



Human Embryonic Stem Cell Research and Christian Community Ethics: An Old Testament Investigation

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This paper uses a dialogical approach to develop a Christian community ethic of human embryonic stem cell (HESC) research. The first part describes HESC research and differentiates it from other forms of stem cell research. Seven possible policy options are outlined and then used to delineate several non-Christian and Christian religious positions. After this survey familiarizes the reader with various religious arguments, the paper turns to an investigation of some Old Testament (OT) texts. The OT discussions of conception, conception and birth, and the interruption of pregnancy are each considered in their ancient Near Eastern culture. This investigation determines that both the sovereignty of God and his immanence in community determine the ancient Jewish community's attitudes toward conception and birth. Conception is always considered in the context of the community, a community which includes God as its guiding member. This paper argues that the concept of conception in community remains valid, and therefore that today embryos are also created in a community context. For us, the most appropriate community grouping is the nation. As a result, if HESC research is carried out over the objections of even a minority of community members, violence has been done to those members. In consequence, a current Christian community ethic would reject all HESC research, while recognizing the importance of other forms of stem cell research.

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May 19, 2005 Hwang, et al. announced that they had successfully created eleven human embryonic stem cell lines by somatic cell nuclear transfer (SCNT) of nuclei from individuals with serious diseases into donor oocytes.¹ Had this research been verified, it would have been a cutting edge development because the genetic code of the stem cell lines would be identical to those of the nuclei donors so that theoretically their immune system would not reject the stem cells when they were used to treat the individuals' illnesses. Based on these and other developments in Asia, and particularly in Korea, observers suggested in May 2005 that the US was falling behind Asia in human embryonic stem cell research (HESC).²

withdrawn millions of dollars of funding for HESC in Korea.

Nevertheless, as a response to national anxiety that the US was falling behind Asia in HESC research, on May 24, 2005, the US House of Representatives easily passed the Stem Cell Research Enhancement Act,

In December 2005, it was learned that Hwang's paper was fraudulent, that he had not successfully completed this research. In response, the Korean government has

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authorizing research on human embryos that had been created, but not used, for *in vitro* fertilization (IVF). This bill expands research from the US federal government's previous position allowing the use of HESC lines created prior to President Bush's speech on August 9, 2001. President Bush has threatened to veto this bill. This is currently possible because the act passed by a vote of 238 to 194 in Congress, fifty-two votes short of the two-thirds majority required to overturn a veto.

As of January 2006, the bill (S. 471) has not been passed in the Senate. However, it has forty co-sponsors and is on the Senate calendar. Senator Bill Frisk has written that in its current form the bill does not include sufficient ethical and scientific oversight, prohibition of financial incentives to procure embryos, and guidelines concerning who decides whether an embryo is implanted or discarded.³ He views these omissions as shortcomings. Should this bill pass, with or without these revisions, it may only marginally improve the US competitive position in this research. Several other countries funding HESC research permit therapeutic cloning, which would still be banned by the US federal government.

While the US federal position on embryonic stem cell research remains conservative, individual state policies reveal diverse views. On November 2, 2004, California voters passed Proposition 71, authorizing the state to raise \$3 billion to support stem cell research in California—\$300 million yearly for ten years. The majority of this money will be used to support HESC research.⁴ Californians' endorsement of HESC research is currently the most visible example of a state legislative trend: Connecticut, Hawaii, Illinois, Massachusetts, Minnesota, Nebraska, Pennsylvania, and Rhode Island also have bills enacted or pending that provide funding for HESC research, including therapeutic cloning. New York, North Carolina, and Washington have bills enacted or pending that okay HESC research, but ban reproductive or therapeutic cloning. Florida will fund HESC research and does not reference therapeutic cloning in its laws.

While many states support some form of funding for HESC research, other states, including Kentucky, Louisiana, Maryland,

South Carolina, and Texas have introduced conflicting bills, reflecting ongoing debates that have not been resolved as of June 2005. Meanwhile, other states oppose HESC research. West Virginia has a bill pending that prohibits any type of cloning and HESC research. Alabama, Indiana, Kansas, Missouri, Ohio, and Tennessee have bills enacted or pending that ban reproductive or therapeutic cloning while they do not explicitly address HESC research. Finally, Virginia, Michigan, and Indiana will fund adult stem cell research as a viable alternative to HESC research.⁵ This survey of state legislation suggests that, as with other moral issues related to sexuality and reproductive rights, America is fragmented.

HESC research may be the hottest scientific research this decade or perhaps even this century. The race for results is reminiscent of the space race in the 1960s. The impetus for this race is the belief that HESC research may one day provide a cure for debilitating injuries and diseases such as quadriplegia and multiple sclerosis. Equally motivating, although perhaps less noble, is the potential for mind-boggling profits from successful applications of this research. HESC research has great healing potential and may provide major positive economic benefits to corporations, states, and even countries. Nevertheless, Americans have conflicting beliefs about this research because it requires destroying early embryos to harvest stem cells and/or creating human embryos in a laboratory. These actions raise significant ethical questions. These ethical questions are particularly pressing for Christians who believe that God is the Creator, that God created human beings in his image, and that every human is loved by God and therefore ought to be valued by other humans.

Current Status of HESC Research Policy

The Basic Science of HESC Research

Stem cells are cells that become human organs and tissues in developing embryos, and maintain and repair human organs and tissues in adults. There are several classes of stem cells. The major classes are identified in the following description of early embryonic development.

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Embryonic development begins with the union of a sperm and an ovum. After union, the cell divides. These two cells then divide and become a total of four cells. The four cells each divide and this process continues until they become a solid ball of approximately sixteen cells. This is called the morula. All cells in the morula are *totipotent stem cells*. This means that they are undifferentiated (not specialized) and have the total potential to develop into extra-embryonic tissue such as the placenta as well as embryonic tissue.

