

# An Evaluation of Three Religious Perspectives on Stem Cell Research

Kristyn A. Mannoia



Kristyn A. Mannoia

*Ian Barbour, an authority on the interplay of science and religion, has developed four possible relationships between science and religion ...*

*Ian Barbour, in his book *When Science Meets Religion*, outlines four relationships between the fields of science and religion. This paper explores the usefulness of these categories in developing a religious perspective on stem cell research. First, I present Barbour's four possible relationships between science and religion as they could be articulated in the context of bioethics. Second, I consider which of Barbour's models are forwarded in Orthodox Jewish and Roman Catholic perspectives on stem cell research. Finally, I present an evangelical Wesleyan appraisal of stem cell research as it might be crafted if Barbour's model were introduced as a structural resource at the outset.*

**T**hroughout human history, technological advances have emerged as issues of controversy for both scientific and religious communities. Both spheres have had to determine the extent to which the other has influence, and society has had to integrate information from both spheres to define the ethics and morality of new technologies within that context. Of current concern and debate is the development of human embryonic stem cell (hES) technology. In theory this technology presents nearly limitless possibilities for new treatments and cures for diseases that are ravaging the world today. However, these potential benefits come with a cost. In order to obtain these miracle cells, an embryo must be sacrificed. Is this price too high? Religion and science intersect around this issue.

Ian Barbour, an authority on the interplay of science and religion, has developed four possible relationships between science and religion that can be applied to the issue of hES research: Conflict, Independence, Dialogue and Integration.<sup>1</sup> In this paper, I will briefly describe these four frameworks, and

then will consider how three important Judeo-Christian religious viewpoints on hES research—the Orthodox Jewish, Roman Catholic, and evangelical Wesleyan—can be classified into one of these frameworks. Finally, based on these classifications, I will make some tentative conclusions concerning the ethics of hES research.

## Barbour's Frameworks

### Conflict

The first relationship outlined by Barbour is Conflict. It is the premise that religion and science make opposing claims about the same area and both cannot be correct. Thus, one must choose between religion and science as the ultimate truth. Two very different examples of the science-religion Conflict given by Barbour are the viewpoints he calls scientific materialism and biblical literalism. He defines scientific materialism as the premise that matter is the ultimate reality and all knowledge and understanding comes from the scientific method. It is empirical in its epistemology and in it, interaction between science and religion results in the dismissal of all scientifically untestable religious claims. In contrast, the view he calls biblical literalism asserts that the Bible is the sole source of truth and the ultimate authority. Biblical literalists hold that the Bible is

**Kristyn A. Mannoia**, a student ASA member, is currently an undergraduate student at Azusa Pacific University, working toward double degrees in biology and philosophy. She plans to graduate in 2005, take a year off from school, and then attend medical school. She loves to travel and in her spare time she teaches piano. Kristyn can be contacted by e-mail at: [kmellowyellow@apu.edu](mailto:kmellowyellow@apu.edu).

perfectly inerrant and authoritative on scientific matters; therefore the interaction between science and religion results in the dismissal of some claims of modern science. Both scientific materialism and biblical literalism are examples of conflicts between religion and science.<sup>2</sup>

In terms of stem cell research, Conflict appears to be a predominant framework used by conservative, far-right Christian groups and also by materialist, scientific communities, including many people not officially affiliated with these groups, but ascribing to their views nonetheless.<sup>3</sup> On the one hand, groups such as the Christian Coalition of America say that science today has gone well past the limitations God set for us.<sup>4</sup> They would describe the regular occurrence of abortion today as a violation of the sanctity of human life, and would consider embryonic stem cell research as an expansion of that violation. Biblical literalists say embryonic stem cell technology further indulges our sinful desire to manipulate creation and usurp God's position as Creator. On the other hand, much of mainstream scientific culture, which could be classified as scientific materialism, has set aside religious considerations altogether when developing and evaluating new technologies.<sup>5</sup> In the case of hES research, scientific materialists would consider the embryo, from which stem cells are derived, as merely a group of cells. From these undifferentiated cells, many different cell types could be grown and used to cure many currently incurable diseases, such as Parkinson's, spinal cord injury, and even cancer. This is the end toward which materialists work, regardless of the means. A scientific materialist would not associate an embryo with personhood or religious significance, but instead would see it as a potentially useful resource. With no moral dilemma in using an embryo for research and therapeutic purposes, utilitarian principles may prevail. Scientific materialists would see the use of embryos to derive cells for treating diseases as a morally and ethically sound act.

### Independence

Barbour considers Independence to be a position taken by many evangelical conservative Christians, as well as neo-orthodox Protestants and various scientists, who maintain that science and religion exist on different planes that should not intersect. Religious subscribers to an Independence view focus mainly on Christ as the center of everything. The only way to know God is through his revelation, not through human scientific discovery. They say that the Bible should be taken seriously, but not literally. This avoids any conflict with the scientific realm. Barbour uses the testimony of Langdon Gilkey, who was a witness at the Arkansas creation trial, to make four points of distinction. First, science deals with objective, public data while religion has to do with inner experiences. Second, science asks "how" questions, whereas religion addresses "why" questions. Third, logic and experimentation are the final authorities in science, but God is the ultimate author-

ity in religion. Lastly, science uses quantitative language and makes predictions that can be tested while religion depends on symbolism to represent God.

