

ISSUES IN PERSPECTIVE

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PERSPECTIVE NUMBER ONE

STEM CELL ADVANCES AND THE VALUE OF THE HUMAN EMBRYO

The matter of stem cell research has reached a new peak of concern because the Obama administration has removed the restrictions on embryonic stem cell research, dating back to the 2001 Bush administration order restricting such research only to existing stem cell lines. However, a new advance recently announced by Chinese scientists demonstrates once again that embryonic stem cells are not needed to advance the research.

- First, a summary of the findings. Chinese scientists have bred mice from cells that might offer an alternative to embryonic stem cells, producing the most definitive evidence yet that the technique could help sidestep many of the explosive ethical issues engulfing the controversial field. However, this advance could also raise some alarm that the research could lead to human cloning and “designer babies.” In papers published in late July, in two scientific journals (*Nature* and *Cell Stem Cell*), separate teams of researchers from Beijing and Shanghai reported that they had for the first time created virtual genetic duplicates of mice using skin cells from adult animals that “had been coaxed in the laboratory into the equivalent of embryonic stem cells.” The procedure, announced in the above named journals, summarizes that the researchers used viruses to “flip genetic switches in the DNA of skin cells from adult mice to turn them into iPS [induced pluripotent stem] cells into very early embryos that are capable of forming a placenta but not fully developing on their own. The resulting embryos were then transferred into the wombs of female surrogate mice.” One team of scientists produced 37 iPS lines, three of which produced 27 offspring. Rob Stein, *Washington Post* reporter, summarizes that “Altogether, the researchers bred at least 100 first generation mice and hundreds of second generation mice that were nearly identical genetically to the mice from which the iPS cells had been derived.” This research currently demonstrates that embryonic stem cell research is not needed. However, the danger of this research is that it could actually enhance the technology for reproductive cloning and could enhance research to produce an era of “designer babies” by enabling researchers to genetically engineer traits into cells using them to create embryos. In short, the ongoing stem cell research is rather frightening. This new research validates that embryonic stem cell research is not needed to accomplish the goals of genetic technology. However, as with all kinds of research in this area, there are unintended consequences—we could solve the embryonic stem cell debate but actually enhance something equally as troubling.
- Second, we must probe the question, does the human embryo have moral value? Ethicist Michael Sandel probes the motive behind genetic and reproductive technology research: “In a world without givens, a world controlled by bioengineering, we would dictate our nature as

well as our practices and norms. We would gain unprecedented power to redefine the good. . . The more successfully we engineered IQ and muscle-to-fat ratio, the more central these measures would become to our idea of perfection. We already see this phenomenon in our shift of educational emphasis from character to academic testing. We might create a world of perfect SATs, ERAs and CEOs. But it would never be a perfect world. . .” (Michael Sandel, *The Case Against Perfection: Ethics in the Age of Genetic Engineering.*)

Reproductive and genetic technologies have empowered humans to a degree unimaginable only a few years ago. These technologies are also empowering parents to decide what kinds of children they want. Therefore, these technologies raise profound ethical questions, including ethical questions about the human embryo. We cannot ignore them. Here are some practices that raise profound ethical questions:

1. THE USE OF DONOR EGGS IN INVITRO FERTILIZATION (IVF)

- Used in 12% of all IVF cases
- The result is the mind bending phrase, “bio-genetic child,” meaning a child who is both biologically and genetically related to each of its parents, but, for the first time in history, separating those components.
- Ethical Questions:
 - 1. Should the woman who donates her eggs be paid?
 - 2. Should we accept the practice of selling eggs with specific personal attributes in mind?
 - 3. Should we permit parents (or other mothers) to choose the person they want to donate the eggs?
 - 4. Should the basis be IQ, appearance, heritage or race?
 - 5. Are we getting close to eugenics if we, as a civilization, permit this?
 - 6. Do the children of such a procedure have the right to know that the egg which was fertilized is not the egg of their mother who raised them?
 - 7. Should there be “open-identity” donation procedures?
 - 8. Should we, as a civilization, provide opportunities for children to establish a relationship with their donor egg mother or donor sperm father?

2. PREIMPLANTATION GENETIC DIAGNOSIS (PGD)

Through IVF, eggs are fertilized and allowed to divide for 3 days (at the 8-cell stage). The cells of the embryo are tested for defective genes carried by the mother or father. Embryos free of defective genes are then implanted in the mother’s uterus or frozen.

Ethical Questions with PGD:

- Is it wise to allow widespread use of PGD? (It is currently used in about 10% of IVF procedures in the US.)
- Could PGD be used to determine other traits or characteristics? Could it become a tool in fact for eugenics?
- Should there be limits to the empowerment of parents using PGD?
- Who would set those limits?

3. CYTOPLASMIC HYBRID EMBRYOS

Recently, the UK's Human Fertilization and Embryology Authority cleared the production of cytoplasmic hybrids for stem cell research. The nucleus of an animal ovum is replaced with human DNA, producing an embryo that is 99.9% human.

Ethical Questions:

- Does such a procedure violate a deeply ingrained principle of “species distinction” between humans and animals? Is there a “creation-order distinction” being violated here?
- Do “interspecies embryos” pose a slippery slope of unintended consequences?
- Does this procedure challenge human dignity?

4. CONSIDER: LIFE AS A CONTINUUM

“Human development begins at fertilization, the process during which a male. . . sperm unites with a female [egg] to form a single cell called a *zygote*. This highly specialized, totipotent cell marked the beginning of each of us as a unique individual. [A *zygote* is defined] “as the beginning of a new human being.”

