

Focus on the Family: Implications of the Biotechnology Revolution

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“Human history becomes more and more a race between education and catastrophe.”

H.G. Wells

“One of the greatest pains to human nature is the pain of a new idea.

It...makes you think that after all, your favorite notions

may be wrong, your firmest beliefs ill-founded...”

Walter Bagehot

The 20th century has been, by all visible measures, a time of innovation and technological development. Toward the end of the century, and into the next, another in the virtually endless series of technological innovations, is sweeping the world. Assisted reproductive technologies, as with all innovations, promise to bring new challenges to human beings. This short paper is designed to create a conversation around the impact of assisted reproductive technologies on the family.

Technological innovation flies in the face of the calming and stabilizing influence of the status quo. This is particularly true when discussing one of the bedrock societal institutions: The family. Many people understand the family to be the most fundamental social institution. When you mess with the family, you are messing with all of humanity. In our tradition, we know the family is important as evidenced by statements like, “All human beings—male and female—are created in the image of God.” and “The family is ordained of God. Marriage between man and woman is essential to His eternal plan.”

So what happens when some of the most basic assumptions about the family, e.g., who can be a parent or how parenthood is achieved, and when some of the most cherished cultural folkways, mores and traditions are stretched by technological change?

The effects of changing technology have both an up side and a down side. Despite the positive changes made possible by technological innovation in the last century, we worry about the inability of our moral, ethical and legal understandings to keep pace with this rapid change. For example, we have seen in the second half of the 20th century, the emergence of multiple threats to the survival of the human species, many fueled by technological change. These threats have taken the form of nuclear weapons, the proliferation of atomic materials, weapons of mass destruction, intercontinental weaponry, and so on.

In addition to these “objective threats,” we have seen the rate of social change increase exponentially, creating an additional sense of liminality, psychological marginalization and unsureness. The resultant complexity within our lives defies description. The gap between technological advance and understanding the implications of the technological advance grows wider with each passing day. More than ever before, we have created a need for the development of anticipatory solutions . . . we can no longer afford crises where the “point of no return” is passed before we even know we have a crisis.

In the middle of these cataclysmic sociological phenomena, we continue to pursue those essentially human needs that define us: The need for meaning and relevance, the need for context and understanding, and the need for a moral and ethical

framework. Part of this pursuit is the focus of this current series: How will we cultivate a moral imagination? The title of this series of presentations, sponsored by the Chair of Moral Values, is Cultivating a Moral Imagination: Digging Deep Within A Discipline. The intent of this series was to examine the cultivation of a moral imagination from the context of a particular academic discipline. That will be our task today: To explore the challenges of comprehending the impact of the biotechnology revolution on the family, or, put differently, to describe the challenges in constructing the moral, ethical and legal framework around assisted reproductive technologies.

In September, Sandra Looney shared with us her perspectives on “Creating a Moral Imagination: Practice in Perspective. Looney suggested that in considering how literature helps to form the moral imagination, she would not speak not for my discipline, but from her participation in the discipline at this stage of her teaching. She wrote, “I will admit my vision for cultivating the moral imagination together with students is ideal. At least sometimes I glimpse the ideal. I believe that literature awakens the moral imagination in its power to bring the self to the self and the self to others.”

In October, Richard Bowman approached the cultivation of moral imagination through three leaps of moral imagination in biblical literature which he termed the story, the counter-story, and confessing counter-story. He wrote, “Perhaps it is only when we can recognize and accept our flawed complexity and our resulting human vulnerability, perhaps it is only then that we can return to that original leap of the biblical imagination and find the freedom to live more responsively in relationship to God and responsibly in relationship with other people.”

Looney told us the receptivity of students was essential and that one of our tasks

is to make them receptive. As she said, “Words fill, shape, critique, inspire. The power for the moral imagination is in the words.” Bowman spoke of developing the freedom to live responsibly in relation to God and to people. These two images will be the foundation for our conversation this morning: Receptivity (through words) and living responsibly (through actions.)

What does it mean to be family in light of the technological revolution surrounding reproductive science, or what we call, in general, assisted reproductive technology? Oliver Wendell Holmes once wrote that, “a mind once stretched by a new idea never regains its original dimension.” The technological revolution in human reproduction of the 21st century will stretch our minds and our understandings into shapes never before seen; shapes that defy the original dimensions. Our minds and perspectives, once stretched, will never return to its original shape (the “cat is out of the bag.”)