---

*When applied to stem cell research, the Independence viewpoint results in a compartmentalized understanding of the limits of science. Since proponents believe that the Bible only reveals Christ and should not be taken literally, its components can be disregarded as metaphorical and nonscientific.*

---

When applied to stem cell research, the Independence viewpoint results in a compartmentalized understanding of the limits of science. Since proponents believe that the Bible only reveals Christ and should not be taken literally, its components can be disregarded as metaphorical and nonscientific. Thus, almost any avenue of research is available to scientists studying stem cells so long as they avoid "why" questions or symbolic language purporting to represent God.

### Dialogue

Barbour contends that while there are distinctions between the fields of religion and science, they can learn some things from each other. This forms the basis of the Dialogue perspective. This approach focuses on similarities in the nature of the presuppositions, methods, and concepts in each field rather than the differences between them. Limits to the similarities, however, raise questions regarding where one field ends and the other begins. For instance, scientists are able to empirically observe order and pattern in the universe, though they are not able to identify the source of this rationality. Here science is limited and must appeal to metaphysics. A scientist with a Christian world view would hold that in some fashion God created the heavens and the earth. Meanwhile a naturalist, one who only believes in what is physically observable, would argue that the current order has evolved from a prior, less ordered state. Nevertheless, both science and religion share foundational philosophical presuppositions in this discussion. Scientific inquiry assumes that the



## Student and Early Career Scientists Corner

### *An Evaluation of Three Religious Perspectives on Stem Cell Research*

*With regard to stem cell research, a Dialogue perspective acknowledges the limitations of [science and religion]. Practitioners ... would agree that human life is valuable. However, the application of this assumption may differ depending on beliefs about the nature of human embryos.*

world has discernable patterns. Religious beliefs coincide, extending the presupposition to affirm that an intelligent creator is the source of these patterns. Furthermore, Barbour asserts that methods and concepts in both fields are very similar. He quotes authors such as John Polkinghorne and Holmes Rolston, who hold that there are “*significant parallels* in the methods of the two fields including the use of criteria of consistency and congruence with experience.”<sup>6</sup>

With regard to stem cell research, a Dialogue perspective acknowledges the limitations of both fields. Practitioners within the fields of science and religion would agree that human life is valuable. However, the application of this assumption may differ depending on beliefs about the nature of human embryos. A scientific materialist may say that the value of human life compels science to use the resources it has, including human embryos, to alleviate human suffering due to disease. Stem cells could be actively harvested from embryos created for therapeutic purposes. Some religious people applaud scientific advances to alleviate suffering. However, their regard for human life in another form, namely the embryo, would take priority over the benefits of research. They would object to the embryo’s destruction under any circumstances. Other religious people would contend that research on stem cells is acceptable when the harvested embryos would be destroyed anyway, as in the case of excess human embryos not used for assisted reproductive procedures. This example indicates that within a science/religion dialogue there are many possible conclusions.

#### **Integration**

Integration brings all aspects of science and religion together in one complementary picture of reality. It depicts these two realms as spheres of influence that completely overlap. Barbour distinguishes between three integrative philosophies. First, he discusses natural theology, which looks at the world from the perspective of theology and sees it as evidence for theological beliefs. Barbour lists Aquinas’ teleological argument as well as the modern anthropic principle as examples of this world view. Both argue that the existence of a supernatural being is the only explanation for the structure and order that is observed in the universe. Second, Barbour

outlines a theology of nature, which looks at the world through the lens of science. Theology is still foundational, but it is subject to review based on scientific information. There is no provision for disagreement; as we learn more about science, we will continue to adapt our theology. Third, Barbour examines systematic synthesis, an example of which would be process philosophy, which envisions God as the creative source and the beginning of order, but not as a completely transcendent sovereign. He is limited to time and therefore experiences things just as we do. His purpose and character do not change, but his action in the world changes as he experiences new things. Thus, we should be open to new interpretations of God as we learn more about his creation.<sup>7</sup>

Practical application will differ depending on which interpretation of this framework one subscribes to—natural theology, theology of nature, or systematic synthesis. Taking the stance of natural theology, a person might say that all of nature belongs to God. While it was made specifically for our use, we also have the responsibility to protect it from misuse. Thus, stem cell research might be unacceptable because it destroys God’s creation in the form of an embryo. In a theology of nature, a doctrine regarding the beginning of life would be informed completely by scientific observations. There is no theological absolute regarding hES technology; our theology would continually adapt to include farther-reaching scientific possibilities. From a systematic synthesis perspective, the means (the continual pursuit of new technology) justify the ends (the potential results of hES research). Process is paramount. The progress made in the scientific community coupled with the possibilities for more development would justify any stem cell research.