The cells of the morula continue to divide and secrete fluid that accumulates in the center of the ball of cells. Approximately four to five days after conception, this hollow ball of cells is called a *blastocyst*. At this stage, the cells differentiate (specialize) into either embryonic or extra-embryonic cell types. The embryonic cells cluster together into the inner cell mass (ICM). Any one cell of the ICM can become any of the many embryonic tissues (e.g., cardiac, skeletal, lymphatic). These embryonic cells have now achieved one level of differentiation and are considered to be *pluripotent stem cells*. These cells only have partial potential. They will become embryonic, not extra-embryonic, tissue. However, they still have a lot of potential because they can become any type of embryonic tissue.

HESC research refers to research on cells harvested from the ICM. The embryos from which these cells are harvested are created by *in vitro* fertilization (IVF) or therapeutic cloning and are allowed to develop to the blastocyst stage. Proposed uses of ICM cells include research to understand human development, birth defects, cancer, and gene regulation. In addition, it is suggested that cell replacement therapy could be used to replace diseased cardiac tissue or insulin secreting cells. Many embryos initially created by IVF techniques for reproductive purposes are never implanted. Instead they remain frozen at IVF clinics. It has been proposed that HESCs could be harvested from these "left over" embryos for research purposes. Potential risks and costs of the clinical use of HESCs include possible immune rejection of tissues created from donor embryos and the need to screen for genetic errors in the donated cells (particularly for the disease that is being treated).

Immune rejection could theoretically be prevented by *therapeutic cloning*, that is, using cells created by somatic cell nuclear transfer (SCNT). This procedure takes the nucleus with its 48 required chromosomes from a somatic (nongamete) cell (e.g., skin cell) and transfers it into an ovum that has had its nucleus removed. As a consequence, the DNA comes from only one parent cell instead of having an ovum (24 chromosomes) and a sperm (24 chromosomes) unite to form the 48 chromosomes required. After transferring the nucleus to the ovum, the egg is shocked to stimulate it to divide. The ICM cells are then harvested at the blastocyst stage. When used for therapeutic cloning,

these cells have the advantage of decreasing immune rejection. The person being treated donates the nucleus. Theoretically, they will not reject their own tissue because it contains their own DNA and not that of another person. This process also has limitations; patients being treated for diseases resulting from genetic errors, juvenile diabetes, for example, will not be able to donate the nucleus from one of their own cells. Reproductive cloning also uses SCNT, complicating the political and ethical ramifications of using this procedure therapeutically.

As the embryo continues to develop past the blastocyst stage, the stem cells further differentiate, becoming *multipotent stem cells*, also known as adult stem cells. These cells have differentiated further and are designated to become fewer types of cells. For example, hematopoietic stem cells (HSC) will only become one of the types of blood cells (e.g., white blood cells, red blood cells, or platelets). There are also mesenchymal, skin, muscle, bone, and neuronal stem cells. These multipotent stem cells can potentially be obtained from stillborn or aborted fetuses, umbilical cord blood and/or within the tissues of human infants and adults.

Some ethicists and researchers believe that adult stem cells do not have the healing potential of HESC.⁶ Other researchers such as David Prentice, however, argue that the healing potential of adult cells may at least equal that of HESCs.⁷ There have been reports that multipotent stem cells can be induced to produce cell types broader than their original designation. For instance, circulating blood stem cells have reportedly been stimulated to become hepatocytes,⁸ bone marrow stem cells have been reported to develop into blood, heart,⁹ endothelium, bone, cartilage, fat, tendon, lung,¹⁰ pancreas,¹¹ liver,¹² muscle, marrow, stroma, and brain cells.¹³

Adult stem cell research currently has healing potential without controversy. HESC research requires the destruction of existing embryos or those created by controversial techniques, raising many ethical questions. The next section considers the current scientifically realistic options for HESC research and identifies the current policy positions of several countries with reference to these options.

Seven HESC Research Policy Options

Nikolaus Knoepffler lists seven basic policy options that governments can currently adopt to regulate HESC research activity or to determine eligibility for government research funding:

Option 1 - Allow no HESC research;

Option 2 - Allow research only on stem cells harvested from existing stem cell lines;

Option 3 - Also allow research on stem cells harvested from "surplus" embryos;

Option 4 - Allow research on stem cells created by IVF for the purpose of research;



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Option 5 – Allow research on stem cells harvested from embryos produced by SCNT;

Option 6 – Allow research on stem cells produced by IVF or SNCT and then genetically modified;

Option 7 – Allow research on stem cells harvested from embryos produced by SCNT into nonhuman oocytes.¹⁴

Currently, there are nations that support each of these regulatory options.¹⁵ When countries are described as supporting options 2 through 7, it also can be assumed that they accept earlier options, excluding option 1. As examples, China supports options 6 and 7; the UK, Belgium, Iraq, and India support options 4 and 5; Israel supports option 5; Japan, Australia, Canada, Denmark, Russia, and Spain all support option 3; while the US and Germany support option 2; and Austria, Ireland, and Costa Rica support option 1.

Non-Christian Religious Stances on HESC Research

LeRoy Walters conducted the research on the national policies cited above. He also considered how a variety of religious positions on HESC research influenced national policies. He made some broad, but carefully qualified, conclusions: regions most influenced by Catholicism or conservative Protestant Christianity implemented options 1 and 2; Israel's policies were consistent with a majority Jewish position; Islamic positions lead to liberal policies in Singapore and Iran, as did Hindu approaches; and Buddhist influence is mixed.

