

# HUMAN CLONING

Papers From a Church Consultation



Evangelical Lutheran Church in America  
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Roger A. Willer, editor

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## Contributors

**Dr. Cynthia B. Cohen** is a Senior Research Fellow at the Kennedy Institute for Ethics. She has written widely on bioethical issues related to the beginning and end of life. She serves on the Committee on Science, Technology, and Faith of The General Convention of the Episcopal Church, U.S.A.

**Dr. Richard C. Crossman** of Waterloo Lutheran Seminary was formerly president and now teaches theology there. He has written for the Canadian church on theological and ethical aspects of agricultural biotechnology.

**Dr. Kevin Fitzgerald, S.J.**, Loyola University Medical Center, Chicago, holds degrees in moral theology and genetics and is a Research Associate in Loyola's department of hematology and oncology.

**Dr. Mark J. Hanson** is the Executive Director of the Missoula Demonstration Project, Missoula, Montana as well as a research professor at the University of Montana's Practical Ethics Center. He has published frequently on the moral and religious implications of the new genetics in his previous work for the Hastings Center in New York.

**Dr. Philip Hefner** is Professor of Systematic Theology, Lutheran School of Theology at Chicago and has written widely on various aspects of theology and science. Hefner is also Editor of *Zygon: Journal of Religion and Science* and director of the Zygon Center for Religion and Science, Chicago.

**Dr. Tom D. Kennedy** is Chair and Associate Professor of Philosophy at Valparaiso University in Indiana. He has taught courses, lectured, and written on various aspects of bioethics for a number of years.

**Dr. Duane H. Larson** is President of Wartburg Theological Seminary, Dubuque, Iowa where he also teaches courses in theology. Larson has pursued dialogue between theologians and natural scientists throughout his teaching and publishing career.

**Dr. Robert Roger Lebel** is a community-based Clinical Geneticist with Genetics Services, S.C. in the western Chicago area. He holds masters degrees in zoology, theology, ethics, and medical genetics as well as a M.D. from the University of Wisconsin Medical School, Madison, Wisconsin.

**Dr. Margaret R. McLean** is the Director for Biotechnology and Health Care Ethics at the Markkula Center for Applied Ethics, Santa Clara University, Santa Clara, California. She serves on the California State Advisory Committee on Human Cloning and holds doctorates in both clinical pathology and ethics.

**Susan R. Martyn** is Professor of Law at the University of Toledo in Toledo, Ohio. She has written widely on bioethics and law as well as consulting on several briefs on behalf of the ELCA.

**Rev. George L. Murphy** holds a doctorate in physics and has written frequently on concerns related to science and theology. He currently serves as Pastoral Associate at St. Paul Episcopal Church in Akron, Ohio.

**Dr. Richard Perry** is Assistant Professor of Church and Society and Urban Ministry at the Lutheran School of Theology at Chicago. He has written on various social justice topics and authored a chapter in the volume, *The Promise of Lutheran Ethics*.

**Dr. Nancy L. Reinsmoen** is a Professor in the Department of Pathology at Duke University Medical Center where she serves as the Director of the Clinical Transplantation Immunology Laboratory. Her Ph.D. is in pathobiology and she has published numerous manuscripts and presented on related issues at many professional associations.

**Dr. Hans O. Tiefel** is Professor of Religion and Ethics at the College of William and Mary, Williamsburg, Virginia. His work includes several contributions on bioethics for the ELCA and its predecessor bodies.

**Rev. Roger A. Willer** is an Associate for Studies with the Division for Church and Society and also a Ph.D. candidate in theology at the University of Chicago.

## Preface

The possibility of human cloning fascinates, bewilders, and repulses people in church and society today. Jokes and cartoons voice our unease about what recent breakthroughs in cloning science and technology mean for the human future. Something new is happening, and we are not sure what to make of it. In the middle of our uncertainty, where might Lutheran Christians and others look for guidance?

The present book is an excellent place to turn. It introduces readers to the science of cloning, draws upon Christian beliefs to frame the topic, and confronts the important ethical issues human cloning raises. The book takes a very complex aspect of science and makes it accessible to those of us with a layperson's grasp of scientific topics. It encourages and prepares readers to think carefully and to enter into meaningful deliberation on human cloning. It is a book suitable for individual study and for educational purposes in congregations and other settings. *Human Cloning: Papers from a Church Consultation* offers an initial contribution from the Evangelical Lutheran Church in America (ELCA) on human cloning to the church ecumenical and to the wider society.

This book contains papers given at a consultation on human cloning convened by the Division for Church in Society of the ELCA. It comes in response to a resolution from the Delaware—Maryland Synod that called upon the ELCA “to explore and assess all facets of human cloning.” The consultation, held in October, 2000, brought together persons working in genetics, theology, ethics, and the law to think through the issues surrounding human cloning with the understanding that their contributions would be published for use in and beyond the ELCA. They came together as Christians, united in faith, but from diverse disciplines, backgrounds, and settings and with sometimes different perspectives on how human cloning should be approached.

On behalf of the Division, I thank the Rev. Roger A. Willer, Associate of the Department for Studies, for organizing the consultation, editing this book, and providing a overview of the lively discussion among the consultation participants. I thank also all those who prepared papers and took part in the consultation. Their generous giving of their time, expertise, and insight is bound to bear fruit throughout our church and beyond.

Please note that the authors of these papers are expressing their own views. The book is not an official statement of the ELCA but is meant to promote deliberation within and beyond the ELCA.

*Human Cloning: Papers from a Church Consultation* is one of three ELCA publications in the area of genetics. Readers of this book may also be interested in *Genetics! Where Do We Stand as Christians?* (2001) written by Willer and *Genetic Testing & Screening: Critical Engagement at the Intersection of Faith and Science* (Minneapolis: Kirk House Publishers, 1998), edited by Willer, a major study with nine essays by different authors. Information on ordering these publications may be found on page 94.

The Rev. Charles Miller  
Executive Director, Division for Church in Society

## Introduction

The announcement of Dolly's birth in February of 1997 ("the sheep heard round the world," as it is sometimes called) represents *the* milestone in public awareness of the challenges posed by the dawning of the age of biological control. This event created a *critical mass* in public awareness about the revolutionary impact of the new genetics. The term revolution is appropriate because the challenges are as broad as the transformation of medicine and agriculture, and as deep as fundamental questions about human identity and God's loving intention for nature. These challenges beckon the church's involvement. So do its members' questions.

What does the Evangelical Lutheran Church in America (ELCA) think about cloning? That question was asked in 1997 by thoughtful church members and their requests prompted the Delaware—Maryland Synod to call upon the ELCA to provide guidance. Its Division for Church in Society (DCS) responded by authorizing a one-time consultation to "explore and assess all facets of human cloning in relation to Lutheran understandings." A broad exploration was ensured by the designation of several topics as explained below. It was also aided by inviting a range of participants working in genetic science, business, medicine, theology, or ethics. (The participants' roster may be found on page 87.)

The consultation took place October 13 to 15, 2000, in Chicago when twenty-five individuals (mostly ELCA members, but with some intentionally invited ecumenical partners) spent seven sessions discussing the issues from a variety of perspectives. In each session a primary paper, prepared during the previous summer, kindled response in the form of short written reflections and periods of dialog. (Strangely, the conversation never failed to outlast the allotted time.) The papers (edited and sometimes revised) from this weekend of consultation are collected here. This publication is the first ELCA resource on human cloning and is intended to promote learning and moral deliberation throughout our church.

The terms "clone" and "cloning" are often used in overlapping and confusing ways, especially in the public domain. A specific definition of "human cloning," then, can serve as the natural way to begin detailing

the scope and structure of this publication. Cloning, in general, denotes various technological processes such as embryo splitting, nuclear transfer (Dolly), or others used to create copies of biological material. The biological material involved could be sequences of DNA, molecules, cells, or whole organisms. (Whole organisms range from bacteria to primates.) In this general sense, the replication of a molecule or a cell is an instance of cloning, but these are not the focus of this publication. Human cloning here designates the social, ethical, and theological issues related to cloning whole organisms, whether that involves the technological procreation of a human clone or of animals for immune compatible organs.

Within this general concern for human cloning, we must make further distinctions, distinctions used both in the literature about human cloning and here. The cloning of human cells might serve either of two distinct goals—reproductive or therapeutic. Reproductive goals include the desire for genetically related or genetically selected (for example, selecting a movie star's genome) children. Therapeutic goals include the creation of immune compatible cells, tissues, and organs for transplant as well as the production of human proteins in transgenic animals. The coupling of cloning technology with the rapid development of stem cell research also falls under our purvey for obvious reasons. The promise represented by the combined use of these two technologies for treating everything from Alzheimer's to Parkinson's disease lays a responsibility on us to consider carefully the issues of extensive medical use of human stem cells that cloning might make possible.

These distinctions provide the rationale for the scope and structure of this publication. In Section One Kevin Fitzgerald provides an introduction to scientific information about cloning, emphasizing especially the somatic nuclear transfer cloning (SNTC) breakthrough that produced Dolly and which could be the engine of widespread human cloning. This introduction aims to provide a working knowledge of the key aspects of what is the potential of and the obstacles to human cloning. However, as both Margaret McLean and Richard Perry are quick to point, out human cloning does not exist in a vacuum. Rather the "fact set" about cloning must



include assessment of cloning's impact on all segments of society, from that of people of color to the farm community. These two thinkers also raise social questions about justice and explore what might characterize adequate public debate.

The writers in Section Two explore the questions and challenges that cloning brings to Christian Lutheran theology. Philip Hefner sketches the questions and resources that classical theological themes bring to this discussion. Richard Crossman responds with additional reflections, emphasizing practical moral principles. Duane Larson offers an intriguing constructive proposal for Lutheran ethical categories by grounding them in a renewed understanding of the Trinity. George Murphy's sermon, given at the consultation, is included as an illustration of how one might preach on this topic in a thought-provoking way.

Section Three clusters together specific moral questions that serve as helpful locations for ethical, theological, and practical reflection. The first topic is procreative (reproductive) cloning, that is the "cloning" everyday conversations usually have in mind. Hans Tiefel reflects on whether Christians could ever consider procreative cloning as the loving thing to do. In their responses, Tom Kennedy challenges the church to claim its distinctive message in this issue, while Robert Roger Lebel, a clinical geneticist, shares questions and reflections from his front line perspective.

The second set of papers specifically probe the issues of cloning for research and therapeutic purposes. Mark Hanson considers several of these in his paper, but properly devotes much of his thinking toward concerns around stem cell research. Cynthia Cohen and Nancy Reinsmoen engage Hanson's work with pertinent questions informed by sharp analysis, women's concerns, and researchers' hopes.

Susan Martyn addresses the final topic from her vantage point as a professor of law. Since activities of human cloning necessarily intersect with legal issues, her systematic review offers important insights into an area sometimes neglected in conversations about cloning. It is important to point out that each writer of the primary papers here has concluded with specific recommendations for church policy that is based on their normative work. They did so at the request of the convener in order to facilitate tangible deliberation within the church. The presence of these recommendations in this document should be understood in this light and do not represent any attempt to speak *for* the church.

A critical moment in any consultation is the dialog that follows the presentation of each paper. In the last section of this publication, Roger Willer as convener, shares observations about that conversation

with the reader. His observations attempt to designate threads of the conversation that deserve further attention. Some of these pointings simply lift up insights offered around the discussion table. Others suggest disagreement or where further dialog is clearly needed. Finally, some of these suggest "agreements" culled from the *tenor* of the conversation. In this sense Willer shares a report about the direction and character of the conversation that should spark further reflection.

It is important to append the note here that the October 2000 consultation was structured differently than this publication. Further, the nature of papers for a consultation deviates somewhat from the nature of papers designed for written publication. These facts help explain some anomalies of this volume, such as the disparity between the number of papers in each section or the informal character of some of the writing.

What does the ELCA think about cloning? This set of papers and materials only begin to chart that answer. However, if such questions are ever to be answered in a definitive way, church members, congregations, and the church as an institution must be equipped to think through the issues. That is the point of this publication. It does not attempt to stipulate a position on human cloning, but it does intend to aid education, catalyze thinking, stimulate deliberation, and encourage active participation in the needed public debate. Surely these goals are critical to pursue as we enter the age of biological control represented so unquestionably by a sheep from Scotland.

# **Section One**

## **The Science and the Public Debate**



# Cloning: Can it be Good for Us?

Kevin Fitzgerald

## Abstract

*Adequate answers to moral questions about cloning require a working knowledge of the science and technology involved, both present and anticipated. This paper presents an overview of the current state of somatic cell nuclear transfer technology (SCNT), the type of cloning that now permits whole organism reproduction from adult DNA. This essay explains the basic science and technology and explores potential uses. It then notes remaining scientific obstacles and unanswered moral questions that must be resolved before SCNT could be used for human reproduction. Attention is also given to aspects related to cloning for therapeutic and research purposes.*

## The Importance of Understanding the Science

In April of 1997, shortly after the announcement of the cloning of Dolly the sheep, the journal *Nature Genetics* reported that Dr. Brigitte Boisselier, scientific director of Clonaid in the Bahamas, planned to offer human cloning for \$200,000.<sup>1</sup> Dr. Boisselier defended this offer on the grounds that parents have the right to clone themselves. Since the Clonaid offer, others, such as physicist Richard Seed of Chicago, have also made announcements in the media about their intent to clone human beings. Such declarations immediately bring to mind two questions: Can human beings be cloned? How should we use this new technology?

In order to answer well the second question of what should or should not be done with this burgeoning new technology, it is crucial to answer thoroughly the first question concerning what can be done both now and in the near future. One reason this thorough answer is crucial is to provide a solid foundation for the analysis of the proposed benefits and harms of applying this new technology to the needs and desires of human beings.

Many potential benefits of cloning have been proposed. They range from the possibility of simply providing new scientific insights into mammalian embryonic development through many new types

of medical treatments, to new options in reproductive technologies for endangered species or for human beings. Similarly, the claims of potential harm also range widely. These claims move from concerns for individual human beings that might be used as mere objects of research to social concerns focusing on the exacerbation of the health care inequalities already plaguing our communities and nations.

The extent to which any of these postulated benefits and harms may actually occur will depend significantly upon the real capacities of the cloning technology itself. This paper will present an overview of the current state of this cloning technology, and a subsequent evaluation of the likelihood of several of the suggested benefits and harms cloning will bring to humankind.

## Understanding SCNT

When the new technology of cloning is mentioned, it is not always clear what is meant. After all, in some sense, cloning technology has been around for hundreds of years. Gardeners and botanists have long been cloning plants by transplanting cuttings. Even animals as complex as amphibians have been cloned for several decades. What, then, is the new cloning technology that was ushered in by the advent of the lamb named Dolly?

To be precise, the stunning scientific breakthrough achieved in the cloning of Dolly was the application of a technique called “somatic cell nuclear transfer” (SCNT) to cells taken from an adult mammal. In order to understand the significant nature of this breakthrough, one must place it within the context of the natural development of a mammal.

A new individual mammal usually begins with the fertilization of an egg by a sperm. Both sperm and egg each supply half of the new mammal’s genome (the DNA that makes up the genes which are packaged into chromosomes). When the sperm penetrates the outer protective layers of the egg, it triggers an activation process in the egg. This process makes the

egg impermeable to further penetration by other sperm (in order to avoid too much male DNA entering the egg) and sets up the egg to begin dividing. Early on in the process of cell division (when the embryo is only two, four, eight, or perhaps sixteen cells) the functions of the cells are controlled primarily by the materials that were stored up in the egg. At this time, the cells are capable of being separated from each other and each developing into a new embryo. This ability of each cell to grow into a full organism is called “totipotency.” Such a separation of the cells in an embryo is often the reason for the birth of identical twins, triplets, etc. These genetically identical siblings are natural clones of one another.

Being relatively minuscule as compared to the egg, the sperm contributes very little to the egg cell other than the DNA it brings. The sperm DNA is packaged very tightly in order to remain safe and secure within its tiny cell. Consequently, it appears to take some time before the DNA from the sperm is completely unpacked and functional. In addition, the egg DNA has been stuck in an inactive state in the egg since before the female mammal that produced the egg was born. Hence, perhaps due to these conditions and other activation safeguards built into the egg, the DNA from the sperm and egg that comprise the genome of the newly developing mammal does not control the activities of the cell immediately after fertilization. Instead, it can take several cell divisions before the entire genome becomes active and begins directing the functions of the cells in the developing embryo. Among mammals, mice achieve a fully functioning genome at the early stage of a two-cell embryo. Sheep, pigs, cattle and humans appear not to have fully active genomes directing cellular function until around the four-to-eight cell stage, at least.<sup>2</sup>

Once the mammalian genomes become fully functional, they begin to direct the development of the embryo. As the number of cells increases and the embryo grows, the cells of the embryo begin to take on different characteristics and functions. They eventually become the different cells and tissues of the mammalian body (heart, lung, intestine, skin, brain and so forth). This process of developing specific characteristics and functions is called “differentiation.” During differentiation, the genomes of cells selectively turn off the various genes they

will no longer need in order to perform their specific functions. Heart cells do not need the brain genes and vice versa. In all, it is an amazing process when one considers how the DNA from an egg and a sperm comes together, continuously copies itself in order to make new cells, turns on all the genes needed to make an entire new organism, and then selectively turns off the genes that are not needed as the new cells become the different cells and tissues that make up the body.

The idea behind SCNT is to bypass the normal reproduction process of combining DNA from a mother and a father, via egg and sperm, to create a new individual. Instead, one intends to create a clone of another individual (similar to a delayed identical twin) by using a cell other than sperm or egg. The non-reproductive cells of the body are called “somatic cells” (from the Greek word for body, “soma.”). Two major obstacles must be overcome in order for SCNT to work. After early embryo development, most of the cells of the developing individual become differentiated and no longer have all the genes required to activate development of a full organism. Hence, the first obstacle is to get all the required genes turned on again (dedifferentiation). The second obstacle is somehow to trigger the dedifferentiated genome into acting like it is in a newly activated egg and begin the process of growth and development.

Overcoming the second obstacle is fairly straightforward. If the genome to be cloned needs to act like it is in a newly activated egg, then put it in a newly activated egg. This step is the “nuclear transfer” part of SCNT [see figure below]. As techniques have improved for the harvesting, culturing, and micro manipulation of eggs and donor somatic cells, this part of the SCNT process has become much less troublesome than the first obstacle (dedifferentiation).

As the failure to produce clones from differentiated mammalian cells continued during the past few decades, many scientists began to think that in mammals the process of differentiation moved only in one direction—

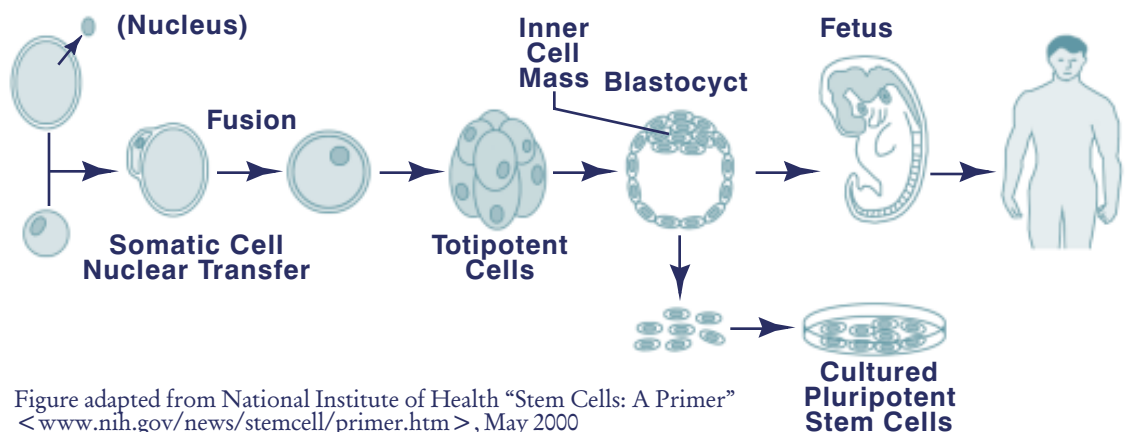


Figure adapted from National Institute of Health “Stem Cells: A Primer”  
 <[www.nih.gov/news/stemcell/primer.htm](http://www.nih.gov/news/stemcell/primer.htm)>, May 2000

from more generalized cells to cells of more specific and narrow function. It was this entrenched conclusion that Dolly shattered when she arrived on the scene. Now that mice, pigs, cattle, rabbits, goats and dogs have also been cloned from differentiated somatic cells, the idea of producing dedifferentiation in cells from adult mammals is widely accepted. Two questions need to be answered with respect to our investigation of SCNT: How far have we presently run with this technology? Where are we going with SCNT?

The scientific excitement and media coverage are based on the fact that we can run at all with SCNT, even the few steps so far. The fact that some mammalian species have been successfully cloned from fetal or adult animals is still electrifying. However, there are several problems with the technology that do not receive as much public attention. A brief review of some of the different approaches presently used to produce cloned animals will help make clear these present difficulties.

The first obstacle one recognizes when reviewing SCNT protocols is making the process efficient. Dolly was the single successful birth from 277 enucleated eggs. These eggs were fused with starved adult sheep mammary cells (starved to stop normal cell division which may inhibit the dedifferentiation process accomplished by egg proteins) by multiple mild electric shocks. If the electric shocks successfully fused the cells and activated the eggs, then the healthy embryos were implanted in surrogate mother sheep.<sup>3</sup>

In an attempt to increase the efficiency of SCNT procedures, other groups have tried varying the protocol with different species of mammals. Instead of fusing cells, some have injected the somatic cell nucleus (or just the somatic cell chromosomes) into the enucleated egg. The reasoning behind these variations is based on the above-mentioned fact that the contents of the egg direct the early development of the embryo. Hence, contents from the somatic cell and nucleus may disrupt normal development when mixed with the egg and reduce the efficiency of the SCNT process.<sup>4</sup>

Other variations applied to the procedure include varying the conditions under which both the eggs and somatic cells are prepared, as well as varying the kind of stimulus the egg is given in order to activate the growth and development process. Though these variations have produced some increases in the efficiency of the SCNT protocol (i.e. more animals born per the same amount of eggs used), problems persist with the SCNT procedure. Even after successful implantation, the cloned animals die at a much higher rate *in utero* than is normal. In addition, even if the cloned animals live to be born, significantly more of them will have serious health problems than is seen normally.<sup>5</sup> When taken together, these problems with

the SCNT process may indicate that it often does not adequately mimic the process of sexual reproduction in resetting the genomes for full and proper activation in the early embryo, and subsequent correct development and differentiation. Therefore, in determining the appropriateness of this technology for any suggested purpose one must consider the levels of safety, efficacy, and effectiveness desired.

## Possible Uses

These proposals for the use of human cloning spread out along a spectrum from responding to psychological grief at the loss of a loved one to the possibility of medical interventions intended to prevent the passage of disease from one generation to the next. A brief review of some of these suggestions in light of what is technically feasible will provide an opportunity to evaluate their scientific and medical merit. This evaluation will lay the foundation for the answer to the second question, posed at the beginning of this article, concerning how we should or should not use SCNT.

One proposal for using SCNT to prevent the transmission of disease from parent to child involves genetic diseases which do not arise from mutations or abnormalities affecting the genes located in the nucleus of a cell. Human cells contain many small structures outside the nucleus, called mitochondria, which are crucial to cell function and which contain their own genes. Egg cells have many mitochondria, and even though sperm also have them, sperm mitochondria generally do not get into the egg when fertilization occurs. Therefore, only the mother has to be concerned about passing on a mitochondrial disease to her children.

SCNT technology could then be used to remove the nucleus or the chromosomes from an embryo which has inherited diseased mitochondria. This nucleus would be placed into an enucleated egg cell which has healthy mitochondria. Hence, the genetic characteristics inherited from both parents' chromosomes would remain and the diseased mitochondria would be eliminated. Since this procedure would be done in order to treat a disease which could be severely detrimental to the health of the offspring, it is proposed as conforming with the accepted medical practice of taking some risks with the health of the patient (in this case the embryo) so that a significant health benefit can be achieved.

It is an important part of medical practice to consider whether or not alternative methods might provide the same benefits with much less risk. Such an alternative to the above proposal is presently being researched. This option involves transferring the nucleus of the mother's egg to the enucleated egg cell with the healthy mitochondria. If the transfer



works, the new egg can be returned to the Fallopian tubes or uterus of the mother and, it is hoped, be fertilized. The significant differences here are that the SCNT procedure involves the problems mentioned above concerning egg activation and somatic cell genome dedifferentiation, while the nuclear transfer, when only eggs are used, does not. Looking ahead to an ethical evaluation of these two procedures, it would appear that the procedure of using eggs alone has the advantage since the loss of eggs in a failed procedure would be of less significance than the problems with embryos that are incurred with a SCNT procedure.

Moving away from inherited diseases, another one of the first suggested uses for human cloning was to supply needed tissues and organs for transplantation. In its most heart-rending form, this proposal seeks to address the situation where a child or infant requires a transplantation in order to live. The parents, it is proposed, could clone the child to produce a sibling who would provide a perfect transplant match. Presuming that the older child's disease does not have a genetic basis, the clone could donate an organ or tissue to save the life of the sick sibling.

Again, present research may provide better alternatives. Studies are ongoing into the possibility of transplanting the special cells (called stem cells) which generate and regenerate the various tissues of the human body. These stem cells can be considered partially differentiated so that they can become many, but not all, of the types of cells required by a tissue or organ. They can be acquired from tissue and organ donors, both living and dead, or, often preferably, from the patient. When using one's own cells, the problem of the body rejecting foreign cells is avoided. Hence, an optimal therapy might be removing, treating, and reimplanting a patient's own stem cells to combat a disease. In addition, cloning technology itself is providing the possibility that animals, genetically engineered to have tissues and organs compatible with humans, could be cloned in order to provide their tissues and organs for transplantation into people. Both of these approaches would make the cloning of a new person medically unnecessary.

### Potential Obstacles

However, these alternatives also have potential problems. Even if animals can be genetically engineered to provide tissues and organs compatible for transplant, it is not clear that they can be engineered to be completely safe for transfer into humans. Each species of mammal can harbor within its genome virus-like DNA which is either harmless or only mildly problematic to animals within that species. Over the course of evolution, a relatively safe balance has been achieved between the animal genome and the DNA from the virus. What happens, though, if

these virus-like pieces of DNA are suddenly transplanted into a human genome? The human genome has not had a long period of time to evolve a balance with these virus-like segments of DNA and so they may acquire a dangerously pathogenic relationship to their new human environment. There are arguments proposed that this type of transfer of virus-like DNA, elements may have been the start of the Human Immunodeficiency Virus (HIV) scourge as human contact with chimpanzees may have allowed the relatively benign Simian Immunodeficiency Virus to enter human beings and become the HIV.<sup>6</sup>

As for the problems with stem cells, their state of partial differentiation may be a significant limitation. It is not yet known whether or not adequate supplies of stem cells can be found in the human body to treat every form of disease that might require cellular replacement. Diseases resulting from cell and tissue loss or malfunction span a wide spectrum from Alzheimer's and Parkinson's to diabetes or cardiac muscle damage. Stem cells have not yet been found for some of these specific tissues (such as cardiac muscle).<sup>7</sup>

In response to this possible limitation of stem cells, some proponents of SCNT have suggested that it can be used to make tissues and organs for patients without having to reproduce a clone of the patient. This type of SCNT is often called "therapeutic" cloning in contrast to the idea of reproductive cloning. The proposal is to use SCNT to produce embryo clones of the patient and then destroy the embryos early in their development (at the blastocyst stage, see figure 1) when their stem cells have only just begun to differentiate. These embryonic stem cells ("ES" cells from the inner cell mass) seemingly have the capacity to form any and all tissue types because that is what they do naturally. Researchers need to isolate and culture these cells so that they can learn how to direct their development to produce whatever type of cell or tissue is desired. Such ES cell research has already been ongoing in mice for years, and now these proponents suggest it be done in humans.

Several obstacles confront this approach. First and foremost are the problems already encountered by SCNT in animals. Just because the procedure is creating only cells and tissues rather than infants does not mean that incorrect dedifferentiation will create no significant troubles down the line. The questions surrounding adequate activation and dedifferentiation of the human genome must still be answered, regardless of whether they are on the cellular or organismal level.

Another obstacle for human ES cell/SCNT is the acquisition of human eggs for the research and patient's cloned embryos. The procedure of removing eggs from a woman is not without its dangers, discomforts and expense. A proposed alternative is to

use non-human eggs as recipients of the patient's genome. An attempt at this procedure was the source of the cow egg/human hybrid stories in the media that raised somewhat outrageous fears of chimeric animal/human creations. The more realistic scientific concerns center around the likely incompatibilities between species, especially on the level of bovine egg contents providing proper dedifferentiation and activation for human genomes.

In addition to these more scientific concerns, there are social and ethical obstacles for the human ES cell and SCNT approach. Though prenatal loss and deformed infants will be avoided, the technique does require the creation, manipulation, and destruction of human embryos. Justification for this creation and destruction of human embryos is presently a source of significant contention and controversy in our society. Therefore, on both a scientific and ethical plane one is impelled to ask about alternatives.

One alternative is to return to the uncertainty surrounding the actual potential of non-embryonic stem cells, those stem cells that are found in all our bodies, regardless of our age. Recent research has indicated that these partially differentiated stem cells may actually be much more versatile than was first suspected. Stem cells from one type of tissue or organ (e.g. blood) have been used to create cells of other tissue types (e.g. nerve, liver, muscle). In fact, use of some of these partially differentiated stem cells has already moved into clinical trials, whereas the research on human ES cells has only just begun. The question is therefore raised as to whether or not we should presently pursue the more ethically controversial and scientifically difficult human ES cell/SCNT approach because we do not yet know if the other stem cells will provide all the treatments people desire.

