

How do we decide about biotechnology?

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“Biotechnology” has been the theme of several events I’ve been at in the last little while. We are told that the issues that fit under the biotechnology label are as momentous as the atomic bomb or putting a man on the moon. But my experience is that most of the time when I mention these issues in my teaching people’s brows furrow or their eyes glaze over.

Why *is* this? It could be my teaching. But I think it’s more than that. I think it’s that genetic science and things like that are a big mystery to most of us, and so we’re content to leave the debates to the experts.

Consider what has happened with “embryonic stem cell research” as just one example. For many years there was a ban on using federal funds for research that would involve the destruction of human embryos. In 1999 the National Bioethics Advisory Commission published its recommendations that the ban be lifted, with qualifications such as that only “spare” embryos left over after in vitro fertilization be used for the research. The public was given a year to respond, and then in September 2000 President Clinton approved the NBAC guidelines.

Had he not lifted the funding ban, scientific research might have been slowed but not very much. You see, geneticists are so keen on the discoveries they are making that

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they found ways to work around the ban. Embryonic stem cells are extracted from human embryos that are less than two weeks old. Since there is no intention of letting the embryos develop into babies, the remainder is disposed of once the stem cells are extracted. For this to be done by scientists receiving federal money would have been illegal, but it was not illegal for them to buy the stem cells from privately-funded labs that did the “harvesting.” And that’s what happened.

Genetics is so dynamic right now that things have already gone further. In August a British government committee recommended legalizing “therapeutic human cloning.” Asked about this, Glenn McGee, a professor of bioethics at the University of Pennsylvania, told CNN, “the biggest stem-cell companies in the United States are way beyond where the British are now.”

Meanwhile most of us ordinary citizens are still back there asking, “what’s a ‘stem cell’?!” We aren’t dumb, but our education in this area hasn’t kept up.

Which is a problem ethically. As Lori B. Andrews wrote in the *Chronicle of Higher Education*, “when the subject of research is the clay out of which humanity is shaped, decisions about its use affect us all.” The science is abstract and its details are presently out of the reach of laypeople, but the subject of that science is not abstract at all—it is human life.

So what do we do? Martin Luther favored education of the masses so that everyone could read the Bible for themselves, not rely only on the priests. Today maybe The Salvation Army and other parts of the church need to promote science education for the

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masses of that we can “read” creation for ourselves. Deciding what kind of genetic tinkering is ethically positive and what is not is too important to be left to an expert elite.

(P.S. A “stem cell” is a relatively undifferentiated cell. When our skin is injured and we need new skin cells, stem cells do the manufacturing job; and when blood cells need to be replaced, another kind of stem cells does the job. The stem cells in embryos are valued by geneticists because they are “pluripotent,” meaning that virtually *any* kind of body cell could be grown from any one of them. Because of this, we are told that those like Billy Graham who suffer from Parkinson’s Disease may have new hope—embryonic stem cells could be programmed to grow replacement dopamine-producing brain cells. And so on for heart disease and diabetes and kidney problems, etc. The ethical caution is, cure at what cost?)

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