Many religious concerns expressed about the use of embryonic stem cells are identical with broader religious concerns about abortion. Because embryos are destroyed before day fourteen in order to harvest these cells, many argue that it is a different issue – the early embryo does not have the “human” status and moral position that it might have by the third month, the sixth month, or later. Consequently, the question of when human life begins has been the focus for most religious groups as they develop ethical positions.

Orthodox and Reformed Jews view the embryo “as mere water” until the fortieth

day of the embryo's development.¹⁶ After forty days, the embryo is considered to be a part of the mother and harming the embryo is prohibited except to save the mother from death or serious harm. Orthodox and Reformed Jewish groups accept option 3 because they believe it meets their moral imperative to save life, without destroying human life.¹⁷ Jewish perspectives on options 4 and 5 are mixed, reflecting different results from attempts to balance disapproval of creating embryos for research with the Jewish imperative to heal developed from Deut. 30:20.¹⁸

Islam also has various approaches to HESC research. According to Walters, the majority of Muslim legal commentators view abortion as moral through either the fortieth day or the fourth month of embryonic development. Thus ending the life of five-day-old blastocysts is not problematic. Muslim testimony before both NBAC (US National Bioethics Advisory Committee) and SBAC (Singapore Bioethics Advisory Committee) supports the use of already existing embryos for research (option 3). While views on options 4 and 5 are less clear, the Legal Committee of the Islamic Religious Council seems to support these options.

The Singapore Buddhist Federation also supported option 3 before SBAC (Singapore is 42.5% Buddhist). In London, however, Damien Keown, co-editor of the *Journal of Buddhist Ethics*, disagrees with all forms of HESC research, arguing for option 1.¹⁹ Somparn Promta concurs, saying that Buddhist writings clearly view conception as the point where human personhood begins and therefore sacrificing a life for the good of another is wrong.²⁰

For reasons similar to the Buddhist arguments against HESC research, Taoists also argue against all forms before SBAC. Taoists support research that brings healing and health to others, but not research that sacrifices any form of human life to benefit others.

The Hindu Endowments Board of Singapore accepted HESC research, including option 3, within limits. While the Hindu religious tradition firmly rejects abortion,²¹ the Hindu Endowment Board concluded that at fourteen days it is not certain that the fetus is endowed with all qualities of life.

Christian Positions on HESC Research

A variety of Christian ethical stances on HESC research exist. The most comprehensive statements are those of the Catholic Church. Their official position is that HESC research should not be undertaken. It is always wrong to destroy “early” embryos because they have the same moral status as other human beings.²² Embryos at all stages of development have the same status as other humans for the following reasons: they are made in the image of God; they have a unique genetic code;²³ human life develops continuously from conception; and inherent in the early human being is a complete human life.²⁴ Even if these assumptions are wrong, the precautionary principle warns that because it is not possible to know conclusively, we ought to err on the side of caution and not destroy any HESCs. The US Catholic Bishops have rejected HESC research in a number of communiqués.²⁵

The Eastern Orthodox Church supports option 2, arguing that human embryos should not be destroyed for research. The Orthodox Church believes science and medicine do God’s will in healing. At the same time, human beings are created body and soul at conception. Humans are in the process of *theosis*, or deification—becoming like Christ. This process begins as a zygote. The Orthodox stance also emphasizes that through this process humans enter into community with God, just as Father, Son, and Holy Spirit are community.²⁶ Thus, human embryos ought not to be destroyed no matter how powerful the healing potential is from the use of their stem cells. However, because the destruction of embryos to create existing stem cell lines has already occurred, it cannot be undone. Thus, existing HESC lines ought to be used for healing, but not for private profit.²⁷

Other Christian denominations or groups that support option 1 and/or option 2 include the Southern Baptist Convention,²⁸ the Assemblies of God and the Episcopal Church,²⁹ an ecumenical group of Protestant and Orthodox scholars before the European Group on Ethics, the National Council of Churches, and the Singapore Council of Christian Churches before SBAC.³⁰ The official statements of the Episcopal Church and the Assemblies of God emphasize that HESC research destroys a human life. The Southern Baptist Convention position statement identifies this concern, but in addition it emphasizes that children are created in the context of the family: “The biblical witness declares that children are a gift from the Lord (Ps. 127:3–5) and are to be the offspring of a husband and wife (Gen. 1:27–28; 2:24; 9:1–2).”³¹ Rather than approaching the question of cloning and HESC research from the perspective of individual rights, this statement recognizes that from a Christian perspective embryos are created in a community context.

Alternatively, the United Church of Christ supports HESC research, at least including option 3, suggesting that ethical guidelines need to be carefully developed for this

research.³² The United Methodist Church “with remorse and guilt” affirms the use of already existing IVF embryos for stem cell research, regretting that we have “acceded” to the creation of these embryos.³³ The Presbyterian Church USA also accepts option 3, using tissues from either aborted fetuses or “surplus” embryos in their 213th General Assembly.³⁴ The above survey suggests that a majority of Protestant and Catholic Churches worldwide either do not support HESC research, or lend limited support to HESC research using embryos initially created for IVF.

The religious views summarized above are concerned with healing and protecting all human persons. Most of the positions have been determined by logical attempts to determine the moral status of the early embryo. Should an early embryo have the same moral status as an already born human? If not, when does an embryo attain this status? Different conclusions have led to various ethical positions. What if the question of relationship is further developed? How, if at all, might the question of the early embryo’s relationship to God and to other humans alter ethical stances?

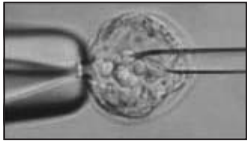
The Embryo in Relationship: An Old Testament Perspective

This section will evaluate Old Testament (OT) views of conception, pregnancy, interrupted pregnancy, and birth. It will particularly consider what these texts say about the developing embryo in a community context. Once this is done, some conclusions will be made concerning how relationships ought to influence our views on HESC research.