Moving on from the debate over the therapeutic cloning alternative, what if someone desires to have a person cloned just so that the clone could be loved? Such proposals are often placed in the context of a couple wanting to replace a dying child with a clone of that child, or a spouse having a clone of the dying spouse. In these cases, it is crucial that the fact that there would be significant differences between clones and the people from whom they were cloned, as mentioned above, be kept clearly in mind. No human being is replaceable—not even physiologically. We are all unique. The desire to clone a loved child or spouse to replace the lost loved one may well indicate a retreat to a biological solution from the age-old problem of dealing with the grief and trauma of death. Even if the psychological struggle with the loss of a loved one is eventually dealt with successfully, the cloned child will always have to live with the reality of having been cloned to replace another.

There could be other difficult social and psychological realities with which a clone might have to live. It is not clear whether the experiences of children conceived by means of artificial reproductive technologies could be used to extrapolate what clones might experience growing up. Whichever is the case, these issues will require attention because some physicians in the field of reproductive technology will want to offer cloning as an option to their patients, as Clonaid and others intend to do.

This last proposal for the use of human cloning—to help solve reproductive problems—brings up the question of who has the right to try to be cloned. Discussions about people's rights can be complex and convoluted. Considering the fact that reproductive technology clinics already employ a panel of techniques to combat fertility problems, the medical need to use cloning to solve a particular reproductive problem may be quite limited, if the need exists at all. Hence, in the ethical evaluation of whether or not cloning should be offered, the burden of proof is on those who want to use cloning to treat patients. They must demonstrate clearly what benefits it would provide and how the potential risks to offspring would be all but eliminated.

On a societal level, this desire to produce children of predicted types could also cause great harm. If children do not behave as expected, or fit in as expected then it could be surmised that they were not produced properly. The struggles of growing, developing, and living would be reduced to mere technical problems to be solved through technology. If this sounds too futuristic and far-fetched, consider the present clamor in medicine for drugs and treatments to take care of all the large and small problems people encounter in life, especially suffering, dying, and even death itself.

## Conclusion

Scientific advancements and medical technology have contributed greatly to the quality of life people can have. Our God-given abilities allow us to achieve and accomplish so much for which we should be thankful. The temptation humankind faces continually is to look to our own achievements for salvation from whatever ails us. Advancements in mammalian cloning could be one of those accomplishments which provides great benefit to many who are in need. It could also be used to provide a way for us to run from who we are by attempting to make ourselves into that which we are not—mere products of our genes and biochemical reactions.

It is our moral obligation as Christians to seek to use our abilities and accomplishments to care for one another and creation as best we can. It is our moral

obligation. Currently, the cloning of human beings offers calamity, not care; individual restriction, not freedom. Our moral obligation, then, is to exercise our right not to employ this new technology to produce tailor-made children for whatever reason, but to continue to be open to the benefits it may provide in medical research.

## Endnotes

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## Table Talk and Public Policy Formation in the Clone Age

Margaret R. McLean

### Abstract

*The dawning of the age of human cloning and genetics is shaping our lives, relationships, ideologies, and social structures. How will we as people of faith and as citizens respond to the changes and challenges of the clone age? This essay invites us to engage in communal moral deliberation and broadening conversations about serious matters, including human cloning. A framework that includes important moral markers for significant “table talk” is offered. The role of religious voices in the public square is also considered.*

*Events that alter our very notion of what it means to be human are few and scattered over the centuries. The birth of Dolly is one of them. . . . The world is a different place now that she is born.*

Gina Kolata, *The New York Times*

*Our work completes the biotechnological trio: genetic engineering, genomics, cloning. It also provides an extraordinarily powerful scientific model for studying the interactions of the genes and their surroundings—interactions that account for so much of development and disease. Taken together, the new biotechnologies and the pending scientific insights will be tremendously powerful. Truly they will take humanity into the age of biological control.*

Ian Wilmut and Keith Campbell, Roslin Institute

In a shed in rural Scotland on a summer’s eve in 1996<sup>1</sup>, the cottony Dolly was born and with her surprise birth, “the clone age”<sup>2</sup> dawned. Already this new age of molecular biology and medicine is beginning to deeply shape lives, relationships, ideologies and social structures. Biotechnological innovation,<sup>3</sup> in general, changes the ways we interact, organize our lives, and think about what ought or ought not be done. The specter of the cloning of an existing human genome, in particular, heralds transformation of our thinking about human uniqueness, the limits of human ingenuity, and human longevity. Science questions “how?” The dawning clone age implores us to ask “why?” and “for what purpose?” and “for whom?”<sup>4</sup>

Such questions of ethics and justice are not easily resolved in the public realm. Unlike earlier “big science” projects—such as the moon shot and the atomic bomb—modern technology, both info tech and biotech,<sup>5</sup> does not depend on wide-ranging, bureaucratic structures and public funding, but on decentralized, isolated, often privately financed systems.<sup>6</sup> A private company in Menlo Park, California, holds the patent on the cloning process that gave rise to the most famous sheep since Mary’s little lamb.<sup>7</sup> In addition, the past two decades have seen the marrying of scientific research to Wall Street. Dolly’s spectacular birth announcement did not take place at an academic meeting or on the dense pages of *Nature* but was tucked into Britain’s *The Observer* and splashed across the front page of *The Sunday Times* on February 23, 1997.<sup>8</sup>

Public policy challenges—e.g., the balance between publicly and privately supported science, the extent of regulatory oversight, the access to information, and the dispersal of risk and benefit—arise from the very nature of biotechnology itself. How will we as people of faith and as citizens respond to such challenges of the clone age?

In this essay, I urge that we answer the call to develop rational and ethical public policy regarding human cloning by appealing to communal moral deliberation, and I suggest several basic ethical principles that could guide policy formation. The discussion opens with a working definition of “human cloning” and the intent and goals of the use of cloning technology. Reflections on my experience as the “religious voice” on the California Advisory Committee on Human Cloning serve as the entrée into the consideration of the role of religious views in the public square.<sup>9</sup> A few frequently encountered misconceptions about human cloning are addressed prior to a discussion of ethics and public policy. My goal is to sketch a framework for serious table talk that offers important moral markers and to offer a mode of integrating scientifically informed, sound ethical reasoning into the public arena.

## A Clone by Any Other Name

One of the cloudiest aspects on the horizon of the clone age is the inability to settle on a commonly understood definition of “cloning” and “clone.” Scientists mean one thing; journalists another; talk show hosts yet one more. In general, the term “cloning” describes various processes employed to copy biological material. Making multiple copies of molecules or cells is an instance of “cloning” in this general sense, although there is no (re)production of individual organisms. In other instances, new organisms—either plant or animal—are produced. Sheep, cattle, and human cloning are examples of this second form. For the purposes of this discussion, the phrase “cloning” denotes the copying of the nuclear genome of a human being who currently exists or who has existed in the past, irrespective of how it is done; for example, by embryo splitting or nuclear transfer.<sup>10</sup> Notice that this definition says nothing about the intended use or outcome of cloning—it only specifies the replication of a particular, *already-expressed* human genome.

Yet, it is intentions and goals that trouble us most. Are there any justifiable reasons to engage in human cloning? In the clinical context, human cloning might serve two distinct goals—reproductive or therapeutic.<sup>11</sup> Reproductive goals include having genetically related children and, when coupled with stem cell technology, the genetic engineering of the germ line. Therapeutic goals include the creation of immune compatible cells and tissues for transplant, the production of human proteins in transgenic animals, and the prevention of mitochondrial diseases.<sup>12</sup>

Adding to the linguistic confusion is the rapid development of stem cell technology.<sup>13</sup> This can be coupled with nuclear transfer cloning for therapeutic purposes. The convergence of these two technologies with their promise for treating everything from Alzheimer’s to Parkinson’s disease imposes a responsibility on us to consider carefully the individual and societal impact of the medical use of human stem cells, even as we mull over the question of human cloning.

## Merry Christmas

Although I was an engrossed observer of these technologies from the outset, my engagement with the ethical and social implications of cloning and stem cells received a boost as I sorted through my mail in December 1998.

The envelope was plain—government issue—and arrived with my Christmas cards.

“Dear Dr. McLean,” the stark white enclosure read. “I am pleased to appoint you to serve on the newly established Advisory Committee on Human

Cloning<sup>14</sup> . . .” which is “. . . charged with review of the scientific and social implications and impacts of human cloning, and making policy recommendations to the Legislature and the Governor by December 31, 2001.” The letter specified that each of us on the committee represented a particular discipline or constituency—that is, law, ethics, medicine, and “the public.” I was designated the sole “religious voice” and wondered if I was destined to be the voice crying in the wilderness in this most religiously diverse of states.

The atmosphere in which the Advisory Committee works is heavy with uncertainty, fear, and an inevitable—if uneasy—sense of humor. From chorus lines of lookalikes singing “Bring in the Clones” to the storefront “Savings and Clone” cell bank, cloning has tickled our collective funny bone and ensnared our imaginations. From Mary Shelley to Aldous Huxley, this is the stuff of science fiction. True enough, but this is also the stuff of life, stuff which demands serious consideration and conversation along with a modicum of humor.<sup>15</sup>

Thus far, the Advisory Committee has listened to days of testimony by experts in medicine, law, and theology, and to pleas by citizens. We have read, conversed, considered, and logged frequent flier miles. Each time we meet, we hear from people who are afraid of what awaits us in the clone age—photo-reproduced automatons, commodified children, overpopulation, and a general disregard for the limits of human tinkering. We also take notice of those who cling to the potent promises of genetically related children, avoidance of mitochondrial disease, and the generation of transplantable organs and tissues not subject to rejection. Honesty demands that I admit to being truly conflicted in these deliberations. The voice of caution chastises about market forces, boutique children, and run-away hubris. The whisper of hope exalts health and well-being, sheaves of transplantable cells, and a deeper knowledge of what it means to be created human. Doing our best requires asking the right questions, listening attentively, challenging misconceptions about the science, pondering alternatives, and remaining unpretentious about the results of our deliberations.

Doing my best requires paying attention to religious points of view and inviting testimony from people of faith. To some, this might seem odd, but the Advisory Committee is well aware that being responsive to citizens requires an understanding of what the religious traditions of the citizenry conclude about the morality of human cloning. As new technologies move toward the scientific mainstream and the marketplace, religious views are important for discerning moral positions and shaping public policy. Although informed by faith, the views of religious

communities are not solely religious in nature. As Cynthia Cohen indicates, “[W]hen religious spokespersons express concerns about treating humans as ends in themselves, about the potential for the abuse of power, or about the need to treat the poor and marginalized in a just manner, they are enunciating values that are not solely faith based. They are invoking values integral to the common life of the larger community, values shared by many persons of different or no religious commitment.”<sup>16</sup>

Representatives of religious traditions prompt the community to remember that even in the context of religious pluralism, there may be a set of basic core values that can provide common ground for moral deliberation and assessment. Religious points of view broaden ethical vision by posing questions of meaning and purpose oft times ignored by so-called secular ethics. Religious ways of knowing and reasoning enlighten, energize and deepen public discourse and can offer broad conceptual frameworks of understanding and responsibility so necessary to our reasoning about cloning. In stark contrast to unfettered individualism, many religious perspectives champion the common good, the self-in-relation, and a vision of humanity as interdependent and responsible.<sup>17</sup> “There is something far worse than theological disagreement, and that is theological silence,” writes Ronald Cole-Turner in the preface to *Human Cloning: Religious Responses*. “For our society to make its way blithely into the practice of human cloning without having heard the concerns of Christians would be a great failure on the part of the church.”<sup>18</sup> And, I would add, on the part of society as well.

The 1997 report from the National Bioethics Advisory Commission (NBAC) on cloning understood that religiously-based moral concerns were important components of the discourse. NBAC acknowledged that several different religious communities share concerns about “. . . responsible dominion over nature, human dignity and destiny, procreation, and family life” even in the absence of a singular conclusion regarding the moral justification of human cloning.<sup>19</sup> NBAC recognized, as does the California State Advisory Committee, that “. . . moral arguments in various religious traditions rest on premises accessible to others outside those traditions,” including categories such as “‘nature,’ ‘reason,’ ‘basic human values’ and ‘family values.’”<sup>20</sup> This commitment to the role of religious voices in the public debate was reiterated by NBAC during their deliberations on human stem cells. The NBAC summary of religious presentations about stem cell research notes that: *Although it would be inappropriate for religious views to determine public policy in our country, such views are the products of long traditions of ethical reflection, and they often overlap with secular views. Thus, the*

*Commission believed that testimony from scholars of religious ethics was crucial to its goal of informing itself about the range, content and rationale of various ethical positions regarding research in this area.*<sup>21</sup>

This national recognition that religious themes can offer imaginative responses to ethical questions and that religious voices ought to be heard by a secular society provides the imperative for communities of faith to engage in education about and deliberation on the ethical edges of biotechnology.

As Cole-Turner keenly recognizes, the clone age requires a faith context. As Lutherans, we can sit on our theological traditions and let others draw the boundaries of what is desirable and valuable in human health, or we can ponder and engage the dilemmas raised by human cloning.<sup>22</sup> There is profound danger in sitting idly by. It will take an educated and emboldened public and religious community to begin to address all that cloning is about to unleash.

## The Dolly Effect

One early lesson from Dolly’s sudden appearance is that it is best to avoid attempting to close the ethical-legal door only after the lamb has scurried away from barn. Dolly’s unanticipated arrival left us scrambling for a way to think critically and speak helpfully<sup>23</sup> about the ethical and policy issues of nuclear transfer technology and human cloning. The current federal moratorium presents an opportunity to engage in meaningful public dialogue on essential ethical and social issues.<sup>24</sup> “Meaningful dialogue” means conversations that are mutually informative, honest, thoughtful, broadening, and potentially transformative.

But time, like Dolly’s telomeres, is growing short.<sup>25</sup> The post-Dolly moratorium on federal funding has confined cloning research to privately funded labs. This privatization has left scientists and the general public without a clear set of ethical or regulatory guidelines. Remembering the sense of uneasy surprise and dread which accompanied Dolly’s arrival ought to provoke questions about the desirability of cloning research remaining cornered in private, commercial laboratories alone. As there was neither public debate nor public oversight of cloning prior to Dolly’s birth, the imperative for public deliberation now is intensely persuasive. Meaningful dialogue in the public arena simply cannot occur in the context of “trade secrets.”<sup>26</sup> It is critical to move cloning and stem cell research and their attendant concerns into the public spotlight where they can be broadly debated and the research and its application supervised. This is perhaps the strongest argument for government funding hinged to public oversight and debate.

In addition, it seems prudent to circumvent another aspect of the “Dolly effect;” that is, the rhetoric of



“the technological imperative.” Often, scientists and the general public characterize technological advances as “inevitable.” For example, shortly after Dolly’s media debut, Nancey Murphy, associate professor of philosophy at Fuller Theological Seminary, expressed the hope that religious ethicists would “. . . concentrate their efforts on saying what we should do with [cloning], rather than saying it shouldn’t be done, because people have rightly said it cannot be prevented.”<sup>27</sup> It is appropriate—even necessary—to reject the argument that since human cloning is feasible and difficult to ban altogether, it is “inevitable” and immune to ethical consideration and legal constraint. Such a sense of blind fate profoundly limits our thinking about new technologies and how we imagine their use in society. Conversations about human cloning are often located at one of two extremes—either uncritical acceptance or uncritical condemnation of the inevitable. Such positioning leaves scant room for critical thinking and responsible choice. “If we can, we will . . . and, soon” is a bankrupt ethic for the clone age and a particularly destitute ethic for Christians who take responsibility for the future of creation.

Finally, we need to challenge “the *Multiplicity* myth,” that is, the assumption that reproductive cloning will produce an exact copy of a person.<sup>28</sup> In the 1996 comedy, *Multiplicity*, Michael Keaton’s character, Doug, eases the demands of his hectic life by creating three clones. Predictably, humorous disaster results, causing Doug to quip, “Sometimes you make a copy of a copy and it’s not as sharp as the original.” But, there is a serious problem lurking here. Because of the widespread inattention to science in the kindergarten through 12<sup>th</sup> grade curriculum, the American public relies on the entertainment industry for “science” education despite the fact that the cinema is not a bastion of scientific accuracy.<sup>29</sup> What has gotten lost in the laugh track is that a cloned infant would be a copy of a person’s nuclear genome, *not* a copy of the person. The child created by cloning would develop in different uterine, family and community environments, and would have a vastly different life experience from the adult from whom he or she was cloned. Magazine covers and newspaper headlines lead us to believe that genes are the sole determinants of our individual personality, temperament and choices. Genes are important, but so is the environment. A child of cloning would develop her own personality, likes and loves. People of faith ought to react strongly against the reductionist thinking inherent in so much of our public discussion about human cloning.

### Ethics and Public Policy

Every meeting of California’s Advisory Committee underscores NBAC’s observation that “. . . [c]onscientious individuals have come to different

conclusions regarding both public policy and private actions in the area of stem cell research”<sup>30</sup> and human cloning. Clearly, differing—often opposing—perspectives cannot be easily bridged by a single policy decision. Taking a rainbow of moral commitments and beliefs seriously is a frequent challenge to policy development in a pluralistic society.<sup>31</sup> We need intense civic conversation about points of accord and discord in order to develop policy that adequately accounts for shared visions of human flourishing, upholds society’s best interest, and forcefully pursues justice.

In considering public policy, three observations are important.<sup>32</sup> The first is that there is general uncertainty regarding which competing moral points of view ought to mold public policies. The second is that responsible public policy strives to be the least offensive to the most persons. The last is that the current collection of “optimal ethical views” which produce the best outcomes is likely to change in the near term. Now more than ever, “the only certainty is that nothing is certain.”<sup>33</sup>

Responsible public policy is critical of claims of inevitability and inevitable benefit, and acknowledges unintended consequences. In most decisions in our lives, we do not expect to predict accurately all the effects of what we do—choosing a career or spouse turns into a surprising adventure. But our fascination with innovation—with technological breakthrough and inevitable progress—can hinder our ability to examine carefully either context or consequences. We must acknowledge that, even as we seek to reduce uncertainty and risk, we decide and act without knowing fully the consequences of what we do. As Lutherans, we ought to be somewhat accustomed to such uncertainty and tension—to the ambiguity of being saint and sinner, of straddling of “the already and the not-yet.” We are uniquely comfortable in the territory of uncertainty that technological innovation portends. Such uncertainty ought not be seen as indecisiveness, but as humility, not as equivocation, but as an invitation to discussion.

### “Table Talk”: Broadening Conversations and Moral Imagination

Congregations are uniquely positioned as communities of moral deliberation. Such deliberation must begin with fact seeking. If we do not understand the science behind innovations, we have no framework for interpretation. Our first step is to gain reliable knowledge of sufficient depth about human cloning and stem cells so that our questions regarding the use and abuse of these technologies can be helpfully engaged. Both our ethical and faith-filled thinking are only as good as the fact set and understanding we bring to the table.

Congregations can provide the ideal settings for such education and conversation. At 5 o'clock every evening, Martin Luther's Wittenberg dinner table became the scene of intense, open conversation and occasionally raucous conversation about "... everything that touches the nerves of life."<sup>34</sup> Gathered around were university professors, exiled clergy, escaped nuns, government officials, travelers, family and friends. Nightly, Luther would pose one simple question, "What's new?" and a spirited "table talk" would commence. Imagine what would be said if the response to the doctor's good question was, "human cloning."

Lutheran congregations ought to take a page from Luther's "Table Talk," asking members "What's new?" and enabling them to answer fully and unashamedly. We all need the opportunity to engage in broadening conversations about life in the clone age—to share our wisdom, our experience, our hopes, our fears. What better place to engage in such risky talk than around "Luther's table."

Broadening table talk explores differences and allows participants to enter into diverse ways of thinking and to perceive imaginatively new opportunities for action.<sup>35</sup> The goal of such broadening conversations is not to provide answers but to expand horizons, to have each of us imaginatively enter into perspectives that are not our own and dare to be challenged and stretched by them. Such conversations are an important first—and often neglected—step to genuinely exploring points of convergence and divergence in our viewpoints. They open up the possibility of reconciliation, based on mutual understanding and our willingness to expose cherished presuppositions to the critical light of another point of view. Broadening conversations shy away from both rhetoric (a weapon for winning an argument, not understanding a position) and logic (based on prior assumptions) to focus on building a basis for mutual understanding and respect. Engaging in broadening table talk opens the door to my changing my position, not on the basis of capitulation or consensus building, but on the basis of new understanding and conversion.

Talking through tough issues—such as human cloning—as Lutherans, as Christians, as church, means respectful, yet zealous dialogue rooted in shared faith. God is active in all realms of life—the scientific, the social, the political. God cares for creation, orders society, seeks justice, and draws us out of our individual lives to engage the world. An important goal of broadening conversations in congregations is to discern how God is acting and bidding us to act in the world without the expectation that we will all agree.<sup>36</sup> Because we so often make choices about right and wrong as individuals, we forget that morality is rooted in community. Moral discernment is a

community activity—one in which we engage together as we trust the Spirit to work through Scripture, tradition, reason and experience to speak to our concerns and guide our conversations. We draw connections between questions about human cloning and our faith. We search for biblical themes and images that can guide our thinking.<sup>37</sup> We look at our own Lutheran tradition for guidance. What, for example, does the image of saint and sinner tell us about the limits of human endeavor? How does human cloning propel us to think about our relationship with God and with each other? How does the vision of Scripture enable us to imagine new possibilities for action? Through such conversations, we can find broadening areas of agreement despite our points of conflict on such issues as:

- What is going on in human cloning both scientifically and culturally?
- What are my (our) presuppositions and assumptions about the facts, the stakeholders and the outcome?
- What are the issues behind the cloning debate?
- What are the impediments to understanding the context and the questions?
- What is going on from the perspective of each person engaged in the conversation? What can I learn from entering into the perspective of another?
- What are the consequences—intended and unintended—of each possible choice?
- Who is not engaged in such table talk and what might their voices say?
- What are the racial-ethnic, class, and cultural aspects of human cloning?
- Are there genuine obstacles to doing the right thing?

As we address these difficult questions, we trust that we will come to understand what God would have us do and that the Spirit will provide the measure of courage to do it.

The story of the Tower of Babel reminds us of the dangers of living life without limits—of thinking that we are "right" whatever we do. No matter how good our goals, how noble our causes, they do not justify any means to reach them. We must remain ever mindful of being saint and sinner as we reflect on what we ought to do and why.

### Public Policy and Shaping the Future

Although Lutherans may disagree on the answers to these questions, we do have guidance in the form of certain basic values identified in *Living the Faith: A Lutheran Perspective on Ethics*.<sup>38</sup> These include *agape* (love that seeks the welfare of the neighbor), mercy,

compassion, and justice. For Lutherans, participation in the public square demands justice. “In a world that emphasizes power and the ability to gain both wealth and control, justice becomes a primary goal.”<sup>39</sup> God has called us “to do justice, to love kindness, and to walk humbly with God” (Micah 6:8). God’s acting in creation and through Jesus the Christ compels us to work for justice—not for a justice of compromise and convenience, but for a radical justice in which the basic needs of *all* are met (sufficiency) without jeopardizing the quality of life for future generations (sustainability).

Reflections on justice and kindness begin with the lived reality of injustice. “Justice emerges as the cry of revolt against injustice. An approach to justice must therefore begin with injustice.”<sup>40</sup> Thus, justice in the clone age begins with recognition of

- 800 million people in the world who suffer from hunger and malnutrition;<sup>41</sup>
- 11 million children who die each year from preventable diseases;<sup>42</sup>
- 32.3 million Americans who live in poverty.<sup>43</sup>

Considerations of biotechnology in general and cloning in particular can never be dissected from the injustices of oppression, poverty, racism, classism, and sexism, among others. This “web of injustice”<sup>44</sup> encompasses all that we do and must be taken seriously by those who seek to walk humbly with their God.

Justice, compassion and respect for the dignity of the human person—a dignity imparted by creation in the image of God—imposes a communal obligation to treat disease and maintain individual and societal well being. Because human therapeutic cloning and stem cells promise profound human benefit, we ought to worry that the benefit will further privilege the powerful and well off and devalue those on the socio-economic margins. The shaky platform of our current booming national economy includes 42.6 million uninsured Americans<sup>45</sup> without consistent access to the basics of health care, and 13 million children living in poverty.<sup>46</sup> Privatization of health care through for-profit health maintenance organizations widens the gap between the medically rich and the medically indigent, resulting in shamefully inadequate care for those without the tools to access the system. Given our country’s growing economic divide and the fact that private companies are riding the leading edge of biotechnology, it seems likely that left undisturbed, new, beneficial medical technologies will be available to some but not to all.

In order to sustain human health, attention must be paid to the social lottery that leaves some without access and opportunity. Fairness of access<sup>47</sup> seeks to remove the socio-economic blockade imposed by the

social lottery and level the playing field. Justice demands that our commitments and actions be determined by their effect on those who are the weaker members of society, especially children and those poor in body, mind and spirit. We are called to serve the neighbor. Consideration of our weaker neighbors around the world and around the block may limit what we do to that which tangibly benefits them as well as ourselves—or perhaps instead of ourselves.

## Responsibility for the Future

Cloning—broadly conceived—stretches human power so that present desires and duties mold the future in unprecedented ways. Justice must concern itself with taking responsibility for future generations as well as for those here presently. The seventh generation rule obtains; that is, we should consider the consequences of what is done today on each of the next seven generations.<sup>48</sup>

Success would be the development of public policy consistent with the principles of social justice and taking responsibility for the future. In view of the unprecedented and uncharted scientific and medical benefits that may result from research on human cloning and stem cells, basic policy components would include:

- A primary public understanding of the science behind cloning and stem cells, including the promises and perils.
- Opportunities for vigorous, honest broadening conversations both around the table and in the public square paying attention to local and global voices and concerns.
- Public funding of research including public review, oversight, and accountability. Privilege given to present and future justice for vulnerable persons and communities especially children.
- Development of workable regulations of biotechnology that account for the goals of human health, guarantee just access to biotech innovations, and control misuse and human exploitation.

Our informed and inspired religious voices need to be heard in the public square. We must provide opportunities to learn about human cloning and stem cells, and to hear the challenges of divergent perspectives on the issues. Churches are key sites for caring, fair, broadening table talk. Such conversations could serve as models for meaningful discourse in the public square.<sup>49</sup>

As Christians, we examine our desires, our sense of the good and of what it means to be human, created in the image of God. We go forward with resolve, courage, caution and a concern for justice for the marginalized. As community, we negotiate the slippery slope of human cloning that can slide us



into both right-making and wrong-making applications of new technologies. As church, we are “open to learn from the experience, knowledge and imagination of all people” and seek “to discern what is the will of God what is good and acceptable and perfect” (Romans 12:2).<sup>50</sup> And we ask God to help us.

## Endnotes

1. Although Dolly was born on July 5, 1996, the world did not know of her birth until the story broke in *The Sunday Times* on February 23, 1997. The scientific paper with the mundane title of “Viable offspring derived from fetal and adult mammalian cells” appeared in the February 27, 1997 issue of *Nature*. By then, the lamb was out of the barn!

2. The phrase “clone age” is taken from the title of a memoir by Lori B. Andrews. See Lori B. Andrews, *The Clone Age: Adventures in the New World of Reproductive Technology*. (New York: Henry Holt and Company, 1999).

3. It is important to distinguish between science and biotechnology. Science is first and foremost about systematized knowledge gained through observation, identification and investigation of phenomena. Technology, in general, is the application of science in order to change things; specifically, to better and enhance the human condition. Biotechnology refers to the harnessing of living things to make products to benefit humanity. Biotechnology contributes to food production, oil spill cleanup, human reproduction, and drug development. Whereas the discussion here is confined to human cloning, the questions raised regarding use, access, moral deliberation, and policy formation are relevant across the spectrum of biotechnologies including pharmacogenomics, genetic testing and bioinformatics.

4. Distinguishing between “questions of science” and “questions of ethics” is not meant to imply that “questions of science” do not overlap, dovetail or give rise to “questions of ethics.” Indeed, science poses questions for scientists and the general public about right-making and wrong-making uses of knowledge and technology. It is to say that the focus of science is on “the what” and “the how,” and of ethics, on “the why” and “the who.”

5. Today’s innovations occur in a context in which technological development, especially in the field of information technology, is increasingly decentralized, globalized, and dependent on free market economies and private enterprise.

6. Examples include the pharmaceutical industry and the field of reproductive medicine in the United States.

7. Geron Corporation holds the patent on nuclear transfer cloning and the commercial license for stem cells.

8. For a fascinating description of Dolly’s, birth including the scientific underpinnings, the ethical implications, and the culture of research, see Gina Kolata: *Clone: The Road to Dolly and the Path Ahead*. (New York: William Morrow and Company, Inc., 1998). For an account of the cloning of Dolly from the scientists involved, see Ian Wilmut, Keith Campbell and Colin Trudge, *The Second Creation: Dolly and the Age of Biological Control*. (New York: Farrar, Straus and Giroux, 2000).

9. Although beyond the scope of this discussion, the role of

religion in the public square is not without controversy even among theologians. For a cross section of views among scholars of religion and ethicists on the role of religion in bioethics and public policy formation, see essays by Campbell, Childress Engelhardt, and Zoloth in Dena S. Davis and Laurie Zoloth: *Notes from a Narrow Ridge: Religion and Bioethics*. (Hagerstown, Md.: University Publishing Group, 1999).

10. Although molecules, cells, plants, and animals can be and have been cloned, the discussion here is confined to “human cloning” either in the reproductive or therapeutic sense.

