primary assumption in this model is that the “professional professes something (the art of healing) on behalf of someone (the patient). This double fidelity to the art of healing and to the patient generates trust. This is why we call the professional relationship *fiduciary*.”³² The physician professes the provisions of the professional covenant to which he binds himself. The primary purpose of the relationship is to benefit the patient, and a basic principle, then, is that physicians may not put their own interests above those of the patient.³³ This is fundamental to any physician-patient covenant.

Patient beneficence drives the relationship, thus safeguarding him from exploitation or manipulation. In addition to taking care *of* the patient, the physician covenants to care *for* the patient. “Taking care of” only mandates that the physician determines what are wrong and what can be done about it. This is no more than is required in the patient sovereignty and contractual models. The fiduciary covenant relationship moves beyond this as the physician cares for the patient. This care for the value of the patient is expressed in a desire for the

patient's good and participates mutually in determining what ought to be done. In any model in a free society, what will be done is ultimately the patient's responsibility.

This arrangement requires an ethics of trust. Nearly a half century ago, Sir Harold Himsworth summarized the spirit of the archetypal fiduciary covenant – the Hippocratic Oath – as to act always so as to increase trust. Paul Ramsey restated this: “Act always so as not to abuse trust; act always so as to exhibit faithfulness, to deserve and inspire trust.”³⁴ Because medicine is an inherently moral endeavor, an ethics of trust is part of its essence.³⁵ This is because of the primary place of patient beneficence and issues forth from the vulnerability of patients in the relationship. As the vulnerable patient places himself in the hands of the physician, the physician must act out of an ethics of trust grounded in the “axiom of care for the vulnerable individual . . .”³⁶ The “asymmetry of power in favor of the professional . . . imposes quite special obligations and responsibilities on the professional. Not only must the power be used competently and concernfully, but it must never be misused or abused.”³⁷ Herein lies a “pathos of trust: the vulnerable individual appealing for responsiveness within an unavoidable asymmetrical relationship.”³⁸

This responsiveness is central to the fiduciary covenantal relationship. In place of responsibility to the patient as in the patient sovereignty model, the physician is responsive to the vulnerability of the patient. This establishes a relationship as dialogue between patient and physician.³⁹ The physician's fiduciary responsibility for the patient is no mere paternalism, but a covenant to seek the patient's good.

The concept of covenant relationship is derived from that which has had the greatest influence on Western culture – the biblical covenant between Yahweh and Israel. May sees four main elements in this covenant: gift, promises, covenant faithfulness and ritual reminders.⁴⁰ As it applies to the physician-patient fiduciary covenant, it is better seen as laid out in Deuteronomy: a historical introduction (Deuteronomy 5.6), main provisions (Deuteronomy 5-26), curses and blessings (Deuteronomy 28), and passing on of the covenant to posterity (Deuteronomy 31-31). These elements are seen in the most puissant medical covenant in Western history: the Hippocratic Oath.

The Hippocratic Oath is set up in four parts: the covenant with divinity, duties to the profession, duties to patients and the sanction. It includes the history of the profession handed down from the physician's teacher, the provisions of duties, the passing on of the art to students, and blessings for honoring the covenant and curses if it is forsworn.⁴¹ The duties to the patient can be summarized as “the twin obligations of philanthropy and the sanctity of life.”⁴² Herein the fiduciary nature of the covenant shines forth. The physician is to help and never to hurt. He is to work always to bring healing and never death. He is to work within his abilities and not outside of them. He is to act purely toward his vulnerable ward and keep himself from intentional wrongdoing. This is especially true in the area of sexuality as the patient exposes herself to the physician in order to receive his attendance. Finally, the physician is to keep his knowledge of the patient in confidentiality as “holy secrets.”

Such a covenant provides an effective response to the pluralism of the late, degenerate sensate culture. When the Hippocratic Oath emerged in ancient Greece, it encountered an equally pluralistic society. That “profoundly pluralistic” society,

was the context in which the Oath invited the physician to commit himself to one particular set of values. His answer to pluralism did not lie in relativising his own moral and professional commitments and seeking to adapt them to those of his patients. Indeed, the whole purpose of the Oath was to meet the challenge of a plurality of religious and ethical convictions by calling on the physician to assert and practise one particular option among the many.⁴³

The obvious charge against such a fiduciary covenantal relationship is that it is paternalistic. But this is not so. It is a commitment by a physician regarding his skills, character, actions and values. Strictly speaking, paternalism is the right to impose one’s decisions on another.⁴⁴ Both the fiduciary and the covenantal features of such relationships preclude any such imposition. The physician never claims sovereignty in the relationship in a paternalistic manner. He subsumes himself to a higher authority, and he limits himself to certain values and actions corresponding to those values as established in the covenant. It is the physician’s freedom of action that is limited by the covenantal pledge to practice within his skills and according to moral commitment.⁴⁵ The physician is not free to impose his decisions on the patient.

The patient remains free to enter the covenantal relationship, and having entered it, to accept or reject the physician’s recommendations. The covenant provides boundaries for the patient, decreasing subjectivism in choices that must be made. Such a covenant “determines the pattern of the relationship, for doctor as for patient, [and] the physician is no longer seen as paternal.”⁴⁶ This covenant relationship is like the old playground game of three-legged race wherein two people are linked together by tying one leg of each to the other. They must work together in order to progress down the track to the finish line. The physician knows the course from having seen it mapped out and having traveled it before, and therefore should point the way they should go. But the patient must give assent to the direction of the physician in order for his directions to be put into action toward the goal.

It is important to see the relationship in such a covenant. First, it is established between the physician and a higher authority. Though this is not necessarily the God of the Bible – the Hippocratic physicians were pagans – it must be firmly founded. If not, it will be nothing more than an existential experience. Smith illustrated this recently by opining that physicians must avoid amoral relativism, but then went on to say, “Somewhat regretfully, it seems that I must abandon the hope of basing that value on secure foundations. Yet I am not prepared to discredit the undoubted sense of value that I do feel, and feel often enough to sustain my belief that, at least most of the time, I am doing a worthwhile job.”⁴⁷ As the physician enters a covenant, he therefore “professes” something. He has committed under oath to an authority that he will hold certain values as true and certain actions as good and right. He cannot be amoral, or relativistic. He cannot adopt, nor adapt, different values as he encounters patients with different values.