Conception, Pregnancy, Birth

Cain’s birth is the first recorded in the OT: “Now the man knew his wife Eve, and she conceived and bore Cain, saying, ‘I have produced a man with the help of the LORD’” (Gen. 4:1). Two themes are introduced in this passage: first, while Eve and Adam had sexual intercourse, it was with the help of the Lord that the child was produced; second, “conceived and bore” are either implicitly or explicitly linked in OT discussions of conception. (See, e.g., Gen. 4:1, 17; 16:11; 21:2; 29:32–33; Exod. 2.2; Judg. 13:3, 5, 7; Ruth 4:13; Job 15:35; Ps. 7:14; Isa. 33:11.) Thus conception, pregnancy, and birth are stages of one continuous process.

In the OT, conception occurs through the agency of God. Pamela Scalise writes “in narrative and poetry, God is the one who is able to give and withhold offspring.”³⁵ According to Scalise, the usual formula for reporting conception and birth does not mention the Lord’s participation. However, specific reports of the Lord as the source of conceptions that were deemed impossible, marriage blessings naming God (Gen. 24:60 and Ruth 4:11–12), and personal names indicating the Lord’s divine assistance in conception and birth “suggest that the LORD was recognized as a source of fertility in a general way, not just in the



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attributed to
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(1 Sam. 1:5;
Gen. 30:2).
Opening or
re-opening
the womb
requires God's
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case of special individuals.³⁶ While these narratives reveal a general pattern, the stories of specific individuals also emphasize that God's conceiving activity was viewed as an outpouring of God's pleasure in a relationship with a specific person or family.

How ought we understand this claim? First, while the OT attributes to God an active role in conception, it does not present God as a fertility deity. Unlike the worship of fertility deities prevalent in the Near East culture of that time, sexual activity was not a part of worshipping Yahweh. Yahweh had no consort. Yahweh could not be manipulated by magic. Yahweh was not associated with the cycles of nature.³⁷ Instead, Yahweh is a God who blesses those with whom he has a relationship and fertility is God's primary blessing.

Fertility is God's blessing to the community, and specifically, to the "father's house." In the OT, ancient Near East families were *patrilocal*. This means that the man lived near his parents with his wife and that he inherited their lands and the relationship with their gods. There is speculation that when God called Abram to follow him and leave his "father's house" he did so to take Abram away from the obligation to maintain the household's relationship with his father's gods (Gen. 12:3). When God gave Abram these instructions, God also outlined the intimate relationship God would develop with Abram. Abram, as the *paterfamilias*, now initiated and would maintain and develop a relationship with God; his family would join this relationship. Unlike the manipulative relationships characterizing the worship of other gods in the ancient Near East, Abraham's relationship with God was intimate; God participated in family life. God's fertility blessing to Abraham occurred within this intimate relationship (Gen. 12:1-3; 15:5-6; 26:3; Exod. 32:13).

OT and NT genealogies reveal that persons never thought of themselves as individuals, but always as members of a family. The immediate extended family was the tightest unit to which a person belonged. This included the father and his wife, the father's sons and their wives and children, and all unmarried daughters and granddaughters. Archeological evidence indicates that this extended family would live in a small group of houses, ringing a common

area, on an acre or two of land. This extended family group often consisted of 50-150 individuals. Each house represented a nuclear family, but as the proximity suggests, in daily activity and law, the extended family was the primary social configuration.³⁸ God's blessing of fertility rests on the patriarch's extended family, the most intimate level of community, as well as on the husband and wife. Children are God's blessing because they develop the land and nation of Israel, provide security for their parents' old age, perform their parents' funeral rites, labor on behalf of the community, carry on family lines, and bring the family honor. Conception is the genesis of God's blessing. Infertility is a lack of blessing attributed to God closing the womb (1 Sam. 1:5; Gen. 30:2). Opening or re-opening the womb requires God's "healing" or intervention.³⁹

God's active role in conception is described by his work in the womb, intensifying God's relationship with the woman and family. Phyllis Tribble uses three narratives in Hebrew Scriptures to support her contention that even "the wombs of women belong to God."⁴⁰ First, when Abraham deceived Abimelech, saying Sarah was his sister, God protected Sarah in Abimelech's harem by informing the king of Abraham's deception and then threatening the king. God also closed the wombs of the women in Abimelech's household, re-opening them when Abraham prayed for Abimelech (Gen. 20:1-28). Second, God showed compassion on Leah, who was hated by Jacob, by opening her womb. Later, he remembered Rachel and opened her womb. God explicitly blessed both of Jacob's wives with fertility—the hated and the beloved. Third, Yahweh also closed Hannah's womb. When Hannah prayed, Yahweh remembered her and opened her womb (1 Sam. 1:1-12). In these stories God—not the wife, husband, or society—controlled and acted on the womb.

Tribble writes that the fetus does not control the womb either. However, because God's action is either fertilization, the creation of a fetus, or infertility, the absence of a fetus, it is more accurate to say the fetus or lack thereof is best understood as the concrete expression of God's action on the womb.⁴¹ God's actions are not those of a distant deity in these narratives. He protects Sarah, blesses Leah and Rachel, and interacts with Hannah as an actor or participant

in the events of the narratives. Neither are God's actions induced by magic—he makes decisions and takes initiatives, interacting intimately with the characters in these stories.

This section has argued that in the OT, God is portrayed to be both active and relationally intimate in the process of conception. God blessed Abraham in a relationship with him. This set the relational model for God's subsequent blessings of fertility. God's fertility blessings are bestowed on an extended family or community rather than the individual. Likewise, the curse of infertility impacts the whole community. Finally, the womb language of the fertility blessing denotes God's intimate involvement in this relational blessing.⁴²

Interrupted Pregnancy

Three specific OT passages consider the interruption of pregnancy. First, Lev. 21:22–23 prescribes the penalty for accidentally causing a miscarriage:

When people who are fighting injure a pregnant woman so that there is a miscarriage, and yet no further harm follows, the one responsible shall be fined what the woman's husband demands, paying as much as the judges determine. If any harm follows, then you shall give life for life, eye for eye, tooth for tooth, hand for hand (NRSV).