11. For our purposes here, human reproductive cloning is the use of nuclear transfer or embryo splitting to produce a child for rearing. Human therapeutic cloning is transfer of a patient’s nuclear genetic material into an enucleated egg in order to create pluripotent stem cells that can then be coaxed into developing into a particular tissue or cell line, e.g., insulin-producing pancreatic islet cells. See John A. Robertson, “Two models of human cloning,” *Hofstra Law Review* 27: pp. 609-638, 1999, for an extensive consideration of “therapeutic” and “reproductive cloning.”

12. A proposed preventive intervention for mitochondrial disease involves gamete nuclear transfer (i.e., the transfer of an egg nucleus from the affected woman to an enucleated donor oocyte, which is subsequently fertilized). This procedure is not a case of human cloning per se, as it does not result in the replication of a pre-existing genome. Nonetheless, mitochondrial disease is often included in the list of cloning’s potential medical benefits out of a concern that policy makers will fail to distinguish between the two procedures and ban or intrusively regulate gamete nuclear transfer along with somatic cell nuclear transfer.

13. Much of the debate regarding stem cells has centered on the use of donated human embryos as the primary source of pluripotent stem cells. There is reason to believe, however, that such embryonic sourcing may become unnecessary. Recent progress in the isolation and channeling of adult stem cells into particular cell types—for example, turning circulating bone marrow stem cells into liver cells—indicates that adult stem cells may serve as a source of tissues for transplant. Anticipating progress in the development of adult stem cell technology, the discussion here focuses not on the source of the stem cells, but on the question of access to the benefits of stem cell technology. See Diane Scarponi, “Study finds liver cells coming from bone marrow.” < [www.sfgate.com/cgi-bin/article.cgi?file=/news/archive/2000/06/27/national0805EDT0495.DTL&type=scie nce](http://www.sfgate.com/cgi-bin/article.cgi?file=/news/archive/2000/06/27/national0805EDT0495.DTL&type=scie nce) >, June 27, 2000.

14. Hereinafter designated “Advisory Committee.”

15. In my weaker moments, I contemplate promoting cloning conversations within Lutheran congregations with the tag line, “Cloning: A New Tool for Evangelism.”

16. Cynthia B. Cohen, “Open possibilities, close concerns,” *The Park Ridge Center Bulletin* 13: 12, 2000.

17. For example, the Judeo-Christian concept of covenant exemplifies the interconnectedness of creation and Creator leading to a consideration of self-in-community and concern for a just future.

18. Ronald Cole-Turner (ed.): *Human Cloning: Religious Responses*. (Louisville: Westminster John Knox Press, 1997).

19. National Bioethics Advisory Commission (NBAC), "Cloning Human Beings, Vol. I," June 1997, 37.

20. *Ibid.*

21. Idem, "Ethical Issues in Human Stem Cell Research, Vol. I," September 1999, 99. For transcripts of the testimony on religious views of stem cell research, see "Ethical Issues in Human Stem Cell Research, Vol. III," June 2000.

22. In response to many formal and informal requests, the Lutheran church has engaged questions of ethics and medical science. The ELCA predecessors (The American Lutheran Church, the Lutheran Church in America, and the Association of Evangelical Lutheran Churches) collaborated on a series of essays about "procreation ethics," published in 1985. With remarkable foresight, three of the seven essays dealt with ethics and genetics, specifically with genetic manipulation, prenatal diagnosis and genetic screening. See James H. Burtness, "Genetic Manipulation," James M. Childs, "Genetic Screening and Counseling," and Edmund N. Santurri, "The Ethics of Prenatal Diagnosis," pamphlet series (New York: Lutheran Church in America, 1986). In 1998, the ELCA sponsored the edited volume *Genetic Testing and Screening: Critical Engagement at the Intersection of Faith and Science*, Roger A. Willer, ed. (Minneapolis: Kirk House Publishers, 1998).

23. The phrase "thinking critically and speaking helpfully" is borrowed from James H. Burtness, who uses it to describe the discipline of ethics as "thinking critically and speaking helpfully about moral matters." I heard it first in an ethics course taught by Burtness at Luther Seminary. Unashamedly, I have used it ever since.

24. Although the ban on human cloning remains in effect, the National Institutes of Health (NIH) lifted the ban on stem cell research on August 23, 2000. The new guidelines permit federally funded researchers to work on human embryonic stem cells, but not to derive these cells. Derivation must be done by private firms on donated post-IVF frozen embryos. A week earlier, on August 16, 2000, a scientific committee in Britain recommended to the government that both embryonic stem cell research and therapeutic cloning be allowed when using "cell nuclear replacement," in which a nucleus from a patient's body cell is inserted into a human egg whose own nucleus has been removed-be allowed. For therapeutic cloning, the egg would be grown in culture and exposed to chemical signals that would convert it into the particular tissue needed by the patient. The British report specifically forbids human reproductive cloning. Under the new NIH guidelines, therapeutic cloning is specifically prohibited for federally funded research, but could be undertaken if privately financed. See Department of Health and Human Services, "National Institutes of Health Guidelines for Research Using Human Pluripotent Stem Cells," <www.nih.gov/news/stemcell/stemcellguidelines.htm>, August 24, 2000, and the Chief Medical Officer's Expert Group on Therapeutic Cloning, "Stem Cell Research: Medical Progress with Responsibility," <www.doh.gov.uk/cegc/>, August 16, 2000.

25. On June 14, 1999, the Washington Post reported that two companies have begun trying to create the first batches of cloned human, or human-cow, embryos. Geron Corporation of Menlo Park, California, is attempting to clone embryos that can serve as sources of embryonic stem cells. Advanced Cell Technologies is creating cloned embryos that are part human and part

cow, also in hope of deriving a source of stem cells. Both companies have denied interest in the reproductive potential of the technology. See "American Researchers Hush-Hush in Work to Clone Human Embryos," <www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/1999/06/14/MN107553.DTL>, June 14, 1999.

26. It is important to recognize that Americans have never had a serious public deliberation as a prelude to policy formation regarding biotechnology. There was a brief flurry of activity in Congress shortly after Dolly's birth announcement that quickly burned itself out. The deliberations of NBAC about human cloning and stem cell research are the closest we have come to a public debate of the issues and policy. The California Advisory Committee is attempting to facilitate broad-based participatory public conversation, but without much success thus far. I, for one, lament our collective reluctance to deal with potentially divisive issues and to be more concerned with the political cost than the moral cost.

27. Gustav Niebuhr, "Cloned sheep stirs debate on its use on humans," *New York Times*, <www.nytimes.com/libra!y>, March 1, 1997.

28. It is often noted that sheep are not noted for their individuality. While meant to be humorous, this is an important distinction between cloning a sheep and cloning a human; a human clone would retain individuality. One need only look at identical twins to realize how distinctive persons who share an identical set of genes can be.

29. Notably, *Jurassic Park* provides a plausible scientific explanation for the return of dinosaurs.

30. NBAC, "Ethical Issues in Human Stem Cell Research, Executive Summary," September 1999, 3.

31. The existence of a public realm assumes the potential for discussion among citizens and sound public policy is rooted in such discourse. In a pluralistic public square, the shared language of justice may provide a form of Esperanto for responsible public debate.

32. Harold T. Shapiro, "Reflections on the interface of bioethics, public policy, and science," *Kennedy Institute of Ethics Journal*, 9: 210, 1999.

33. Pliny the Elder, "Historica Naturalis," bk. 2, ch. 7.

34. Dust jacket notes to *Luther's Works*, Vol. 54: Table Talk. (Philadelphia: Fortress Press, 1967).

35. My appreciation is extended to Dr. Judith Berling of the Graduate Theological Union for helping me delineate the attributes of broadening conversations.

36. See Division for Church in Society, ELCA, *Talking Together as Christians about Tough Social Issues*, (Chicago: Evangelical Lutheran Church in America, 1999) for guidance in talking about tough issues in congregations.

37. One of the biblical images commonly associated with human cloning is the creation story in Genesis 1, in which Eve is created from Adam's rib.

38. Division for Church in Society, ELCA, *Living the Faith: A Lutheran Perspective on Ethics*, (Chicago: Evangelical Lutheran

Church in America, 1999).

39. *Ibid.*, 20.

40. Karen Lebacqz, *Justice in an Unjust World*, (Minneapolis: Augsburg Publishing House, 1987), 10.

41. The Hunger Site, "Hunger Facts," < [www.hungersite.org](http://www.hungersite.org) > .

42. The Child Survival Site, "Frequently Asked Questions," < [www.thechildsurvivalsite.com](http://www.thechildsurvivalsite.com) > .

43. U.S. Bureau of the Census, "Current Population Survey," < [www.census.gov](http://www.census.gov) > , September 26, 2000.

44. Lebacqz, 34.

45. Robert Pear, "Number of Insured Americans Is Up for First Time Since '87," *New York Times*, < [www.nytimes.com/2000/09/29/national/29INSU.html](http://www.nytimes.com/2000/09/29/national/29INSU.html) > , September 29, 2000.

46. U.S. Bureau of the Census at note 41.

47. For a further discussion of fairness of access, see Margaret R. McLean, "Stem Cells: Shaping the Future in Public Policy" in Suzanne Holland, Karen Lebacqz and Laurie Zoloth (eds.), *The Human Embryonic Stem Cell Debate* (Boston: MIT Press, Summer 2001).

48. This responsibility for seven generations was expressed by Canadian aboriginals in their testimony to the Canadian Royal Commission on New Reproductive Technologies. Patricia A. Baird, "Testimony before the California Advisory Committee on Human Cloning," Oakland, Cal., January 20, 2000. In my usage, seven is to be seen for its symbolic meaning of completeness and totality.

49. For helpful suggestions on facilitating "civil conversation about serious disagreements," see James H. Burtness, *Consequences: Morality, Ethics, and the Future* (Minneapolis: Fortress Press, 1999), 157-158,

50. *A Social Statement on The Church in Society: A Lutheran Perspective*, (Chicago: Evangelical Lutheran Church in America, 1991), 6.

## Broadening the Church's Conversation

### (A Response to Margaret McLean)

Richard Perry

I want to respond to Professor Margaret McLean's paper in a manner that will broaden and deepen the church's conversation on human cloning. McLean moves us in this direction by 1) offering a definition of cloning, 2) sharing her experience as "the sole religious voice" on a California committee on human cloning, and 3) by calling the church to engage in moral deliberation. I want to focus my comments on McLean's call for engaging in moral deliberation.

#### Knowledge is Power

McLean suggests that a first step for broadening conversations begin with "reliable knowledge of sufficient depth about human cloning. . . . Both our ethical and faith-filled thinking are only as good as the *fact set* we bring to the table." [See McLean, page 17] One could not agree more with McLean.<sup>1</sup> For Christians to persuade "the public" and public policy we must understand the issue. Yet I have a sense of uneasiness about this first step.

What constitutes our "fact set?" I contend our "fact set" lacks sufficient depth when the long shadow of race is omitted from our moral and faith-filled thinking. Why should race be a factor in a conversation on human cloning? First, the *history* of the relationship between African Americans and science is far from positive. Science and scientific theory have contributed to the oppression of African people around the globe. Second, race should be a factor because it may assist society and the church in going beyond biological determinism to what *really* constitutes a human being.<sup>2</sup> Third, race ought to be included because it has a bearing on: the type of questions asked; who is asking the question; and what constitutes justice in biotechnological innovations.

#### The Importance of Race

One of the dilemmas facing our society is resolution of the race issue. Some of our difficulty in resolving this dilemma resides in our failure to remember. We seem to have developed, as religious people,

amnesia. It appears we have fallen down a slippery slope of denial into a pool of naïve perceptions about the history of the relationships between the races in this country and around the globe. For example, what has science and its practitioners learned from the tragedy of the so-called "scientific" Tuskegee Syphilis Study and the Sickle Cell anemia experience that targeted African American people? How is science incorporating this knowledge of the past in its present work?

One cannot help but remember that science developed elaborate theories supporting the inferiority of African people.<sup>3</sup> This alleged inferiority, grounded in a tragic form of biological determinism, persists today in new forms. African people were "scientifically" considered to be inferior because of their skin color and thus treated as property. This attitude appears to have reappeared even within the Human Genome Project in a way that spawned the "African-American Diversity Project" at Howard University in Washington, D.C.<sup>4</sup> The first step toward broadening any conversation on cloning must include the issue of race and knowledge of how science has abused African people and other communities of color.

#### Living the Paradox

African Americans may face an ethical paradox when confronted with biotechnological innovations such as cloning. There is, on one side of the paradox, a sense of suspicion based on the community's negative history with science and the medical profession. Science and those who practice it cannot be trusted because of the abuse and misuse of African people around the globe.

The words of Herman Shaw, a survivor of the Tuskegee Syphilis Study reflects the other side of the paradox. Shaw said at President Clinton's May 16, 1997 press conference: "This ceremony is important because the damage done by the Tuskegee Study is much deeper than the wounds any of us may have suffered. It speaks to our faith in government and



the ability of medical science to serve as a force for good.”<sup>25</sup> These remarks reflect the African American community’s sometimes intense loyalty to social institutions that do wrong yet because it deeply believes in the ability of those same social institutions to do good.

This ethical paradox yields a healthy hermeneutic of suspicion. What, really, are the intentions of science when it comes to cloning? Why now and for what purpose? Is biotechnological innovation another method for reasserting scientific support for a “pure” and “superior” race in the face of increased, visible racial and ethnic diversity in this country? Does this type of technology continue to expand the economic divide between the “haves” and the “have nots”? Viewed in this way, it is no wonder African Americans may be suspicious of “new” biotechnological innovations! Whether one can afford to have his or her nuclear genome copied falls far down on the list of priorities when one is concerned about food, shelter, clothing, and a decent job with health benefits!

### Pursuing Justice in the Public Arena

Finally, let me offer some comments on the issue of justice. Justice, as I understand McLean, includes sufficiency, sustainability, compassion, respect, and “treat[ing] disease and maintain[ing] individual and societal well being.” Further, justice means having “just access” to cloning technology by removing “the socioeconomic blockade imposed by the societal lottery and leveling the playing field.” [See McLean, page 19] I find McLean’s concern about justice helpful and hopeful.

However, is “just access” enough for those who are routinely denied just plain access to health care generally? I would contend that biotechnological innovations like cloning cannot be understood apart from the health care system itself. McLean also accounts for this as Christians move into the public debate on policy. However, being concerned about the poor and marginalized in society is no guarantee that justice will prevail, now or in the future. Lutheran ethics would certainly suggest that we are to be concerned about our neighbor. What about transformation of the health care system that privileges the rich over the poor?

As I read McLean’s paper, I was reminded of the African proverb, “I am because we are, we are because I am.” Implicit in this proverb is a sense that humankind is related. The individual is as important as the community, and the community is as important as the individual. Individual needs and wants are understood in light of the needs and wants of the community. It may not be necessarily good for the individual to pursue cloning simply to satisfy, for

example, a need to have an heir or a more “perfect” child. The justice question is more than what serves the individual; it refers to just access to health care and biotechnological innovation. It is about all people participating in determining the values that are important in the community. The justice question is what serves the unity of the whole community. Justice, then, pushes for a re-ordering of priorities and values that emerge from a process in which the community engages in some type of moral deliberation. Individual freedom and choice is limited by what is good for the whole human family rather than those who can afford to fund their personal choices.

It seems to me that our call as Christians is to privilege the poor and marginalized people in society. Will the church’s support of cloning, if it does so, reflect an egalitarian ethic; an ethic that pursues cloning because it is a social good that will benefit a large majority of the people in society who are economically able to participate? Biotechnological innovation is for all people, regardless of race, class, sex, or religious orientation. Accordingly, sheer profit motive or attention to costs have to be removed in order for “just access” to be a reality for poor people.

Where am I in this debate? I would oppose a ban on further research on human cloning because I believe there are health benefits. Applying the law would drive, I fear, scientific research and public dialogue underground. On the other hand, I recall Psalm 139: 13-14: “For it was you who formed my inward parts; you knit me together in my mother’s womb. I praise you, for I am fearfully and wonderfully made. Wonderful are your works; that I know very well.”

God created humankind, and I believe that is enough to know. While I have no hope that race will disappear as an implicit factor in public discussion of biotechnological innovation, I believe it must be explicit. I do think the church can create an atmosphere in society where it will be more difficult for racism, racial discrimination, and prejudice to have a chance to survive. In addition, it may mean the church first taking the log of race out of its eye.

### Endnotes

1. Genetics and human cloning are new subjects on my intellectual screen. I have spent many hours preparing for this consultation by reading some of the literature just to become familiar with the language and concepts associated with genetics and cloning. I want to emphasize that many poor people do not have this opportunity and thus have to trust the information shared with them by experts. In fact, this may be a form of elitism which may lead to a deeper chasm between the poor and the rich.
2. African Americans have long protested being defined in biological terms. While I believe African Americans would argue that genes are important, they would equally argue that the

“content of our character,” or in biblical language “the fruits of the Spirit” is what constitutes being a human being. Of course my reference here is to Dr. Martin Luther King, Jr., who was the most ardent spokesperson of this view in the twentieth century.

3. See Cornel West, *Prophesy Deliverance: An Afro American Revolutionary Christianity* (Philadelphia: Westminster Press, 1982), especially Chapter 2, “The Genealogy of Modern Racism.”

4. See Harriet A. Washington, “Piece of the Genetic Puzzle Is Left Out,” *Emerge* (September 1999), 30. Although Washington agrees with the mapping of genes, she identifies a problem which I believe contributes to suspicion of science. She writes, “These technological achievements, however, pale before a serious scientific misstep: All 67 families studied are Caucasian, which means project scientists have severed the African branch of the human family tree.”

5. “Herman Shaw’s Remarks,” Friday, May 16, 1997, The White House, Washington, D.C. in *Tuskegee’s Truths: Rethinking The Tuskegee Syphilis Study*. Edited by Susan M. Reverby (Chapel Hill and London: The University of North Carolina Press, 2000), 572. At this press conference, President Clinton issued an apology for the government’s complicity in the Tuskegee Syphilis Study.



## **Section Two**

# **Theological Resources**

# Cloning: The Destiny and Dangers of Being Human

Philip Hefner

## Abstract

*These reflections are governed by an attempt to understand the agenda that cloning and the enterprise of genetic medicine present to United States culture and to Christians who are trying to fashion their discipleship in that culture. They seek to frame the questions and issues in terms of theological themes that must be engaged if answers are to be forthcoming. The questions include those of motivation and appropriate criteria as well as a delineation of key problem areas that prompt reflection. The traditional theological themes marshaled in response include creation, the imago dei (image of God), sin, Christ's self-giving love, and eschatology (God's future).*

## An Overview of the Terrain

### The fundamental issue

Cloning in its various forms (cells, tissues, whole organisms) should be considered in tandem with (1) the mapping of the human genome, (2) the entire range of genetic interventions and "engineering," (3) all that goes under the rubric of "genetic medicine," (4) the agricultural sector, in which we alter genetically both plants and animals. In these activities, we seem to be engaged in processes refashioning or re-making the human person and the species we are most dependent upon. This refashioning of the human is the fundamental issue posed in cloning. Up to now we have sought to refashion the non-human portion of the ecosystem, but we have turned our efforts to ourselves. The exciting promise of this refashioning is that the conditions of life may be rendered new and liberating; the moral dubiousness lies in the unworthy motives, the outright mistakes that may attend our cloning efforts, and the possibility of reducing human life to an object of manipulation.

The following questions are representative of those that arise as we engage cloning and genetic engineering:

- What criteria govern our re-fashioning of ourselves?
- Why do we engage in such efforts? What are our motives?

To allow human flourishing?

To correct or heal what is defective or undesirable, i.e., to improve human life?

To be entrepreneurial—and achieve self-determination and profit?

- Does every person have an inalienable right to have defects corrected?
- Does society have the right to impede any person's seeking to correct their defects?
- Since our efforts to refashion ourselves inevitably involve other species, both plants and animals, can we assume that the entire biosphere exists as a resource for human improvement?

### Four problem areas that arise on this terrain

These questions point to four major areas for analysis, each of which deserves fuller attention than is possible here.

#### *Our relationship to other species*

To speak only of other animals (and we should by no means overlook plants), we note four kinds of relationship and dependence, all of which are relevant to the cloning issues. 1) We are predators in the sense that we depend on other animals for our food. This involves genetic engineering of plants and animals, and cloning. The cloning of "Dolly" was carried out in an agricultural laboratory, and nutritional possibilities were among the motives for the cloning. 2) We use other animals for the testing of procedures that will be used in humans, including the processes of cloning and transplantation. 3) We apply knowledge learned from other animals to understand humans and the processes of our bodies and minds. It is generally not recognized how much of our knowledge of human biological and social processes is gleaned from, and even based on, models first developed in the study of other animals. 4) By the process of cloning in other animals (pigs, for example), we develop people-friendly organs for transplantation into humans.

The questions that arise here are: What is our relationship to other animals? Where do we fit into the commonwealth of creatures in God's creation? Do the creatures of the biosphere exist primarily as a resource for the enhancement of humans? Do we humans have a responsibility to other species? Should we be concerned to "improve" other creatures, as well as ourselves? How would the term "improve" be defined? What contribution are we called to make to the creation and to its other inhabitants, comparable to the contribution we exact from creatures for our own benefit?

*The significance of ideas*

Philosophers like Alfred North Whitehead nearly a century ago reminded us what Immanuel Kant (b. 1724) had already pointed out in the eighteenth century: the word "nature" refers to all that is "out there" and also to our concepts and definitions of what is out there. Nature is unknowable apart from our ideas or concepts of nature even as much as it is an objective reality independent of humans.

Cloning and all of the other elements of the genetic-medical-agricultural complex that I designated at the outset are fully conditioned by human ideas and our construction of those ideas. A few examples: We construct the ideas of defect and even illness that are made the subject and object of genetic intervention and in which cloning is brought to bear. We define, in effect, what normative *human being* is, and proceed with our definitions as criteria for our engineering. Is deafness a defect, for example? Perhaps most hearing persons consider deafness to be a handicap. A large segment of the deaf community challenges that definition. Is Down's syndrome a tragic flaw or an occasion of grace? It depends on which set of parents we consult. Is trans-species organ transplantation desirable or a blasphemy? Should we genetically engineer embryos so as to eliminate short people, to eliminate the common cold or influenza? The answers to all of these questions depend on how humans construct their ideas and definitions.

The questions we must deal with from these reflections are: How do we distinguish between more and less adequate ideas of what is human, what is ethical, and what is given to us through divine revelation? How do we maintain our obedience to God in Jesus Christ when we recognize that we ourselves construct our ideas of what Christ means to us and how we should be obedient? Indeed, the New Testament itself intentionally presents us with a plurality of ideas of Jesus. How do we claim authority for any ideas of human integrity and Christian ethics in our churches where there is a plurality of ideas on these topics, each of which is considered by someone to be of divine origin?

*How correction and error are inextricably related*

Even though we may believe that our actions are correcting and improving what nature has given us, we are inevitably introducing error into the natural processes, the consequences of which are not known to us. By hindsight, we can see the error, as well as the corrections, entailed in our interventions in natural processes. Nuclear energy, building dams, biological manipulating of farm animals, Thalidomide, the use of X-rays. We can see both correction and error in these efforts.

This dialectic of correction and error may be a practical expression of what we Lutherans mean when we say that all of us are saints and sinners at the same time. It is a reality for us to acknowledge. It is an element to be factored into our genetic and cloning interventions.

*Inter-relating co-creating, entrepreneurialism and self-improvement*

The genetics and cloning activities that we are reflecting on occur in the context of our culture as a whole. Our practice of medicine and the healing arts is embedded in the fabric of our United States society and culture. There is no pure practice of medicine, just as there is no pure practice of religion or of government or of business. This fact must have a prominent place in our thinking as suggested by several writers in this consultation.

The idea of re-fashioning our human lives occurs only in this cultural ambience, and indeed, the idea of co-creating becomes rather dangerous in this American context. Two facets of the American culture are particularly noteworthy in this connection: entrepreneurialism and self-help or self-improvement.

Certainly one could argue that the most pervasive and powerful philosophy in the United States today centers in the idea of free market entrepreneurialism. This idea governs nearly every facet of our public life. All of life is perceived as the Market, and the good things of life emerge when as many entrepreneurs as desire are given unregulated freedom to design their wares, market them, and compete for consumers. Some scholars would argue that this is what meant by the phrase, "life, liberty, and the pursuit of happiness" in the Declaration of Independence. The result is that the public cannot be sure whether the benefits of cloning and related practices proceed from responsible reflection on human life and its well-being, or from someone's idea of what is marketable and profitable. Given the realities of American culture and the exigencies of maintaining our health care system, the benefits of these practices will never exist in a pure state, untouched by the free market philosophy.

The United States is perhaps the greatest self-help culture in the history. The "seven habits of highly

successful persons” is a watchword for us, along with twelve-step programs for every imaginable human problem. But there is a difference between struggling to overcome alcoholism and sculpting one’s personality so as to fulfill a kind of psychic greed that enables one to “make friends and influence people,” as one Dale Carnegie advertised when I was growing up in the 1940s.

What challenge faces us in this domain? Obviously, science, medicine, healing, beneficial interventions and the businesses that carry them out are vulnerable, and they need to be protected and defended. Few figures in our society are more vulnerable than business entrepreneurs, scientists and doctors because they are fair game for the basest, most selfish desires of those who would be consumers of science and medicine. At times, we can protect and defend science and medicine effectively only if we, at the same time, subject the public presentation, exercise and consumption of medicine and healing to the sharpest, most penetrating criticism. But this must never be carried on as if it were a rejection or condemnation of science and medicine and their “business.”

### Bringing Christian Faith and Theology to Bear

The basic questions that are posed by cloning are, as such, perennial for Christian theology. The major challenge to theology is not that it has no repertoire of ideas pertaining to these questions, but rather that: (a) *when these questions are asked today, they often grow out of experiences that are new to our era, which our traditional ideas did not envision, and (b) the theological ideas are, for the most part, formal and therefore very general, so that their specific application to concrete experiences and problems requires enormous intellectual and moral effort.* To speak of the first challenge, previous experience has never dealt with the situation of a mother knowing that the fetus she is carrying is genetically damaged and therefore having to decide whether to abort it. Nor have persons in prior eras had to decide whether it is good to receive an organ transplant from another species, or whether to manipulate an embryo genetically to produce a baby who can contribute biologically to the healing of a sibling who is genetically handicapped.

With respect to the second challenge, the Christian faith is clear in defining human beings as creatures in the “image of God” and who are intended to “glorify and enjoy God forever.” But it is a rather torturous path from those emphatic assertions to the question of whether cloning a sheep glorifies God. We know well that a common problem facing Christian ethical thinking is that it may, on the one hand, echo so strongly the theological principles that it seems out of touch with the daily practice of the lab or hospital. On the other hand, it can speak so practically

that it seems to be based more on common rationality than on distinctive Christian faith. Technically, this is sometimes referred to as the problem of “middle axioms.” It is not clear that Christian medical ethics has ever been able to resolve this dilemma.

The following themes of classic Christian faith seem to me to be particularly important for our Christian reflection on the terrain, not only as I have sketched it, but also as other contributors to this consultation have described it.

### Theology of Creation

Our affirmation of God the Creator tells us that, in the final analysis, the nature we have been given is God’s work of creation. We affirm the doctrine of “creation out of nothing,” which asserts, finally, that God is the only creator, the source of our natural world. We also affirm “continuing creation,” which says that God has not left the creation, but continues to be the ongoing sustainer of the world. The “nature we have been given” includes the nature that we consider to be in need of correction, improvement, and healing, and it also includes the human nature that is capable of assessing defect and correction, as well as acting on that assessment to make interventions in nature, including human nature. This nature also includes our reflective capacity to decide how to respond to the situation in which God has placed—us ranging from encouraging cloning to banning it outright. We have been given a situation, and we have also been created as persons who can react to that situation and take responsibility for our actions—all of this is our created nature from God. In this sense, human destiny in our time is to be tied up with our action of refashioning, because it is our nature to do such. We believe that the ultimate source of this nature is God’s work of creation. This theological understanding of creation does not resolve practical difficulties in the lab or hospital, but it does predispose us to recognize that in our practice of medicine, genetics, cloning, and agricultural engineering, we are never not in the presence of God and never not dealing with what God has created.

I believe that this sensibility is central to Lutheran theology, and it is expressed in our doctrines of the two kingdoms, law and gospel, the finite is capable of the infinite, the hidden and revealed God, and in our sacramental theology of the real presence. These are often interpreted as if they are dualisms. On the contrary, I believe they abolish dualism. Each of these theological doctrines, in its own way, insists that there is no segment of the world or of human experience from which God is absent.

Several difficulties arise for us in these doctrines. For example, we find it difficult to account for evil, genetic defect or illness because these seem to be contrary to the will of a good and loving God, as is revealed to us in



the New Testament. Further, we may conclude that God has created us as creatures who can decide that the creation requires correction and healing. For some, this is an empowering conviction that suggests that the sky is the limit for human ingenuity, while for others it is blasphemous because it gives license for humans to tread on God's territory and tamper with what the Creator has made. The affirmation of Creation does not resolve these ambiguities and disputes; that is left for the struggle of faith and imaginative theological construction. But the affirmation of the faith tradition will not let us rest with the idea that any aspect of nature, including human nature, is somehow absent of God or outside God's work of creation. Nature in the lab or hospital or farmland, no matter what its external appearance, is God's. And so are the human agents in those areas. Psalm 139 can in no way be discarded as a text that is relevant to our theme: "O Lord, you have searched me and known me. . . . For it was you who formed my inward parts; you knit me together in my mother's womb." It may be difficult to understand how these words apply to the genetic alteration of embryos, but our faith tradition invites us to discern how this is true.

There was a time in human history, more than 10,000 years ago, when nature, as people experienced it, did not include farms and agriculture. There was a time when it did not include cities or telephones or electronic communications. Today, nature comes under the forms of farms, cities, and computers. A recent survey indicates that children and teenagers do not call computers "technology," but rather see them as part of their natural world. We are rapidly coming to understand that nature includes what humans do to nature, how they transform it. Nature comes to us today under the forms of human co-creating activity under the forms of what humans can make of nature, the forms of genetic engineering and cloning. This means that God's creation comes to us under these forms as well.