The second relationship is between physician and patient. The patient is free to choose to enter into this covenant relationship, not as an oath-taker but as one who chooses to expose his vulnerability to the physician-in-covenant because he sees the selfless nature of the physician. This choice is ultimately the patient's regardless of the system of reimbursement for health care in which he has entered. It is easy to see in a fee-for-service arrangement. But even in a managed care plan, the patient is always free to seek any physician he chooses – only he may be responsible for paying his financial obligations incurred without the assistance of the managed care system. Where conditions limit the patient to one physician (a “one-doc town” or national health system built on neighborhood primary care assignments) the patient is still free to go to the physician or not receive care. There really is no such thing as compulsion; each does exactly what he wants most to do at that particular time. The choices may be limited and undesirable (“your money or your life”), but choice is available nonetheless. The patient cannot understand that the physician practices covenantally and cannot comprehend the ramifications of this in today's culture unless the physician makes this clear. He must profess it to the patient. Not to profess it is to be unprofessional. In choosing the physician as his health professional, the patient thus chooses to come under the covenant. In this choice by the patient, the covenant extends in a new dimension. To the vertical covenant with Authority is added a horizontal component between physician and patient.

How does this fiduciary covenant play out in the sensate culture? It is important to understand that it does not require a consensus of the culture or even of the medical profession in order to set it in action. The Hippocratic Oath was established in a sensate, pluralistic culture. Inherently controversial, the physicians of the day looked askance at its challenge of the status quo. It served as the manifesto of a small group of revolutionary physicians intent on radically reforming their profession. Irrespective of consensus in their culture, the Oath set up the physician-patient relationship under certain values to which they both committed.⁴⁸

As stated above, the physician must profess openly his covenantal obligations. Is this fulfilled through a written communication given to the patient before an encounter? Certainly if his office is sending out preliminary information or stating financial expectations, this can include the moral expectations and covenantal nature of his practice. The common notice that “It is customary to pay for services when they are rendered unless other arrangements are made beforehand” can be accompanied (or replaced!) by a copy of the physician's covenant. This covenant could be posted in examination rooms as well as public areas. Nothing, however, replaces the need for the physician to explain this to the patient, especially in other facilities such as hospitals. This having been accomplished, the physician must facilitate the patient choosing to freely reject or enter the relationship.

The relationship thus established is one of mutuality. It is not one of equality, as this is understood today: sameness. As pointed out already, the relationship is asymmetric toward the physician in terms of knowledge and skill, but toward the patient in terms of ultimate choice. The patient holds the trump card. This gives balance and mutuality, but not equality. Both patient and physician freely act under the terms of the covenant – the physician with skill

and morality, the patient with confidence. Ultimate responsibility is to the covenant. This relationship provides a safeguard when other parties invade it, including third-party payers and physician employers.

In the pluralistic sensate culture the fiduciary covenantal relationship provides anchor and safe harbor within which the physician can act with integrity and the patient with confidence. The relationship depends on the mutual commitment of patient and physician and not on societal consensus. If history repeats itself, a small group of covenantal physicians could restore trust to the physician-patient relationship. They could also reverse trends in medicine that accompany a late, degenerate sensate culture.

The Hippocratic Oath

I swear by Apollo Physician, by Asclepius, by Hygeia, by Panacea, and by all the gods and goddesses, making them witnesses, that I will carry out, according to my ability and judgment, this oath and this indenture:

To regard my teacher in this art as equal to my parents; to make him partner in my livelihood, and when he is in need of money to share mine with him; to consider his offspring equal to my brothers; to teach them this art, if they require to learn it, without fee or indenture; and to impart precept, oral instruction, and all the other learning, to my sons, to the sons of my teacher, and to pupils who have signed the indenture and sworn obedience to the physicians' Law, but to none other.

I will use treatment to help the sick according to my ability and my judgment, but I will never use it to injure or wrong them.

I will not give poison to anyone though asked to do so, nor will I suggest such a plan. Similarly I will not give a pessary to a woman to cause abortion. But in purity and in holiness I will guard my life and my art.

I will not use the knife either on sufferers from stone, but will give place to such as are craftsmen therein.

Into whatsoever house I enter, I will do so to help the sick, keeping myself from all intentional wrong-doing and harm, especially from fornication with woman or man, bond or free.

Whatsoever in the course of practice I see or hear (or even outside my practice in social intercourse) that ought never to be published abroad, I will not divulge, but consider such things to be holy secrets.

Now if I keep this oath and break it not, may I enjoy honour, in my life and art, among all men for all time; but if I transgress and forswear myself, may the opposite befall me.⁴⁹ **E&M**

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CURING, CARING AND BEYOND: REFLECTIONS FOR A CLINICAL ETHIC

DENNIS HOLLINGER, PHD

There is a difference between being good at what we do, and being good. And nowhere is that distinction more significant than in the fields of medicine. Being good at what we do is bringing the technical know-how to a profession. But being good is bringing moral character and actions to the intricate relationships that inhere within the world of health care.

Medicine in clinical situations invariably brings together the most sensitive moments in professional life, for the health care professional is encountering another human being in their most vulnerable state, often accompanied by apprehension, fear, and anguish. Other professions clearly touch humans in profound ways, but in medicine one potentially touches the whole of a person in their greatest moments of weakness. "Medicine, even at its most technical and scientific levels, is an encounter between human beings, and the physician's work of diagnosing disease, offering advice, and providing treatment is embedded in a moral context." Thus, "Clinical ethics concerns both the ethical features that are present in every clinical encounter and the ethical problems that occasionally occur in those encounters."¹

It is quite easy to reduce medicine and clinical ethics to a set of techniques that address a given problem. Thus the medical professional explores a physical symptom and its causes, makes a diagnoses and prognosis, sets a pattern of therapy in place and the health care team carries it out. Moreover, when ethical issues arise a physician, nurse, administrator or ethics committee often analyze the medical indices, patients preferences, quality of life, contextual factors, and set forth an ethical plan to embody the values of both the patient and the professions.² But all of this is merely technique. And one may be quite good in carrying out the techniques, but not good in a more profound way—the way of moral character, action and wisdom. Ethics, while always incorporating the empirical or medical realities embedded in the moral situation, must go far beyond the data and techniques.