Many observers of these developments express apprehension that biotechnology might change human nature for the worse. It may be that our very nature, those basic things that make us human, is at risk. For example, the knowledge that there are “molecular pathways between genes and aggression,” means that biologists can produce violent mice by tinkering with the genes that control their enzymes. How about producing human beings with superior memories through genetic modification? The “neurotransmitter revolution” in pharmacology has led to applications related to social regimentation. Methylphenidate (Ritalin) has become “a pill for socially controlling children,” as if to bypass, for our own convenience, the fact that evolution did not design children to sit in school and be quiet.

There are at least four “expressions of technology” that reflect this technological

reality. First, there is the discovery of the influence of genetics and brain structure on human behavior. Second, as I just indicated, there is the manipulation of emotions and behavior through pharmacology. Third, there is the very real likelihood that contemporary biotechnology will substantially prolong life. While prolonging life may sound like a good thing, it may produce deleterious effects if life is prolonged without correspondingly reducing the dependency of the elderly on other people's support. Fourth, the final expression of our technological future is genetic engineering, which has the potential to, among many things, introduce among some of us the desire for "designer babies," or should I say, designed babies!

Never before have we humans had the power to control and assist the process of human reproduction in ways that challenge the very nature of what it means to be a human person and consequently what it means to be part of a family. These issues raised by the life sciences and the new reproductive technologies are emotionally charged and hotly debated in the public arena. Will we be able to be satisfied with the religious answer that all souls are equal before God? Should we be willing to live with the Kantian notion that the answers to these multi-faceted issues should be based on our capacity to make rational choices? Or should we stop worrying about these technological changes and simply accept the Darwinian position "that species do not have essences" as a species is merely a snapshot at moment between what came before and what will come afterwards?

There are strong voices involved in the conversation around these technological revolutions. Genetic scientist Lee Silver, author of Remaking Eden : How Genetic Engineering and Cloning Will Transform the American Family, has argued there is no

"natural order" that genetic engineering might destroy. Silver has written, "Why not control what has been left to chance in the past?" Daniel Dennett, the author of Consciousness Explained, argued that human consciousness is a sequence of operations as in a computer, and perhaps, therefore, replicable. In contrast, John Searle, the author of The Mystery of Consciousness and several other books, argued that consciousness is a biological property that a computer could not duplicate.

All humans exist within frameworks of meaning. For most of us, the most substantial and significant of these frameworks is the family. Over the last three decades the American family has been undergoing a profound and far-reaching transformation. Both family structure and family values have been changing and as a result of these changes, the American family is a much-altered institution. Structurally, from the 70s to the late 90s, marriage plays a less dominant role than it did (people are delaying marriage; divorces have increased; people are slower to remarry; there has been an increase in cohabitation.) There have been changes in childbearing (lowered fertility rates; a drop in preference for big families; childbearing increasingly disconnected from marriage; number of children reared by two parents in an uninterrupted marriage.) There have been changes in households (typical family switched from involving a married couple with children and one spouse employed TO a couple with children and both spouses employed.) Structurally, there have been huge changes in the family.

Amidst all of that change is the challenge of expressing the family within the changing technological revolution. This expression of family can be characterized by two simultaneous processes: complexity, and mystification. Complexity is exemplified

by the fact that parenthood today must be examined from three levels: genetic parenthood, gestational parenthood, and nurturing parenthood. It is no longer true that these three levels will always be found in just two people, or through completely natural means. There are many examples of the complexity being created for the expression of family by this technology revolution.

Mystification refers to the common patterns of human/familial reaction technological change. For example, many of us occupy a narcotic-like tendency to ignore developing technological situations that may have profound implications for us. Because of conflicting ideologies, or distraction or a failure to concentrate, we are mystified by technology, and ineffective in coping with it. Another example of mystification in relation to technology has to do with the opaque areas that are designed (intentionally or unintentionally) into technology. We create experts to disburden ourselves failing to understand the downside of disburdenment. Ignorance of the effects of the technological revolution can be deadly.

I have several questions for you. Do you think we should trust the emerging biotech industry? Will these biotech businesses be able to regulate themselves? Can science by itself establish the ends to which it is put? Who should pronounce on whether the ends of science and technology are good or bad? Should we (society) leave it up to parents to determine whether they want designer babies? What should be the role of theology, philosophy and politics in establishing the ends of science and the technology that science produces, and the pronouncement on whether those ends are good or bad?