### Created in the Image of God

Many historians and theologians have said that this affirmation is the single most important statement that our tradition makes about humans. There is no consensus in the tradition as to exactly what this assertion means—it has been interpreted in a multitude of ways. It is safe to say, however, that in the light of the "image of God" affirmation, we have not fully understood what it means to be human if we omit our relationship to God or fail to acknowledge that in some important way, the nature of God is normative for human nature. Christians find the nature of God set forth in Jesus Christ. (Hebrews 1:2-3; Colossians 1:15) Christ reveals God, Christ is redeemer, and Christ is also a statement about what humans, most fundamentally, are called to become.

Genetic engineering and cloning may be carried out in blasphemous and perverse ways, but they are rooted in our deep down desire to fulfill the image of God within us and our fellow human beings. How that truth can be clarified is the task of Christian reflection, devotion, and action.

### Sin

The first word of Scripture is that we are created by the good God and in the image of that God. The second word is that we are out of sync with our own created nature; we are alienated from what we are intended to be. It is important what comes first and what comes second. It is also difficult to understand, even though its existential actuality is very clear. I believe that this is rendered by one of the meanings of the traditional Lutheran axiom, "saint and sinner at the same time" (*simul justus et peccator*). The assertion of original sin says this—that sin is what we do in sinful acts, but it also says that sinful acts flow from our created nature. The creatures who have been made in the image of God are also sinners.

For our topic, we may say both that the capability for genetic engineering and cloning are good, since they flow from the distinctive human nature that God has created, and that they are never without sin, however, because the engineers and the cloners are never without sin. Our cloners are saints and sinners at the same time, and so also our ethical precepts concerning cloning will be both saintly and sinful at the same time. There will never be a perfect code of ethical guidelines for cloning. The question is how this insight can be rendered effective in the actual practice of genetic engineering and cloning.

### Christ's Self-Giving Love for the World

In his diaries, Philip Berrigan (Jesuit priest and activist) went to the heart of what Christians believe about Jesus Christ when he said, "I always believed that Jesus died for the sake of the world, and we are supposed to do the same." That states the Christian understanding of what we are here for. Consequently, it follows that our practice of genetic engineering, in medicine and in agriculture, and our efforts at cloning must somehow be placed in the service of our giving ourselves for the sake of the creation, including its people and its other species.

What could this possibly mean in practice? I have met doctors, some of them Christians and Jews, some of them neither, who have said emphatically, "I will do whatever is in my power to meet the needs of the people who come to me." This argument is difficult to disagree with, even though it may be quite sentimental and problematic at times. In the case of "embryo reduction" in the wombs of women who carry multiple conceptions, I have heard doctors say, "It is

evil to kill a fetus, but it will be even more evil for that woman and her family if I do nothing and all her fetuses die.” I cite this example intentionally, because it will seem abhorrent to many people. The doctor who said this, however, meant also that he would make himself vulnerable to the criticism and even the possibility of doing evil because it was necessary to help a woman out of an even more difficult eventuality. Could we say that this doctor (who, by the way, is devoutly religious) was expressing Philip Berrigan’s truth? If we answer “no,” how would we imagine that Berrigan’s Christological faith could be acted out in this realm?

### **God’s Future**

The future is determinative for the creation—the future God envisions and is bringing about in God’s own mysterious ways. This conviction is fundamental to Christian faith. In technical jargon, theologians call this the “eschatological” character of our faith and of God’s creation. The theological foundation for entrepreneurialism and self-improvement—even when they are thoroughly perverted—lies in this eschatological character of the nature God has created. This conviction has enormous implications for genetic engineering and cloning. It suggests that we must be clear that cloning and genetic intervention is undertaken on behalf of the future—the future of the persons involved, the future of the creation. How can this eschatological perspective be brought to bear upon our genetic and cloning medicine? That is a major task of Christian discipleship to accomplish.

### **Coda**

Genetic engineering, in medicine and agriculture, as well as various forms of cloning and related activities are not far-off possibilities. They are present realities. In the next generation, they may be as much a part of fabric of life in the United States as internal combustion engines and computers have become. The question is how these activities will be implemented in our common medical practice, and in what ways Christians can be disciples in their vocations under the conditions of genetic, cloning culture. This consultation is a welcome effort by the Evangelical Lutheran Church in America to engage these questions.



## Cloning and Genetic Engineering: Human Mandate and its Context (A Response to Philip Hefner)

Richard C. Crossman

On August 17 of this year, it was reported in the *Toronto Star* newspaper<sup>1</sup> that two separate research teams, one in England and the other in Japan, had successfully cloned piglets. While sheep, cattle, goats, mice, and monkeys have been previously cloned, the cloning of these piglets was viewed as especially significant because it involves the combination of human and animal genes in a manner that could facilitate tissue and organ transplants to humans without employing immune defeating drugs. On the same day, it was also reported on the same page of that paper that British doctors and researchers were calling for “expanded human embryo cloning.”<sup>2</sup> Clearly, the age of cloning and genetic engineering is not a future reality, it is upon us, and it is most timely to consider the theological and ethical implications of this emerging technology. On a more personal note, I feel especially close to this issue of cloning and genetic engineering because one of the leading Canadian centers of research in this field is twenty minutes from my seminary and is part of a consortium with the university with which my seminary is federated.

Hefner’s paper takes up this task in a well-thought-out way, rightly suggesting that before we can craft adequate answers, we must first be aware of the questions and issues that need to be addressed. To this end, he astutely identifies and describes in his paper such questions and issues. He relates these questions to the observation that “re-fashioning of the human is the fundamental issue posed in cloning.” Further, he contends, this is to be properly understood only within the context of all creation, namely, both plants and animals. As he suggests in this paper and has explored in print elsewhere, he finds “created co-creativity” for humanity to be a hallmark of what it means to be human, and he is concerned that such creativity not be unduly stifled. In principle, the creative work of cloning and genetic engineering he views to be as natural for humanity as honey-making is for bees and milk-making is for cows. Nevertheless, he also quite rightly acknowledges that human creativity can and often does have a sinful side

to it. This happens when it becomes unduly influenced by a press for unfettered *laissez faire* entrepreneurship or self-indulgent self improvement—factors he finds strongly present in United States culture.

Further, having made these points, the paper also rightly suggests that there are no unambiguous concepts or acts, and that our judgments, definitions and explanations are all provisional. This would include our very definition of nature, human nature, ethics and ethical value or defect. As a consequence, we are unavoidably left to choose the best among the less than perfect options we conceive. One might call this a dialectic of ever-correcting ambiguity. Nevertheless, we are not left alone in this dilemma. Our understanding of being created in the image of God (despite varied descriptions of the *Imago Dei*) and our Lutheran tradition (despite those who would view such things as “two kingdoms”, law and gospel, and hidden and revealed God in a dualistic fashion) assure us that God is ever present in all parts of life, bringing about the future God envisions in God’s mysterious ways, wherever and however we find ourselves. The work of Christ and the theology of the cross (though not specifically identified as such by Hefner) are, of course, involved in all this.

I find what Hefner has said to be on the whole insightful and helpful. His aim in the paper; that is, to seek “to frame the questions and issues that must be engaged if answers are to be forthcoming,” has been clearly fulfilled. I am sympathetic to his treatment of the theological side of the human endeavor, and I find his direct and indirect suggestion of ethical guidelines to be sound:

1. Don’t treat persons solely as means to an end.
2. Act so as to affirm life and not destroy it.
3. Value others for their own intrinsic worth.
4. Work toward the well-being of all creation, as Christ did.
5. Pursue justice with unqualified zeal and commitment.

6. Test the good against the future God envisions and is bringing about.

Nevertheless, in the interest of expanding and sharpening the conversation, I would raise three matters: 1) *The Principle of Precaution*, 2) *Globalization*, and 3) *Boundaries*.

#### *The Principle of Precaution*

In the 1992 United Nations Conference on Environment and Development, a principle for guiding research and activity was produced. This principle was known as Principle 15. It was subsequently reaffirmed “by a group of scientists, government officials, lawyers, and environmentalists at the 1998 Wingspread Conference.”<sup>3</sup> This principle, as affirmed by the Wingspread Conference, declares that “When an activity raises threats of harm to human health or the environment, precautionary measures should be undertaken even if some cause and effect relationships are not fully established scientifically. In this context the proponent of the activity, rather than the public should bear the burden of proof.”<sup>4</sup> Given Hefner’s observation that there is a high vulnerability of “science, medicine, healing, beneficial interventions, and the businesses that carry them out” to the “basest, most selfish desires of those who would be consumers of science and medicine,” it would seem to me quite prudent and appropriate that the burden of proof for risk-taking via cloning and genetic engineering activities should be undertaken by those proposing the activity *before the risk is taken*. This should be done rather than having the public react to and deal with any negative consequences after they arise. On the one hand, it must be acknowledged that such a more cautious approach is contrary to current business and research practice in the field and may slow down or temporarily halt some creative endeavors. Moreover, if my perception is correct, it might not be fully in accord with the emphasis on “creativity” that Hefner is suggesting. On the other hand, the public might in some cases be better served by this more accountable pacing. Of course, the standards proposed by Hefner could still be employed in establishing the burden of proof. The wisdom of this more cautious approach can be seen in the case of xenotransplantation (cross species genetic engineering), one of the issue areas Hefner identifies in his paper.

Presently, it is estimated that the demand for organ transplants is going to grow dramatically in the years ahead. Moreover, this demand will far outstrip future availability of human organs. Consequently, the potential profit to be made from successfully using animal organs (currently pigs are preferred) to meet this need is enormous (it has been estimated that there could be a 6 billion dollar market by 2010).<sup>5</sup> “Research is growing in the use of animal organs in transplants, and drug companies are doing most of it.”<sup>6</sup>

Recent successes in cloning piglets that carry human genes and can thereby bypass the difficulty of rejection by a recipient’s immune system have heightened the press to use pig organs in transplantation. Clearly, it would appear many would benefit from this. However, it has also been established that retroviruses exist in pig cells which, while benign to pigs, could be potentially lethal to humans (in the long- or short-term) because humans have not evolved a natural immune defence system for them. Moreover, in our highly mobile age such viruses could rapidly spread to whole populations before, or if ever, a cure is found. The risk is not just to the recipient of the pig organ transplant; it is to humanity as a whole. As a consequence, many ethicists conclude that further xenotransplant procedures ought to be severely restricted until the procedure can be demonstrated to be safe by those who will make a profit from it. Just because we can do it and it is in our nature to try, does not mean human creativity itself should be pursued with equal vigor in all domains possible.

#### *Globalization*

Hefner has cogently identified the negative influence in United States culture that unfettered entrepreneurialism and misplaced self-development can have on the work of “science, medicine, healing, beneficial interventions, and the businesses that carry them out.” However, I would be quick to add that this not just a United States phenomenon. It is a global phenomenon. Its negative influence is becoming worldwide. The press among businesses for a friendly-to-business regulated global economy (e.g., North American Free Trade Agreement) and the desire of many governments to assist in that process has reached the level of missionary zeal (or for some, resignation) to a force that appears to be inevitable. Either way, it is undermining the confidence people have in their health systems, their politicians, their scientists and their business leaders, and it is undermining, in turn, the ability of those systems and people to serve the well-being of humanity and nature. In the area of cloning and genetic engineering this can be most easily seen in the European press for the labeling of genetically modified foods (given their experience of “mad cow disease” in Britain and France), the press for the patenting of life forms (e.g., the Harvard onco mouse and genetically modified seeds), and the press to have those patents promoted globally. As more and more life forms and genes (human and non-human) are patented and controlled by private corporations, and that have an over-riding need to be profitable for their stockholders in an increasingly competitive world, the interests of profit and control will unavoidably be given undue precedence over other ethical concerns for the well-being of the environment and the future of the creation. Moreover, it is a serious ethical concern that biomedical

matters that directly affect the health and well-being of the public (including those who are less powerful and marginalized) are increasingly being drawn under private control, which is not easily held accountable to the public for their decisions. I believe our ethical task in the area of cloning and genetic engineering needs to be viewed as a global, not just a national matter. My presence here at this conference, as one from the Canadian context, I believe, testifies in part to the Evangelical Lutheran Church in America's affirmation of this need.

#### *Boundaries*

One set of questions Hefner raises in his paper is, "What is our relationship to other animals? Where do we fit into the commonwealth of creatures in God's creation? Do the creatures of the biosphere exist primarily as a resource for the enhancement of humans? What contribution are we called on to make to the creation and its other inhabitants, comparable to the contribution we exact from creatures for our own benefit?" These are good questions which call on us to do some serious reflecting. While Hefner doesn't develop a direct response to these questions (nor does he set that out as his task), he does suggest that the unique contribution humans make is related to their innate God-given capacity for co-creativity. Moreover, his questions also imply that the other creatures [plants and animals] of the biosphere have their own contribution to make to humanity and the well-being of creation. In light of this, I am prompted to raise two further questions.

First, does the contribution of other species or other humans ever set boundaries upon the co-creative activity of human beings? Is the creation basically a human-run show by more powerful, knowledgeable humans *vis à vis* the other species present in the world? On the one hand, scientifically advanced humans might be led to view things that way, given our power to clone, genetically manipulate and, apparently, subjugate all other species. But I am also reminded of the observation of health professionals not long ago that the capacity of bacteria and viruses to adapt to new environments has rendered increasing numbers of antibiotics impotent. And there seem to be ongoing challenges—such as AIDS, cancer, and the common cold—that resist subjugation. Moreover, I don't believe it's insignificant that our creative ability in cloning and genetic engineering is made possible only through a collaborative effort with viruses. All of this suggests to me that the human capacity for co-creation must always be pursued in ways that enhance, rather than undermine, the capacity of other species to continue to contribute to the well-being of creation. Global warming and the loss of green space through urbanization remind us of the price we pay when we undermine the life-carrying capacities of

other species. Alternatively, humanity needs to embrace with humility its own limitations, including its capacity for co-creation, and celebrate the contributions of fellow species to the well-being of God's creation. Co-creation needs also to be approached as a collaborative activity with the rest of creation, rather than primarily a subjugating and controlling one.

Second, does human creativity escape the ambiguity of simultaneously providing things which benefit the well-being of creation and generating dynamics which will undermine that very well-being? Experience would lead me to believe it does not. A good example of this can be seen in the creation of atomic energy. The creation of atomic energy was not sinful, but it certainly was ambiguous. It gave us cheaper electricity, as well as radioactive waste that is very difficult to dispose of safely. In terms of cloning and genetic engineering, this observation points to the need to be just as sensitive to the suffering (human and non-human) as to the benefits which might be created as we pursue our creative activities to improve the well-being of creation. Such sensitivity may, of course, call on us to curb our creative efforts in a particular way or redirect those efforts so as to avoid the suffering that might otherwise be fostered. In either case, human creativity needs to recognize and be responsive to its boundaries as it seeks to be a positive force for the future of God's creation.

#### **Endnotes**

1. "Pig cloning stirs human transplant hopes," *Toronto Star*, August 17, 2000, sec. A, p. 20.
2. *Ibid.*, "Expanded human embryo cloning urged. . . ."
3. Purdy, Laura, "Should we put the 'Xeno' in 'Transplant'?", University of Toronto, unpublished draft paper, February 6, 1999. (Dr. Purdy notes that her draft paper expresses her own opinions, and does not necessarily reflect the view of the institutions with which she is affiliated.)
4. *Ibid.*
5. *Ibid.*, 10.
6. Pannozzo, Linda, "This Little Piggy's Going to Market," *This Magazine* (Toronto) 33/1 (July/August 1999), 34-39.



## Lutheran Theological Foundations for An Ethics of Cloning

Duane H. Larson

### Abstract

*Lutheran theological themes that would form the basis for an ethics of human cloning must be based upon and fully governed by the dogma of the Trinity. This foundation drives toward an understanding of the human person as a person-in-community. A person-in-community is made both the more particular and communal while also the community is ever more communal in its diversity. Such a view of being personal has significant interpretive consequences for traditional and basic Lutheran doctrines; e.g., justification, political ethics of two kingdoms, natural law, and human vocation. The theology of the cross, finally, acts as both the special revelation of how God will be God and as the final corrective to hubris. The implication left by the essay is that an ethics of human cloning, if ever achievable, must maintain the communitarian identity and dignity of all human beings.*

### Introduction: The Challenge to Doing Theological Ethics

The discernment and adoption of a position on a given ethical issue from a Christian perspective requires, of course, prior thinking about the appropriate theological foundations. When one would search for a solid position from a specific confessional tradition within Christianity, one's task may appear to be simple at the outset: just name the relevant theological doctrines and dogmas and then use them as the points from which to vector into a single—and correct!—stance. More careful reflection shows the task to be not so simple, even if assuming, as we Lutherans do not, that the language of confessionalism is authoritative for us in the same way that biblical literalism is for more conservative Christians. On one hand, as has been the case with Lutheran ethics, only one theological theme or too few themes may have been used when many more are relevant. On the other, when many relevant theological themes are discerned within the confessional tradition, the careful discernor may find that their “vectors” may go in opposite directions; even more complicated, they may go in different directions and yet significantly overlap.

When one even asks the question of whether there are ethical approaches that are uniquely or distinctively Lutheran, one must recognize, with Paul Nelson,<sup>1</sup> that accounts of Lutheran ethics range from descriptive tasks to prescriptive projects. For example, a simple “description” of a Lutheran ethic may center upon the doctrine of justification by grace through faith. Its logic will be as follows: Because human beings are in the state called “sin,” neither can we achieve salvation by our own effort, nor are we even able to achieve short of salvation what God's law demands with regard to our best ethical behavior. But the gospel of God in Jesus Christ proclaims to us that God in sheer grace gives us a share in the justice or righteousness of Christ. Thus at peace with God, forgiven sinners are freed to show our gratitude and use our talents by loving our neighbors as ourselves and committing ourselves to the needs of others and the world.

In the popular view, this summary may appear to be all that is necessary to impel the believer toward free and freed ethical reflection and action. But a sampling of diverse material will soon lead the reader to recognize that different philosophical predispositions—and even competing interpretations of Martin Luther's theology in its original context—have driven Lutheran ethical reflection into quite different, even opposing, conclusions. For example, one sees that ethicists like William Lazareth, Knud Logstrup, and Helmut Thielicke in their early years understood the Lutheran accent on justification by way of existentialist philosophical interpretation.<sup>2</sup> Middle axioms or other “casuistic” forms of ethical argument were mostly missing in such ethical perspectives. With these writers, Luther was understood to be one who with the doctrine of justification announced the human being's “freedom to be.” So it was that mid-twentieth century ethical reflection met “situation ethics”; here the would-be caregiver was called ultimately and only to care for the neighbor with the best exercise of love available, given the constraints of the particular context.<sup>3</sup>



Even with these well known theological ethicists, however, minds changed and they would eventually favor ethical foundations that were less oriented to human subjectivity and more qualified by evidently more objective criteria. For example, Logstrup's keen existentialist emphasis on individual conscience was later disavowed by Thielicke, who argued that more criteria were required for appropriate theological foundations for ethics, as well as reference to God's "naturally" intended laws. Similarly, Lazareth, like Robert Jenson, came more to affirm natural law as something that the freed will could now indeed and so should follow; thus a contemporary emphasis on and preference for the so-called third use of the Law and Lutheran affirmation of natural law.<sup>4</sup> While Lazareth in a famous essay on nature, grace, and law was at one time more given to a fluidity in natural law, his stance has grown to be more prescriptive with an understanding of natural law that is universally and necessarily applicable (deontic) to all conceivable human behavior<sup>5</sup>, consonant with the Roman Catholic position set forth in *Veritatis Splendor*.

While much contemporary Lutheran theology resonates more to these latter moves than to the preceding existentialist accents, it has been the case until recently, nevertheless, that the theme of justification itself was understood existentially and individualistically. Questions of salvation and of *human being* had more to do with a person individually construed than with humankind as a *community*. With Dietrich Bonhoeffer,<sup>6</sup> Lutherans began to understand human being itself as more ecclesial and communitarian. This would come to bear significantly on ethics. Additionally, the new flourishing of reflection on the doctrine of God the Trinity is especially consequential, as we shall see. In the examples I too briefly noted above, a revisiting of the presuppositions of the common understanding of the doctrine of justification has led to revisions and—indeed—expansions of “Lutheran” ethics that require more carefully constructed middle axioms. This summary suggests that Lutheran ethics cannot simply be a gathering together of the “Lutheran” themes that might form finally a sieve through which ethical concerns might be flushed, or a set of parameters that would circumscribe ethical questions so to achieve a final prescriptive Lutheran ethic on a particular issue. Even more Lutheran themes than had heretofore been considered traditional are necessary for the doing of good “Lutheran” ethics.

The plot for this paper, then, is to uncover crucial presuppositions for Lutheran ethics that will necessarily complicate ethical decision making without compromising justification—the article of faith on which the church stands or falls. What is presupposed in the jargon of justification that must now be exposed, especially if the human subject in the question

of cloning is not to be lost? At issue for any soundly Lutheran utterance of justification are the general classic themes of theological anthropology and the doctrine of creation. Both of these touchstones of Lutheran theology presume something even more fundamental, the dogma of the triune God. It is this “hard core” Christian claim of God as Trinity that I wish to recapture for this Lutheran argument toward ethics, with its implications for the human understanding of faith, reason, and vocation as fundamentally social and societal in the most wide ranging ecological sense.

### Foundations for an Applied Theology, Relative to the Ethics of Cloning, From a Lutheran Perspective

A distinctively *Lutheran* web of themes that would help to outline a subsequent Lutheran ethical foundation begins, of course, with Lutheranism's famous “*solas*”; i.e. *sola scriptura*, *sola gratia*, *sola fides*, *solus Christus* (Scripture alone, grace alone, faith alone, Christ alone). The unusual claim of many “alones” in Lutheranism should guard one from a theological reductionism whereby one “alone” is more normative than the others. The stringing together of “alones” should help the faithful ethicist to discern the web-like character or related theological themes that are necessary for a responsible theological foundation for ethics.

As far as these particular “alones” are concerned, of course, we have already noted the promise of grace. It is essentially Lutheran, too, to speak of Scripture alone and faith alone as baseline sources for thinking out an appropriately Christian response to issues of the day. This is also to say that Lutheran churches do not understand themselves to have formal teaching authority other than these “rules” for use by individual Christians *within* the church and under the guidance of the Holy Spirit. But it is important to recall also that Lutheranism has never understood scriptural authority to be so embracing as to deny revelation in the natural world. Luther abided by the Thomistic rule that nature does not contradict biblical revelation, or vice versa, though biblical revelation—particularly revelation of God in Christ on the cross—is always a necessary presupposition for understanding rightly the rest of revelation in Scripture or in nature.

With regard to the vocation of human being, the common summary inference from employing the “alones” is that Christianity highlights humankind's uniqueness, transcendence and humility as God's communal project. God as a “community” created humankind to be communal. Why might this be said? This is based upon the core revelation of God as Trinity and *human being* as the image of God the Trinity

(*imago dei trinitatis*). Though the doctrine of the Triune God is a necessary trajectory from scriptural revelation, in all subsequent Christian theology it must be worn as the lens for understanding the scriptural vision for *human being* and contemporary human vocation. So it is that we must here endure a brief rehearsal of the doctrine of the Triune God.<sup>7</sup>

## The Foundation of the Foundations

The doctrine of the Trinity has been assumed as foundational throughout Lutheranism's career. Explicit consideration of Lutheran doctrine in light of the assumption, however, has not been carried through until the twentieth century, as has been the case with most ecumenical Protestant theology. Recent research recognizes that Luther's Augustinian and Thomistic heritage was basically unquestioned on the point of the dogma of the Trinity. Here the Lutheran Confessions claimed no new insights. Nor need they have done so, given that the very existence and identity of God, as well as the dogma of the Trinity itself, was rarely questioned until the Enlightenment. But under the critical gaze of enlightened, liberal rationalism (which accorded final authority to autonomous human thought), as well as the apparent irrelevance of trinitarian dogma to practical life (given the heightened esoteric and formulaic character of most trinitarian thinking that was conducted), the dogma came to be regarded popularly as irrelevant and quaint. The situation called for renewal of trinitarian thinking in the twentieth century, and this came mostly from Roman Catholic and Reformed quarters. In other words, under the influence of ecumenical theology today, Lutheranism has revisited its trinitarian claims and begun significantly to rehearse its doctrine in their light. The basic characteristics of contemporary Lutheran trinitarian theology follow, with some allusion to their impact upon other doctrinal/theological reconstruction.

First, the dogma of the Trinity concerns the identity of God. Because the dogma is a compact expression of Scripture's witness to God active in history, "who" God is precedes discussion on God's existence and nature. "Father, Son, and Holy Spirit" language, then, synthesizes—as well as gives proper significance to—the whole narrative of God's ways with creation. This narrative begins with Holy Scripture, focuses on the life, death, and resurrection of Jesus Christ, extends through the apostolic age with focus on the Holy Spirit and the early history of the church, and continues "beyond" the scriptural witness through the current life of the church until the last days.

There is a relational principle between God and the creation told by the Christian story, too, that speaks of God's experience of history as much as history's experience of God. This subverts much of

the western theological tradition about the Trinity. That tradition enjoyed distinguishing between God's "internal" triune character as wholly distinct and inaccessible from God's perceived work in history. Classic western philosophical abstraction about the oneness of God, or even an emphasis upon God's simple unity prior to God's threefoldedness, leads one to regard God as immune to change and allergic to time. These are the dire consequences of much of the western tradition's preference for God's unity before trinity, and so of the popular irrelevance of the dogma. But contemporary trinitarian theology prefers to regard scriptural revelation as aligned with God's "inner" character. Inasmuch as the scriptural witness is to God's activity in history—often called God's economy—that history reveals a threefoldedness (or plurality) to God's identity in history. Thus, as Wolfhart Pannenberg and Eberhard Jüngel<sup>8</sup> write, among other significant Lutheran theologians of the twentieth century, God's identity as "one" must be understood in the light of the communitarian "three," rather than the three somehow derived or deduced from God's unity. In other words, trinitarian identifications denote God as communal and simple, as well as transcendent and immanent, and all of this simultaneously. As I like to put it, when the persons of the Trinity relate in perfect accord, being ever self-giving and other-receiving, "God happens." It is in the universe's interest that this is an eternal dynamic relationship. God, who is neither an addition to nor administrator of the persons, is the community of love, membered in the diversity of the three, constituted by the parts. This God is the ground and goal of the universe.

In other words, and secondly, the dogma of the Trinity is a complex of expressions, even a meta-dogma, which is concerned with no one doctrine (e.g., the doctrine of justification), but with the whole set of Christian claims. All Christian doctrine must be informed by and recur to the Trinity if such doctrine is authentically Christian. Thus, justification or atonement, for example, cannot end with an individual's being right with a solitary God; rather they include the whole community and ecology. This must be the case if God indeed is the communitarian and transcendent ground and goal of all life. Or, to pose another example of the dogma's normativity, a church cannot be merely a voluntary organization of individuals, but must be—in light of a church's trinitarian foundation—a local realization of a wholistic, catholic, body of Christ. One might venture even a more radical implication. Even the human person must be understood as a person-in-relation, a being-in-communion; otherwise, without being-in-relation or communality, a human is no person at all. When one would then consider the quality as well as the diverse breadth of relationships

in which a human is placed, one may come to see that becoming human persons is essentially an inseparable matter of God's creating, redeeming, and sanctifying human beings into a visible and harmonious communal expression in the history of God's own communal nature. Such are suggestive trajectories when theology is grounded thoroughly in the overarching dogma of the Trinity.

This leads, for our purposes, to a third and final point: the dogma of the Trinity functions as a metaphysical principle. It accounts for diversity while maintaining the unity and coherence of the cosmos. It solves, so to speak, the problem of the "one and the many" by revealing that the "many" are already grounded in and constitute together a wholistic "one." Thus, as Colin Gunton observes, the common and contradictory options for interpreting the Trinity are revealed indeed to be against the dogma altogether.<sup>9</sup> A simple, homogenous notion of unity in which the three are merely the same as one (suggested by classical, non-trinitarian theism) can only be totalitarian. A simplistic notion of diversity in which the three are fully different and merely join together as a club (based on mere tri-theism) can only be incoherent chaos. But where diversity relationally constitutes community through the reciprocity of selfless and self-giving love, and where love wholly grounds the community, one discovers indeed the truth and beauty of life in the Trinity. Here one discovers the life biblically known as the image of God (*imago dei*) itself.

### The Vocation of Human Community

Now what has the doctrine of God the Trinity to do with *human being*? If being created in the image of God means that human beings have a corporate or communal purpose, one in any ethics must regard sociality as absolutely fundamental. Sociality, as with any ecology, suggests that there is never a final state or form—or even some perfect state or form to which we must return—that makes for a "proper *human being*." Human being, in other words, is always becoming. It is constituted by relations rather than "substance." Human beings are indeed "made up" by relations and so cannot be understood apart from the whole of the human community, even while as individual parts, humans have their integrity and dignity. Does the part come first? The whole first? If we are to understand this in a trinitarian or communitarian way, neither question is appropriate. We understand *human being* as both part and whole, a simul in which whole and part must always inform and reference each other; such is the paramount importance of being as relation and from relation.