If we are to move beyond being good at what we do to being ethically good in the clinical situation what do we need? In what follows I want to suggest several reflections that might help us move beyond technique to wisdom, beyond science to moral goodness, beyond clinician to Christian caregiver with deep moral commitments. I write not as a medical professional, but as a as a bioethicist, clergy, and of course sometime patient, who thus views medicine through a different, but I believe important lense. Essentially I want to suggest two observations to guide us in clinical ethics: curing is not the same as caring, and caring does not encompass the whole of clinical ethics.

Curing is Not the Same as Caring

To note that curing is not the same as caring seems so obvious that at first glance it hardly warrants mention. But in reality the push to cure often becomes so

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pronounced that the caring element easily gets slighted. Obviously the health professional (in all fields) wants to cure. But it is quite possible to achieve medical cure and in the process to have never cared. In some cases physical cure is not possible, for medicine like all human endeavors is finite. But even when cure is not attainable, care is always possible, and therein is a major ethical responsibility of clinical health.

Caring in the Medical Traditions

To embody care in cure has a long tradition in the health professions. Not only nursing, which from the beginning was defined as holistic caring for the physically ill³, but the much older physician tradition from early on was characterized by a moral responsibility that went beyond bodily cure. While the term care is not used, the Hippocratic Oath from the ancient Greek era exudes a strong sense of caring with its emphasis on using one's abilities to help the sick, responsibilities to teacher and pupils, honor in the community, and a commitment to protect the integrity and well-being of the patient. In the Roman epoch Stoicism "emphasized the shared humanity of all peoples and, for the first time, made healing a profession, one based on compassion and mercy for the sick. Some of the later Stoic writers expressed sentiments of love for the patient, identification with his or her suffering, and disdain for financial gain."⁴ Many traditions of medicine have emphasized a natural or reasoned approach to such care.

Caring and the Christian Faith

But it was with Christianity that medicine received its greatest impetus towards both healing and caring. Christianity helped remove the aura of sickness as punishment for sin, as it set physical maladies in the theological context of the Fall as opposed to the specific actions or sins of a given person (John 9:1-3). With its theology of creation Christianity asserted that the physical world is a good world and an important element of human life. Moreover, Jesus came as the great physician, healing not only the soul but the physical body, with a rationale of compassion. Thus, as medical historian Henry Sigerist has noted, "It remained to Christianity to introduce the most revolutionary change in the attitude of society toward the sick. Christianity came into the world as a religion of healing."⁵ And with the strong commitment to healing disease was the moral commitment to care for the person.

At one level this Christian care was motivated by Christian love as the summary of Christian moral responsibility enunciated by Jesus (Matthew 22:37-40). But there is also another foundation for caring in biblical faith—the understanding that humans are created by God as whole beings. In the Christian world view the patient is a person bearing God's image, and a person who embodies various salient dimensions: the physical, the emotional, the social, and the spiritual. Thus when physician, nurse or a hospital system treat only the physical and cure a disease, they have not attended to the full needs of the patient as person.⁶ The health care professional, by virtue of training and vocation, obviously must address the physical dimension as a professional priority. They are trained and paid to cure. But precisely because we are whole beings, and because cure itself is aided by attending to the other dimensions of the person, there is a moral responsibility to move beyond curing to caring. Clearly one fails ethically if they care and do not cure, when cure is possible. Such is an egregious moral failure

to carry out one's vocation (which ultimately is not a profession but calling of God), and constitutes a break of trust with the patient.

But in our own time the more frequent moral blemish is the failure to care for the patient in the midst of technical cures. To care for the patient in a holistic manner is not only good ethics, but good medicine as we learn more and more about the intricate relationship of the body to the spiritual and emotional self, and the role of social context and relationships in one's physical well-being. Stress, broken relationships, and immoral lifestyles are frequently greater threats to physical health than infectious diseases. Addressing physical symptoms alone does not always cure, and much curing of necessity calls for care of the whole person.

It is in this sense then that Margaret Mohrmann, M.D., Ph.D., has spoken of medicine as ministry for the Christian practitioner. Because of the holistic nature of persons and illness Mohrmann suggests that in taking histories from patients, physicians must allow them to tell their own embedded life story. She believes that "there is much to be learned from the way patients tell their own tales of suffering: what they emphasize, the chronology as they have experienced it, the side events that sound unrelated to us but clearly are not to them, what they fear it all means." Moreover, she contends, "If we listen to them, our patients teach us the natures of their illnesses and the meanings of their sufferings. They teach us our craft and our vocation."⁷ To do medicine in this way is to care deeply for the patient and respect them as human beings. Such an approach renders the much heralded, but inadequate, bioethics principle of autonomy to be a mute point. To do medicine as ministry and to move beyond cure is not only embodying an ethic of care, it is good health care, for as Mohrmann insists, "Any discussion of the nature of a person's suffering is inadequate, even unintelligible, without the context of that person's story."⁸

Contemporary Challenges to Caring

Moving beyond cure to an ethic of care is of course not easy in modern clinical medicine. There are enormous barriers to medicine as ministry. The economic structure of medicine today mitigates against a clinical ethic of care with its pressure to serve as many as possible as expeditiously as possible. Physicians and nurses not only feel overworked and often exhausted, but daily sense managed care's pressure with its bottom line approach. Moreover, the bureaucratic maze of copious details and endless reports, while necessary because of litigation and governmental regulations to ensure justice, often works against an ethic of care for the patient. In other words the whole political/economic structure of medicine often works against the patients' immediate good in the name of ensuring patient rights and protection. Physicians and nurses find it increasingly difficult with these demands to hear the patient's story that accompany the medical facts.