Biotechnology has grown exponentially over the past few years. With all of the

new technologies available many things have become possible that were once thought impossible, for example, cloning and genetic engineering. With these new possibilities arises the issue of political implications for this technology and knowledge. The political implications are numerous. Fukuyama implies that there is no way to control that advances will be made in technology but that these advances will need to be controlled politically to ensure their proper use.

As we learn more about genetics, human behavior, neuropharmacology, molecular biology, etc. we are increasing our ability to manipulate humans and their behavior. All of this has political implications. The medicalization of behavior has been empowered and pushed by several interest groups, most notably those economically involved such as drug companies. This movement is continuing to expand, increasingly including new conditions. Undoubtedly, the trend to medicalize behavior and the political implications that follow will not slow, but will inevitably increase exponentially with our knowledge of the brain and its functions.

Professor Patricia Werhane defines moral imagination as “the ability in particular circumstances to discover and evaluate possibilities not merely determined by that circumstance, or limited by its operative mental models, or merely framed by a set of rules or rule-governed concerns.” She will argue that a systemic approach to moral imagination coupled with the background assumptions underlying social constructivism do not preclude the development and application of a robust theory of rights.

All that being said, what do we do? The moral imagination agenda, when applied to reproductive technology and the family, must focus on six specific conversations. First, we need to become much more conversant with the reproductive process and

human development (embryonic and fetal) in some detail and explore the concept of human life and when it begins. Second, we have to improve our understanding of assisted reproductive technologies and the plethora of moral/ethical/religious and legal issues that accompany the use of such technologies. Third, we need to conduct conversations on the moral-ethical dimensions of the genetic selection of pre-implantation embryos and possible genetic modifications of the human germ line and the religious and ethical problems posed by such manipulations. Fourth, contrary to the mediocre efforts to date, our culture must participate in the stem cell debate, including possible sources of stem cells and possible uses of stem cells in medicine and the ethical implications. Fifth, we must discuss cloning, how and why it might be done, and the ethics of human cloning for research or reproduction. Finally, and in contrast to the myth of naturalism so ingrained in American citizens, we must actively engage the conversation around the evolving and changing nature of the human family in light of the new discoveries of in science and reproductive technologies. There are multiple and substantial needs for a conversation about the family, not fogged by limited and literal biblical exegesis, nor fueled by simplistic notions of individual rights.

So, how do we find the freedom to live more responsively and responsibly in relationship to God and responsibly in relationship with other people while dealing with these incredibly complex issues? The answers to this question revolve around several important responsibilities: We must be responsible for choices and actions around issues of reproductive technology; We must be responsible for the level of consciousness we bring to this conversation; We must be responsible for our relationships and families despite the challenge of power and responsibility being placed

elsewhere; We must be responsible for the meaning we give to life and to our existence; We must be responsible for our happiness.

Francis Fukuyama has written, "We need to start thinking concretely now about how to build institutions that can discriminate between good and bad uses of biotechnology, and effectively enforce these rules both nationally and internationally" (p. 10). The idea of regulation is difficult, it requires legislators to step up and make hard choices on very complex issues. (p. 11) Although this is a difficult task at hand comparable complex decisions have already been accomplished in the past. "For it will be the next few years concerning our relationship to this technology that determine whether or not we enter into a posthuman future and the potential moral chasm that such a future opens before us"

For many years, the dominant understanding about technology has been, in general, that technological advance is good for society and good for individuals. It may be, however, that when analyzing the relationship between biotechnology and the family in the 21st century, we should systematically challenge the blanket assumption about goodness of technological infusion. To have technological revolution without the appropriate moral, ethical and legal frameworks is to, quite frankly, invite disaster. The cultivation of a moral imagination around the issues of reproductive technology will be a huge task, but one we cannot delay. As the gap between technology and understanding grows wider, the potential for anomie, at a minimum, and massive societal involution at its worst, expands.

There has never been a time when critical thinking about issues will be more valuable. It is cultural foolishness to apply a simple solution to a complex problem.

Without descending into simplistic ideological squabbles, we must energize our intellectual capacities and imaginations so that we can construct appropriate structures of understanding around the infusion of technology. The challenge is before us. I hope we are up to it.

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