This communal understanding of the human vocation is implicit where Luther most explicitly affirms something like natural law in his language of

the "orders of creation." It is noteworthy that these orders or "estates," even when affected by sin, are social: the priestly office, temporal authority (government), marriage/family, and all not necessarily in this order or in any hierarchical relation. Bernhard Lohse summarizes: "To the priestly estate belong not only pastors but also those responsible for the 'community chest,' including sextons, messengers, and servants active on behalf of the spiritual estate. To the marriage estate belongs not only married persons but also children, servants, and even widows and virgins. Finally, to civil government belong city counselors, judges or officials, chancellors and scribes, in addition to princes; likewise servants and maids who work for the government."<sup>10</sup>

Whether pre- or post-fall, divine "law"—whether generally understood or concretely posed, as with the orders of creation—is not in original intent an alien law imposed from outside on human beings. It is rather a divinely ordered creation wherein the justified life finds both freedom and purpose without compulsion, and this mandate becomes concrete precisely in the midst of one's place and calling as a social being.<sup>11</sup> Luther's interpretation of Genesis 2 captures this insight in a winsome way. "And so when Adam had been created in such a way that he was, as it were, intoxicated with rejoicing toward God and was delighted also with the other creatures. . . ." Luther writes of the before-fall state in a way that resonates with the contemporary emphasis on the communitarian character of creation. What is also most notable, and more to the point with regard to natural law, is that Luther follows this happy language with the observation of how God provided humankind a concrete way (with the law of which fruit to eat) so to exercise that life in and with God and all creation. As David Yeago observes, this law is not alien to human vocation in its original and proper condition, but to feel or regard the law as alien is indeed a major characteristic of sin. Luther's understanding of the doctrine of justification by grace through faith, on the other hand, is precisely the replacement of the person once in bondage to idolatry and distorted vocation into faith, which is indeed to be "in union with Christ." So Luther has often put christologically what we are here putting in trinitarian terms.<sup>12</sup>

In other words, redemption is re-creation into God's intended community. Justification is not merely a pronouncement of moral righteousness; it is the restoration to life in the body—the community—of Christ. This language, for being in relation with all God's creation, accords with the concrete social practices that God intends in concrete creaturely ways for believers to embody in communion. In other words, God's commandments, which must



be construed as the divinely intended role of natural law, enable and guide “that way of life for which human beings, created in the image of God the Trinity, are destined.”<sup>13</sup> Thus trinitarian reality, here put in terms of justification, naturally leads to Christian ethics, and there can be no *Christian ethics* which are not at base trinitarian.

It is important at this point to reassert that a fulsome trinitarian pre-understanding to classic Lutheran themes does not accent the “social” to the annihilation of the individual. It is the personal individual, after all, who is saved by Christ and who appropriates Christ’s benefits, as Luther emphasizes again and again throughout the *Small Catechism*. In the divinely intended life of community, justification serves as the axis binding the person and sociality in between the times of original blessedness and the coming kingdom. The over-accent on the individual, on the other hand, is of course what is most often understood as sin. Luther did not differ much from traditional views of sin and original (inherited) sin, though he did, as a good preacher must, provide new and varied characterizations of sin’s concreteness. In sum, though, Luther saw sin as self-love that raised the self above God and neighbor. When Luther spoke of people’s orientation to the “flesh,” it was this sense of self-love beyond divinely intended sociality that he had in mind.

It would be helpful to note here that Luther’s idea of inherited sin, as well, is necessarily social (perhaps ironically), as sin affects and distorts institutions, including the church, by underscoring the individual above the rest. Though beyond the compass of this paper, this suggests that an individualist notion of a community that is merely the contractual aggregation of individuals falls no less under the condemnation of sin as does the individualist *per se*. Thus certain social structures that are characterized by the modernist impulse of individualism are questionable. It may be that an overly extended notion of human unto individual rights might be questionable, too, and would have import for a conversation on cloning. What is envisaged in a trinitarian theological anthropology, however, is that persons are distinguishable from individuals, and persons are such with dignity by nature of being in relation in community. This also implies that a community which holds itself over and against the individual, especially when that community adheres to an ideology of homogeneity, is also sinful and indeed no real community at all (insofar as community requires mutually accountable diversity). In this latter case, what we see is not genuine community, but the notion of individualism writ large, as the literature of contemporary post-modern thought rightly observes.

Even a christological ecclesiology will be seen differently when viewed in this trinitarian way as compared to modernist individualism. Though better than merely understood as a voluntary gathering of like-minded individuals (so extending Rousseau, Locke, and social-contract theory), a church that is understood as a gathering of individuals whose center is Christ likely is still deficient. Luther saw the trinitarian-christological consequences, too, of the scriptural understanding of *body of Christ* in terms of ubiquity, such that Christ is even in and with “the least of my brothers and sisters” (1 Corinthians 12). In other words, while Christ is of course the center, Christ is also at the margins, such that justified human beings encounter Christ and are woven together through each other, thus relating far more profoundly and proximately than might spokes on a wheel relate to each other through a hierarchalizing and distantly mediating center.<sup>14</sup>

Justification, thus, is the material basis for Luther’s ecclesiology.<sup>15</sup> In practical terms, this also means that the members of the church are freed by justification to practice the Golden Rule outside as well as within the church. Further, in a *communio* understanding of the church—the intent for all creation—the consequences of the Golden Rule are indeed heightened, too, as sacrifice for the neighbor will always recur through the same neighbor and the extended community back to the increased particularity of the person who first employs the rule.<sup>16</sup> But since the rule is universal in its audience and application, the question rises as to whether other criteria are invoked dependent upon whether the audience is ecclesial or “worldly,” sacred or secular. Here the Lutheran doctrine of the “two realms” or “two kingdoms” is pertinent, while also in need of its own redemption.

### “Two-Dimensional” Doctrine

The doctrine of the two kingdoms is neither an allowance for passivity on the part of the Christian in civil government (the temporal order) nor for privatization of religion. It is certainly not a metaphysical or ontological claim that separates life into dual and incoherent realities. One comes closer to understanding the point of two kingdoms theory if one would construe it as a unique mode of seeing that discerns different dimensions in reality, like seeing the Russian egg within the larger Russian egg. In other words, when a Lutheran Christian is freed to see rightly, she will see more than what the materialist or even the “common sense” person sees, though she will certainly see what they see, too. The further difference is that she will see that God has ordered, too, what others will call merely historical or natural. She will understand that Christians are not to divorce the realities, or cede one to one authority and the other to “God,” but that Christians are



simultaneously to live in both the spiritual and temporal estates, both of which are God's.

Thus, justification frees Christians for a right and disciplined use of the mind so to “read rightly” the natural order as also spiritually ordered, recognizing that others may not and do not see in just such a way. Thus, reason must be employed freely to work on reason's terms, within which the Golden Rule plays freely. As Luther makes clear in the *Freedom of a Christian*<sup>7</sup>, reason is among the disciplines to be employed in caring for neighbor. As a discipline, as a pro-activity, reasoned ethics then will take on social and institutional forms. Governmental systems that would give the Golden Rule the freest of play will be sought after and supported! As Paul Nelson has noted in a Lutheran World Federation study, two kingdoms thinking requires that Christians be fully committed to the pursuit of democratic justice on reason's (the natural order's) terms, showing how society may be better without becoming a theocracy. In this way only are individuals, Christian or no, accorded the dignity that is proper to all humanity. So Nelson summarizes: *Updating Luther's distinction between “the two kingdoms” while preserving its fundamental insight, the [LWF theologians] say that Christians should “contribute to the establishment and maintenance of democratic societies . . . [using] their power to organize societies so that they accord as far as possible with the principles of beneficence and equality contained in neighborly love. Together these two principles entail that all human beings are entitled to a just share of the goods at hand, not just to help them in the form of charity. The unity of beneficence and equality entails justice. . . . On a basis of a vision of the good life, the church must show how society may be better. But it is not for the church to be a legislator for society: that is a task for politicians, for the worldly kingdom not the spiritual one. What is a relevant task for the church is to criticize law and politics.*<sup>18</sup>

So far, then, though not a systematic listing, I have suggested the trinitarian communitarian framing for the important Lutheran topics of justification, anthropology, human vocation, ecclesiology, and political theory. An additional unspoken thread throughout has been a doctrine of creation, the communal and creative point of which is evinced in ecclesiology. What can be explicitly stated here, finally, is that the person-communion that humans are called to become is one who necessarily is involved in ongoing stewardship of the creation that God has entrusted to humanity. This job-description belongs to the vocation of all the baptized—and it is a vocation as integral to the natural order as to the spiritual.<sup>19</sup>

## The Theology of the Cross

At this point, the salient factors in a Lutheran theology that may bear on the ethical question of human cloning may have been adequately rehearsed (though hardly constructively developed). But a meta-theological principle, one with reference to theological *method*, has yet to be noted, and so must be noted as a major caveat here. This has to do with the *teologia crucis*, the theology of the cross. Lutheran “natural law,” if there be such, is wholly compromised as a universally necessary ethical principle by the theology of the cross, especially if natural law is understood to be a principle or set of principles ordained by God, but then set apart in such a way that God is removed from them and absent everywhere else. It is just this popular misconception of a quasi-deism that is afoot when created co-creators in communion with God and each other are warned on any ethical issue not to “play God.”<sup>20</sup> In this regard, the theology of the cross acts in at least two ways. First, it recognizes that God is where a sinner does not expect God to be, be it on a cross, in the sign contrary to “divinity,” in suffering, weakness, and death. God is where God is not expected in order to reveal more clearly the divine will of love that inhuman and impersonal individualism would mask with self-aggrandizing speculation. Secondly, the theology of the cross is a principle of *self-criticism* in any theological—and so, ethical—project. Because of sin, we are blind to our hubris even while confessing it, and this applies even to the most strenuously responsible exercise of theology in service to ethics.

## Conclusion

In the exercise of reason and praxis, in other words, grace abides in suffering and the human striving after utopia is confronted by just such counter-intuitive grace. What is the motivation of our ethical deliberation then? Is it human self-projection on a corporate scale? Is it self-aggrandizement, which includes the seductions of the market? Is it that fear of death which masks the individualist's putting of self before God, rent asunder from community? Or are the ethical conclusions both personal and social in God's intended new *simul*? Are they attuned to individual dignity that gives and receives according to the whole—*kat-bolos*, catholic—in the description here given? Do they increase diversity and honor community? And will the conclusions strive beyond the parochialism of even the terms here tendered so to finally engage and stimulate the free and reasoned reign of love in a larger public?

## Endnotes

1. "Bioethics and the Lutheran Communion," in *Bioethics Yearbook*, vol. 5, *Theological Developments in Bioethics: 1992-1994*, ed. B. Andrew Lustig (Dordrecht: Kluwer, 1997). On the American scene, Nelson is the most comprehensive chronicler of global Lutheran bioethics, though the topic of human cloning, of course, is only just beginning and cannot yet receive such coverage. The summaries—and so the unfolding of contemporary evolution—of distinctively Lutheran foundations for bioethical questions are clear, pertinent, and of such volume that they cannot be treated but in an allusive way in this paper, though the paper is in debt to Nelson throughout. His other work includes "Bioethics in the Lutheran Tradition," *Bioethics Yearbook*, vol. 1, *Theological Developments in Bioethics: 1988-1990* ed. Baruch Brody, et al. (Kluwer:1991); "Lutheran Perspectives on Bioethics," *Bioethics Yearbook*, vol. 3 (1993). On the matter of descriptive and prescriptive tasks, this paper, of course, centers on the former, and engages in the latter to the extent that current thinking in trinitarian theology is but just beginning to have an impact on the understanding of "traditional" Lutheran categories.

2. See, e.g., Knud Logstrup, *The Ethical Demand*, trans. T. Jensen (Phila.: Fortress, 1971); William Lazareth, "Lutheran Ethics," in Childress, ed., *The Westminster Dictionary of Christian Ethics* (Phila.: Westminster, 1986). Lazareth's thought in this article is more descriptive of the main Lutheran tradition. His own constructive contributions that lead away from the twentieth century existentialist occasionalism of Lutheran thinking may be seen in his essay, "Luther on Civil Righteousness and Natural Law," in Ivar Asheim (ed.), *The Church, Mysticism, Sanctification and the Natural in Luther's Thought: Lectures Presented to the Third International Congress on Luther Research* (Philadelphia: Fortress, 1967). This position resonates with Robert Jensen's contemporary "deontic" position nuanced in his "Death in Vitro," *Pro Ecclesia* 4 (Winter), 13-15 and clear in his *Systematic Theology*, vol. 2, (Oxford: Oxford University Press, 1999). On Thielicke, cf. *Theological Ethics*, vol.1, trans W. Lazareth (Philadelphia: Fortress, 1966).

3. One can even discern this sort of existentialist occasionalism in George Forell's celebrated book *Faith Active in Love* (Minneapolis: Augsburg, 1954), a classic and compelling argument on the nature of Luther's theological ethics. However, any sheer existential or occasionalist reading of Luther's thought is qualified by Forell's argument on the reality for Luther of the natural orders; cf. the festschrift reprint in *Word & World*, William Russell, ed. (Supplement Series 2, September, 1994) of his essay, "Luther's Conception of 'Natural Orders'", 66ff.

4. See Jensen, 1999.

5. Lazareth, *op.cit.*

6. Bonhoeffer's *Life Together and Christ the Center* are noteworthy in this regard. His sociological ecclesiology is also particularly pertinent. Cf. *Sanctorum Communio, A Theological Study of the Sociology of the Church*, translated by Reinhard Krauss and Nancy Lukens, edited by Clifford Green (Minneapolis: Fortress, 1998).

7. On much of the following, see my article on "Trinity" in Gassmann, ed., *Historical Dictionary of Lutheranism* (Baltimore: Scarecrow, 2001- forthcoming); also Larson, *Times of the Trinity*

(Brussels: Lang, 1995). What here follows is not necessarily a description of a position held by all Lutheran theologians today. It is most certainly my interpretation of a dominant and dynamic trend in Lutheran and ecumenical theology, which I believe is growing impressively, fulfilling the promise of Karl Barth's and Karl Rahner's seminal work early in the twentieth century.

8. Wolfhart Pannenberg, *Systematic Theology*, vol. 1, trans. by G. Bromiley (Grand Rapids, Eerdmans, 1997); also his theological anthropology, *Anthropology in Theological Perspective*, trans. by Matthew J. O'Connell (Philadelphia: Westminster, 1985). See also Eberhard Jüngel, *God As the Mystery of the World*, trans. by Darrell Guder (Grand Rapids: Eerdmans, 1983). I am grateful to Richard Perry, also, for his pointing out to me the similarity of my thinking with that of Leonardo Boff, *Trinity and Society*, translated by Paul Burns (Maryknoll: Orbis, 1988), while it also occurs to me that African influence on my thinking has been influential. Cf. A Okechukwu Ogbonnaya, *On Communitarian Divinity, An African Interpretation of the Trinity* (New York: Paragon, 1994).

9. Colin Gunton, *The One, the Three, and the Many: God, Creation and the Culture of Modernity* (Cambridge: Cambridge University Press, 1993).

10. Bernhard Lohse, *Martin Luther's Theology, Its Historical and Systematic Development*, ed. and trans. Roy A. Harrisville (Minneapolis: Fortress, 1999), 246.

11. Lohse, 247.

12. Luther's Christology as *deeply* relational—here put in trinitarian terms—is very well analyzed by Nils Gregersen in his "Natural Events as Crystals of God—Luther's Eucharistic Theology and the Question of Nature's Sacramentality," in Viggo Mortensen, ed., *Tro & Tanke, Svenska Kyrkans Forskningsrad* (1995:5). I would also add that what Luther described as the original historical state of life with God, I, with most theologians today, construe as God's eschatological intent for human vocation.

13. Reinhard Hütter, "The Twofold Center of Lutheran Ethics," in Karen Bloomquist and John Stumme, eds., *The Promise of Lutheran Ethics* (Minneapolis: Fortress, 1998), 43. This essay is the finest and most succinct current treatment of the traditional Lutheran ethical viewpoint.

14. See William T. Cavanaugh, "The City, Beyond Secular Parodies," in *Radical Orthodoxy*, John Milbank, Catherine Pickstock, Graham Ward, eds. (London: Routledge, 1999).

15. Lohse, 278.

16. Luther, Martin, *The Freedom of a Christian* (1520). In *Luther's Works*, 31 ed. Harold J. Grimm, 327-77. Trans. from the Latin by W.A. Lambert and rev. by Grimm (Phila.: Muhlenberg Press, 1957).

17. *Ibid.*

18. Nelson, 1997, 149ff.

19. Hefner, *The Human Factor* (Fortress: Minneapolis, 1993).

20. See Ted Peters, *Playing God, Genetic Determinism and Human Freedom*, (New York: Routledge, 1997).

## Improving the Species

### (A Sermon)

George L. Murphy

*When people began to multiply on the face of the ground, and daughters were born to them, the sons of God saw that they were fair; and they took wives for themselves of all that they chose. Then the LORD said, “My spirit shall not abide in mortals forever, for they are flesh; their days shall be one hundred twenty years.” The Nephilim were on the earth in those days—and also afterward—when the sons of God went in to the daughters of humans, who bore children to them. These were the heroes that were of old, warriors of renown. (Genesis 6:1-4)*

Pieces of ancient myth—the gods who lusted after human women, begetting half-divine superheroes. This broken myth is used by the biblical writer to speak about the sin and corruption of humanity, and to oppose the idea that divinity can be propagated biologically. But perhaps we can use it to speak about a modern way of looking at humanity which has been called “the gene myth,” the belief that we are completely determined by our genes. Perhaps.

The godlike beings came to earth when humanity was young and new at the business of intelligence and having dominion. The species was still a lot like its primate cousins. And the gods—we would call them aliens or extraterrestrials today—circled the earth in their starship. They sent down “away-teams” and, carefully hidden, observed a species in a state of development much like that of their own race a million years before. The humans were very primitive, just beginning to show real skill in making stone tools. There was plenty of fighting between little isolated groups. But they had started to use their brains, and there were some signs of cooperation among them. The gods were intrigued, for intelligence is rare in the galaxy. They saw the potential that this new species had. And they knew their own potential, their expertise in analyzing and engineering life at the molecular level. It was an ability that they had perfected for millennia and had used to develop new crops and animals on their home planet. They had eliminated defects in their own species and had es-

tablished genetically clean colonies in several planetary systems. A great deal of good had been accomplished, and now they had a new opportunity.

The gods considered themselves to be a highly moral species. They believed in a Supreme Being who had given them the task of improving the world. So as the captain and the heads of the various scientific departments sat in the captain’s ready room and watched the videos of this species that they had found at its dawning, and examined the reports of the away teams, it was quite natural for the chief of molecular biology to say finally, “We can help them.”

“What do you propose?” asked the captain. “Give them some of our technology?”

“No need for that,” answered the scientist. “They’ll develop their own technologies. But we can ensure that those technologies will be used for good. We can improve these people themselves. They can be spared the thousands of years of struggle and all the mistakes our ancestors had to make.”

When the plan was set out, all the officers were soon in agreement. What better way to help this species than to give them some of the qualities of their own advanced race? If, as they believed, life was determined by genes, then genetic improvement was absolute improvement.

It was a straightforward matter for them to translate their own genetic coding to that of terrestrial species. They secretly abducted a number of the humans (of course, doing them no harm—and it was for a good cause). They altered the DNA in the somatic cells of humans and made use of their well established cloning techniques to impregnate the daughters of humans. After ensuring safe births of healthy offspring, they released mothers and children back into optimum habitats.

The gods secretly observed the growth of their children, for they thought of these beings as if they were their own. They tested them periodically to be certain that the intended physical and mental enhancements



had resulted. The children were much more intelligent, quicker, and stronger than unaltered humans. After several years the gods were sure that their offspring would survive and prosper, so their starship left earth orbit to return to their home system.

Three generations passed for the gods. Another starship came into the solar system, and the sons of the gods came back to the earth to view their handiwork. The planet had orbited its sun many times, but on an evolutionary time scale, it had been only a little while since their intervention. They expected, however, to see measurable improvement in the species that they had helped with their advanced molecular technology.

Humanity had indeed changed, and the earth had changed. High resolution scans showed gatherings of dwellings and what might be the beginnings of agriculture. Progress had been made. But when an away-team returned from its mission, the news it brought was unsettling. "There is extreme social stratification and excessive violence among these humans," the team leader reported to the assembled officers.

"Of course there's violence and role differentiation," said one of the scientists. "That's part of evolution. Nobody expected that all to be eliminated. But surely the enhanced intelligence of leaders is helping them to overcome those tendencies."

"I'm afraid not," said the team leader. "Now greater intelligence seems to give violence and domination greater scope. They have designed new weapons. Those who already have the necessities of life organize campaigns of conquest against other tribes. They have developed concepts of private property, and the stronger are able to own the weaker."

"But this is impossible," burst out the chief geneticist. "Our predecessors knew what they were doing. They didn't design these humans to be vicious slave owners."

"Perhaps there were errors in translating the genetic codes," offered a computer scientist.

"Some mistakes may have been made. We need to analyze the data again and get it right."

Debate among the scientists went on for several minutes until the captain signaled them to silence. They looked at their commander expectantly.

"Maybe," said the captain, "there is a more fundamental problem. Is it possible that the achievement of a peaceful and just society requires more than genetic health? Perhaps—and I know that this goes against everything we've believed for generations—we are not determined entirely by our genetic makeup."

There were gasps from around the room. "But how . . . ?" "What else . . . ?"

"I disagree completely," said an engineer. "What we need to do is to figure out the mistakes our predecessors made and go down and correct them. Get these humans developing in the right direction."

"No," said the captain. "The mistake our predecessors made was to overestimate their understanding of themselves and to think that they could apply their limited knowledge to decide the fate of another species. What we did was just a more sophisticated version of what we've seen going on down on this planet—the use of superior knowledge and technology to determine the lives of other intelligent beings. Our predecessors meant well. Let that be their memorial."

"But with no further intervention, what will happen to these humans?" demanded a sociologist.

"They are still intelligent beings, and evolution goes on. The course of their development may change" said the captain, "but we will not intervene further. Any help for them must come from another quarter."



## **Section Three**

# **Specific Questions**

Should We Clone for Specific Purposes?

## In Our Image: Procreative Cloning and Faith

Hans O. Tiefel

### Abstract

*This essay seeks to think about human cloning in ways that resonate with our faith. It considers difficulties and problems of human cloning from the perspective of Christian ethics, recommending careful attention to the ways we, as believers, speak here as a precondition for understanding this issue. It seeks bearings from the ways of God, contrasts those ways with cultural assumptions, and searches for resources in central Christian and Lutheran affirmations. The essay analyzes and rejects the appeal to human rights as a way of understanding and resolving the ethics of human cloning. It recommends a communal and biblical approach that relies upon our understanding of the church, of sin, of justification by faith, of love as an essential guide, and of the cloned child's welfare.*

### Difficulties

Surely human procreative cloning poses important issues for the church and for our country. We should give it faithful and careful thought for the sake of children so conceived, for the sake of ourselves as Christian citizens, for our fellow citizens, and for the sake of God, who places the creation of human lives into human hands. Yet, understanding this topic proves difficult. As in all applied or practical ethics, one must find and digest the facts. Therefore, these papers from the consultation introduce the facts—medical, technological, legal, political. That becomes a challenging task for both authors and readers when biotechnological research, legislative initiatives, and fickle public attitudes change so rapidly. Still, one assumes that if one can learn the facts, then one can also think about them religiously and morally.

The facts themselves, however, never appear in pure or objective form, but have already been selected for relevance, embodied in a particular disciplinary language, and endowed with meaning that can both lead and mislead. The contexts in which facts originate—whether in medicine, technology, law, business, or American values—flavor the meaning of the facts. For those who remember “Draagnet,” we never have “the facts and nothing but the facts.” Using facts about cloning theologically will give them a different flavor—

Lutheran in this context—and will call for different ingredients than those chosen by secular chefs. This point does not argue for staying out of the kitchen, but does remind us to insist on a grain of salt. We cannot be sure of how these efforts will turn out, but we hope that the outcome will be something over which we can say grace. Or laugh. Or do both.

A few specific warnings about ingredients: Biological data appear in biological words. Biological words presuppose biological methods. Scientifically, an individual human life is merely of general research or knowledge interest. Here, believers and God, who may want to interject that all human lives are precious, cannot get a word in edgewise. Similarly, if in human cloning we are dealing with “somatic cell nuclear transfer” or “the denucliation of a somatic cell and the insertion of a cell nucleus from a donor,” how would that differ from manipulating cells of mice, sheep or cows? How then to express the claim that we are dealing with the very beginning of a human life made in the image of God? In science and medical technology, cloning is a matter of “reproduction.” By contrast, “procreation” or “begetting” (user-friendly terms in religious and humanizing contexts), evoke different assumptions and values. What we say is what we get. Or, the same thing, one cannot do ethics or religion in the languages of science, economics, technology, law. If we were to speak any of these specialized languages exclusively or predominantly, we could no longer reason morally. Nor could we then think or reason as believers.

We may not leave this topic to the experts or let them decree our vocabulary. If we seek to understand human cloning in the light of faith, we must draw it into the orbit of our biblical traditions, liturgy and faith. Invoking “the image of God,” for example, contrasts religious seeing with scientific observation. To use a musical metaphor, we need to transpose secular songs into hymns in which we can acknowledge, thank and praise God, and honor God’s creation. In this task we are at constant risk to see and think as everyone else would when we read the “factual score.”

If we let secular experts, whether medical, legal or political, define the reality of cloning for us—set the tone—we would be deaf to the voices of faith. Those who define reality with key words also define what is at stake. In human cloning, as surely in all biomedical issues, there is no objective, non-leading or value-neutral way to speak, and therefore to decide. This reality explains my attention to words.

Believers who resolve to think about cloning faithfully encounter additional difficulties. No biblical text offers a single biological word. How, then, to draw this topic into the light of faith? What is the right use of Scripture and of our religious traditions, the right hermeneutics? Three options appear, each with a legal parallel. Much as Jews invoking ancient judgments in Scripture and rabbinic traditions, or like lawyers who cite case law, we might survey the Commandments for likely precedents, creatively fitting the new into familiar patterns. Which biblical texts, then? Alternatively, as theologians or as constitutional lawyers, we could resort to such theological themes as creation and sin, a biblical view of human nature, covenant, redemption and grace. Finally, finding neither approach satisfactory, and as lawyers who find that the law does not speak to this, we might leave faith out of it. Our Lutheran banner then would be “freedom of individual conscience.” We would deal then with cloning much as we currently treat abortion: saying neither yea nor nay. Just in case there should be something morally wrong with it, we would also add the proviso that we always know where to look for forgiveness.

What might one conclude about these difficulties? Tackling the issue of human cloning requires caution. However we come at it, *we* make texts and precedents and even God speak. No matter how transcendent our references, how imposing our theological-ethical responses and how impressive those foreign and technical words, they remain human, all too human. Here writers find encouragement to sin bravely. Readers seem well advised to retain a sense of humor.

## Bearings

After such warnings, one hesitates to move. Heart in hand and falling back upon basics, just what is the task of Christian ethics? It is to relate everything to God; to integrate our heads, our words and lives with what we believe, confess, and worship. Whatever we say about human cloning or anything else for that matter, it ought to resonate with God’s ways. Bible, tradition, and liturgy witness to those ways. What we conclude morally, then, ought to be something we can show to God. And we show it to each other in the name of God. Wrought by us, we may do it badly, but at least God’s ways offer a compass heading.

And we have the community of the church to support and correct our search.

## The Ways of God and Human Cloning

What, then, might be God’s ways by which we could find our bearings in uncharted territory? Surely God is for us in giving us life, in calling us children and kin (the abbreviation for “in God’s image”), in inviting us into a personal and communal relationship, and in seeking our well-being in all things. Our God is creatively, lovingly and redemptively pro-life. While that seems to be a basic and sound thing to assert by biblical believers, it remains non-controversial only in a vacuum. In a political or public policy context, it becomes incendiary. Nevertheless, unless we remake God in our own image, this is the Lord we acknowledge—in the matter of cloning or anything else.

One immediate implication for the prospect of human cloning would be that if children are brought into the world by this process, surely God will be for them, welcoming them and expecting us, God’s kin, to do the same. And if there should be prejudice against cloned children—one reads of doubts about their identity and their very humanity—our responsibility to these children will be all the greater. Our God has a special thing for the more dependent and needy, for those in trouble.

But that ignores the question of whether children should be conceived by cloning in the first place. If God offers us human cloning as a blessing, would we be able to recognize it as such? Initial responses to the possibility of cloning were almost wholly negative. Leon Kass echoed that rejection when he condemned human cloning as “the wisdom of repugnance.”<sup>1</sup> Gut feelings surely point us in the right direction in regard to such abominations as incest, bestiality, cannibalism and bloody murder. Yet, revulsion seems less than a safe moral clue when evoked by particularly gruesome human deformities and diseases. With speed that hints more at hostile reflexes than searching deliberation, several European nations have banned experiments that might lead to human cloning. The U.S. government decided quickly that it will not currently support such research leading to “reproductive” cloning. Yet, initial alarm over human *in vitro* fertilization (IVF) be a precedent, perhaps familiarity will breed contempt. Whether rightly or wrongly, popular anxiety over the birth of Louise Brown conceived through petri dish fertilization has faded into indifference and the practice enjoys widespread acceptance. Clearly, our intentions require testing. Could cloning be one way of obeying God’s command to be fruitful? Does it resonate with God’s creative ways? Does it express the biblical images of our calling as co-creators? Many

Jewish voices, for whom having children remains a divine command and continuation of the People of God is a providential imperative, incline to answer YES. Traditional Roman Catholic answers offer a clear NO! Cloning is asexual. That alone is enough to condemn it as unnatural and dehumanizing. Protestants, by contrast, find themselves at sea. For one, they allow the law of love to suspend the commandment to be fruitful. “Been there. Done that.” For another, they prove less bound to the “natural.” To be sure, sexual intercourse is natural in that it does not have to be taught; it has always been the way of man and beast, and has tradition on its side. But new occasions teach new duties. If medical technology enables us to become fertile, we welcome it as a blessing. And cloning, while it does not cure infertility, enables some infertile partners to have a child of their own, not in the traditional sense, to be sure, but one will recognize whose child it is. If the wife’s enucleated egg cell receives the husband’s somatic cell nucleus and the wife brings the resulting new life to birth, it is “their” child, their son, in definite, if novel ways.