Larger socio-cultural systems frequently play havoc with Christian ethical commitments; medicine is not alone in this dilemma. It is in such contexts that Christians have a responsibility for a prophetic voice to the systems, reminding them of the ways the moral good is thwarted and how change might be forthcoming. But even where the time and bureaucratic restraints make caring difficult, it is important to understand that caring is reflected in the spirit one

brings to the patient-practitioner encounter, however brief that may be. How one reports the diagnosis, prognosis, and course of treatment is likely more significant than what is actually said. For starters an ethic of care calls for medical language that is understandable to the average patient.

A further complication for an ethic of care is health care specialization. While with some nostalgia we may long for the days of the generalist physician who made house calls and knew the whole family and its history, we must recognize that specialization and medical division of labor are here to stay. And so as Jack Provonsha, M.D., Ph.D., has noted, we have today lost the sense of a complete physician. "The burgeoning laboratory facilities, the space-age gadgetry which become a daily necessity for the practice of good medicine, the increasingly limited amount of time one has available for broad reading, all very quickly orient today's student toward specialization and the team approach to practice."⁹ But while one can not, says Provonsha, be a complete physician, they can be a complete person in carrying out their vocation. "Being an incomplete physician but a complete person says something about the physician's consciousness of his profession— something about the relations of the part to the whole— not just to the whole of medicine but the whole of existence." And it is here that we see the difference between a technician and one with true vocation: "The technician knows everything to be known about his own line of work, except its relations to every other line of work."¹⁰ It is in understanding the part to the whole that one begins to care, not merely to cure.

At the heart of an ethic of care is a proper understanding of the relationship between practitioner and patient. Pellegrino and Thomasma describe four models of relationship that exist today: a legal contract for services, a commodity transaction similar to any commercial transaction, a healing model which is essentially applied biology, and a covenant of trust in which the best interests of the patient are paramount. The model one accepts has a profound impact on the clinical ethic one implements. As Pellegrino and Thomasma put it, "If the relationship is a contract, the ethics of law prevails; if it is applied biology, the ethics of science; if it is a business transaction, the ethics of the market place; and if it is a covenant, the ethics of virtue and trust."¹¹

It is precisely an ethic of virtue and trust which is essential for clinical ethics today. For if we are to move beyond being good at what we do to being good, it is a matter not only of what we do, but who we are— our character. And it is a Christ-like character of caring that reflects the life of Jesus, who healed not as a divine technician, for "He had compassion for them and cured their sick" (Matthew 14:14 NRSV).

Caring Does Not Encompass the Whole of Clinical Ethics

While we should always move beyond curing to caring in the clinical context this is not the end of the moral story. If we end the story with caring or medical compassion we have ignored a very significant piece of Christian ethics, which ought to also guide us in the work of clinical medicine. Caring must be set in the context of divine givens, which provide directions and set boundaries on how we care. There must be curing, caring, and beyond, for there are realities from creation that we dare not contravene in the ministry of medicine. These gracious givens of God from creation are integral to medical care, even if their foundations

are best perceived in a theological context. Such a framework is needed if we are to move beyond being good at what we do to being morally good.

It is quite easy to end ethical responsibility with care today, for in our current postmodern ethos care and compassion (the attending emotion of care) have virtually become the moral trump card over all other moral principles, virtues and worldview assumptions. Professional ethicists and the average person on the street have a tendency to fall back on compassion or care for their own ethical deliberations, for other persons facing moral choices, and for moral reflections in general. In doing so actions of care or feelings of compassion for a would-be sufferer (usually broadly defined) take precedence over any givens, whether they be derived from God, nature, or a tradition such as medicine. In a sense emotional therapy has become the primary grid through which care is defined and carried out. Any form of medical care which does not result in a greater sense of internal and emotional well-being is seen to fall short of true care.

When care is defined primarily in this therapeutic framework ethics (including clinical bioethics) becomes subjective and oriented towards self-defined well being, which is gauged by personal feelings. The "therapeutic self" increasingly becomes both the focus and criteria of ethics, and even cure is defined less by physical/medical measures and more by inward, subjective feelings of personal enhancement. Ethics, as a normative framework lying outside the subjective self, becomes a foreign and much maligned concept. Ethics in this context becomes essentially a formula for self-actualization.

As we have outlined already care must be a significant part of the clinical ethical commitment. But care defined by psychological well-being falls far short of both the medical traditions and Christian ethical commitments. As Oliver O'Donovan, moral theologian at Oxford University, has argued, compassion can never stand alone. "Compassion is the virtue of being moved to action by the sight of suffering.... It is a virtue that circumvents thought, since it prompts us immediately to action. It is a virtue that presupposes that an answer has already been found to the question, 'What needs to be done?'"¹²

There are clearly dangers to any society that becomes so absorbed with psychological well-being that all else becomes secondary. Such a society becomes hedonistic and is no longer able to understand either the meaning of pain and suffering or its true threat to the physical self. Measures of physical well-being are absorbed by psychological well-being and provide inadequate indices for the medical nature of things. Thus, the medical judgments come to be re-defined with a subjectivity that makes true medical care ambiguous. Even the notions of sickness and health are up for grabs.

At the heart of an ethic that stops with care and compassion is a rejection of the notion of givens in reality which provide meaning, perspective and boundaries for medical therapies. From a Christian perspective the concept of givens resides in a theology of creation which understands that God has designed the world with order, meaning and direction. George Steiner, the British literary critic put it this way, "There is aesthetic creation because there is creation. There is formal construction because we have been made form... The core of our human identity is nothing more or less than the fitful apprehension of the

radically inexpressible presence, facticity and perceptible substantiality of the created. It is; we are. This is the rudimentary grammar of the unfathomable.”¹³ In other words precisely because God has created there is order, coherence and meaning within the created world, and this has implications for the way we treat the person in medicine.