#### **Orthodox Jewish View**

In Jewish law, the Torah is the ultimate, authoritative rule upon which every other is based. The many different pieces of literature that form the Jewish code are derived from this. They have been developed over years of study and dialogue among the rabbinic community, similar to American case law in our legal system. There are four main movements within the Jewish tradition. Each of these maintains a different adher-

ence to the law. Reform, Reconstructionist, and Conservative movements allow for flexibility in the interpretation of the law. The fourth, the Orthodox movement holds that "the Torah is the literal word of God and that Jewish law is to be determined by reference to the codes and *responsa* of the past."<sup>8</sup> Jewish *Halachah*, or ethical legal tradition, is derived from many perspectives and allows for different interpretations. It attempts to establish "epistemological commonality" as a basis for any discourse, and form social applications from this collaboration.<sup>9</sup> A prominent representative of the Orthodox community and the subject of this analysis is Laurie Zoloth, of San Francisco State University.<sup>10</sup> She points out:

Reflection on all innovative scientific research is constrained by the fact that none of the specific issues raised by new technology is directly addressed by Talmudic conversations ... nor in the elaborate medieval commentary that carried the most considerable weight in the classic tradition.<sup>11</sup>

The Orthodox Jewish movement is a clear example of a Dialogue framework. Zoloth and others, such as Elliott N. Dorff,<sup>12</sup> encourage communication within a community and attempt to find presuppositions that may serve as a springboard for applications. Instead of mandating actions in a vacuum, "cultural practices and aesthetic sensibilities create the landscape upon which the locus of Jewish discourse ... meets."<sup>13</sup> Differing cultural practices result in many interpretations of the law, all of which vary regarding the role of science. Zoloth points out three main questions in the Jewish debate regarding stem cell research.

First and overall, there is "the problem of *telos*," or goal. Presumably the object of stem cell research, or any type of medical research, is to combat disease and disability by reconstructing tissues. However, what constitutes illness? Are mental illnesses included or only physical ailments? When does the risk of the cure outweigh the risk of the disease? Zoloth says: "We lack a coherent theory that allows broad philosophic agreement on the issues of definition of disease and normalcy."<sup>14</sup> Infirmary could be interpreted as only what happens after birth, or it could include genetic defects present from conception. One may believe, then, that the use of human embryonic stem cells should only be used to replace tissue in a person after their birth, such as faulty nerve cells. Others might argue that Parkinson's and Alzheimer's are examples of ailments that could be prevented by treatment before birth using hES research.<sup>15</sup>

The second issue Zoloth addresses has to do with the process of the research on stem cells. She asks questions about informed consent, risks in the procedure, and unintended consequences. All of these are issues today in other areas of medicine and scientific research and so have relatively well-developed responses in the Halachic law. At the heart of this debate, though, is another that is continu-

ously a source of fiery contention: the matter of abortion. Currently, the stem cells with the most potential come from embryos approximately five days after fertilization. Any removal of stem cells at this stage would destroy the embryo. Therefore, depending on one's view on abortion, pursuing hES research can be strongly encouraged, strictly forbidden, or accommodated somewhere in between.<sup>16</sup> There are differences between abortion and hES research, so comparisons can only be taken so far. For example, if one believed that a fetus could be considered a person when it is three months old, an abortion after that would be morally wrong, but hES research could be permitted as it would occur before the three-month limit. However the fundamental issues are the same, so relevant arguments regarding abortion can be applied to the debate regarding hES research.

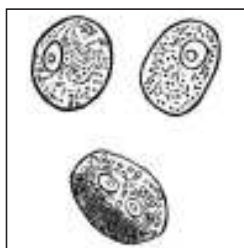
---

*The Orthodox Jewish movement is a clear example of a Dialogue framework ... Differing cultural practices result in many interpretations of the law, all of which vary regarding the role of science.*

---

The third problem has to do with context.<sup>17</sup> How will the products of the research be used in the world today? Should the possibility of ill usage prevent research from advancing? Most importantly, though, how will people be affected by the results of more exploration? It is this question that Zoloth uses to answer all the others. She argues that "the task of healing in Judaism is not only permitted, it is mandated."<sup>18</sup> While the primary focus of Western thought today is the individual, Judaism is "other-based." For Jews, "the framing questions will be those of obligations, duties, and just relationships to the other."<sup>19</sup>

In this light, Zoloth draws the conclusion that the potential benefits of stem cell research far outweigh the drawbacks. According to Jewish law, an embryo is "mere water" until forty days after conception.<sup>20</sup> In harvesting stem cells, according to the Jewish definition, no person is harmed and many could potentially be saved. Zoloth balances the mandates of Judaism with the potential benefits of science. There are some limitations: the law still condemns the use of another man's sperm to artificially inseminate a woman as adultery, or an unlawful marriage



## Student and Early Career Scientists Corner

### *An Evaluation of Three Religious Perspectives on Stem Cell Research*

*The Roman Catholic position must be classified as Dialogue. Science is taken into account and not viewed as essentially unnatural ... Ultimately, however, in the Roman Catholic view, religion has authority over science and takes precedence in the hES research debate.*

between relatives could occur unknowingly. However, "to save even one life, the Halachah states, it is permissible, and in fact mandated, that all other *mitzvot* [regulations] can be abrogated (except for the case of the prohibitions against murder, adultery, and idolatry)."<sup>21</sup> Thus, Zoloth's work clearly supports a Dialogue framework. She is willing to examine and take advantage of the benefits of hES research in light of her Orthodox position, but not without limitations. This dialogue is evidenced by her words:

Given such positive Halachic responses, the nearly universal communal response to all genetic advances that can promote health and increase fertility has been enthusiastically positive in the Jewish world.<sup>22</sup>