A similar argument against cloning as unnatural and therefore defiant of God, is that human cloning dehumanizes by manufacturing (“manu”=hand) children. These would literally be handmade humans. When they are clones of the rich or famous, perhaps even genetically enhanced, they might even be derided as “designer children.” Yet, God’s ways require human agency. God uses human bodies, human hands, human choices, and surely human ingenuity to bring children into the world. When we cannot conceive, we seek medical and technological help and thank God when it works. Would cloning be all that different from justified medical assistance in procreation? If not, one needs other than anti-natural arguments.

Concepts of human nature are notoriously Janus-headed, showing more than one face. The inventiveness, control and design intrinsic to human cloning, going nature one better, constitute key aspects of human nature. Moreover charges of “Unnatural!” have had such hateful uses in the contexts of homosexuality, racism, and sexism, that one suspects it is a synonym for what is offensively strange rather than what is antithetical to God’s ways. Separating sex from procreation surely is the responsible thing to do when we rightly fear the consequences of intercourse. For example, procreation without sex, when doing otherwise might risk a future child’s health or when a couple must remain infertile, seems consonant with love and compatible with our understanding of God’s ways. To be sure, the more the artificial involvement in this new form of begetting, the more worries about modesty, expense, and complications. But finally, claims about mysterious bonds between sexuality and having children remain mysterious to me.

While it may be rash, other fears among non-specialists seem misconceived. These included the specter of armies of cloned super-soldiers or a ruling elite of superior clones. That ignores the influence of time, place, and context of those genetically identical. Identical twins will look alike and even share character traits, but biological nature, even if it defines much of what we are, is not destiny. Similarly, parents will not clone a child to become an organ donor for a grandparent or another child. Our society protects children from exploitation, even when it is attempted by parents. The genuinely worrisome features lie elsewhere.

## The Ways of God and American Ways

As members of the Evangelical Lutheran Church in America, we speak and think American. As an immigrant, one who chose United States citizenship, pledged allegiance to it, and served in its armed forces, I remain deeply grateful for what this country at its best is and stands for. I have not suffered discrimination and poverty that marks us at our worst. But American ways, even at their best, are not the ways of God. Individual rights, personal liberty, autonomous choice privacy delineate our cultural ways. Thinking of God and human cloning in cultural conditioned ways, we hear the voice of the times and may mistake it for the voice of God. This phenomenon is ubiquitous and ancient. Biblical insistence on God’s holiness warns against an easy reading of God’s ways. Paul, cautioning against being conformed to this world, insists on thinking in new and transformed ways to discern the ways and will of God (Romans 12:2).

An American way of seeing and describing human cloning is to place this issue under the rubric of rights—*reproductive rights*. One speaks of individual choice and the negative right against interference in this most private of decisions and actions. Such is the language of liberalism and of the law. If America stands for anything, it guarantees individual rights. Should human cloning be categorized under moral and legal rights?

“Rights” is a modern word and concept originating in 17th-century England and the 18th-century Enlightenment. Human rights were instrumental in establishing the freedom of religion, in ending European wars of religion, in endowing with equality first Jews, then Blacks, and finally, women. Roman Catholic bishops invoke rights on behalf of the poor and economically oppressed. Rights form the banner under which our society seeks to correct injustices and to establish a more perfect union. Rights constitute the indispensable banner under which we, as citizens and as Christians, can side with the neglected and oppressed. Thank God and liberalism for human rights!



Yet the appeal to reproductive rights to justify human cloning creates serious moral problems, especially for biblical believers. Rights are protective devices, fences that prevent hostile incursions or assistance that remedies harmful neglect. As such, they are adversarial, and legal rights is the language of the law. Rights might be likened to safety nets: they keep the worst from happening. But we should normally try to avoid having to make use of them. If we do right by each other, it should never come to invoking rights. We owe each other so much more than that. Again, we absolutely need rights. But our moral language must be so much richer. Therefore, when it comes to the liturgies that enunciate, celebrate, and seal our mutual obligations to spouses, children, and our communities, we promise commitment, care, and love—without ever mentioning rights.

A second problematic feature of rights as the central word for understanding our procreative responsibilities is that rights are individualistic. Rightly so, they protect the one from the many. But invoking such rights as autonomy, freedom and choice for the relationships that sustain and carry our shared lives distorts. Attempting to conceive what we owe each other as husbands and wives, parents and children, brothers, sisters, friends, church members and citizens in terms of rights warps our moral perceptions. Specifics will clarify the point.

In the context of “reproductive rights,” no one has been a better advocate of rights than law professor John A. Robertson. Here reproductive liberty is a protected activity for its importance to personal identity and meaning. The focus is on the individual who intends to reproduce, for “reproductive goals should be respected as a central aspect of people’s freedom to define themselves through reproduction.”<sup>2</sup> When he first addressed the issue of human cloning, Robertson followed the liberal logic that privacy and autonomy remain decisive, and, therefore, one may clone for any reason. More recently, Professor Robertson reaffirmed the presumptive right of infertile individuals and carriers of genetic diseases to clone genetically related offspring.<sup>3</sup> “That right should be denied . . . only if substantial harm from cloning to have genetically-related children for rearing could be shown.”<sup>4</sup> Appealing to current social attitudes and values, limiting this reproductive right for now, allows him to draw the line against the narcissistic and eugenic uses of cloning when sexual reproduction is possible. Cloning simply to have the child of one’s dream would be excluded. The good of children so begun is assured by the interests that parents ordinarily have in the well-being of their children.<sup>5</sup>

Robertson allows risk of serious harm to future offspring—risk of a fate worse than death—to trump

a current right. The problem in the case of cloning, of course, is that we cannot be sure of serious harm unless we try it. And then it will be too late. The cloned child, of course, could sue parents, medical technologists, and all who played a part in his or her origin. But judges have dismissed wrongful life charges by children against their progenitors for the reason Robertson invokes prospectively: “[E]ven if the clone suffers inordinately from her replica status, there is no alternative for her if she is to live at all.”<sup>6</sup> The National Advisory Board on Ethics in Reproduction rightly notes that such reasoning allows almost any harm to befall cloned children, since it can always be said that they are better off alive than never having existed.<sup>7</sup> Robertson does not take intergenerational responsibilities seriously enough, for prospective parents clearly owe their offspring reasonable care even before conceiving them. When procreative rights trump the risk of harm to the cloned offspring parent-child, solidarity suffers. The prospective child, here to be created by cloning, does not yet exist and thus has no legal rights or moral claims it can raise in its defense. That is the very reason why rights language simply does not work to protect future generations. Here reliance on rights distorts. Rather than insisting on our rights, a child-friendly perspective must make the good of the child its major concern.

## Christian and Lutheran Ways

### Admitting sin

By contrast, Lutheran Christian moral bearings focus on the ways of God, and these ways stand in stark contrast to cultural ways. Most striking, as members both of our culture and of our church, we confess a dark or jaundiced assessment of human nature that resists God’s ways. We take sin seriously. Selfish, irrational, destructive humankind requires the restraining chains of the law. Therefore, we cannot assume that cloning decisions will be made by objective, rational, and moral persons or non-sinners. One would do well to remember human pride, egoism and self-assertion in terms of the motives, process, and consequences of human cloning.

Motives will not only be mixed, as they might be in much of time-tested begetting, but brand new occasions for pride arise in the perpetuation of a specific human bodily self and in the novel control over the projected life. If pride be the original human sin, one might suspect a yearning for “guaranteed self-replication”<sup>8</sup> and a fleeing of finitude.<sup>9</sup>

The process will involve great loss of early human lives not only to experimentation, but also to quality control. The language for this process has already been coined as “great respect” for human lives in their earliest forms (blastocyst, zygote, embryo, fetus), a

now routine verbal curtsy before using such lives and using them up.

The likely consequences of procreative cloning not only include a new mode of conception that overcomes sterility or the barrier of genetic disease, but also promise to become a thriving “reproductive options” enterprise, more like luxury services than basic health care for all. The commodifying and purchasing of these services may not be the same as buying a child, but one suspects that they are in shouting distance of each other.

Such characteristically Lutheran realism seems well remembered in this context of procreative cloning. It need not be the first or last word, but it seems fitting to recall who we are in this as in all contexts. These dark features penetrating human identity should not be obscured by the clinical white of medical technologists or the golden sheen of for-profit reproductive enterprises.

### Justification by faith

*Justification by faith* stands at the heart of the Protestant Reformation. While it seems to point to a human act, gratefully receiving what God offers us, it actually centers on what God does. God’s forgiving love sets us right. This great fulcrum, the heart of Luther’s rediscovery of grace, becomes fundamental for ethics. Biblical ethics responds, one might almost say reciprocates, with the double command to love God with all of one’s being and strength (Deuteronomy 6:5) and to love the neighbor as oneself (Leviticus 19:18). It turns out to be impossible to separate these two commands in the sense that there can be no love of God without caring for human beings. Such responsive love finds its guide in the ways of God and stands at the center of Christian ethics. Would cloning a human child resonate with such love? A simple enough question, but not at all easy to answer. We, the body of Christ, need to reason together. Given Scripture, tradition, experience, and common sense, where would the creative and redemptive love of God point us when it comes to bringing children into the world as clones? That is poorly phrased, since here their very beginning becomes definitive of who they are. Instead, where would God’s love point us about engendering children through cloning? I will try to respond to that question in a moment.

But Lutherans reason morally not only from God’s redemptive love, but also seek bearings from what they deem true traditionally about *life in community*. Since we are members of one another, remain dependent and interdependent throughout life, we may not reason in the preferred mode of our own culture—individualistically. Rather, we are communal by nature; We are born into families, we are members of nation states, we are ultimately “connected”

to any human being, especially those exploited and oppressed. We find ourselves so connected and called both because that is the fabric of our lives and because that is where God is and calls us to be and to do. Moreover these relationships are not just added to who we are “contractually,” as liberal law and politics would have it. Rather they constitute us. If our relationships to God and others were to be taken away—if we could stand it—we would be peeled layer by layer not to a self-reliant hard core, but to a shriveled, desperate remains curved in on itself. Where our American culture imagines the independent person, toughened by risks of unfettered private freedom and adversarial competition—“what does not kill me makes me stronger”—Christians confess their dependence, interdependence and need wholly devoid of heroic pretensions. We live by the grace of God and of each other. We *are* children, sons, daughters, friends, students, teachers, citizens, and human beings, not in the roles we assume, but in ways that define, construct, and sustain who and what we are.

Consequently, it would be false both to our own identity and our confessions if we were to consider procreative cloning a private affair and a matter of individual right, without regard to others and especially without regard to a child so engendered. It is altogether reasonable that contributing authors to this consultation invoke larger issues such as justice and medical care that at first sight seem wholly irrelevant to cloning.

Such community-grounded moral reflections should always focus on the child. It is first for the sake of children so conceived that the church is called to reflect and to witness what it understands about the love of God. In what follows I offer an initial attempt to take the perspective of the child. Who can anticipate all the questions that might arise?! But here are the sort of reflections that seek to take seriously what love of God and neighbor might mean specifically.

### Is Cloning the Loving Thing To Do?

God’s ways have been described most inclusively as loving. The heart of biblical and Christian, Lutheran ethics, therefore, is the double love commandment that enjoins us to walk in God’s ways. Could human cloning express such love?

In the fact that it promises life, yes. But cloning is also very destructive, since it will not become a practice without much experimentation. Dolly was preceded by 276 cloning failures. If human cloning should be even more difficult and complex, the early forms of human lives sacrificed for a cloning achievement will be legion. Moreover, even after the practice has been established, in each specific case medical guardians will insist on the strictest quality control.

If the qualities intended in the clone should be compromised, what would be the point? Medical liability as well insists on strict quality control, much as in IVF. Once medical technology has a hand in this process, it must protect its hand as well as the “patients” or customers it serves. Survivors of this rigorous quality control gauntlet will be lucky. Since they have to measure up to the standards of all who have a hand in this, they are not loved or welcomed unconditionally; they are loved for better only, at least until they are born.

Since knowing what love requires is not always self-evident, the negative version of the Golden Rule offers a guide: “Do not do to others what you don’t want done to you”. If cloning is good for future children, would I choose it for myself if I could? Would I choose to be the clone of the best human being imaginable? The question is not wholly fair, since answering affirmatively may imply ingratitude for the life one has. Yet, this is a question a future cloned child might ask or has a right to ask of parents, who are obligated to love their child, even prospectively, in the very act of taking steps to bring it to life. Assuming that I would survive the winnowing of the cloning process, would I delight in being the spitting image of the “best” person in the world?

I think not. For while all other children have two genetic parents, I have only one. The woman who brought me into the world may not be my flesh and blood, unless she cloned herself. And then I would be a second genetic rather than her child, as child has always been defined. In both cases she and I know that. The fact that cloning now may multiply my mothers (ovum donor, nucleus donor, womb mother, rearing mother) is not reassuring. For to whom do I really belong? More important to me, who really belongs to me? In case I am boy, my rearing dad may not be the famous person who was chosen as my predecessor. Accompanying such troubling confusions over my immediate parents will be unclarity about all of my kin. They, in turn, will be unsure of their ties to me—ties that have always been relied upon to protect and nurture children. To be sure, for biblical believers, all children count. Love is or should be thicker than blood. But even the faithful understand their obligations to begin with “their own.” Their responsibilities to God and to others become clear in ways metaphorical of fathers, mothers, children, brothers and sisters. Ties between parents and children speak a universal loving language that we should not confound.

Would I choose to be cloned or affirm my beginnings as a cloned individual? I am told that I was given a better chance in life than most. My folks did not play genetic roulette with me.<sup>10</sup> They did not risk inflicting their genetic abnormalities on me. In

contrast to other couples, they were sure of what they were getting and that such was a good thing, for they gave me what all parents strive to offer their children: the best possible chance in life. Yet, even a grateful child might wonder how to deal with the fact that it is different from all other children. To be sure, our culture prizes the unique. We deem it a virtue “to do one’s own thing.” My thing, however, already has a model in the person in whose image I was created. Do I as clone and survivor to birth then get the chance to be loved unconditionally? Or will parental acceptance insist that I measure up to my physical predecessor in whose image they charted my life?

Our culture prizes control. Cloning (creating an almost exact physical duplicate of an existing living or even dead being) constitutes an emerging form of control. Such control bestows a new power on those in charge of such multiplication. In regard to animals, we have always insisted on being in powerful control. Whether we bring them life or kill them, animals serve us. Without asking whether that is right, human cloning will let us extend such power to our children. One generation can now do a new thing with those who follow. In deciding to give us life, they can also determine our physical identity. Since the choice of physical identity is never capricious, but is always made for the best of reasons, those reasons now become normative for the cloned child. To be sure, parents always have hopes, plans, and dreams for their offspring, but normally they take potluck. Now progenitors can assure at least the physical form and precondition for what may make those dreams possible. Yet, such begetter dreams may become nightmares for the begotten. Is this a loving gift to one’s child? It seems rather “a form of despotism of the cloners over the cloned”<sup>11</sup> and an invitation to child abuse.<sup>12</sup>

Human cloning will replicate a specific image. Remarkably, biblical believers have always been committed to the hope and pledge that their children—as well as they!—would grow into and affirm an ancient image. Yet that image, our likeness with God, does not lie within us and is not in our control. Cloning children will not affirm or confirm our identity as children of God. The qualities for which one might choose a clone donor probably do not resemble the ways of the God of Israel or of Christ. Even if they did, cloning a saint would not prove efficacious for the clone unless a cell nucleus contains the miraculous power ascribed to the bones of the saints. As it is, all it takes to claim that ancient image is Baptism, linked with certain communal prayers, promises, and perseverance.



## Summary and Conclusion

Faithfully reflecting on procreative cloning is our responsibility as Christian citizens. We owe it to God, to our country, to the church as the body of Christ, and thus to ourselves. And most importantly, we owe it to children so conceived. As a people enmeshed in cultural ways, we also know ourselves to be called to find our bearings from the ways of God. It therefore behooves us to approach this topic cautiously and critically, paying very close attention to the facts, to the words, and to our culture's and God's ways. I have argued that we should not think in individualistic and adversarial terms, that we not speak in terms of rights, but that we affirm relational and communal ways and invoke love. We can be sure that any successful cloning will be heralded under the banner of love. Yet, as Lutherans, we are also realistic enough to know that love can "cover" a multitude of sins, for what love requires when we beget children through cloning is not self-evident. It is a form of begetting and, thus, is life-giving and creative. But would it be judged to be loving by persons so conceived? While the church would welcome such children in the name of God, we must ask before they are conceived: Would such an origin be a blessing or a burden to cloned children?

My conclusion is that we should oppose human cloning on moral grounds. Such begetting gives too much control to begetters over the begotten. Thereby, cloning deprives the child of too much: two parents and two lineages and a unique start in life that is not overshadowed by an existing physical identity carefully chosen and already designated with an identity and human image. Such a lot in life is too heavy, constraining, and cruel for any child. By contrast, the image to which biblical believers testify and to which the child should aspire offers a choice rather than a fate. And while the divine image also imposes a burden, that weight is light, freely borne, and genuinely loving. What, then, should be the witness of our church? Unless human cloning can be shown to be genuinely loving toward children, we should oppose such cloning on moral grounds. Politically, we should support the current ban of federal funding of human cloning projects that was imposed because the process is not safe for children. We should also seek a permanent ban on research leading to "reproductive" cloning even if it becomes "safe," as well as discourage it in private enterprises. We should be clear in explaining why we conclude that God's ways are good for children, for parents, and for our country but are incompatible with this mighty technology that promises us children in our own image.

## Endnotes

1. Leon R. Kass and James Q. Wilson, *The Ethics of Human Cloning* (Washington, D.C.: The AEI Press, 1998), pp. 3-59. Kass' essay, "The Wisdom of Repugnance," appeared first in *The New Republic*, June 2, 1997.
2. John A. Robertson, *Children of Choice: Freedom and the New Reproductive Technologies* (Princeton, N.J.: Princeton University Press, 1994), 18.
3. John A. Robertson, "Two Models of Human Cloning," *Hofstra Law Review*, Vol. 27, No. 3 (Spring 1999), 609-638.
4. *Ibid.*, 619.
5. *Ibid.*, 638.
6. Robertson, *Children of Choice*, 169.
7. "It presupposes that children born of cloning are waiting in the void of nonexistence to be summoned into existence and that if they do not receive the call to life, they are harmed." National Advisory Board on Ethics in Reproduction, "Report on Human Cloning through Embryo Splitting: An Amber Light," *Kennedy Institute of Ethics Journal*, vol 4, no. 3 (September 1994), 258. While here cloning refers to embryo splitting, the point applies to cloning defined as nuclear transplantation as well.
8. Jean Bethke Elshtain, *Who Are We? Critical Reflections and Hopeful Possibilities* (Grand Rapids, Mich.: William B. Eerdmans Publishing Company, 2000), p. 103.
9. *Ibid.*, p. 121.
10. Joseph Fletcher, *The Ethics of Genetic Control: Ending Reproductive Roulette* (Garden City, N.Y.: Anchor Press/Doubleday, 1974).
11. Leon R. Kass, *The Ethics of Human Cloning*, 27.
12. *Ibid.*, 78.



## Let the Church First Be the Church: Thinking Theologically and Speaking Clearly about Reproductive Cloning

(A Response to Hans Tiefel)

Thomas D. Kennedy

*This is what we have come to expect from religious authorities: dogmatic pronouncements without any support external to a particular religious tradition, self-justifying appeals to a sect's teachings, and metaphor masquerading as reasoned argument. And, of course, the interpreters of God's will invariably fail to agree among themselves as to precisely what actions God would approve.*

Ronald Lindsay, "Taboos without a Clue: Sizing up Religious Objections to Cloning"<sup>1</sup>

Let us try to be candid and clear at the outset. If the church has any particular word to say on the issue of cloning (or, for that matter, any other issue of medicine and morals), it will be because of who the church is and what has been entrusted to the church, not because of some general surfeit of moral wisdom in churchfolk. There is little reason to think that we will find in the church large numbers of those who are markedly superior, morally speaking, to those outside the church. We've no reason to think that those churchfolk who are moral saints, who are people of uncommon moral goodness, will be able to articulate, in a language accessible to all comers, their moral judgments, the reasoning that has led them to the conclusions they've reached on any particular issue. In short, the gifts to the church are not necessarily those demanded by Mr. Lindsay. The church *qua* church may have no great insight into the best arguments that come from outside the tradition. That is nothing for which the church owes an apology to Ronald Lindsay or anyone else. If the church will address the issue of cloning, it should do so with those gifts, with that wisdom, that is uniquely the church's. Having thought through the issue, *qua* church, we may then attempt to translate our understanding into the language demanded by Lindsay. But that project must always await an assessment of the immediate cultural context and the church's peculiar calling in that context. The church must first be the church, must first know, speak to one another, and live the truth entrusted to it if there is to be a healing for the nations.

Hans Tiefel's counsel that we not leave the topic of cloning "to the experts and their use of words," rather, that we "seek to understand human cloning in the light of faith," is, thus, welcome, implicitly acknowledging the only expertise the church can claim to have, the expertise of faith in response to God's disclosure. "The task of Christian ethics is to relate everything to God," Tiefel says and, therefore, "whatever we say about human cloning . . . ought to resonate with God's ways" as witnessed to by Bible, tradition and liturgy. Helpful words, to be sure, and especially relevant to our thinking about cloning for reproductive purposes. Following a brief summary of Tiefel's paper, I will articulate several theological concerns that go beyond those provided by Tiefel and which should be prominent in the church's thought and speech about reproductive cloning.

Briefly, Tiefel first approaches a cluster of arguments that reproductive cloning is morally problematic because it is asexual reproduction and, as such, *unnatural*. Tiefel finds wanting the "unnaturalness" objection to cloning. First, new technologies require successor generations to rethink what is natural; that is to say, nature is not fixed, static for all time. Cloning is novel, to be sure, but unnatural? Secondly, cloning can be understood as just a further, apparently extreme, stage of technological reproduction and so but another of God's ways requiring human agency; cloning need be no more dehumanizing and unnatural than any other means of reproduction requiring assistance. Thirdly, charges that something is "unnatural" are themselves often morally repugnant, expressing a contempt for what is good but strange, rather than what is genuinely hostile to the ways of God. Finally, worries about separating sex and procreation are, at best, shrouded in mystery. Lutherans worry little about decoupling sex and procreation when the aim is not to procreate, Tiefel argues. Likewise, when the aim is to have a child, reproduction without sex (e.g., for the infertile or the genetically maleficent) may appear to be the blessing of God. Thus, unnaturalness objections fail, according to Tiefel.

If we Lutherans ought not to confuse ourselves with Roman Catholics (for whom an appeal to nature carries much weight), neither should we be content to be only Americans, Tiefel continues. He deftly discusses the proliferation of rights and rights talk in American society, as represented by the legal theorist John A. Robertson. For Robertson and for American individualism, reproductive rights (one's entitlements not only not to be interfered with, but an equal access to resources necessary to make possible the desired reproductive activity) trump all other concerns including the well-being of would-be children. As Tiefel notes, the language and the commitments of American individualism are a great deal less than conducive to the expression and development of robust Christian identities.

Having reminded us of the Lutheran themes of sinful human nature and our essentially social character and the realism about corruption that flows from the former, and the reminder of the immediate social context that follows from the latter, Tiefel concludes by raising the question, "Could human cloning express a love like God's love?" His answer is a qualified "No." Qualified in that God is "pro-life," so that the promise of life is expressive of love. But, finally, "No, the practice of cloning does not comport well with the love of God." Cloning will require a quality control of that which is created that is incompatible with the unconditional love of God and that conditional love of her genetic parents is likely to follow the clone throughout her life. Furthermore, the clone is likely to be confused about her identity, her parents and her kin and, thus, unable to delight in her life. Finally, the control that is expressed in cloning is likely to be experienced by the clone as "despotism" and domination." Better, Tiefel concludes, not to clone.

### Speaking Theologically about Cloning and Reproduction

Although I find Tiefel's discussion most helpful, I believe there are additional theological resources we do well to draw upon in discussing reproductive cloning. His rejection of the "unnaturalness" objections to cloning, his rejection of the reproductive rights arguments for cloning, and his rejection of cloning are, finally, I think, rejections based upon a respect for persons (parents, would-be parents, children, and would-be children) a respect not obviously incompatible with the God who is revealed in Jesus Christ. But to say what is not obviously incompatible with faith and faith's God is not the same as integrating "our heads, our words and lives with what we believe, confess and worship." His objections to reproductive cloning appear most frequently in a language closer to that of Lindsay than of Luther, or so it seems to this reader more accustomed to what Lindsay requires.

How might a theologically richer discussion of cloning go? Christians had better be able to say something clearer on the nature of nature and what that means for us than Tiefel here delivers. "I believe in one God . . . the Creator of heaven and earth," we confess. Why do we sometimes speak the language of "peace, justice, and the *integrity of creation*?" What does it mean for cloning to confess the God revealed to us in Christ Jesus as both creator and redeemer of fallen creation? This confession requires us, first of all, to take seriously our status as embodied creatures, as bodies, but not only bodies. We recognize human life as good and the human body as essential to our identities as persons. Medicine, as considered by Christians, must be to serve this good of bodily life. As Michael Banner has suggested, medicine fails in its calling both by "withdrawing altogether from the service of the body" and "by converting service [to the body] into manipulation."<sup>2</sup>

The problem with the mere manipulation of human bodies is the failure to recognize the created order as having a form, a meaning, independent of our own projects. To confess God as creator is to recognize natural limits (limits entailed by the meaning of natural objects as created by God), to what we should do. Such limits, Oliver O'Donovan rightly points out, "will not be taught us by compassion, but only by the understanding of what God has made, and by a discovery that it is complete, whole and satisfying."<sup>3</sup> Believing in God's creation as having form and meaning independent of our projects does not prohibit the expansion of technology. It does require us to ask of each new technological innovation, does this respect the meaning of God's created order or does it manipulate it to achieve our purposes?

Having thought theologically about the nature of creation, having more deeply plumbed the confession that God is maker of heaven and earth, we ought to find the 'unnaturalness' objections to reproductive cloning a great deal more central and a good deal less mysterious than does Tiefel. To engage in a reproduction that so radically unyokes what God has yoked together in creation is to manipulate human bodies, rather than to serve them in their pursuit of creaturely ends and to violate the integrity of creation.

### From Creation to the Family

If the prospects of cloning require us to think more deeply and speak more clearly about the goodness of creation, they likewise require us to develop our understanding of the divine mandates or "orders of creation," the family in particular. The chief attraction of reproductive cloning is that it offers the potential for an infertile couple to have a child genetically or biologically related to at least one of the rearing parents. A second use of reproductive cloning would

enable an individual or couple for whom sexual reproduction is possible to have a child without sexual reproduction.<sup>4</sup>

Both Tiefel's embrace of the modern tradition of human rights and his worries about American individualism are well-founded. He is right to remind us how much richer is our theological and liturgical vocabulary than the rights language of law. But until the church speaks a clear theological word on the family, its nature and its relation to the social order, the language of churchfolk will default to the language of legal rights. If families are but the voluntary associations of (at least) two individuals who have consented to a relationship recognized by law, the rights language of American individualism will do perfectly well. If, by contrast, a family has its origin in the fellowship of two who are different, yet called into unity by God, then we require a vocabulary of faith, not merely the vocabulary of rights. What does the church, today, know about the family? What is the church willing to say about family at this time and in this place?

It is not only those who would consider reproductive cloning who await this word from the church. It is a word awaited, as well, by infertile individuals and couples who wish to become parents, those who may be excused for thinking of technological reproduction solely in the language of the marketplace and American law, deafened as they are by our many and conflicting voices on the importance of genetic relationships in a family, the status of "spare" embryos conceived *in vitro*, the costs of technological reproduction, and our obligations as stewards in a world of haves and have-nots. *Reproductive* cloning presents a challenge for the church not first and foremost because it is cloning, but because it is possibly a new and exorbitantly expensive—in terms of the cost to embryonic life as well as financially—means of technological reproduction. Speaking clearly about reproductive cloning requires us first to speak clearly about technological reproduction.

## In Sum

- The church's first task is to be the church, a community of those faithful to the Creator God who reveals himself in Christ Jesus.
- Faithfulness to God will require us to read God's creation rightly in Jesus Christ, discovering in creation a form and meaning perhaps not apparent to all.
- The practice of reproductive cloning does not comport well with the meaning of humans as creatures of God and with the integrity of creation.
- Christians must also reflect upon cloning in light of a theology of family and the divine orders.

## Endnotes

1. Ronald Lindsay, "Taboos without a Clue: Sizing up Religious Objections to Cloning," in Glenn McGee, *The Human Cloning Debate*, (Berkeley: 1998).
2. Michael Banner, *Christian Ethics and Contemporary Problems* (Cambridge, 1999), 60.
3. Oliver O'Donovan, *Begotten or Made?* (Oxford, 1984), 12.
4. These distinctions are from John A. Robertson's "Two Models of Human Cloning," in *Hofstra Law Review*, Vol. 27, No. 3 (Spring 1999), 609-638.



## Reproductive Cloning (A Response to Hans Tiefel)

Robert Roger Lebel

Prayerful posture and thoughtful analysis characterize the writings of Hans Tiefel. Reading his work is both an intellectual treat and an invitation to gospel fidelity. His concern for language and its ownership, its role in communication and its control of the issues is well placed. My life as a Christian geneticist is made complex and sometimes frustrating when scientific colleagues consider me lightweight because of my faith, while fellow believers suspect me of consorting with the enemy—technology run wild pursuing unholy goals. On my better days, I discover my role as a helper in translating the languages, bridging the divides; then my vocation is clarified.