Discovering what those givens are within the created world is by no means always easy. We must recognize that Christians have sometimes used the notion of givens or “creation mandates” to support the status quo and even unjust political and social structures. But it makes a huge difference in ethics to affirm that there are providential givens which provide meaning and direction for ethical judgments and character. It provides a wholly different ethical perspective than a personalistic ethic that is limited to the subjective definitions of the individual moral actor. What are the divine givens which are pertinent to clinical ethics and provide meaning, direction and boundaries to our care? Let me suggest four givens which are not only defined by Scripture and theology, but also can be commended through rational reflection and to some degree through the historic experience of the medical traditions.

Only God is Ultimate and Sovereign

The first given is that only God is ultimate and sovereign. Clearly there are other entities, principles, virtues and understandings that we hold dear in life and in health care, but nothing else in the world is ultimate and the final arbiter. Thus the medical profession’s diagnosis and prognosis, the patient’s wishes, the quality of human life, and even the value of human life itself can never take on the role of ultimacy and sovereignty. Humanity is given a role of stewardship by God in creation (Genesis 1-2), but that stewardship role is defined by caring for God’s creation (including human patients), not sovereignly dictating its patterns and outcomes. Thus, the physician is not sovereign over the patient, just as the patient is not sovereign over his or her own life to do with it as they please. Humans are not ultimate lords over life or death.

That God is sovereign means that even human life, made in the image of God, is a secondary good compared to the ultimate reality of the triune God. Our value and worth is ultimately derived from the creative act of God, reflecting in profound ways His likeness. While dignity and sanctity reside within the created person, that dignity or sanctity never carries with it the same ultimacy as the creator. Thus clinical ethics can never demand that human life must be maintained at all costs when it is clear that treatment would be futile or unduly burdensome in the face of impending death. Medical vitalism, the view that a person must keep alive at all costs, is every bit as much playing God as taking life into our own hands by willfully ending it. The distinction between the creator and created is a basic given in reality, and it provides clinical medicine with humility and a realistic view of the stewardly care of physical life.

Intrinsic Dignity of the Patient

A second given is the intrinsic dignity of the patient. The patient’s dignity flows from their being created in God’s image and loved by their creator. Human dignity is alien in the sense that it comes from beyond our selves, but then is inherent in the very being of a person. One’s life is not dignified because they are valued by others, feel personal worth, contribute to society, or are able to meet a par-

ticular criteria for quality of life. All human life has a sanctity and dignity because God's has made it such; it is a given of reality.

There is an impetus today to utilize quality of life measures in clinical ethics rather than intrinsic dignity. The great danger of quality of life indices is in replacing this given with functional criteria. Thus a functional dignity, measured by certain cognitive or relational capacities can easily come to replace an intrinsic dignity. Of course quality of life indices are an important medical judgment in attempting to determine the course of medical treatment, or even whether treatment is warranted in light of possible futility. But quality of life is a slippery concept and often subservient to very subjective perceptions. An example is that "studies have shown that physicians consistently rate the quality of life of their patients lower than do the patients themselves."¹⁴ Thus, while we will utilize quality of life measures in assessing the medical situation and framing a course of treatment or non-treatment, quality of life should not replace the more fundamental ethical given of intrinsic dignity.

The Integrity and Wholeness of Marriage, Sex and Procreation

A third given for clinical ethics is the integrity and wholeness of marriage, sex, and procreation. By integrity and wholeness I mean that these three acts are ordained by God in creation to be held together. God's design was that human life begin and be nurtured in the context of a committed, one-flesh relationship of marriage and as the fruit of a couple's marital love. This in no way means that sex and marriage are only for procreation. Sex as a gift of God has four primary purposes: the consummation of a marriage, procreation, expression of love, and pleasure. These purposes, however, are to be held together, meaning not only that sex is reserved for the marriage of a man and a woman, but that procreation is to be tied to that relationship and not pulled apart from it.

This given is particularly pertinent in reproductive clinical medicine where new technologies have the potential of separating procreation from the one-flesh, marital bond. I do not take the view that morally legitimate procreation can only emerge from a specific act of sexual intercourse (i.e. the traditional Roman Catholic perspective), but that procreation is to be in the context of the marital bond in which sex, marriage, and progeny are in union. Artificial insemination by a donor clearly separates procreation from that union, though artificial insemination by husband does not. Similarly, various forms of surrogacy, donor gametes, and cloning, all separate the three dimensions that are givens in the divine order of things.¹⁵ While this at one level is a biblical and theological argument, it also a given that many people seem to understand by nature, sustained by historical experience, and society's own interest in keeping marriage, sex, and procreation together.

The Covenantal Character of Relationships

A final given for clinical care and ethics is the covenantal character of relationships. Covenantal relationships between physician and patient stand in contrast to either paternalism, in which the doctor is boss, and autonomy, in which the patient is boss. Covenant stresses a mutuality of trust and confidence in which one party with need draws on the expertise of another party without attempting to push each other into positions of compromise and loss of personal

integrity. Such a relationship does not negate contracts, but a contractual relationship is different in that it is primarily focused on mutual protection from the other. In a fallen world we of course need contracts due to the human bent towards deception, injustice, and personal aggrandizement. But though contracts are essential in such a world the ideal relationship is covenantal.

Covenant is the term the Bible uses to describe God's relationship with his people and their relationship with God. It is a relationship of deep trust and fidelity in which one can count on the commitment of the other to fulfill their responsibility in the relationship. And just as God establishes covenant with those who trust for salvation, so we are then called to relate to other humans in the same manner. Marriage, as a covenant, is of course the prime example of such a relationship. But being made in God's image we are by nature relational beings (Genesis 1:27, 2:18) who function best in relationships of mutual support, care and integrity. In a fallen world we can expect that human relationships will often be characterized by pride, slander, anger, deception, self-sufficiency, and injustice. But that is not the ethical norm. And while redemption in Christ compels and empowers us to new forms of human relationships, we also recognize that even men and women outside of faith in Christ are often able to reflect something of this covenantal dimension.