#### Roman Catholic View

At the Council of Trent, almost four hundred and fifty years ago, Roman Catholic Church leaders met to discuss the urgent threat of the Protestant Reformation. They strongly refuted what they regarded as the heresy of Protestant leaders and upheld the ancient theory of *jus naturale*, or natural law. This law expressed "the classical view of nature as essentially changeless reality."<sup>23</sup> God's sovereignty was emphasized, thus every human faculty had a God-ordained purpose. Sexual intercourse was intended for reproduction; pain was part of a purification process; thinking was to glorify God. Anything "unnatural" and not according to God's will was considered sinful. In the seventeenth century, this law was strict and prohibitive. Over time the code was developed to preserve not only individual human capabilities, but also the natural condition of the body as a whole. Amputations were allowed to save a patient, on the basis of "the principle of totality," even though they interfered with natural progression by preventing death and lengthening life spans. These were considered "ordinary" means of preserving life and were sanctioned by the Church, in contrast with "extraordinary" measures, such as cryogenics or artificial life-support machines.<sup>24</sup>

The Roman Catholic Church has changed doctrinally since the Council of Trent, and it is being forced to deal with issues that could not have been anticipated by the early

Church leaders. The Vatican and the American Catholic bishops still strongly endorse the theory of natural law, however. Four criteria were developed to determine what is permissible under natural law for moral issues. These criteria are based upon what is called the principle of double effects, or double consequences, in which one effect is good, and the other bad. Certain relationships between these two consequences of an action must exist, or not exist, in order for the act to be morally acceptable for natural law adherents. First, the fundamental action by itself, independent of its consequences, must not be morally evil. Second, evil consequences resulting from a morally good action must not be the means to achieve a further good effect. Third, all evil consequences must be genuinely unintended, and merely tolerated if they happen. And fourth, the good consequences of the original action must outweigh any evil consequences. To be permissible under Roman Catholic natural law, an action must conform to these four standards.<sup>25</sup>

A traditional Catholic who adheres to the current interpretation of natural law must find a way to reconcile hES research and natural law in order for it to be permissible. Kevin William Wildes of Georgetown University states: "I do not think one can argue that there is, in Roman Catholic thought, opposition to stem cell research itself."<sup>26</sup> Thus, not considering the derivation of the stem cells or their usage, the research itself is not morally evil. This meets the first criteria.

However, once the derivation of the stem cells is considered, this research violates the second criteria mentioned above. The Roman Catholic position states that human life begins at conception. Hence, taking a human life is necessary to achieve the potential good consequences resulting from hES research. The evil consequence is undeniably the means to what is considered the good effect. As Michael Mendiola states: "It is the destruction of embryos that poses the greatest challenge or barrier from this tradition's perspective."<sup>27</sup>

In violation of the third criteria, the evil effect would be intended and would be necessary for research to proceed. Embryonic stem cell derivation entails the destruction of an embryo in order to harvest the pluripotent cells that are thought to have the

most potential for growth into cell types desirable for therapeutic purposes. The evil consequence in embryonic stem cell derivation, for example, the destruction of embryonic human life, is known beforehand and is necessary in order to facilitate production of useful therapeutic cell lines.

The loss of life in the harvesting of stem cells would not outweigh the potential, unknown benefits. Thus, the fourth criteria is not met. There are dissenters among Roman Catholics. Mendiola, for example, suggests that we can adhere to natural law, "yet still allow public practices that go against those convictions on good ethical grounds."<sup>28</sup> However, the "good" of those ethical grounds is then relative to human judgment, and thus susceptible to misinterpretation. In contrast, the Conference of Catholic Bishops presents strict criteria for ethical action in its adherence to *jus naturale*.

Three of the four conditions of natural law therefore are not met in hES research. It is considered by traditional Catholics to be unethical and immoral. It upsets the natural order and its use would constitute extraordinary means of sustaining life. Although in this case science and religion are not in agreement, the Roman Catholic position on this issue would represent a Dialogue relationship between the two. According to the first stipulation in the natural law, hES research is not inherently evil. Hence, if a technique were ever developed to harvest human embryonic stem cells without killing the embryo, Roman Catholics would endorse the research. This would eliminate the objections raised by the other three requirements and allow science and religion to coexist without conflict. Yet when the current circumstances are considered, the Roman Catholic position must be classified as Dialogue. Science is taken into account and is viewed as not necessarily in conflict with religion, as evidenced by Wildes' statement above. Ultimately, however, in the Roman Catholic view, religion has authority over science and takes precedence in the hES research debate.

## An Evangelical Wesleyan Perspective

An evangelical Wesleyan perspective can be developed using the framework of the Wesleyan Quadrilateral containing the elements of personal experience, Christian tradition, reason, and Scripture. The Wesleyan Quadrilateral is used to judge the veracity of statements and positions with theological implications. From this perspective, our lives are holistic and theology should be integrated into every aspect, including the issue of stem cell research. This is not to say that theology and science must agree in every aspect. Thus, an evangelical Wesleyan perspective agrees with a Roman Catholic position of Dialogue, although as a Wesleyan Protestant variant.

## Personal Experience

Key factors in embryonic stem cell research are inextricably linked with the abortion debate, as the life of the fetus is ultimately at issue. What makes a human being a person? Gilbert Meilaender argues that this divorce of personhood and humanity results from our socialization. We have been conditioned to believe that they are two separate things, when in reality they are intertwined. He says that "a person is not someone who has a certain set of capacities; a person is simply ... 'someone who'—a someone who has a history."<sup>29</sup> His or her very existence is reason enough to protect a fetus. That embryo is "someone who," someone who does have a history, albeit a short one, that is valuable and should be preserved.