So the effort to transpose talk of cloning into images of faith becomes a battle for the high ground of vocabulary; the king of the hill controls the conversation. Of course, it is always more pleasant when the protagonists elect to join in a common effort to advance human thinking, rather than perceive themselves as rivals, one of whom must prevail while the other retreats in defeat.

Comparison to the events which surrounded introduction of *in vitro* fertilization is apt. I recall a prominent practitioner of IVF, after publicly announcing his disinterest in participating in reproductive cloning. I congratulated him on his stance; he said glibly that this problem would resolve in the same way that IVF did, and that “soon we’ll all be cloning in our kitchens.” If the inevitable intransigent advance of medical technology is hampered by controversy due to transient protest by conservatives, only to be followed by the triumph of the elite innovative vanguard, then this attitude is justified. With Tiefel, I would hope for better from myself and my fellow humans. But that is because we resist temptations to cynicism and opt rather for gospel commitments and the promise of grace.

I would not exercise myself about questions of acceptance for the resulting child of reproductive cloning. Just as there are families prepared to adopt handicapped children today, providing for them loving and

nurturing homes, there should be no need to doubt that such acceptance will be ready for these children. Nor should it take long for classmates and others to overcome superstitious anxieties about their full humanness. And after all, nurturing (mothering and fathering) has long been blurred across the lines of genetic relatedness, both for good and for ill, in a wide variety of historical settings. Who is that boy’s mother? Why, the woman who raises him, of course. That was already well established long before fancy new reproductive technologies were introduced. As for concerns about animation, the inviolability and uniqueness of the soul of a cloned person should be no more difficult to defend than that of a monozygous twin derived from a single zygote, or of a chimaera composed of two fused pre-embryos.

Persons who seek to avoid genetic disease in their children by employing “donor” eggs or sperm hope and presume that he or she does not have high risk of carrying mutations which are known to exist in the people seeking a child. For years, we have warned that the “donors” are not necessarily free of genetic disorders of other kinds, unanticipated and potentially just as worrisome as the one being avoided. The great advantage of reproductive cloning is supposed to be that it sidesteps that concern by showing that the “donor” is already a successful, perhaps even superior adult. Or, if self-cloning is the goal, then the parent is known or presumed to lack any important genetic defects. So Tiefel imagines the child reflecting with pleasure on the parents’ not having “played roulette” but electing a sure route to eugenic bliss.

That is precisely where the point is lost if one understands genetics. On genetic grounds, we may embrace John Robertson’s willingness to reject cloning if it will entail significant risk of harm to the product child, and then confront him with some facts to which I have not found much attention being given. The problem is somatic mutation; it presents us with a compelling reason for caution/concern about potential harm from reproductive cloning.



The fertilized egg (zygote) is a single cell with a complete set of human genetic material encompassing all the information needed for all the functions of a complete human body. That entails approximately 3 billion base pairs of DNA. Translation of that potential into a final product requires cell divisions to accumulate 100 trillion cells in an adult. Every day of routine living calls for some 100 billion cell divisions to replace cells being lost by normal wear and tear. It is inevitable that mutations take place; most are inconsequential, but occasionally one brings about a change in cell behavior, and some such changes lead to development of tumors.

Every day geneticists consult with persons seeking information about increased familial risk for cancer. We explain the above process to them, including a description of how a person inherits two copies each of genes which protect cells from derangement into tumor; cancer occurs only after a sequential cascade of mutation events, disabling the genes which maintain the cells' normal specialized functions. Some persons begin life with one copy of a protective gene already disabled by mutation, but most individuals who develop cancer had all their genetic protection intact at the time of fertilization, losing crucial elements of that system over the years.

If this is true (and we have every reason to believe it is), then on what basis am I confident that the nucleus chosen to produce a cloned offspring for me lacks important accumulated somatic mutations, placing that child at high risk of genetic disease which was not present in me (or my chosen hero "donor") or in our families? Mutations are going on all the time, and many a family is tripped up by a severe one (e.g. Huntington disease), or surprised by a trivial one (heterochromia - different colored eyes). So the child may have my facial conformation and mid-life balding pattern, but also be affected by a genetic disease of which I never thought. I find this daunting, and am surprised not to find it in prominent places of the discussion about cloning. This might be a transient problem, if technology allows for screening of thousands of potential mutations in a pre-embryo, but such an optimism demands considerable progress before it can be fulfilled.

If we are to take some enlightenment from the trinitarian doctrine of relational existence within God and within human community, then we can accept joyfully the notion that love should be the criterion for all ethical debate and scientific decisions. If the cloned child cannot be brought to fullness of life safely in someone else's image, then the process should be rejected. We are far from being able to assure such safety in the production of a cloned individual, and so should not attempt the task.

Humility is just as important as courage in the effort to be a created co-creator, to act decisively and constructively as an agent in the great scheme of evolutionary progress. An example of the limits of our vision haunts my mind. In the 1630s, Jesuit missionaries accompanied the explorers to New France. They were captured and tortured by the native Americans. A layman assistant named Guillaume Couture was later offered an opportunity to join the priesthood, but elected rather to serve as an ambassador between the new settlers and the natives (whose language he had learned, and whose respect he had gained by his courage). His former companions were later martyred. He married, raised a family, and died in bed at age 84. His grandson's great-grandson had a daughter, whose granddaughter's granddaughter came to be my mother.

If Couture could have seen my existence, which is one of the consequences of his decision to marry rather than become a priest, how would it have changed his decision process? The question is meaningless, unanswerable. None of us can know or even imagine the remote events that follow from our actions. But every reproductive choice made by every person has consequences 300 years later in the human community. The fact that those consequences are also mediated through numerous decisions made by others in the meantime does not diminish the mystery of my contribution to the process. Thus, we should make our choices carefully and with well informed consciences (so, have courage!), but also recognize the limits of our vision (so, have humility!).

## **Section Three**

# **Specific Questions**

**Should We Clone for Therapeutic Purposes?**

# Cloning for Therapeutic Purposes: Ethical and Religious Considerations

Mark J. Hanson

## Abstract

*This essay reviews how cloning techniques may be used for therapeutic purposes, analyzes ethical and religious implications, and makes recommendations for the ELCA. Although cloning may bring many potential benefits, they remain uncertain. Furthermore, human embryo research is morally troubling. At this time, therefore, alternatives to human cloning for therapeutic aims should be sought. In public discourse, the ELCA should emphasize the value of the human embryo, the relativity of health, the principle of justice, and its commitment to truthfulness to its own tradition. The church should support the laudable mission of medical research, while speaking to the moral concerns often sacrificed in the name of scientific progress.*

The birth of a lamb and a subsequent firestorm of worldwide controversy and debate marked the first successful cloning of an adult mammal from a somatic cell. Much of this debate has focused on the justifiability of human cloning for reproductive purposes. But the advent of cloning technologies has brought with it not only the potential for biomedicine to provide a new means of assisted reproduction, but also novel avenues in research and therapeutic application. A distinction can therefore be made between reproductive cloning and therapeutic cloning. The latter refers to techniques in which cells are cloned and developed to the blastocyst stage with no intent to transfer the resulting blastocyst to the uterus for reproduction, but rather, with the intention of research and application for therapeutic purposes.<sup>1</sup>

The range of research and therapy options occasioned by cloning through somatic cell nuclear transfer techniques is wide and even potentially revolutionary for biomedicine. Yet many of these possibilities—such as those deriving stem cells from human cloned human embryos—implicate moral controversies that are as likely to be as controversial as reproductive cloning. This essay will review these research avenues and potential applications, analyze the ethical and religious considerations they raise, and provide normative recommendations regarding how these techniques might be considered and applied.

## Possible Cloning Research and Therapeutic Application

Cloning by somatic cell nuclear transfer was long considered by scientists to be merely a subject of science fiction. Thus, when an adult sheep was successfully cloned in 1997, many assumptions about cell behavior and embryogenesis had to be rethought, and new possible applications came into consideration. The first set of research issues facilitated by cloning includes a variety of basic research questions related to cellular behavior. For example, because the nucleus of the cells of a newborn clone is from cells of an adult, there is speculation that genetic material of the offspring will actually be aged, leading to premature decline and death. Thus, research on populations of cloned animals may yield insights on certain mechanics of the aging process.<sup>2</sup> Genetic mutations and the genetic bases of cancer may also be studied by examining the cells of subsequent generations of cloned offspring. In addition, cloning facilitates the study of the genetic reprogramming that occurs when a nucleus from an adult cell is transferred to an enucleated egg and redirected to function as an embryo.<sup>3</sup>

A second, more problematic area of study and potential application stems from the fact that nuclear transfer is the only technique for “gene targeting” in livestock. Selective manipulation or “knocking out” of genes in animals may allow for development of animal models to study diseases in human beings (such as for cystic fibrosis) or creation of animals whose organs would not as easily be rejected when transplanted into human beings (xenotransplantation), or to inactivate genes related to disease (such as “mad cow disease”), thereby negating the risk of transfer to human beings. Herein lie many potential benefits to humans and even to animals. Even genes can be manipulated more effectively. Of course, genetic manipulation of any kind is also controversial.

Third, and less controversial, would be the use of cloning to produce genetically identical animals that possess certain desirable qualities, either for agricultural

or other uses. A mammal that has been genetically engineered to produce a certain beneficial protein in its milk, for example, could be an efficient and cost-effective means of producing medications for human beings. Cloning that animal would also be the most efficient means of producing a genetically identical animal to continue that process, with a therapeutic benefit for human beings.

Perhaps the most controversial and revolutionary aspect of cloning research relates to the effectiveness of cloning to generate not only embryonic stem (ES) cells, but especially, ES cells that would be genetically compatible with the donor of the adult cells cloned to produce them. An embryonic stem cell is the most basic type of stem cell, and it is found in the inner cell mass of the early stage embryo (or blastocyst). These cells have the remarkable properties of being virtually immortal and undifferentiated; that is, capable of developing into any kind of differentiated human cell found in the body. The promise of these cells is that they could be used eventually to generate tissues and even whole organs for transplantation into human beings. Several thousand people in the United States alone die waiting for organ transplants. And cellular or tissue transplants hold the promise of treating a range of conditions such as diabetes, blood disorders, cancer, bone and cartilage conditions (such as arthritis), Parkinson's disease and spinal cord injuries. Research on stem cells also offers promise in the study of beneficial and toxic effects of drugs and other chemicals on human beings.<sup>4</sup>

Stem cells come in different varieties, of which the embryonic stem cell is perhaps the most basic and potentially useful form. Furthermore, they can be derived from various sources: 1) embryos created by *in vitro* fertilization (IVF) for infertility treatment that were not implanted because they were no longer needed, 2) embryos created by IVF expressly for research purposes, and 3) embryos resulting from somatic cell nuclear transfer (SCNT) or other cloning techniques.<sup>5</sup>

Embryonic stem cells might even be produced through the production of hybrid embryos, using nuclear transfer. In fact, scientists have already attempted to place the nucleus of an adult human cell into an enucleated cow egg to produce a hybrid from which stem cells can be derived. The tremendous medical advantage of ES cells derived from cloning is that they can be derived from the differentiated cells of a donor who needs a transplant of tissues or an organ for medical treatment. Tissues derived in this manner would be genetically compatible with the patient, and thus, tissue rejection problems would be eliminated. Without genetic compatibility, tissues produced from ES cells from another source would be rejected by the recipient's immune system, or the recipient would need to take medications to minimize

rejection. In short, ES cells derived from cloning would be highly medically beneficial and efficient. Relative to other sources, they would also likely be cost-effective. As with all research with embryos, however, ES cell research is morally problematic, especially because stem cell derivation results in the death of the embryo.

In addition, ES cells can also be genetically manipulated with *relative* ease.<sup>6</sup> This means that ES cells provide a powerful and tempting means by which genetic alterations can be performed, along with assisted reproductive techniques, to create a genetically altered individual, including a human being. In doing so, however, the germ-line of the individual would also be altered, meaning that all subsequent generations would also carry the genetic change occasioned by the intervention in the stem cell used to create the embryo. In animals, such techniques might lead to treatment models for human beings. In human beings, however, the issue of germ-line intervention is very ethically controversial.

In sum, cloning (SCNT) technology provides many powerful avenues for research and therapeutic application. This is especially so when considered in combination with other techniques facilitated by cloning, such as ES cell derivation and genetic manipulation. It is the potential usage of these techniques in combination that has recently prompted ethicists to question the value of examining the ethical implications of the various technologies in isolation.<sup>7</sup> Truly, the ethical questions of several spheres of biotechnology are increasingly complex and inextricably intertwined.

## Ethical and Theological Considerations

Clearly, the potential benefits of cloning research present us with possibilities to benefit human health and well-being. All else being equal, we would be obligated to pursue these benefits. But, to varying degrees, avenues of cloning research and application implicate the morally questionable practices of embryo research and, when combined with genetic manipulation, new powers for human beings to assume control over the genetic heritage of humans and nonhuman animals. When stem cells are extracted and human embryos are destroyed, an impingement of important moral values has occurred to some extent. Thus, cloning research creates moral dilemmas that are not easy to understand or resolve with straightforward justification.

Cloning results in a cell that soon becomes an embryo (or, what some would call a pre-embryo or blastocyst). Ethical deliberation must begin with this entity in itself, the embryo.<sup>8</sup> Experience from a long history of debate over the issue of abortion reminds us that this issue is highly controversial and divisive.



It is not an issue that can be settled by science. And even within many religious and philosophical traditions, a range of positions exists. The best that traditions can do is to promote ongoing reflection on the issue, utilizing the best theological and non-theological resources available. Ultimately, however, it is an issue destined to remain rooted in mystery. This entails that any ethical argument that rests on assumptions regarding the status of the embryo will be contested and uncertain.

This controversial question cannot be resolved here, obviously, nor can even all the relevant arguments be rehearsed. Cloning technologies will press the Christian church to continue to grapple with the question of whether the human embryo created by cloning is to be regarded as the “weakest and least advantaged” among us and therefore deserving of special respect, or whether it warrants respect, but in a way that can be balanced against other competing goods, such as the potential benefits promised by cloning research.<sup>9</sup>

In its social statement on abortion, the Evangelical Lutheran Church in America (ELCA) has stated that “Human life in all phases of its development is God-given and, therefore, has intrinsic value, worth, and dignity.”<sup>10</sup> The statement also implies, however, that moral concern and respect for the developing embryo increases with progressive development of the embryo and subsequent fetus. Despite controversy about this issue, the view that the embryo warrants more moral respect than mere tissue and that this respect ought to increase with embryonic development, is rather widely held. Even so, if one does not grant the embryo in all stages of development the full moral respect one would accord an adult human person, but rather holds a view of incremental respect for developing human life, therapeutic cloning and research test the degree to which the embryo in its earliest form is valued.

The position of the ELCA on abortion recognizes the tragic choices that must be made, sometimes resulting in the death of an embryo.<sup>11</sup> Although still tragic, destruction of an embryo may be justified to save the life of the mother, for example. On such matters, the Lutheran church has promoted pastoral support for such decisions, but, for good theological reasons, left the issue to individuals to decide according to their own consciences. The question raised by therapeutic cloning, however, is whether consistency may require that embryo destruction also be similarly justified when the benefits from those therapies result in lives saved, or at least saved from long-term chronic and debilitating conditions. Such may be the promise of technologies resulting from the extraction of ES cells from cloned embryos. A moral or policy judgment on which research is justifiable

will have to rest on an argument that balances the destruction of embryos against the therapeutic benefits resulting from that destruction. I will put forward a recommendation on this issue after a wider consideration of related questions.

A second major set of ethical considerations regarding cloning involves the issues surrounding embryo research and the creation of a cloned embryo for purposes other than reproduction. Within Roman Catholic moral theology, creation of embryos through assisted reproductive technologies is, in itself, already immoral because the unitive and procreative aspects of procreation have been severed. Within other religious and moral traditions, the creation of an embryo using technology has largely not, *in itself*, been considered immoral within the context of assisted reproduction. Of course, cloning as a unique, asexual means of assisted reproduction is morally problematic for its own distinctive reasons. But in the context of research and therapeutic application, at least the problem of creating an embryo that lacks a unique genome is not as significant because the embryo will not be transferred to a uterus and brought to term.

Embryo research remains controversial. Currently, with the exception of a few state statutes, there is no regulatory system to govern human embryo research in the United States. Private research may take place virtually without restriction. Federal funding is more restricted, disallowing “1) the creation of a human embryo or embryos for research purposes; or 2) research in which a human embryo or embryos are destroyed, discarded, or knowingly subjected to risk of injury or death greater than that allowed for research on fetuses *in utero*.”<sup>12</sup>

Many thinkers, as well as past and present national ethics commissions, have argued that when human embryo research promises considerable scientific and therapeutic value, it is morally preferable to use embryos that were created for, but are no longer needed for, reproductive purposes, such as surplus embryos created for *in vitro* fertilization (IVF) that would otherwise be discarded. Because cloning involves the deliberate creation of an embryo, research that would result in its destruction is considered to be more morally problematic. In fact, in its report on ethical issues in human stem cell research, the National Bioethics Advisory Commission (NBAC) states that despite uncertainty regarding whether human cells created by cloning have the full potential to produce a human child, success with animal cloning suggests that they might. Since embryonic stem cells from other sources allow for science to continue research, that research should continue using those (for them, acceptable) sources (i.e., cadaveric fetal tissue for embryonic germ cells and leftover embryos from infertility treatments).

Furthermore, because many people would find the practice morally repugnant, the commission recommends that “Federal agencies should not fund research involving the derivation or use of human ES cells from embryos made using SCNT [cloning] into oocytes.”<sup>13</sup> The implication here is that embryo research using cloning to derive human ES cells is less acceptable than research using ES cells from other sources of embryos. The caveat to this recommendation, however, is that, “Nevertheless, the medical utility and scientific progress of this line of research should be monitored closely.”<sup>14</sup> In fact, the commission implies that if the therapeutic potential of cloning as a source of ES cells begins to be born out by ongoing research, the balance of the moral concern over the creation of an embryo versus the value to society of the SCNT embryo will have to be re-evaluated.<sup>15</sup>

Scholars have debated whether it is morally preferable—or, less objectionable—to use embryos already created for reproductive purposes rather than creating embryos solely for research. This debate need not be fully rehearsed here. It is relevant in that it highlights the morally problematic nature of creating embryos solely for research purposes, as well as the ethical preferability of seeking alternatives to that practice, such as using embryos created with reproductive intent, since they were not created *merely* as a means for research ends. But again, the NBAC report reinforces the conclusion that if a great therapeutic potential from deriving ES cells from cloning seems realizable, the practice might be justifiable in the future, even though the creation and destruction of embryos for research and therapeutic purposes results.

The morally problematic nature of embryo research entails, therefore, an ethical obligation to seek less morally problematic alternatives to achieve the same benefits. Because research in this area is at a relatively early phase, much can still be learned from animal studies, especially regarding such issues as cellular aging, embryogenesis, and the potential benefits of ES cells. In addition, research is being conducted on varieties of stem cells derived from types of adult cells which may yield the same benefits of ES cells without implicating the same ethical problems raised by use of ES cells. Similarly, research into processes in which adult cells could be “de-differentiated” and “re-differentiated” to be used in cellular therapies is another avenue to pursue. Other possibilities exist as well. The NBAC report acknowledges, for example, that “perhaps . . . it will be possible to use SCNT without the creation of an embryo.”<sup>16</sup>

Another possible source of stem cells may come from transferring the nucleus of human cells to an enucleated cow egg. The result is a “hybrid embryo” that would not be a viable human embryo, but which

*may* produce viable stem cells, genetically compatible with the donor of the human somatic cell nucleus. The idea of mixing species, especially human and non-human species, is repugnant to many, apart from the scientific concern about mixing the mitochondrial DNA from the enucleated cow egg with the DNA from the human cell nucleus. If the resulting cell is non-viable, however, the concerns about creating a “chimera”—an organism with DNA from two species—are considerably diminished. At present, human and animal genes are exchanged selectively to produce a product like insulin, or eventually, animal organs compatible with human physiology.

The problems of organ and tissue donation might also be resolved in other ways. Genetic manipulation of cell lines to solve tissue rejection problems may be possible. Xenotransplantation (i.e., cross-species transplantation) is also proposed as a new source. Such a “solution” might raise the remarkable choice of whether we would want to use animals genetically engineered with human genes to have compatible organs and risk transmission of AIDS-like diseases from animal to human populations, or destroy human embryos to obtain stem cells. At present, both potential solutions are still hypothetical, but both are being aggressively pursued by biotechnology companies. And research on human ES cells can still proceed, using cells from leftover IVF embryos, or with similar embryonic germ cells from cadaveric fetal tissue.

Some believe, however, that failure to do research directly with ES cells derived from cloning will result in delays that will have a human cost in lives and prolonged suffering. Others debate this. In short, there are viable alternatives to exploring the potential medical benefits that cloning, especially as a source of ES cells, may offer. They may also bear significant moral costs. But that, too, is uncertain.

To summarize my analysis to this point, it would seem that there is very little firm ethical ground on which to stand. The benefits of cloning technologies and the need for ES cells derived from cloning seem substantial, but are still quite speculative. If one’s moral stance regarding the status of an embryo and embryo research is such that no research would be allowed, therapeutic cloning research and application would be rendered morally illicit. But a stance that is anything less than that requires a process of moral deliberation and judgment that must always be tenuous. In other words, a view that affirms incremental respect for developing embryos and that allows for embryonic life to be taken to save other lives seems to leave some moral room for research that would result in the destruction of embryos, but only if the benefits of that research were weighty enough to warrant that conclusion. At present, deriving ES cells from cloning has not been established clearly as the

only means to such benefits. But this may change. The morally problematic nature of therapeutic cloning research obligates us to search for alternatives—whether alternative sources of ES cells or alternative therapies for conditions that ES cell technology could address that would be morally preferable—but they are also dubious and uncertain.

At this point, the other major issue raised regarding therapeutic cloning arises from the relative ease in which techniques of genetic manipulation can be utilized with cloning to create genetically engineered and identical animals for pharmaceutical or agricultural purposes or to introduce germ-line interventions into human populations to ensure that genetic defects are not only remedied in the immediate offspring, but in all subsequent generations as well. The issues surrounding genetic manipulation of animals are mentioned here because of the potential to benefit human beings, but lie beyond the scope of this paper. The potential to use cloning to intervene in the human germ-line, however, is a serious moral issue more directly related to human benefit.

Because germ-line intervention is a separate technology from cloning itself, I will not review in detail the ethical problems it raises. In brief, it may offer a cure for many diseases—in some cases, the most effective or only means of cure—and it is efficient because it prevents genetic defects in future offspring. It also offers possibilities to enhance human traits. Negatively, there are the uncertainties regarding the long-term genetic effects of such engineering on future generations, the impossibility of obtaining their consent, and fears of enhancement employed for eugenic purposes.<sup>17</sup> A separate debate will need to be conducted on these weighty issues. The connection with cloning as a “partner technology” that facilitates germ-line interventions, however, raises the issue of so-called “slippery slope” arguments; namely, that development of therapeutic cloning technologies present the temptation to couple with other technologies and proceed down paths that are fraught with ethical troubles in themselves. While accepting therapeutic cloning research does not logically entail such paths, they ought to demand our attention in this context.

### Other Theological and Prophetic Considerations

Much of the preceding discussion has outlined ethical and policy considerations that accompany exceedingly complex issues. I have also alluded to the central issues regarding the status of the embryo that the ELCA has spoken to in a limited way and to which the church must continue to speak. My discussion has presented the terms of the ethics and policy discourse, but has suggested little in the way

of the prophetic discourse that the church may be best situated to lead.<sup>18</sup> While this prophetic voice is not easily accommodated to the ethical and policy discussions of our contemporary pluralistic public discourse, it remains a voice that believers and non-believers alike can still find not only intelligible, but provocative and informative for their ethical reflection. What, then, can the church add in this prophetic voice? I suggest three theologically informed themes: 1) *the value of the human embryo as formed in the image of God*, 2) *the relativity of the good of human health and evil of human death and suffering*, and 3) *justice in resource allocation*. In addition, one might accompany these substantive themes with the concern to speak truthfully about its tradition.

First, as I have suggested, the question of the status of the embryo will remain a mysterious and unanswerable question in some sense. Yet, unanswerable questions are not alien to Christians, especially Lutherans, whose theology is driven by the acceptance of paradox and a dialectical methodology. Furthermore, Lutherans of good conscience disagree on this matter. The problem is, however, that individual decisions and social policies must be made, and leaving matters solely to individual conscience does not offer guidance.

The church is in line with the moral intuitions of many people when it recognizes that the embryo, from whatever means of its creation, has an intrinsic value that is worthy of respect. I believe this view is derived from the recognition that the embryo is human—it is derived from human life and contains a human genome—and will likely develop biologically as all human beings develop from conception to grave. This view also recognizes that what is made human is made in the image of God, and therefore possesses an intrinsic value that is independent of any particular version of the human form in its unique human physiology or capacities. Ethically, this position implies, first of all, that an embryo should not merely be created and disposed of at will and for any purpose. Its value entails some obligations toward how it is treated. But what are they?

The ethical difficulties are heightened by an “incrementalist view” of the respect owed to the embryo, as suggested in Lutheran church social statements. This sets up a terrible tension in understanding an entity to possess intrinsic worth, and yet in some way possess it incrementally. How can the measure of that worth be known at any point in development? And at what point can it be compromised to the extent of death? Any view that compromises treatment of the embryo as a full member of the human community is open to the balancing act of moral judgment that must weigh such issues as potential cures for diabetes and Parkinson’s disease against the moral value of embryos.



At present, direct research on cloned embryos to derive ES cells represents a very tempting route for research. But it is not one that should be pursued too quickly. Lutheran theological ethicist Gilbert Meilaender echoes an important reminder that the church should repeat; namely, that “we may sometimes need to deny ourselves the handiest means to an undeniably good end.”<sup>19</sup> The church loses any small prophetic edge it may have in such matters if it abandons the kinds of concerns it has for who is included in the community and the worth that embryos might very easily lose in the minds of people who grow accustomed to creating and destroying them, even for laudable ends. The church’s voice may be one of resistance, and even of obstruction to many, but if the church is to be truthful in its message, it should err on the side of the first tenet of its view on the human embryo—intrinsic value—when in tension with the second—incremental respect. Technology and its promises are dangerously seductive. Technology is dangerous because its heralded benefits may come at costs difficult to articulate and slippery to grasp. The results of that seduction may be great benefits, but even so, the church should be a voice in society that provides “meaningful resistance” whenever important issues of meaning are at stake.<sup>20</sup> And little is more meaningful than membership in the human community.

Morally, this position entails objecting to the creation of human embryos, through cloning or any other means, for the purposes of research. As far as regards cloning as a source of embryos, this view is also in harmony with the NBAC recommendation, which advocates for pursuing research by other means until more can be learned. But I believe the church should go beyond that and object to all forms of embryo research in which, as stated in current law, “a human embryo or embryos are destroyed, discarded, or knowingly subjected to risk of injury or death greater than that allowed for research on fetuses *in utero*.”<sup>21</sup>

Second, in voicing a message of protection for embryos, the church should also emphasize a conviction that the good of human health and the evil of human suffering and even death are relative, rather than absolute. It is clear that human health is good, and that pursuing it is a service of love to the neighbor and a Christian vocation for many. But health is not the greatest good, even if almost universally desired. The good of health is not a utilitarian good to be maximized without regard to means or other intrinsic values. The drive to eliminate all forms of suffering, together with the seduction to utilize a vast and fantastic array of biomedical technologies, is resulting in an assumption of increasingly greater powers of human beings over themselves and even their

own human nature (as variously as that might be interpreted). That death has been overcome by the cross and that health is an instrumental good to be used in service to God are messages that still need to be heard among the headlines of biotechnology’s latest sensational achievements. The moral implication is not that health care technologies should not be pursued, but that they should be pursued in the context of the other truths that the church should proclaim, and constrained by the values those truths represent.

Third, the church is always required to resist injustice, which is a manifestation of sin in this world. With each new technology, the church should continue to press questions of how resources are being invested and how the benefits and burdens are being distributed. Given the gamut of global medical needs, there is reason to doubt the justice of greater investment into new infertility treatments. Cloning for therapeutic purposes is still too uncertain to know of its cost-effectiveness, although history has almost always given us reason to doubt it.<sup>22</sup> In addition to providing guidance on technologies as they emerge, the prophetic voice of the church should continually press on issues of access to health care for all persons. It should also provide critique of the social conditions that contribute to the health conditions for which society seeks technological solutions, such as poverty, racism, addictive behaviors, unhealthy environments, unjust distributions of health care and other social goods that contribute to good health.

Finally, the church should, above all, strive to speak truthfully about the tradition it represents, and to seek moral discernment, drawing on the distinctive resources of its tradition, not only the judgments of scientists and philosophers.<sup>23</sup> By preaching that the Word, salvation, and the communion of believers are central to the very condition of health itself, the church reinforces the notion that healing and saving are notions that are rooted in the same divine reality.<sup>24</sup> The church can then speak more fully about what health, illness, and therapy actually mean in terms much richer than the narrow terms of technological applications of innovative therapies. A commitment to truthfulness will not allow the church and its followers to forget its central messages and be seduced by technological promises that come with significant moral prices to pay.

## Recommendations

In light of the preceding considerations, I summarize and propose the following recommendations for church policy regarding therapeutic cloning.

1. Recognizing the intrinsic value of human life, regardless of its stage of development, the ELCA should oppose at present (given the current state of the



technology) the deliberate creation of embryos by cloning or any other means merely for research.