The physician-patient relationship is of such a nature that it is best understood in the language of covenant. The patient places his or her trust in the physician, not only for their medical expertise, but hopefully for their character. Such was envisioned in the Hippocratic oath, which incidentally did not emerge within a biblical tradition. The physician in turn promises to seek the best interest of the patient in bringing cure with care, and as the Hippocratic oath says, to stay clear of harm or intentional wrong-doing, and to maintain confidentiality. This is a given and a necessity in medical care, for the very nature of the relationship calls for such mutuality and trust— a relationship of covenant— in contrast to either paternalism or autonomy.

Conclusion

The difference between being good at what we do and being good is paramount for clinical ethics. The physician, nurse, and health care administrator certainly have ethical obligations for professional expertise and being good at what they do. But in an age when technique and scientific advancement seem to reign supreme, we do well to recover a sense of moral goodness in the clinical context.

Being good morally in medicine means at least two things: First, that we must move beyond cure to care, and second, that caring does not encompass the whole of clinical ethics responsibilities. There are givens from our creator within the world, and the kind of care we give ought to be congruent with those givens. Within such a framework health care professionals who confess Christ can follow his example: "The kingdom of heaven is near. Heal the sick...Freely you have received, freely give" (Matthew 10:7b-8, NIV). **E&M**

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XENOTRANSPLANTATION: ANIMAL RIGHTS AND HUMAN WRONGS

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Abstract

The first successful human-to-human organ transplant was performed in 1954 when a kidney was transferred between two identical twins. In the years since this groundbreaking operation improvements in transplant surgery and an increasing ability to control organ rejection using immunosuppressive medication has made transplantation the treatment of choice for a new generation. Unfortunately, these advancements have resulted in transplantation becoming a victim of its own success, as waiting lists have increased along with the waiting time for donor organs. For these reasons the use of animal organs for human transplantation is seriously being considered. Two groups of animals have been considered as donors: non-human primates and large non-primates such as pigs.¹

Whilst many researchers in this field are very optimistic about the future, many opponents are concerned about the effects on public health and the environment. The primary barrier to transplantation is immunological rejection. With xenotransplantation an additional mechanism of rejection called hyperacute rejection occurs. Immunosuppressive drugs cannot control hyperacute rejection. For this reason, the majority of xenotransplantation trials attempted to date in humans have used chimpanzee or baboon organs. However, the problem will occur with xenotransplantation into humans of organs from more distantly related species such as pigs.

This article highlights the ethical issues associated with the use of animal organs, and the impact of xenotransplantation on animal communities.

Introduction

The use of animal cells and tissues in the treatment of man is not a new innovation. In the early 17th century attempts were made to resuscitate humans by transfusing them with animal blood. In 1682, the skull of a Russian nobleman who had been injured in battle was reportedly repaired using a piece of canine bone. Later, in the 19th century, surgeons attempted on many occasions to transplant tissue from animals into humans, primarily skin grafts from dogs, cats, rabbits, rats, pigs, chickens, cockerels, pigeons, and, most commonly, from frogs. Surprisingly, even sections of apes' testicles were grafted on to men in the early 20th century in an attempt to reverse their impotence. The transplantation of kidneys, livers, and hearts from animals into humans were recorded as early as 1905, although the results have been disappointing.²

The Problem of Rejection

Xenotransplantation is currently at the research stage. If it is to develop into a successful clinical procedure it will involve the breeding and killing of animals on a large scale in order to provide organs and tissue for transplantation.³ The focus of these experiments is centred on both non-human primates and pigs. The primary barrier to transplantation is immunological rejection. With xenotransplantation an additional mechanism of rejection called hyperacute rejection can occur, when the recipient's blood already contains antibodies to the foreign tissue. Binding of these antibodies to the graft activates a set of human serum-proteins, called complement. This results in breakdown of the blood vessels in the graft and coagulation of the patient's blood throughout the transplanted organ, which then dies within minutes. Immunosuppressive drugs cannot control Hyperacute rejection. For this reason, the majority of xenotransplantation trials attempted to date in humans have used chimpanzee or baboon organs.⁴ There are advantages in using pigs as a source of xenografts. Pigs are available in large numbers and can be bred easily and rapidly. Knowledge has improved in the area genetic engineering in pigs, so this may help to overcome the existing immunological barriers. Furthermore, they are physiologically similar to humans in cardiovascular and pulmonary function, renal anatomy and excretion, digestion, and susceptibility to disease.⁵

The Balance of Animal Suffering and Human Benefit

Many people world wide believe that although it is imperative to maintain the protection and integrity of the animal population, in certain circumstances human life does outweigh that of an animal. A belief I cherish myself. However I think it is important that this reasoning does not empower the scientific world to exploit the animal kingdom unnecessarily. Some people believe that all use of animals by human beings for medical purposes is wrong, no matter how great the benefits. Pietro Croce, a leading Italian pathologist has stated that:

“Torture is useless because it makes people confess to crimes they never committed. Vivisection is equally useless because animals have nothing to confess. However, It does serve to confess human stupidity.”

Only a minority in the U.K. holds this view.⁶ However, when assessing the acceptability of the use of animals in xenotransplantation it is important to judge whether the potential benefit of mankind outweighs any suffering imposed on other species, as oppose to in the cosmetic industry, where the human benefit is of minimal proportions.

Ethical Acceptability

Some people argue that there is no logical reason to distinguish morally the pain and suffering felt by animals from that felt by human beings. If one looks at this in terms of humans, it would be wrong to judge a persons suffering to be more or less intense than another human being, so why should this apply to animals?⁷

I think that in certain circumstances, such as xenotransplantation, saving human lives can justify a minimal amount of suffering to animals. But then who is to judge what is minimal, and who can regulate this? For example, some of these experiments are very grisly procedures. They do sometimes involve a full

transplant of a genetically modified pig heart into a monkey. In many cases, however, the doctors will graft the transgenic hearts onto a baboon's neck arteries, as this allows them to observe the way the pig heart behaves in another species, and monitor the rejection process. The baboon is then killed.⁸

In terms of animal rights, if animals share with human beings some or all of those characteristics that, in the case of human beings, would lead us to the conclusion that they have certain rights, then those rights should be ascribed to animals as well.⁹ Animal aid wrote in their submission to the Nuffield Council on Bioethics:

“Animals have value in their own right and do not exist to be harmfully exploited by man.”