---

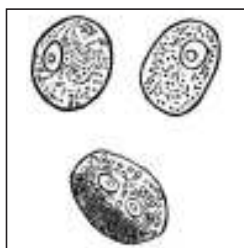
*From an evangelical Wesleyan perspective, our lives are holistic and theology should be integrated into every aspect, including the issue of stem cell research.*

---

Along these lines, Stanley Hauerwas argues that we must be truthful to ourselves and face our intuitions.<sup>30</sup> Our natural inclination is to use terms relevant to our experience. Many instinctively think of an embryo as a baby, acknowledging the inherent human value we attribute to it even in its undeveloped state. This sense can be related to experience, one of the Quadrilateral components. It illuminates one facet of truth when we consider our basic intuitions regarding the status of the human embryo and its relationship to stem cell research. Following Hauerwas' reasoning, our intuition, based on everyday life experience, may suggest that embryos are indeed persons and that, while human embryonic stem cells could potentially be used for healing, this ought not to occur at the expense of human life.

## Christian Tradition

In this circumstance, it is beneficial to consider early Christian tradition, another element in the Wesleyan quadrilateral. From the time of Jesus, Christians were concerned with healing physical ailments. Jesus healed lepers and paralytics as well as forgiving sins.<sup>31</sup> The flesh, where our sinful nature resides alongside God's spirit, is still "God's creation, which would one day experience redemption and resurrection."<sup>32</sup> Throughout the New Testament are admonitions to care for the body, as it is a temple of God, indwelt by the Holy Spirit.<sup>33</sup> Early Christians even sug-



## Student and Early Career Scientists Corner

### *An Evaluation of Three Religious Perspectives on Stem Cell Research*

*Science has no experiment that determines the presence of human life. Nor does the Bible speak explicitly on the subject of the status of embryos. Consequently, a somewhat arbitrary point must be chosen in the developing human's growth to define the beginning of personhood.*

gested that providing for the physical needs of others is more important than preserving one's own health. In the teachings of Jesus, "One finds a much stronger imperative to alleviate the ills of others than to seek to lessen one's own sufferings."<sup>34</sup>

In this light, the case of stem cell research is not a question of merely neglecting the embryo, if one does presuppose it to be a person. Rather, the embryo is destroyed to potentially further the health of others. This action would directly contradict Jesus' teachings. Nowhere in Scripture do we find justification for sacrificing an innocent life to help others. Two examples stand out as possible contradictions to this statement, yet they have a key distinction. First, in Joshua chapter 7, the Israelites stone Achan for the benefit of the rest of the community. However, Achan blatantly disobeyed God's command to take no devoted things when the army conquered Jericho. An embryo is not guilty of disobedience, thus there is no reason for it to be destroyed. The second example in Scripture is that of Christ and his ultimate sacrifice in exchange for all of our lives. Christ voluntarily allowed himself to be crucified. Even if there were an embryo capable of atoning for our sins, it would not be able to choose to give its life. Rather than demonstrating the utilitarian concept of sacrificing one for many, Scripture explicitly condemns destruction of human life as murder.<sup>35</sup> This teaching presents science as conflicting with religious themes found in the Bible, according to Barbour's typology. Granted, the issue still is the personhood of the embryo. If it is determined to be merely a grouping of cells, none of these arguments hold and an integration position is still possible.

#### **Reason**

To this end, we can use another Wesleyan understanding of truth. Reason is considered to be equal to both tradition and experience. As a result, this God-given capacity can facilitate a defense of our position in this debate. Science has no experiment that determines the presence of human life. Nor does the Bible speak explicitly on the subject of the status of embryos. Consequently, a somewhat arbitrary point must be chosen in the developing human's growth to define the beginning of personhood. Because so much of the developmental process is un-

known, if such a point is not established, an infinite regression of the definition of human life is possible. This regression would lead to almost absurd, nonbiblical conclusions, from a Wesleyan perspective.<sup>36</sup> We can guess that human life begins when the spinal cord develops or at the advent of a heartbeat, but do either a spinal cord or a heartbeat make us human? Even the development of a brain and the presence of brainwaves is not a sufficient condition for human life.

Rather than setting an arbitrary limit at any of these points, it seems most logical for human life to begin at conception. At this point, the sperm fertilizes the egg, creating a unique being. The nucleus of the sperm passes into the egg, where the genetic material contained in it fuses with that of the egg. This results in a combination of the genetic material of the parents and an undeniably distinct life form. By assuming this is the beginning of human life, and also of personhood, we eliminate the possibility that we are wrong about any of the other points. For example, if we arbitrarily decide that personhood begins at a certain developmental stage, but in reality personhood began earlier, any destruction of embryos at earlier stages would be murder. Our ignorance may lessen our moral responsibility, but it would not alter the fact that the act was executed. Conception is the earliest stage where human life may exist. Some may argue that selection of conception as the beginning of human life leads to an infinite regression as well, as both a sperm and egg are alive. This argument, however, depends on flawed logic. Neither a sperm nor an egg is capable of producing a viable human on its own. The fertilized egg is the first stage at which a human being can potentially form.<sup>37</sup> Thus this is the first point that could be defended.