Some scholars argue that the Hebrew word translated "miscarriage" refers to premature birth.⁴³ The text itself, however, supports the view that this passage refers to a miscarriage; if a child was born prematurely and no further damage was suffered, then the master suffered no loss and therefore no penalty would be necessary.⁴⁴

A parallel passage in the Code of Hammurabi further supports this reading:

If a seignor struck another seignor's daughter and has caused her to have a miscarriage, he shall pay ten shekels of silver for her fetus. If that woman has died, they shall put his daughter to death.⁴⁵

Since miscarriage is likely the correct interpretation of this word, the Levitical law supports punishment for doing accidental harm to a fetus in a dispute. Therefore, harm caused to a fetus is a culpable manifestation of violence that harms relationships in a community.

The prescribed punishment for harming an embryo is different from the punishment for harming an Israelite in Lev. 20:12–14, which specifies "a life for a life." This difference does not indicate that the fetus has a different moral status than an already born human. Instead, a fetus has a different status than a free Israelite. Consider the law immediately preceding the miscarriage law, Lev. 21:20–21. It states that a person who kills his slave with blows is punished if the slave dies immediately. He is not punished if the slave dies a day or two later. The punishment is not

specified, but the wording indicates that it is not capital punishment. Thus, in Leviticus, slaves and fetuses have at least equal value; the culprit is penalized with similar severity for either killing a slave intentionally or killing a fetus accidentally. Since all would now agree that slaves have equal moral status to other already born humans, a parallel reading of the laws concerning the fetus suggests they have equal moral status to already born humans. Further, since the law requires punishment for killing a fetus accidentally, it is not unthinkable that "a life for a life" applies when a fetus is killed intentionally.

In the Hebrew Bible, two prophetic passages view interrupting pregnancy as a curse. Hosea proclaims God's judgment on Israel for their idolatry, particularly their worship of fertility idols (Hos. 9:10–14). He even commands the Lord, "Give them, O Lord—what will you give? Give them a miscarrying womb and dry breasts" (Hos. 9:14).⁴⁶ Krause and Tribble argue that Hos. 9:11–14 is a reversal of previous fertility blessings because the ancient couplet in this curse, "womb" and "breasts," has one other occurrence in Gen. 49:25 where Jacob bestows a fertility blessing on Joseph.⁴⁷ The blessing is reversed as a consequence of Ephraim's "corporate sterility," or corporate sin of idolatry.⁴⁸ Israel has broken its intimate relationship with God and gone to worship other gods. As a result, God's fertility blessing is withdrawn.

Humans end pregnancy as result of broken relationships with God or other humans. God always opposes human decisions to end pregnancy, especially if they are intended to benefit the offending community. Only God can interrupt pregnancy.

Hosea's shockingly violent demand for God to kill the unborn ought to be considered alongside OT texts that describe ripping open pregnant women as an act of war in the ancient Near East (2 Kings 8:12; 15:16; Amos 1:13).⁴⁹ God judged the Ammonites "because they have ripped open pregnant women in Gilead in order to enlarge their territory" (Amos 1:13). God's judgment indicates that this act of war was detestable to the Lord. Note that the purpose of the Ammonites was to enlarge their territory. It might be argued that this act was abhorrent to God because it was motivated by self-interest. The ultimate



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*A kingdom of
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embryos.
When
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that destroys
embryos
is done,
it usurps
the authority
of God,
destroys
God's blessing,
and harms
the community
of God.*

breakdown of neighbor relationships occurs in this case when one state inflicts violence on the women and unborn children of a neighboring state to further self-interest.

Because God judges this practice of war while Hosea entreats God to carry it out in Hos. 9:14, it can be argued that God's sovereignty over the unborn extends to determining which embryos will live or die. Further, it suggests that God is most concerned with the breaking of relationship. Was Hosea considering this war practice and perhaps entreating God to go to war with Israel on account of their idolatry? In each case, interrupted pregnancy illustrates the severity of the relationship's rupture. Humans end pregnancy as a result of broken relationships with God or other humans. God always opposes human decisions to end pregnancy, especially if they are intended to benefit the offending community. Only God can interrupt pregnancy. This conclusion would be consistent with the Levitical law that punishes someone who accidentally kills a fetus, and with the OT biblical descriptions of God as the source of both fertility and infertility.

Conclusions

For research, pluripotent HESCs must be harvested from embryos that are less than fourteen days old, and likely closer to six days of age. In the US, many different conclusions have been made concerning the ethics of this research. This is illustrated by state legislation that ranges from encouraging adult stem cell research and simultaneously legislating against all HESC research to encouraging HESC research from IVF and therapeutic cloning. Internationally, each of the seven policy options listed earlier has been enacted by one or more nations. Both state and national policies have been influenced to varying degrees by the religious beliefs of citizens. Generally, religious and secular stances taken vis-à-vis HESC research are based on answers to some variation of the question, "When does life begin?"