Another complicated issue involved in the sphere of animal rights is the issue of self-awareness. This can be described as the consciousness an individual has of his or her own condition and experience. To be self-aware requires a high degree of intelligence, and allows one to plan, to make choices, and to engage in complex social relationships. In Christian thought, human beings “have unique significance and value because only they are made in the image of God.” (Genesis 1:27). In this view, animals would not have the same moral status as humans, and animal interests would weigh less heavily than human interests. However, there is significant evidence which suggests that higher primates (e.g. baboons) have much in common with human beings, including self-awareness, and complex social relationships.¹⁰ Supplementary to this, some individuals do not exhibit the characteristics which make them “human”, such as people with congenital defects, disease, or suffering accident and trauma. Should such beings provide organs for transplant to benefit the rest of humanity? I would be inclined to say no, but I am thinking from a future clinician's viewpoint, and not that of someone involved with animal welfare. The idea of relationship is also applicable. An anencephalic baby might be considered to lack the capacities necessary for human interaction, however it is bound to human parents and, through them, to a wider set of people. These relationships generate emotion and attachment. In these terms this baby could not be treated in isolation, being assessed independently or his or her involvement with others.¹¹

Concerns About the Use of Primates for Xenotransplantation

Higher-primate organs and tissues could offer a good chance of success for xenotransplantation because of their genetic closeness to human beings. If this practice becomes widespread it would represent a new way of using primates. Currently, in the UK, the use of primates is very strictly controlled with only very small numbers being used for research purposes. The very reason that makes primates appear to be suitable for transplantation, namely their relation to humans, also leads to many people to think that it would be wrong to use them for this purpose. It is also important to consider their welfare. The routine breeding and maintenance of animals free from infectious organisms might require birth by Caesarean section, rearing in isolation, and repeated monitoring to assess levels of infection. The intelligence and social nature of primates would make these conditions severe for them. In the case of chimpanzees, which are

and endangered species, strong conservationist concerns suggest that their use for xenotransplantation should be forbidden. Conservation concerns do not currently apply to baboons, which are not endangered at present, and are considered a pest in many parts of the world. Might baboons become endangered if they were to be used as a source of organs for xenotransplantation? Baboons have a slow rate of reproduction, so existing colonies of baboons would probably not be able to provide sufficient numbers with which to establish breeding colonies of disease-free baboons. It would be necessary to capture wild baboons to augment these breeding colonies. It is relatively easy to catch and transport baboons. They also adapt well to captivity. Unfortunately, it is possible that successful xenotransplantation using baboon organs might lead to increased pressure on the endangered chimpanzee population.¹²

Genetically Modified Animals

The basis behind transgenesis is the incorporation of a gene from one species into another. The transferred gene enables the transgenic animal to express a particular protein. The transgenic pigs bred for xenotransplantation contain a human gene which produces a complement regulating protein, which reduces the immune response to transplanted organs (see above). Some see the production of transgenic animals as unnatural, and say it is an attempt to change the nature of animals, which violates species boundaries. According to this view, genes have a particular significance because they contain the information that determines the essence of any one species. To move genes around is to destroy the integrity of natural species, and to create unnatural species.¹³ We as humans have to question whether this is correct, as we have total control, whereas the animals have none. Within the Judaeo-Christian tradition human beings are seen as being created in the image of God, which leads to specific objection to experimentation using God-like human genes.¹⁴ For many people “*mutilation*” of the human body would be sanctioned in the interests of saving human life.¹⁵ There are counter-arguments to this, and such issues have been examined by two committees set up by the Ministry of Agriculture, Fish and Food. Firstly, species boundaries are changed as evolution occurs. Some regard transgenic techniques as no more than an extension of traditional breeding techniques.¹⁶ There is also evidence to suggest that small amounts of genetic material are transferred naturally from one species to another. For example, genetic material may be transferred between different types of bacteria. Second, it can be questioned whether human genes represent particular elements of humanity. It is only in combination with all the other genes in the human genome that a particular gene contributes to specific features and characteristics of the human species. Similarly, genes obtained from an animal species do not have to be viewed as representing a particular element of that animal.¹⁷ It is important to remember that in the creation of a transgenic pig only one of two genes of human origin are incorporated into the animal. Since the pig genome probably contains in the order of 50,000 - 100,000 genes, this is proportionally a very small change.¹⁸ There are, however, views that transgenicity harbours problems. Xenotransplant proponents claim that they will breed “germ-free” animals to diminish the risk of viral transmission. But in its June 1996 report, the Institute of Medicine acknowledged that “it is not possible to have completely pathogen-free animals, even those derived by Caesarean section, because some potentially infectious

agents are passed in the genome and others may be passed transplacentally.” Some British virologists say that it would be “a daunting task to eliminate infectious retroviruses from pigs to be used for xenotransplantation, given that they estimate approximately 50 PERV [pig endogenous retroviruses] per pig genome.”¹⁹ There are also potential risks to the environment, should the transgenic organisms escape or be released. Some organisms, such as micro-organisms, are not easily contained. It is important to understand that if xenotransplantation is to become more widespread, it is possible that a surplus of transgenic pigs may arise, which could lead to the issue of whether or not they should be made available on the general agricultural market, namely their sale for food. There may be adverse effects of transgenesis that are not detected until a relevant stimulus is encountered outside laboratory conditions, which may present transgenic animals with increased, or different, stresses.²⁰

The Use of Pigs for Xenotransplantation

The main alternative to using primates for xenotransplantation is to use pigs. As I have highlighted, when considering the use of primates, the characteristics they share with human beings leads to ethical issues. While they are intelligent and social animals, there is less evidence that pigs share capacities with human beings to the extent that primates do. Thus, the adverse effects suffered by the pigs used to supply organs for xenotransplantation would not outweigh the potential benefits to human beings.²¹ I believe that if it is to be ethically acceptable to use pigs for xenotransplantation it will be essential to insure that the conditions in which they are bred and reared are of the highest possible standard, and that any pain or suffering is kept to as minimum.