Early Church leaders concurred. According to Darrel Amundsen and Gary Ferngren: "Abortion was widely practiced in antiquity, but Christian authors from at least the second century without exception condemned the practice."<sup>38</sup> Tertullian wrote: "For us, indeed, as homicide is forbidden, it is not lawful to destroy what is conceived in the womb while the blood is still being formed into a man."<sup>39</sup> The Church resoundingly denounced the practice of abortion and formed legislation to strongly punish those who violated its position. These statements,

clearly in conflict with abortion, have influenced not only the Roman Catholic stance, but also Protestant positions since then. One could argue that this holds not only for abortion, but also for hES research, as it too involves something “conceived in the womb.”

Rather than merely defaulting to a position, however, or defaulting to an established position, we can provide a viable argument. Biologist Walker Percy says:

It is common place of modern biology, known to every high-school student and no doubt to you the reader as well, that the life of every individual organism, human or not, begins when the chromosomes of the sperm fuse with the chromosomes of the ovum ...<sup>40</sup>

And as Meilaender argues, this humanity should not be divorced from personhood. An early church father, Tertullian, wrote in the third century AD: “To prevent being born is to accelerate homicide ... He who is a man-to-be is man, as all fruit is now in the seed.” Though Tertullian was mistaken in his belief that the sperm naturally and solely produces a child, his principle remains the same. The fertilized egg will develop into a full-grown human and ought to be protected for its nascent humanity. Extrapolating from this, just as we think of an apple seed as inherently *apple*, with all the components and essentials for growing into that apple tree, we should think of an embryo as inherently *human* or *person*.

### Scripture

The ultimate source of truth in the Wesleyan Quadrilateral is Scripture. Reason, experience, and tradition all submit to its primacy. Consequently, in the evangelical Wesleyan view, Scripture serves as the authoritative source from which to evaluate hES research. Psalm 51:5 says: “Indeed, I was born guilty, a sinner when my mother conceived me.” This verse suggests that we had inherent moral status from the point of conception. Marvin E. Tate comments: “The emphasis is on the sin of the speaker, who admits that sin ... goes back to the root of personal existence.”<sup>41</sup> This verse implies that the beginning of personal existence is at conception, or at least before birth. God knew the psalmist and was able to see his sinfulness even before he was born. Even translated somewhat less than literally, it implies that God knew us from the first, which the inspired writer asserts is when his mother conceived him. How would a nonhuman embryo be able to be unworthy and guilty? Some sense of agency had to be present in order for it to be at fault. Walter Elwell goes so far as to say, “Personhood, however defined, may be a useful category, but it is not a biblical one.”<sup>42</sup> The Israelites had no concept of the divorce between the physical and spiritual aspects of a person. Personhood was linked to mere existence, as Meilaender proposes. This verse and others like it are applicable not just to our physical being, but to our

spiritual beginning. With its faint glimmer of humanity, the embryo should be protected for its nascence.

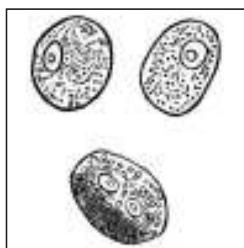
---

*In the evangelical Wesleyan view, Scripture serves as the authoritative source from which to evaluate hES research.*

---

In Isaiah 49:1, Isaiah describes God’s purpose for him, known even before the prophet was formed. “The Lord called me before I was born; while I was in my mother’s womb he named me.” God has a unique calling for each of us.<sup>43</sup> Again in Psalm 139:16, the psalmist recognizes that “Your eyes beheld my unformed substance. In your book were written all the days that were formed for me, when none of them as yet existed.” This “draws attention to the extent of God’s knowledge, spatially ... and *temporally*” (emphasis added).<sup>44</sup> Thus, as Leslie Allen observes, “The psalmist regards himself as the object of God’s creative workmanship before his birth.”<sup>45</sup> These passages are poetic, yet they demonstrate a common theme in the Bible. God knew us before we were even formed; there is a purpose and a plan for each of us that require our lives. That purpose and plan would be aborted along with a human being if an embryo were destroyed to harvest cells.

In the first part of the Gospel of Luke, the author tells the story of the birth of Jesus. Before having her baby, Mary the mother of Jesus visited her relative Elizabeth, who was also pregnant. The Scripture tells us that Elizabeth’s unborn child moved in her womb when Mary spoke. She tells Mary, “As soon as the sound of your greeting reached my ears, the baby in my womb leaped for joy.”<sup>46</sup> Many scholars believe that Luke used Mary as a source for his account of Jesus’ life, suggesting that this passage is more than figurative.<sup>47</sup> John the Baptist, still in his mother’s womb, sensed the presence of the Son of God and acknowledged it. “The verb *skirtao* suggests an eschatological recognition (cf. Ps. 113:4, 6 and Mal. 4:2)” and alludes to more than just a natural shift of the fetus in the womb.<sup>48</sup> A mere bundle of tissues without any sentience would not be aware, let alone able to respond spiritually to its surroundings. While this does not specifically address the status of early embryos, it affirms their early personhood in responding to their environment. And if fetuses are already able to respond thus, who is to say that their precursor is not just as much a person?