“Although most developmental changes occur during the embryonic and fetal periods, some important changes occur during later periods of development: infancy, childhood, adolescence, and adulthood. Although it is customary to divide human development into *prenatal* (before birth) and *postnatal* (after birth) periods, birth is merely a dramatic event during development resulting in a change in environment. *Development does not stop at birth.*”

Moore, Keith L. and Persaud, T.V.N. *The Developing Human: Clinically Oriented Embryology*. 6th edition. Philadelphia: W.B. Saunders Company, 1998, pp. 2 and 18.

A PLEA:

At the very least, human civilization must have a conversation about the ethical implications of the procedures discussed in this *Perspective*. As a part of the conversation, I believe we should also revisit the ethical value of the human embryo. As a Christian, I believe that the human embryo does have ethical and moral value. At least Psalm 139:16 is a starting point for our thinking about the value of the human embryo. This verse indicates that God assigns the human embryo infinite value. So should we!

See Rob Stein's article on the Chinese research on stem cells in the *Washington Post* (23 July 2009).

PERSPECTIVE NUMBER TWO

FURTHER REFLECTIONS ON HEALTH CARE REFORM

The Congress, despite the relentless urging of the president, did not complete debate on health care reform before the August recess. This entire issue is so complicated and so volatile, it seems wise that the nation take significant time to debate, process and think about this

momentous issue. I would like to raise several salient questions about health care reform as it is now being discussed.

- First of all, the House of Representatives has been debating a bill that is 1,017 pages long, with 2,541 sections (HR 3200). *World* magazine has done an important service in itemizing several key elements in HR 3200. Quoting extensively from the bill, these are the salient elements of HR 3200:
 1. The government will define your “health benefits.”
 2. The government will annually ration your health care at \$5,000 per individual and \$10,000 per family.
 3. The government will define how doctors will manage their time.
 4. The government will order you to get end-of-life counseling and show proof.
 5. The government will limit readmissions by penalizing hospitals.
 6. The government will not permit you to sue over coverage limits and cost decisions.
 7. The government will mandate what physicians make.
 8. The government will have access to your bank accounts.
 9. The government will issue you a health ID card.
 10. The government will enlist or create outreach programs like ACORN to sign up individuals to the government-run plan.
 11. The government will not protect the conscience of health care workers who might refuse to perform questionable procures (e.g., abortion).

In addition to these rather frightening portions of HR 3200, there is significant concern that the Health Benefits Advisory Committee stipulated in the bill would determine what procedures are covered under a public insurance plan. The bill requires every American to have insurance that meets certain standards. Those who are pro-life in Congress have raised significant concerns that unless the legislation being considered explicitly excludes abortion procedures, abortions will soon become part of the required insurance package. Further, unless clearly prohibited, such legislation would require taxpayers to foot the bill for such abortions. The 1976 Hyde Amendment, which prohibited public-funding of abortions, must be the model to include in any health care reform legislation.

Finally, columnist Peggy Noonan recently asked some basic, common sense questions about health care reform legislation:

1. Will whatever health care bill is produced by Congress increase the deficit?
2. Will it mean tax increases?
3. Will it mean new fees or fines?
4. Can I afford it right now?
5. Will it make the market place freer and better?
6. Is our health-care system in crisis?
7. Will a health-care bill improve the economy?

Common sense dictates that at least our Congress in the various town hall meetings this month and our President must answer these questions with evidence and with credibility. Otherwise, passage of such a bill is not possible or wise!

- Second, columnist Charles Krauthammer has suggested two fundamental changes that the government could enact that would produce significant reform and reduce significantly health care costs:
 1. *Tort reform.* He writes: “. . . our crazy system of casino malpractice suits results in massive and random settlements that raise everyone’s insurance premiums and creates an epidemic of defensive medicine that does no medical good, yet costs a fortune.” A recent authoritative Massachusetts Medical Society study found that five out of six doctors admitted they order tests, procedures and referrals—amounting to about 25% of the total—solely as protection from lawsuits. Defensive medicine, estimates the libertarian/conservative Pacific Research Institute, wastes more than \$200 billion a year. Just half of that sum could provide a \$5,000 health insurance grant--\$20,000 for a family of four—to the uninsured poor. Krauthammer therefore recommends that the US abolish the entire medical-malpractice system and create a new “social pool from which people injured in medical errors or accidents could draw. The adjudication would be done by medical experts, not lay juries. . . .”
 2. *Real health insurance reform.* Krauthammer suggests taxing the health care benefit and then returning that tax to the employee who then buys his/her own health insurance. I am not certain I agree with this option but his point is well taken. Through health savings accounts or some variation thereof, empower the employee to make their health care decisions just like they do anything else they buy. Empower the citizen to look at their health choices as a consumer, shopping for the best deal with the best quality care for the dollar spent. Instead of creating a massive government bureaucracy envisioned by the current health care proposals before Congress, empower US citizens through the Health Savings Account to shop for their health care.

Why do we believe as a nation that the government that has given us Medicare, Medicaid and Social Security and mismanaged them all can effectively manage the health of all 330 million American citizens? It is time for some common sense to enter the debate. Meaningful tort reform and empowering citizens to act as a consumer into their health care decisions is a good, wise and prudent place to begin.

See *World* (15 August 2009), pp. 36-37; Peggy Noonan in the *Wall Street Journal* (25-26 July 2009); and Charles Krauthammer in the *Washington Post* (7 August 2009).