Research Companies

The research team which is probably at the forefront of efforts to develop xenotransplantation is Imutran, who are based in Cambridge, England. This company was formed in the mid 1980's by David White – an immunologist, and the Papworth Hospital transplant surgeon John Wallwork.²² In May 2000 a stack of internal documents was leaked to Uncaged Campaigns, a British animal rights group. It documented experiments financed by Imutran. The experiments involved transplanting genetically modified pig organs into monkeys and baboons. These experiments are also being done in U.S. research and medical centres. The documents covered the log of experiments over several years in the late 1990s. Over 420 monkeys and nearly 50 baboons died in the tests. The average survival time was 13 days. Uncaged published the documents on the Internet along with a summary report on them, “Diaries of Despair,” and called on the British government to halt xenotransplantation research and set up an independent judicial inquiry. Not long after, Uncaged's material was removed from the Internet. Imutran, citing breach of confidentiality and copyright violation, got a British court order prohibiting Uncaged from further publishing or discussing the documents. The Daily Express newspaper also received copies of the documents and wrote a scathing article in September 2000 reporting that the documents showed days or weeks of animal suffering, incompetence in the conduct of the experiments and far less success with the experiments than was claimed by Imutran.²³ Baboon X201M was a non-human primate, who survived for 39 days after having a pig heart transplant. X201M was one of the animals

The Daily Express focused on in its report. The newspaper noted that in Imutran's published paper to the Journal of Heart and Lung Transplantation, Imutran showcased X201M as an example of the progress it was making in pig-to-primate transplants. Imutran stated in its paper: "Throughout the first 38 post-transplant days the baboon was active and energetic, moving freely about his enclosure." However it was discovered that the log on X201M contradicted this description. The log showed suffering and debilitation of X201M's condition after receiving the pig's heart. The Express also pointed out that Imutran failed to mention in its published data that X201M's pig heart had grown to three times its weight by the time the baboon was killed.²⁴ It has also been discovered that transgenic pigs are kept overcrowded conditions, which has resulted in their frustration and boredom.²⁵ I think that this evidence shows that current animal conservation regulations in xenotransplantation may not be effective.

Implications

It is evident that in terms of xenotransplantation there are many issues to consider. I have focused on the issues surrounding animal rights. As a future doctor it is very difficult for me to equate animal life to that of a human. However, after studying this topic for a few months I have now come to realise that animal abuse is a serious concern in the field of bioethics. This will have an impact on my life, as there is considerable overlap between the medical ethics I will be practising as a clinician and bioethics. In my opinion, if continued development of xenotransplantation is to occur then certain criteria will have to be met and legislation should be established for comprehensive regulation. In the case that animals are used:

- a) the animals should be subjected to as little pain and suffering as possible
- b) the animals should be given the best conditions possible, including companionship, enough food and water, and decent shelter

It would be ideal if transgenic animals could be created that could live healthy and normal lives after organ provision. If this is not possible, perhaps animals could be produced without brains and central nervous systems, but could be still used to provide organs and tissues. They would not suffer at all.

Any research centre conducting xenotransplantation experiments should be subject to local animal conservation laws, and should be regularly inspected to ensure violation does not occur.

The philosopher and writer Milan Kundera, in the *Unbearable Lightness of Being*, suggested that the measure of humankind can be taken by the way we treat those who we have power over. The group that exemplifies powerlessness is non-human animals.²⁶

The idea of this project was to educate myself on an area that I knew little about. I do not confess to believe everything I have read about animal rights, nor do I now believe that the treatment of animals is irrelevant in my life, as I once did. I have attempted to convey the beliefs of people who have studied this topic for many years. How this information is interpreted is for the reader to decide.

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BOOK REVIEW

Holding Health Care Accountable: Law and the New Medical Marketplace

E. Haavi Morreim

New York: Oxford University Press, 2001

ISBN 0-19-14132-6, xvi + 320 pp., hardback, GBP 39.50

The topic of this book is how legal responsibility should be apportioned in American health care after the rise of Health Maintenance Organisations (HMOs) and other changes in the structure of the American health care system. It is written by one of the most incisive analysts of American health care, and lays out a clear analysis and a clear proposal for a solution.

The problem that the author identifies is that after the decline in the USA of the traditional kind of health insurance which reimbursed doctors on a fee-for-service basis and the rise in HMOs and other novel kinds of health insurance it is no longer clear who has legal responsibility if a patient is improperly denied health care. Traditionally this responsibility would have fallen on the doctor, because the insurers did not interfere in medical decisions, but today insurers do in various ways try to curtail the use of expensive resources, and this has made the responsibility much less clear.

What the author suggest is that distinguishing between problems of expertise and problems of resources may allow us to place responsibility on the right agents. If a doctor lacks expertise, or does not apply his expertise properly he should be held accountable for any bad outcome through tort law. If a HMO restricts access to resources to a greater extent than laid out in the contract with the patient, the HMO should be held accountable for any bad outcome through contract law.

What is novel in this proposal is first of all the distinction is very clearly laid out, and secondly it is argued that HMOs may also in certain instances commit failures of expertise. If a HMO develops or uses scientifically unsubstantiated guidelines to guide its decisions concerning the denial of benefits to patients, then this is a failure of expertise and should be treated legally as a tort.

The book further discusses how this proposal fits with the Federal Employee Retirement Income Security Act (ERISA) that govern most health care insurance paid for by employers. The part of the book discussing ERISA matters is primarily of interest to American readers, whereas the more general discussion of accountability and responsibility in modern health care are of interest to all readers in countries where the health care system is under increasing resource constraints (and that is probably most of us).

The book is well written and very extensively referenced. It can be recommended without reservations.

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