## Student and Early Career Scientists Corner

### *An Evaluation of Three Religious Perspectives on Stem Cell Research*

All three religious perspectives examined fit surprisingly into Barbour's category of Dialogue, although an Orthodox Jewish position is prepared to accept hES research while Roman Catholics and evangelical Wesleyans are not.

#### Further Reflections

Meilaender looks at the hES debate as a challenge to be overcome, not as a beast to be tamed. Human embryonic stem cell research evokes philosophical questions having to do with the human will and reason, rather than a medical procedure to be regulated by religious precepts. Human embryonic stem cell research is an indicator of our society's decline into the desire for instant and complete gratification. We know that through it a quick fix is potentially available for many of the evils the world faces, so we put aside moral and ethical concerns in favor of pragmatic expediency. C. S. Lewis describes it in terms of humankind and its desire to conquer Nature: "As soon as we take the final step of reducing our own species to the level of mere Nature, the whole process is stultified, for this time the being who stood to gain and the being who has been sacrificed are one and the same."<sup>49</sup>

Meilaender responds to this concern and challenges the scientific community to a road less traveled: "Only by declining to use embryos for this research do we awaken our imaginations and force ourselves to seek other sources for stem cells ..."<sup>50</sup> We do not have to settle for second best in research; if we can discover how to use stem cells from an aborted embryo, we would most likely be able to figure out how to use those from "bone marrow or from the placenta or umbilical cord in live births."<sup>51</sup> When coupled with arguments encompassing the four cornerstones of the Wesleyan Quadrilateral, Meilaender's challenge presents a convincing argument for the rejection of hES research.

Like the Catholic position, this evangelical Wesleyan perspective on hES research can be looked at many ways. At first glance, it seems that the religious conclusions are in stark contrast to scientific advances. Adhering to the quadrilateral, though, evangelical Wesleyans do not dismiss reason and science out of hand. Science, as well as tradition and experience, is used to verify certain theological points. There is no compromise, however. Wesleyan theology in no way accommodates science in its perspective in order to make it fit nicely. It supports scientific research and yet resists subverting Christian morals to its authority. It affirms the authority of Scripture regardless of whether it fits with science. Thus there is a healthy dia-

logue between science and an evangelical Wesleyan perspective.

#### Conclusion

In conclusion, all three religious perspectives examined fit surprisingly into Barbour's category of Dialogue, although an Orthodox Jewish position is prepared to accept hES research while Roman Catholics and evangelical Wesleyans are not. They each use a different model to come to their conclusion: Jewish case law, or *Halachah*; Catholic natural law; and the Wesleyan Quadrilateral, respectively. In theory, since each uses its respective standard to determine its stance on all ethical issues, the Dialogue position that applies to hES research should be applicable to every moral problem faced by these three faiths. If Roman Catholics hold a Dialogue position regarding stem cell research, when the research is evaluated using natural law, it should follow that their positions on environmental issues and politics would reflect the same Dialogue framework. Using this broader model, we can hopefully understand more about other religious perspectives as well as our own. ♦

#### Notes

<sup>1</sup>As outlined in Ian G. Barbour, *When Science Meets Religion* (San Francisco: HarperSanFrancisco, 2000).

<sup>2</sup>*Ibid.*, 10-7.

<sup>3</sup>*Ibid.*, 15.

<sup>4</sup>See Faithlinks, "Thorny ethical issues surround human cloning," ([www.faithlinks.org/viewarticle.asp?ID=805,2/2/2003](http://www.faithlinks.org/viewarticle.asp?ID=805,2/2/2003)).

<sup>5</sup>See Carl Sagan and Ann Druyan, "The Question of Abortion: A Search for Answers," ([www.2think.org/abortion.shtml](http://www.2think.org/abortion.shtml), 1997).

<sup>6</sup>Barbour, 27.

<sup>7</sup>*Ibid.*, 27-36.

<sup>8</sup>Elliot N. Dorff, "The Jewish Tradition," in *Caring and Curing*, ed. Ronald L. Numbers and Darrel W. Amundsen (Baltimore, MD: MacMillan Publishing Company, 1986), 7.

<sup>9</sup>Laurie Zoloth, "The Ethics of the Eighth Day: Jewish Bioethics and Genetic Medicine. A Jewish Contribution to the Discourse," in *Ethical Issues in Human Stem Cell Research*, National Bioethics Advisory Committee (2000): J-4.

<sup>10</sup>Represented in *Ethical Issues in Human Stem Cell Research* and Suzanne Holland, ed., *Embryonic Stem Cell Debate*, (Cambridge: The MIT Press, 2001) among other works.

<sup>11</sup>Zoloth, "The Ethics of the Eighth Day," J-11.

<sup>12</sup>Represented in *Caring and Curing and Embryonic Stem Cell Debate*, among others.

<sup>13</sup>Zoloth, "The Ethics of the Eighth Day," J-7.

<sup>14</sup>*Ibid.*, J-8.

<sup>15</sup>*Ibid.*, J-7-J-9 and J-12-J-17.

<sup>16</sup>*Ibid.*, J-9-J-10 and J-17-J-20.