The OT passages considered above re-contextualize the questions of whether human embryos ought to be destroyed, and/or whether human embryos ought to be created expressly for the purpose of being destroyed in order to harvest stem cells. These texts shift our focus from the rights of

individuals to the rights and obligations of a unique religious community where God is universally sovereign over conception, pregnancy, birth, and death. In this context, God is the primary source of conception; indeed, we may go so far as to say a woman's womb is the property of God. Conception, birth, and pregnancy are God's blessing on the extended family and the entire community. These are all continuous stages of one blessing. Since God is the giver of this gift, only God can interrupt a pregnancy once it has begun. God condemns persons or groups that intrude and harm the unborn child. These passages suggest that God particularly condemns ending the life of an unborn infant when the harm is done to benefit the perpetrators. Finally harming embryos always results from broken community relationships and always causes further harm to the community. Consequently, a community of God or kingdom of God ethic rejects any actions—including harvesting HESCs from embryos—that interrupts conception, pregnancy, and birth in the community of God.

Stanley Hauerwas' arguments against abortion in *A Community of Character* directly relate to this ethic. He writes that we have inverted the key questions: "Note that the question is not, 'Is the fetus a human being with a right to life?' but 'How should a Christian regard and care for the fetus as a child?'"⁵⁰ He contends further:

People contemplating abortion do not ask if the fetus has a right to life, or when does life begin, or even if abortion is right or wrong. Rather, the decision seems to turn primarily on the quality of the relationship (or lack of relationship) between the couple.⁵¹

Hauerwas' observations suggest that questions of when life begins may be asked by societies to justify actions that have already been chosen as a result of broken relationships.

Hauerwas makes his arguments in the context of abortion. They are relevant to this study because HESC research requires the death of the embryo. We must still ask, "How should a Christian regard and care for a fetus as a child?" This is true for every fetus. There are not two classes of fetuses; one class that is composed of children and another that is composed of tissue for research and possibly future treatments.

Some argue that because excess IVF embryos are created outside the womb, and because they are unwanted, they become specialized human tissues that can be acceptably destroyed and used to create cures for diseases. *In vitro* fertilization, however, is a technology created to heal infertility for couples that desire children. These children have communities around them. Since these embryos are children with communities, Christians need to again ask, "What kind of people do we need to be to artificially create and care for embryos as children?"

Our Christian community tradition of almost 2,000 years overwhelming supports a view that human embryos should not be destroyed.⁵² Some readers will argue that we live in a new, scientific age that makes this specific strand of tradition irrelevant for considering HESC research. Instead, they state that we ought to base our arguments on recent scientific discoveries of the process of embryonic development, on bioethical judgments determining the moral status of embryos and on calculations of the utilitarian tradeoffs between the destruction of early embryos and the great hope that HESC research presents for alleviating human suffering.

Hauerwas addresses this position as well. He argues that Christian social ethic positions cannot be abstracted from Scripture and Christian tradition without losing their foundational logic, coherence, and power. Instead, Christian ethical positions ought to be presented to our broader society in their original context, even when society rejects Scripture and Christian tradition. The Gospel foundation is unifying and freeing, breaking down "false barriers" between people. We regard the other, including embryos, as fellow members of God's kingdom. We do not use people to further our ends, even noble ends.⁵³ By necessity, if the Bible breaks down "false" barriers when we share its ethic with others, then it will sometimes raise barriers between Christians and others who follow "narrow" belief systems that "create 'the world'" that contrasts with God's kingdom.⁵⁴

The church must proclaim God's truth in the broader society and invite all to follow as disciples of Christ. A kingdom of God ethic argues that HESC research should not be done until and if stem cells can be obtained without harming human embryos. When HESC research that destroys embryos is done, it usurps the authority of God, destroys God's blessing, and harms the community of God. ☞

Notes

¹Woo Suk Hwang, Sung Il Roh, Byeong Chun Lee, Sung Keun Kang, Dae Kee Kwon, Sue Kim, Sun Jong Kim, Sun Woo Park, Hee Sun Kwon, Chang Kyu Lee, Jung Bok Lee, Jin Mee Kim, Curie Ahn, Sun Ha Paek, Sang Sik Chang, Jung Jin Koo, Hyun Soo Yoon, Jung Hye Hwang, Youn Young Hwang, Ye Soo Park, Sun Kyung Oh, Hee Sun Kim, Jong Hyuk Park, Shin Yong Moon 5, Gerald Schatten,

"Patient-Specific Embryonic Stem Cells Derived from Human SCNT Blastocysts," *Science* 308, no. 5729 (17 June 2005): 1777-83.

²Victoria Griffin, "US Falling Behind in Stem Cell Research," *London Financial Times*, May 27, 2005; Clive Cookson, "An Asian Triumph for Therapeutic Cloning," *London Financial Times*, May 20, 2005.

³Frist Comments on Stem Cell Research" July 25, 2005: http://frist.senate.gov/index.cfm?FuseAction=Speeches.Detail&Speech_id=257

⁴"Californians to Vote on 3 bln USD Stem Cell Research Funding on Tuesday," *London Financial Times*, October 31, 2004.

⁵Genetics Legislation Database, "National Conference of State Legislatures: www.ncsl.org/programs/health/genetics/geneticsDB.cfm

⁶Nikolaus Knoepffler, "Stem Cell Research: An Ethical Evaluation of Policy Options," *Kennedy Institute of Ethics Journal* 14, no. 1 (March 2004): 55-74, 57.

⁷www.bioethics.gov/transcripts/july03/session3.html; and Alfonso Gomez-Lobo, "On the Ethical Evaluation of Stem Cell Research: Remarks on the Paper by N. Knoepffler," *Kennedy Institute of Ethics Journal* 14, no. 1 (March 2004): 75-80.

⁸H. C. Fiegel, et al., "Liver-Specific Gene Expression in Cultured Human Hematopoietic Stem Cells," *Stem Cells* 21 (January 2003): 98-104; and Lagasse, et al., "Purified Hematopoietic Stem Cells Can Differentiate into Hepatocytes *In Vivo*," *Nature Medicine* 6 (November 2000): 1229-34.

⁹D. Orlic, et al., "Bone Marrow Cells Regenerate Infarcted Myocardium," *Nature* 410 (April 5, 2001): 701-5.

¹⁰D. N. Kotton, et al., "Bone Marrow-Derived Cells as Progenitors of Lung Alveolar Epithelium," *Development* 128 (December 2001): 5181-8.

¹¹D. Hess, et al., "Bone Marrow-Derived Stem Cells Initiate Pancreatic Regeneration," *Nature Biotechnology* 21 (July 2003): 763-70.

¹²N. Theise, et al., "Liver from Bone Marrow in Humans," *Hepatology* 32 (July 2000): 11-6; and M. Alison, et al., "Cell Differentiation: Hepatocytes from Non-hepatic Adult Stem Cells," *Nature* 406 (July 2000): 257.

¹³www.bioethics.gov/background/prentice_paper.html

¹⁴Knoepffler, "Stem Cell Research," 56-7.

¹⁵See LeRoy Walters' survey of national policies in "Human Embryonic Stem Cell Research: An Intercultural Perspective," *Kennedy Institute of Ethics Journal* 14, no. 1 (March 2004): 3-38.

¹⁶Tendler, Zoloth, Jewish Law.

¹⁷Statements by the Union of Orthodox Jewish Congregations of America (www.ou.org/public/statements/2001/nate34.htm), and a major Reformed Jewish organization, the Union of American Hebrew Congregations ("Reform Jewish Leaders Urge Bush to Promote Embryonic Stem Cell Research," <http://rac.org/PrintItem/index.cfm?id=727&type=Articles>) accepts Option 3.

¹⁸The Commission on Social Action of Reformed Judaism (CSA) supports therapeutic cloning because it meets the Jewish imperative, found in Deut. 30:20, to save human life. Further, "Our tradition requires that we use all available knowledge to heal the ill, when one who delays in doing so, it is as if he has shed blood," *Shulchan Arukh Yore De'ah* 336:1, <http://rac.org/PrintItem/index.cfm?id=483&type=Articles>. Alternatively, a recent article in *Jewish Law* argues that since Rabbinic authorities had to carefully weigh alternative rights before accepting HESC research on already existing embryos, they are unlikely to approve of the creation of embryos specifically for their destruction. Daniel Eisenberg, "Stem Cell Research in Jewish Law," *Jewish Law*, www.jlaw.com/Articles/stemcellres.html.

¹⁹Walters, 2004 survey of national policies, 22-3.

²⁰He outlines the Buddhist distinction between suicide and euthanasia — the first is acceptable although undesirable while the second is always wrong because it lacks consent. Since killing an embryo lacks consent also, destroying an embryo is always ethically wrong. Because destroying an embryo for HESC research may provide direct health benefits to others, Promta then considers the idea of one person sacrificing her life for the life of another. Again, life donation is only ethical with informed consent. Thus HESC research is again wrong. Somparn Promta, "Law and Morality: The Buddhist Perspective," *The Chulalongkorn Journal of Buddhist*

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Studies 5 (May–December 1998): 3–57; and Somparn Promta, *ASEAN-EU LEMLIFE Project*, www.stc.arts.chula.ac.th/Workshop_papers.pdf+somparn+promta&hl=en&ie=UTF-8.

²¹"In the prestigious Dharma Sastras and in other major writings, Hindus are told never to practice abortion even in the case of an illegitimate child. Abortion is presented as a heinous crime and is classified as one of the *mahapatakas* (atrocious acts), subjected to severe penances and punishments" in Daniel C. Maguire, *Sacred Choices: The Right to Contraception and Abortion in Ten World Religions* (Minneapolis, MN: Fortress Press 2001), 50.

²²Knoepffler, "Stem Cell Research," 57.

²³Gomez-Lobo defends this view even when considering that twinning is possible:

It follows from the foregoing that those human beings who are twins begin their existence during the reprogramming of the blastomere outside of the morula or during the reprogramming of the two parts of the morula. Those of us who are not twins begin our existence during the original fertilization. No arbitrary dividing point is necessary in either case (Gomez-Lobo, "On the Ethical Evaluation of Stem Cell Research," 79).

²⁴Johannes Paul II, *Evangelium Vitae*, 4th ed. (Bonn, Germany: 1995).

²⁵"Statement on the Report by the Presidents Council on Bioethics, Reproduction and Responsibility: The Regulation of New Biotechnologies" (April 1, 2004): www.usccb.org/prolife/issues/bioethic/embryo/keelerstmt.htm; www.usccb.org/comm/archives/2001/01-142.htm; and www.usccb.org/prolife/issues/bioethic/embryo/embryapp.htm.

²⁶N. V. Harrison, "Human Community as an Image of the Holy Trinity," *St. Vladimir's Theological Quarterly* 46, no. 4 (2002): 347–64.

²⁷Demetrious Demopolous, *Testimony in Ethical Issues in Human Stem Cell Research*, Vol. III of *Religious Perspectives*, National Bioethics Advisory Committee (Rockville, MD: NBAC, 2000), B-3–B-4.

²⁸SBC news press release, "First-Person: The Wisdom of the Costa Rican Resolution," Tuesday, Nov 16, 2004, www.sbc.net/redirect.asp?url=http://www.bpnews.com/SouthernBaptistConvention/OnHumanCloning, June 2001, www.sbc.net/resolutions/amResolution.asp?ID=572; and Southern Baptist Convention, "Resolution on Human and Embryonic Stem Cell Research," June 1999, www.sbc.net/resolutions/amResolution.asp?ID=620.

²⁹General Convention of the Episcopal Church, Resolution 2000-D091 "Referring a Resolution on Stem Cell Research Using Human Embryos," www.episcopalarchives.org/cgi-bin/acts_new/acts_resolution.pl?resolution=2000-D091.

³⁰Singapore, BAC 2002, G-3-66, G-3-69.