- <sup>17</sup>Ibid., J-10–J-11.  
<sup>18</sup>Ibid., J-15.  
<sup>19</sup>Ibid., J-4.  
<sup>20</sup>Babylonian Talmud Yevamot 69b.  
<sup>21</sup>Zoloth, “The Ethics of the Eighth Day,” J-12.  
<sup>22</sup>Ibid., J-17.  
<sup>23</sup>Marvin R. O’Connell, “The Roman Catholic Tradition Since 1545,” in *Caring and Curing*, 138.  
<sup>24</sup>Ibid., 138–40.  
<sup>25</sup>Ibid., 140.  
<sup>26</sup>Kevin Wm. Wildes, in *Ethical Issues in Human Stem Cell Research*, I-3.  
<sup>27</sup>Michael M. Mendiola, “Human Embryonic Stem Cells: Possible Approaches from a Catholic Perspective,” in *Human Embryonic Stem Cell Debate*.  
<sup>28</sup>Mendiola, “Human Embryonic Stem Cells,” 122.  
<sup>29</sup>Ibid., 143.  
<sup>30</sup>Cited in Gilbert Meilaender, in *Ethical Issues in Human Stem Cell Research*, E-5.  
<sup>31</sup>See Luke 5:17, Matt. 8:13, Matt., 15:28, Mark 5:29, among others.  
<sup>32</sup>Darrel W. Amundsen and Gary B. Ferngren, “The Early Christian Tradition,” in *Caring and Curing*, 46.  
<sup>33</sup>See Rom. 8:11, 1 Cor. 3:16–17, Eph. 5:29.  
<sup>34</sup>Amundsen and Ferngren, “The Early Christian Tradition,” 47.  
<sup>35</sup>Exod. 20:13.  
<sup>36</sup>An example would be one of the acts prohibited by the original Catholic doctrine of natural law: sexual intercourse not for the sake of reproduction. However, even conservative Catholic theologians have since determined this to be invalid. A statement from the *Catechism of the Council of Trent* established sexual relations in the context of marriage as “morally licit for some reasons—the fostering of love, physical health, even venereal pleasure which might otherwise be sought in an adulterous union—other than procreation.” O’Connell, “The Roman Catholic Tradition Since 1545,” 126.  
<sup>37</sup>This leads to questions regarding fertilization that occurs in a test tube. While the egg is fertilized, the environment is such that there is no chance for it to fully develop. Does this then make it less human?  
<sup>38</sup>Amundsen and Ferngren, “The Early Christian Tradition,” 50.  
<sup>39</sup>*Apologeticum ad nationes* 1.15. Quoted in Amundsen and Ferngren, “The Early Christian Tradition,” 50.  
<sup>40</sup>Quoted in Marion L. Soards, “Scripture and Stem Cells: Seeking Biblical Guidance When There is No Obvious Biblical Word,” *Ex Auditu: An International Journal of Theological Interpretation of Scripture* 17 (2001).  
<sup>41</sup>Marvin E. Tate, *Psalms 51–100*, vol. 20, *Word Biblical Commentary* (Dallas: Word Books Publisher, 1990), 19.  
<sup>42</sup>*Evangelical Dictionary of Theology*, 1997 ed. s.v. “Abortion,” by Walter A. Ellwell, (<http://bible1.crosswalk.com/Dictionaries/BakersEvangelicalDictionary/bed.cgi?number=T5>).  
<sup>43</sup>Also Jer. 1:5, Isa. 44:2, Isa. 49:1.  
<sup>44</sup>Craig C. Broyles, *Psalms*, *New International Biblical Commentary* (Peabody, MA: Hendrickson Publishers, 1999), 486.  
<sup>45</sup>Leslie C. Allen, *Psalms 101–150*, vol. 21, *Word Biblical Commentary* (Waco, TX: Word Books Publisher, 1983), 262.  
<sup>46</sup>Luke 1:44.  
<sup>47</sup>See William Barclay, *The Gospel of Luke*, vol. 3, *The Daily Study Bible Series* (Philadelphia: The Westminster Press, 1975).  
<sup>48</sup>Luke Timothy Johnson, *The Gospel of Luke* (Collegeville, MN: The Liturgical Press, 1991), 40.  
<sup>49</sup>Gilbert Meilaender, “Some Protestant Reflections,” in *Human Embryonic Stem Cell Debate*, ed. Suzanne Holland, Karen Lebacqz and Laurie Zoloth (Cambridge: The MIT Press, 2001), 144.  
<sup>50</sup>Ibid., 144.  
<sup>51</sup>Ibid., 145.



## A Call for Works in the Arts!

We are seeking original, previously unpublished submissions which may be in the form of poetry, musical score, drawings, cartoons, photography, short prose or meditative thoughts. Ideally the work in art depicts the relationship between science and Christian faith.

### Guidelines for submissions:

- ◆ All submissions must have a title and be less than 300 words.
- ◆ Photographs and artwork must be black-and-white or grayscale. No color accepted.
- ◆ Three copies of each submission must be on single sheets of plain white paper.
- ◆ One copy must be in digital file form (Word document for text, JPG or TIFF for artwork) sent on a PC-formatted floppy disk or as an e-mail attachment.
- ◆ Submissions will be peer-reviewed prior to publication.
- ◆ Send submission with a cover letter indicating that the submission is intended for the “Art Eyes Science” section to:

Roman J. Miller, Editor  
4956 Singers Glen Road  
Harrisonburg, VA 22802

millerrj@rica.net  
540-432-4412