³¹Southern Baptist Conference, "On Human Cloning."

³²United Church of Christ Resolution, www.ucc.org/synod/resolutions/res30.htm.

³³Christian Social Action: "The Ethics of Embryonic Stem Cell Research," 11/16/2004, www.umc-gbcs.org/getinvolved/viewarticle.php?csa_articleId=188; United Methodist press release, "Board Responds to News of Cloning in South Korea," February 18, 2004, Statement of Jim Winkler, General Secretary of the General Board of Church and Society of the United Methodist Church, www.umc-gbcs.org/news/viewnews.php?newsId=690

³⁴www.pcusa.org/ga213/business/13comrep1.htm.

³⁵Pamela Scalise, "I Have Produced a Man with the Lord': God as Provider of Offspring in Old Testament Theology," *Review and Expositor* 91, no. 4 (Fall 1994): 577–88, 577.

³⁶*Ibid.*, 582.

³⁷*Ibid.*, 577–78.

³⁸Gordon J. Wenham, "Family in the Pentateuch," in *Family in the Bible: Exploring Customs, Culture, and Context*, ed. Richard S. Hess and M. Daniel Carroll (Grand Rapids, MI: Baker Academic, 2003), 21–4.

³⁹"Healing comes in answer to prayer (Rebecca, Leah, Hannah), or as a gracious surprise (Sarah, Rachel, Samson's mother)" in Scalise, "I Have Produced a Man with the Lord," 582.

⁴⁰Phyllis Trible, *God and the Rhetoric of Sexuality* (Philadelphia, PA: Fortress Press, 1978), 34.

⁴¹*Ibid.*, 34–5.

⁴²Some scholars argue that a lack of scientific understanding led ancient Israel, like its surrounding tribes and cultures, to ascribe to God a central role in fertility because it was essential to the survival of clans and cultures. High rates of infant mortality, a short expected life span, and a small workforce relative to labor intensive subsistence farming all reinforced the need for fertile women to bear as many children as possible. See Jon L. Berquist, *Controlling Corporeality: The Body and the Household in Ancient Israel* (Piscataway, NJ: Rutgers University Press, 2002), particularly chapter 2, "Sexuality and Fertility," 51–79. Berquist argues that the genealogies in Israel's "Primary History," Genesis through 2 Kings, place kinship and therefore sexual reproduction at the core of the narrative structure. He considers the sexual laws of Israel to be evidence of attempts to maximize fertility in ancient Israel, "a society with severe problems maintaining population levels" (p. 62). He cites legal examples including prohibitions against prostitution (Lev. 19:29), homosexuality (Lev. 20:13), and incest, particularly where it involves younger males and older females, (p. 73) as well as laxer ritual cleansing regulations for emissions of semen during sexual intercourse (p. 59). Nationalism and fertility concerns also motivate the sexual rhetoric inherent in many narratives. Consider Abraham's sexual discipline contrasted by Lot's sexual intercourse with his daughters (p. 55) or God's displeasure with Onan's disregard for the maintenance of his people by spilling his semen instead of impregnating his sister-in-law (p. 68, Gen. 38:6–10). Following this train of thought, Berquist argues that the importance of fertility leads religious texts to view both infertility and fertility as divine work (pp. 74–5). Such a conclusion, common in the *history of religions* school of thought, views all human religious descriptions of God's attributes and actions as reflections of human needs rather than divine revelation. For Christians, however, a more balanced conclusion might be that Scriptures describe how God was involved in Israel's fertility because it was a central concern of life for Israel.

⁴³It literally means "her child going out." As a result of this term's ambiguity some scholars argue that verse 22 signifies premature birth while verse 23 details consequences if either the mother or child sustain further harm. Others, however, argue that verse 22 sets the penalty for the loss of the fetus and verse 23 for additional harm to the mother. John I. Durham, *Exodus* WBC vol. 3 (Waco TX: Word Biblical Publishers, 1987), 324.

⁴⁴Cornelius Houtman, *Exodus*, vol. 3 of *Historical Commentary of the Old Testament* (Leuven: Peeters, 2000) 164–5.

⁴⁵"Talio," *The Torah: A Modern Commentary*, ed. W. Gunther Plaut (New York: Union of American Hebrew Congregations, 1981), 572.

⁴⁶Some scholars argue that Hosea in this passage asks for infertility as a compassionate alternative to the judgments of infertility, abandonment, and infanticide decreed in verses 11–13. Deborah Krause, "A Blessing Cursed: The Prophet's Prayer for Barren Womb and Dry Breasts in Hosea 9" in *Reading Between the Texts: Intertextuality and the Hebrew Bible*, ed. Danna Nolan Fewell (Louisville, KY: Westminster John Knox Press, 1992), 191–202, 193.

⁴⁷Trible, *God and the Rhetoric of Sexuality*, 61; Krause, "A Blessing Cursed," 195, 197.

⁴⁸Trible, *God and the Rhetoric of Sexuality*, 62; Krause, "A Blessing Cursed," 197–9.

⁴⁹"Harah," *Theological Dictionary of the Old Testament* (TDOT), vol. 3.

⁵⁰Stanley Hauerwas, *A Community of Character* (Notre Dame, IN: University of Notre Dame Press, 1981), 198.

⁵¹*Ibid.*, 199.

⁵²See, for example, Darrel W. Amundsen, *Medicine, Society, and Faith in the Ancient and Medieval Worlds* (Baltimore, MD: Johns Hopkins University Press, 1996), 63, 100–1, 199–200, 268–71; and John Connery, *Abortion: The Development of the Roman Catholic Perspective* (Chicago, IL: Loyola University Press, 1977).

⁵³Hauerwas, *A Community of Character*, 51.

⁵⁴*Ibid.*