2. Furthermore, on the same grounds, the ELCA should at present also object to all forms of embryo research in which, as stated in current law, “a human embryo or embryos are destroyed, discarded, or knowingly subjected to risk of injury or death greater than that allowed for research on fetuses *in utero*.”<sup>25</sup>

3. Recognizing the tremendous potential benefits to human health and well-being, the ELCA should endorse the pursuit of biomedical science and the value of the service rendered by those called to it.

4. Given the uncertainties of the current potential for embryonic stem cells derived from human cloning to be the sole or medically best source of cells for transplantable human tissues and organs, the ELCA should encourage exploration of means other than human cloning and embryo research to learn more about options and alternatives to meet those important medical needs, especially without the destruction of human embryos. Those means include study of stem cells from adult tissue and human mesenchymal stem cells and germ cells, and animal studies with stem cells of all kinds. The ELCA should also promote other means for meeting or preventing current medical needs, such as organ donation and healthier living conditions.

5. The ELCA should support study of other possible benefits from cloning research, such as studies of cellular aging, embryogenesis, and cancer, on cells of nonhuman origin.

6. The ELCA should convene consultations to develop ethical guidance on issues of germ-line intervention and other techniques of genetic manipulation that are further facilitated by cloning.

7. The ELCA should revisit the possible justification of human cloning as a source of ES cells if and when the technology advances to a point at which it is firmly established by a strong consensus of the scientific community that ES cells produced in this manner will be the *only* source of genetically compatible tissues and organs that will result in saving human lives that would otherwise be lost. Furthermore, it is morally preferable if the source of this were cells produced from cloning that were not capable of developing into viable human life. Only if life might be saved might the moral case be compelling enough to warrant embryo research on cells derived from human cloning.

## Concluding Thoughts

Too many uncertainties—scientific, ethical, and theological—plague therapeutic cloning research and application for there to be too many firm and timeless

conclusions at this time. Nevertheless, precisely because of these uncertainties, the church should cling to the resources of its tradition so that its ongoing processes of moral discernment may remain as true and distinctive as is possible in the radically changing circumstances in which it must offer guidance. I do not want to make too much of the dangerous kind of seduction that possible technological fixes may offer us. But I believe that the larger context of the erosion of values, moral pitfalls and moral opportunities is too often neglected in the narrow ethical and policy considerations that accompany each new technology as it seemingly springs upon us. The church remains a voice for those concerns, and ethical and policy discourses can only be enriched by it. It can only be hoped that the medical goals sought through those wishing to use cloning techniques can be achieved in ways that avoid or minimize the moral costs and tragic choices that these techniques lay upon us. If nothing else, the church should seek to ensure that the tragic nature of those costs and choices are not forgotten.

## Endnotes

1. Although this distinction is made elsewhere, I rely here on John A. Robertson, “Two Models of Human Cloning,” *Hofstra Law Review* 27, no. 3 (spring 1999): 609-638, at 611. It is important to note that while the term “therapeutic cloning” has become common in discourse on the topic, this form of cloning is not typically therapeutic for the cloned embryo itself. Rather, cloning is performed for purposes that may have therapeutic medical applications for other persons.

2. Alan Colman, “Somatic Cell Nuclear Transfer in Mammals: Progress and Applications,” *Cloning* 1, no. 4 (1999/2000): 185-200, at 190-93.

3. J. B. Gurdon and Alan Colman, “The Future of Cloning,” *Nature* 402 (1999): 743-46.

4. National Bioethics Advisory Commission, *Ethical Issues in Human Stem Cell Research*, vol. 1 (Rockville, Md.: National Bioethics Advisory Commission, 1999), 20-23.

5. *Ibid.*, 9-10.

6. Erik Parens, “What Has the President Asked of NBAC? On the Ethics and Politics of Embryonic Stem Cell Research,” vol. 2, commissioned papers (Rockville, Md.: National Bioethics Advisory Commission, 1999), I-4.

7. Erik Parens, “Hybrid Embryos, ES Cells, and the Bigger Picture,” testimony before the National Bioethics Advisory Commission, January 19, 1999.

8. To maintain some consistency with the literature on this topic and for the sake of stylistic simplicity, I will use the term embryo to refer to the result of SCNT, which is at least theoretically capable of being transferred to a uterus and developing into a viable offspring.

9. Gilbert Meilaender, testimony before the National Bioethics Advisory Commission, May 7, 1999.

10. Evangelical Lutheran Church in America, *A Social Statement on Abortion* September 1991, 2.
11. These choices are tragic in the sense that even though a choice may be justified, it, nevertheless, results in an impingement of an important moral value.
12. Public Law No. 104-99, Title I, §128, 110 Stat. 26, 34 (1996).
13. National Bioethics Advisory Commission, *Ethical Issues in Human Stem Cell Research*, p. 72.
14. *Ibid.*
15. *Ibid.*, p. 56.
16. *Ibid.*
17. For a fuller discussion, see Ted Peters, *Playing God? Genetic Determinism and Human Freedom* (New York: Routledge, 1997), 143-56.
18. James M. Gustafson, "Moral Discourse about Medicine: A Variety of Forms," *Journal of Medicine and Philosophy* 15 (1990): 125-42.
19. Gilbert Meilaender, testimony before the National Bioethics Advisory Commission, May 7, 1999.
20. Courtney Campbell, "Meaningful Resistance: Religion and Biotechnology," in *God- and Human-Made: Religion and Biotechnology Policy*, ed. Mark J. Hanson (Washington, D.C.: Georgetown University Press, 2001) (in press).
21. Public Law No. 104-99, Title I, §128, 110 Stat. 26, 34 (1996).
22. Mason and M. Drummond, "Biotechnology: A Special Case for Health Technology Assessment?" *Health Policy* 41 (1997): 73-81.
23. I am reminded of the importance of this theme by Gilbert Meilaender, (testimony before the National Bioethics Advisory Commission, May 7, 1999) and in the writings of Stanley Hauerwas.
24. See my "Defining Health and Health-Related Concepts: Conceptual and Theological Considerations," *Word & World: Theology for Christian Ministry* 21, no. 1 (summer 2001) (in press).
25. Public Law No. 104-99, Title I, §128, 110 Stat. 26, 34 (1996).

## Ethical Questions about the Uses of Embryos and Women in Therapeutic Cloning

(A Response to Mark Hanson)

Cynthia B. Cohen

I come to you from within the Anglican tradition, which has embraced a wide range of thinkers on the uses of biotechnology. These include C.S. Lewis, who warned that when we reduce our human species to the level of “mere Nature, the being who stands to gain and the being who has been sacrificed are one and the same.”<sup>1</sup> They also encompass Joseph Fletcher, who claimed, contrary to Lewis, that our mastery over nature, including our ability to manipulate gametes and embryos, displays that which is quintessentially and radically human.<sup>2</sup>

Various bodies within the Anglican Communion have commented on matters related to embryos in differing voices. Thus, the General Convention of the Episcopal Church resolved in 1994 that “All human life is sacred. Hence, it is sacred from its inception until death.”<sup>3</sup> It went on to acknowledge that abortion is appropriate in some situations. This led David Scott, an Episcopal moral theologian, to wonder how, if all human life is sacred, abortions can be justified at all.<sup>4</sup> Meanwhile, another branch of the Anglican Communion, the Church in Wales, concluded that although it is not appropriate to create embryos for research purposes, it is ethically acceptable to experiment with “spare” frozen embryos remaining after the completion of *in vitro* fertilization procedures.<sup>5</sup> This leads the reader to ask why is it acceptable to use already created embryos in research, but not to create them for such research in the first place. Each group took a somewhat different view about what should and should not be done with human embryos, and each could be queried about internal and external consistency.

The Anglican Communion is not a confessional religious tradition. That is, it has no defining statements out of an Augsburg or a Westminster and no single founder from whose declarations a line of normative positions can be derived. Instead, the Anglican tradition is grounded in Scripture as celebrated in worship, found primarily in the Book of Common Prayer. It expresses its faith as a way of life that is not only sacramental, but also evangelical,

theocentric, incarnational, and corporate.<sup>6</sup> I had supposed that because the Anglican tradition is composed of these various strands, thinkers within it felt encouraged to adopt diverse ethical approaches to biotechnology and the use of embryos. I also thought that this variety of approaches would not have sprung up were it a confessional tradition. Yet I find within the Lutheran tradition, too, that divergent voices speak out about our relation to nature and our role as co-creators. Here, too, we hear varying statements about the intrinsic value of human life at various phases of its development. This variety of approaches within the Evangelical Lutheran Church in America (ELCA) makes me feel very much at home and may lead me to abandon my supposition that a confessional church will necessarily be monolithic in its thinking.

My Anglican background explains why Mark Hanson’s paper on therapeutic cloning<sup>7</sup> stirs a sense of familiarity and admiration in me. It is not only well designed and carried out, but it also takes account of the need to bring together diverse viewpoints within the ELCA. Hanson pursues a deep, perceptive analysis of the moral issues entailed by proposed techniques of therapeutic cloning and their possible applications. His paper, however, raises a basic question about the moral status of the human embryo in Lutheran thought that I will explore. I will also consider a related area of ethical concern not mentioned in his paper: the impact of therapeutic cloning on those women who provide embryos needed for this procedure.

Hanson addresses the morally problematic practice of cloning embryos for use in stem cell research. Because embryos bear the “image of God,” he holds, they have intrinsic value, regardless of their stage of development. He goes on to conclude that “the ELCA should oppose at present the deliberate creation of embryos by cloning or any other means merely for research.” In addition, he maintains that the ELCA should object to all forms of embryo research in which embryos are “destroyed, discarded, or knowingly



subjected to risk of injury or death greater than that allowed for research on fetuses *in utero*.” [See page 60]

These strongly stated conclusions come as a surprise because Hanson acknowledges earlier in his paper that “any ethical argument that rests on assumptions regarding the status of the embryo will be contested and uncertain,” and that the ELCA position on the moral status of embryos does not “grant the embryo in all stages of development the full moral respect one would accord an adult human person.” [See page 60] These observations would not lead the reader to suspect him to conclude that all research on embryos that is not therapeutic for those embryos is wrong. Yet Hanson appears to maintain to a certainty that embryos, being made in the “image of God,” are owed protection from conception onward from destruction, discard, or serious risk of injury or death. This, in turn, makes it puzzling that he rejects the creation of embryos by cloning or any other means for research only at the present time. Since the embryos at issue will be destroyed in research, his position would seem to require him to reject such research in the future as well.

The concept of *imago dei* on which Hanson depends is not much explored in the standard reference works within the Christian tradition.<sup>8</sup> This suggests that there is no general understanding of what this concept means and that it, therefore, cannot be invoked as a warrant for a position without defending one’s particular interpretation of it. Perhaps the most adequate of the few resources in the literature on the “image of God” claims that it has to do with physical likeness, the ordering of faculties, and particular attributes (soul or mind and, in recent literature, with specific attributes of male and female, with relationality, etc.).<sup>9</sup> If so, those who bear the “image of God” have certain characteristics that embryos do not and the concept of *imago dei* would not provide grounds for claiming that they are owed protection from destruction during research.

A similar problem arises in the work of Bouma, *et.al.*, from within the Reformed tradition, who are among the few in bioethics who address the concept of the “image of God.”<sup>10</sup> They maintain that in order to care for the earth, as required in Genesis 1:26 and Psalm 8:5-6, we must exercise capacities such as those to reason, reflect, make moral judgments, and love. We are not just conscious, but self-conscious, so that our imaging of God involves being able to think, choose and act, and to do so in ways that are needed in order to exercise stewardship of creation.

This account, too, appears to exclude embryos as bearers of the “image of God,” for they are not self-reflective choosers and actors. Indeed, if we take any particular aspect or capacity of a human being to be that wherein he or she bears the *imago dei*—such as

rationality, self-consciousness, ability to relate to others—many people will not qualify as imagers of God, including the severely mentally ill, the profoundly retarded, the senile, the unconscious, and all newborns. Bouma, *et.al.*, respond by holding that “human zygotes are not beings that already have human capacities (waiting to be actualized), but they are the kind of beings that will acquire these capacities in the normal course of their development.”<sup>11</sup> They go on to argue against fixing on a particular stage in human development at which human personhood decisively begins and, instead, adopt a potentiality position, maintaining that “if, in the normal course of its development, a being will become an imager of God, then by virtue of this potential it already deserves some of the reverence due imagers of God.”<sup>12</sup> However, they also suggest that the early embryo is owed not just “some,” but a high degree of reverence, for they accede to abortion only in unusual instances.<sup>13</sup> This seems inconsistent with their view that the embryo at its early stages is not fully an imager of God. Their view needs further explanation if it is to avoid this puzzling result.

Perhaps Scripture can assist us to understand the degree of respect owed to the embryo. In Genesis, when humans are said to have been made in the “image of God,” those humans referred to are already born, not embryos. Other texts, however, declare that God knew us before we existed in the womb and that God continues to know us as we develop within it (Jeremiah 1:5, Psalm 139:15-16). These passages might be taken to show that God considers every embryo to bear the “image of God” and, therefore, to be owed a high degree of protection. Such texts, however, seem to celebrate God’s call to us as God’s children, rather than to establish a point at which human beings acquire *imago dei*. Were we to claim that they indicate that the embryo bears the image of God before or at conception, we would also have to claim that biblical texts prophesying that certain persons will be conceived and born in the future mean that the sperm and egg from which they will develop also bear the image of God. This, however, seems far-fetched. Such texts, it would appear, cannot be taken as precise statements about when developing human beings become bearers of the “image of God.” When we add to these observations the recognition that a surprisingly large proportion of embryos (in the range of 75 percent)<sup>14</sup> is aborted spontaneously early in pregnancy, it is difficult to make a case that we are called to bring every embryo to term out of respect for them as full-fledged persons and imagers of God.

Embryos are human beings in process. While they do not yet exhibit any capacities by which human beings might be said to reflect the “image of God,”



they have the potential to do so. As they move toward full development, they come ever closer to resembling the image of God. The incremental view cited by Hanson, as adopted by the ELCA, maintains something like this without picking out a specific potential capacity that indicates the presence of *imago dei*. Moreover, this incremental view suggests that in their earliest stages, embryos are not owed the same protection as born human beings. It does not, however, give us a firm grasp of just how much moral weight early embryos bear and, consequently, whether it is right to clone them for stem cell research, knowing that this will result in their destruction.

Discerning the moral status of early embryos and of the practice of deriving stem cells from them is termed by David H. Smith to be an issue of “perplexity,” rather than “error.”<sup>15</sup> He explains that “sometimes it is mistaken to characterize a disagreement as one in which someone must be in error.” It is more accurate, he believes, to describe our uncertainty, in some cases, as involving a situation of doubt. This is true of the question of our duties to embryos and stem cells. “The fact is that we really don’t know what they are, and our obligations are indeterminate. We are in a new territory, collectively feeling our way.” In this, he seems to me to hit the mark. Given our uncertainties, it seems appropriate, on an incremental view, to try to work out morally acceptable uses of early embryos for stem cell research in fear and trembling, rather than to dismiss their use on the basis of an undefined concept of the degree to which they bear the “image of God.”

Another significant ethical issue that does not surface in Hanson’s paper has to do with the impact of embryonic stem cell research on women. The process of cloning an embryo requires the use of human eggs. These necessarily come from women. Since many new uses of stem cells derived from cloned embryos will undoubtedly be developed in the future, there will be an increased demand for eggs. Women, consequently, will experience increased pressure to donate their eggs for this research. Should they succumb to the pressure to do so, both their well-being and freedom of choice will be put in jeopardy.<sup>16</sup>

The production and extraction of eggs from women puts their well-being at risk, not only because medications used to induce ovulation can cause ovarian hyperstimulation and, according to some studies, ovarian cancer, but also because the retrieval procedure bears risks of physical injury and pain.<sup>17, 18</sup> Moreover, women would receive no benefit from going through this potentially harmful procedure for the purpose of producing eggs for research that might benefit others. They would not benefit personally, nor would they be able to benefit family members in need by designating them recipients of the stem

cells derived from embryos cloned from their eggs. Given the potential harms to them and the lack of benefit, why would women consent to donate their eggs for therapeutic cloning? Doing so would require a high, and perhaps ethically unjustifiable, degree of altruism.

It takes little imagination to foresee that the primary means for getting women to provide eggs for purposes of therapeutic cloning will have to involve coercion of those in the process of attempting to have children by means of the new reproductive technologies. They will be thrust into a morally intolerable scenario in which their well-being and freedom of choice will be severely diminished. Although these women would receive no financial reward for providing eggs for therapeutic cloning, corporate investors and the investigators whom they support would gain huge profits, were therapeutic cloning successful.<sup>19</sup> While market investment and entrepreneurial biomedical research and treatment are not per se unethical, the lure of monetary gain for those who invest in such research needs to be balanced by stringent regulatory limits to safeguard the well-being and freedom of choice of the women providing the early embryos essential to the success of this research.

## Endnotes

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7. Mark Hanson, “Therapeutic Cloning: Moral and Religious Considerations.”
8. I am indebted to Timothy Sedgwick, Professor of Christian ethics at Virginia Theological Seminary, for his suggestions about resources and extremely helpful comments about those available.

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10. Hessel Bouma III, Douglas Diekema, Edward Langerak, Theodore Rottman, Allen Verhey, *Christian Faith, Health, and Medical Practice* (Grand Rapids, Mich.: Eerdmans Publishing, 1989) 27-49.
11. *Ibid.*, 39.
12. *Ibid.*, 45.
13. *Ibid.*, 226-28.
14. Clifford Grobstein, "External Human Fertilization," *Scientific American* 240, no. 6 (1979): 57-67.
15. David H. Smith, "Creation, Preservation, and All the Blessings . . .," *Anglican Theological Review*, 81, no. 4 (Fall, 1999): 567-588 at 584-85.
16. Cynthia B. Cohen, "Use of 'Excess' Human Embryos for Stem Cell Research: Protecting Women's Rights and Health," *Women's Health Issues* 10, No. 1 (May/June 2000): 121-126.
17. Cynthia B. Cohen, "Parents Anonymous," in *New Ways of Making Babies: The Case of Egg Donation*, ed. Cynthia B. Cohen (Bloomington, IN: Indiana University Press, 1996): 88-105.
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19. Lisa Sowle Cahill, "Social Ethics of Embryo and Stem Cell research," *Women's Health Issues* 10, No. 1 (May/June 2000): 131-135.

## Reflections from the Lab on Cloning for Therapeutic Purposes (A Response to Mark Hanson)

Nancy L. Reinsmoen

I would like to respond briefly to Mark Hanson's paper on therapeutic cloning. I very much appreciated his thorough explanation of cloning and stem cell research, together with the ethical and theological issues that must be considered. In general, I agree with his recommendations and would like to address them individually. However, I would suggest putting a slightly different emphasis on the priorities he has outlined.

The Evangelical Lutheran Church in America (ELCA) has a distinctive opportunity and responsibility to address the issues surrounding therapeutic cloning. The scientific possibilities and applicability of this emerging technology are beyond our comprehension. Rather than trying to address each issue as we see it or even imagine it today, I would think a prudent approach would be to provide a foundational statement about the preservation of the dignity of humankind and promotion of service to human life. New scientific developments and techniques should be viewed in light of these basic fundamentals.

### Use of Embryos in Scientific Research

It is important to understand where the scientific community stands at this time on the issues of therapeutic and reproductive cloning as well as the use of human embryos in research. Recently, guidelines for research involving human pluripotent stem cells (hPSC) were published in the *Federal Register*. These are the guidelines investigators must follow in order to be considered for federal funding from the National Institutes of Health (NIH). These guidelines were established after input by an advisory working group including scientists, patients, patient advocates, ethicists, clinicians and lawyers. The guidelines went out for public comments, and responses were received from members of Congress, patient advocacy groups, scientific societies, religious organizations and private citizens. After careful consideration, the guidelines were presented and now apply to the use of NIH funds for research, using hPSCs derived from human embryos or human fetal tissue. Studies utilizing hPSC

derived from human embryos may be conducted "only if the cells were derived from human embryos that were created for the purposes of fertility treatment and were in excess of the clinical need of the individuals seeking such treatment".<sup>1</sup> There are clear conditions for informed consent, for assurances that the embryos were not generated for research purposes, that there is no financial incentive, and that donation was made without restrictions. This type of research can provide valuable information regarding the differentiating potential and capacity of multiplying adult stem cells as compared to that of hPSCs derived from embryos.

The guidelines also clearly state studies that are not eligible for funding. These include: 1) the derivation of pluripotent stem cells from human embryos, 2) research in which human pluripotent stem cells are utilized to create or contribute to a human embryo; research in which hPSCs were derived using somatic cell nuclear transfer, i.e., the transfer of a human somatic cell nucleus into a human or animal egg, 3) research utilizing human pluripotent stem cells that were derived using somatic cell nuclear transfer, 4) research in which human pluripotent stem cells are combined with an animal embryo, and 5) research in which human pluripotent stem cells are used in combination with somatic cell nuclear transfer for the purposes of reproductive cloning of a human. It was the general consensus that at this time studies such as these have not received adequate discussion and consideration by the public. These guidelines outline the current consensus of the mainstream scientists after careful consideration from a number of different disciplines. Thus, many of the cloning scenarios being discussed at this consultation, including human reproductive cloning, are not even being considered for investigation by mainstream scientists.

Mark Hanson proposes that the ELCA at present should oppose "the deliberate creation of embryos by cloning or any other means merely for research." He quoted *Public Law* 104-99 in his proposal that the ELCA should object to all forms of research in

which “a human embryo or embryos are destroyed, discarded, or knowingly subjected to risk of injury or death greater than that allowed for research on fetuses *in utero*.”<sup>22</sup>

To categorically not support research involving human embryos is short sighted and would rob the scientific community of an enormous wealth of information that may be of great potential benefit to humankind. The current federal regulations should be considered adequate, since these regulations are very specific and were developed after much deliberation and contributions from the general public and individuals from various related disciplines. I would hope the ELCA would adapt a moderate view that incorporates the more recent regulations. The conclusion of the Church of Wales [see Cynthia Cohen’s paper, page 66] illustrates my hope. It holds that experiments on “spare” embryos are permissible under certain conditions, but that no embryos may be created for these experiments.

### **Endorse the Pursuit of Biomedical Science**

Hanson calls for the endorsement of the pursuit of biomedical science and the value of the service rendered by those called to it. In these discussions, one often loses sight of the fact that many scientists are, in fact, very religious people. In many ways, God is working through these scientists to achieve the tremendous benefits to human health. Scientific endeavors at the cutting edge of the field, such as those discussed and the scientists involved, should be endorsed by the ELCA.

### **Explore Alternative Means to Meet Medical and Research Needs**

Hanson has made several laudable recommendations regarding the encouragement of research that does not involve human cloning or research on embryos. Indeed, valuable research is currently being conducted in these areas with encouraging and scientifically valuable results. This work should be endorsed by the ELCA. He also recommends that the ELCA should promote means for meeting or preventing current medical needs by promoting healthier living conditions and styles, and also by endorsing organ donation. I heartily agree!

Toward that end, I would like to see the ELCA renew its commitment to organ donation by issuing a strong statement in favor of organ, marrow and cord blood donation. Today, there are over 72,000 patients in the United States waiting for a solid organ transplant. Last year, organs were recovered from less than 6,000 cadaveric donors. In addition, kidney allografts were donated by about 5,000 living donors. Thus, a

total of about 21,700 transplants were performed in the United States last year. The shortage of organs is profoundly evident. Many patients die waiting for an organ transplant. The donation of organs is truly a genuine act of love for a fellow human being. Issues such as informed consent and definition of brain death are well described by the transplantation community. A major point of discussion and ethical significance is that of organ allocation. Great efforts are made, based on establishment of the waiting lists and the assignment of priorities to allocate these precious gifts fairly. Thus, the donation of organs, a true act of love and gift of health and life, should be strongly supported by the ELCA.

The ELCA should also endorse the marrow and cord blood programs which have provided donors for thousands of patients who do not have compatible related donors. The National Marrow Donor Program (NMDP) has a registry of over 4 million potential donors. As of August 2000, the NMDP has facilitated over 11,100 unrelated stem cell transplants. More recently, cord blood banks have been established, and, to date, have facilitated over 1,000 unrelated cord blood transplants worldwide. Participation in these programs and the support of scientists and physicians working in these areas should also be supported and encouraged.

In spite of efforts to promote organ donation, the donor resources are not and may never be sufficient to meet the medical needs. Thus, alternative solutions are being explored, including xenotransplantation (the transfer of organs across species). A significant amount of research and discussion has centered around identification of the best animal organ donor from a medical and ethical standpoint. Most investigators agree that swine are potential organ donors for humans. In an effort to avoid hyperacute and accelerated acute rejection of these organs, genetically engineered animals are being developed to “trick” the human immune system into not recognizing the transplanted organ as being foreign. This type of investigation does employ gene cloning and transfer; however, the studies are carefully conducted with considerable oversight. Again, this type of scientific investigation involving genetic manipulation should be supported.

### **Future Consultations and Continuing Dialogue**

Just as NIH has stated that some of these types of scientific studies have not received adequate review from the scientific community and from the general public, I think the ELCA should also consider some of this discussion premature. Consultations such as this in which we are engaged, should be considered a continuing dialogue. These discussions will need to



be revisited as the field and technology progresses. I agree that there are many uncertainties concerning the cloning research and application. The ELCA needs to formulate a fundamental statement based on its traditional values to offer strength, leadership, and guidance. The ELCA should focus on current issues and support ongoing relevant work, and not try to anticipate every possible scenario or uncertainty these techniques may bring. The ELCA should continue to press issues regarding how resources are being invested and how the benefits of these technologies are being distributed. A major focus should also be the issue of equal access to health care for all persons. By promoting healthy living styles and sharing the gift of life through organ and marrow donation, the ELCA has the opportunity to provide leadership to those within and to those outside of the ELCA.

### Endnotes

1. *Federal Register*, August 25, 2000, National Institutes of Health Guidelines for Research using Human Pluripotent Stem Cells and Notification of Request for Emergency Clearance; Modification of OMB No. 0925-0001/Exp. 2/01, "PHS 398 Research and Research Training Grant Applications and Related Forms."

2. *Public Law* No. 104-99, Title I, §128, 110 Stat, 26,34 (1996).

## **Section Three**

# **Specific Questions**

What Are the Legal Implications?

## Human Cloning: Law and Ethics

Susan R. Martyn

### Abstract

*Law embodies the moral judgments of a society. In the past, law has been used to encourage, leave alone, regulate, or ban new or emerging scientific potential. The novel legal issues that will be raised, if human cloning becomes a reality, lead to several tentative conclusions. First, we should not encourage human cloning, Second, laissez faire attitudes are too dangerous to tolerate. Third, extensive regulation will be necessary to protect both clone-donors and cloned individuals. Fourth, cloning should be allowed only by not-for-profit organizations. Overall, we should put the burden to demonstrate both benefits and safety on those who wish to use human cloning. Even then, concerns about who will benefit and at what cost to others should inform our public policy. We should not lose sight of the fact that those religious groups who represent the most exploited groups in our society uniformly favor a legal red light on human cloning because they worry about discrimination and the need for more basic human services. In considering our moral and legal response to human cloning, we need to be vigilant about the risk of human fallibility and misplaced self-confidence.*

### The Role of Law

My comments here are intended to address the legal issues that we will face should human cloning become a reality. The question today is not what law can do, but how we want it to address these issues and what we want it to do to produce justice.

Law embodies the moral judgments of a society. Once the people decide which of many, often-competing moral views they desire, law can provide a tool to create the desired outcome. Law can punish the transgression of important social norms and it can compensate if injury is caused. Law also can serve to deter conduct deemed morally wrongful by setting out penalties when lines are crossed. In the same way, law serves an educational function. Those unaware of the need for or the importance of a social norm can be put on notice once law intervenes. Lawyers and judges are prone to thinking by analogy, that is, we look for principles or precedents contained in

prior law that concerned a similar situation when considering how to confront a legal question “of first impression.” With that in mind, I offer four legal analogues that may assist us in facing the uncertain future of human cloning, ethics and the law.

### Four Legal Responses to New Scientific Breakthroughs

In the past, citizens have used law to signal four different attitudes toward new or emerging scientific potential. The most recent response has been to encourage the activity. Legal tools that encourage the development of scientific potential include governmental funding and patent protection. The industrial revolution of the nineteenth century offered a second legal response that mirrored the laissez faire economics of the time. Leave science alone and see what happens. Of course, the industrial revolution that gave us a railroad to connect the country also necessitated a Sherman Antitrust Law in 1890 to counter the excesses of the robber barons. Similarly, the unparalleled economic expansion of the Nineteenth Century came to a literal crash in the Great Depression. As a result, a third legal option has emerged: control or discourage an activity or part of an activity, usually by heavy regulation. The fourth option, and the one with the longest historic pedigree, has occasionally followed heavy regulation: ban the idea or the breakthrough, or create a moratorium for a specified or indefinite period of time.

Assuming those of you reading this essay were empowered to vote in a legislative session faced with these four alternatives, how would you envision your vote with respect to human cloning? I recently asked a typical Evangelical Lutheran Church in America pastor<sup>1</sup> this question and got the immediate reply: “Regulate it.”

“Why?” I asked.

He responded: “Although I perceive some real danger in the experiment, cloning could be an extension of God’s creative intent. We do not yet know how

much benevolent power God has given to humanity in terms of the creative forces of human life. Maybe this is the manner in which God continues to express His creative potential. The remainder of this paper examines this belief. If my anecdotal resource is typical, should we change his viewpoint?

### The Power of Encouragement

Twentieth Century societies often have actively encouraged scientific exploration by funding its development. Examples abound. President Nixon sparked the war on cancer, and The National Institutes of Health funding of general medical research has benefitted us all in the past half-decade. Nuclear power may never have been harnessed, and certainly not developed when it was, were it not for massive governmental spending. And, of course, the human genome probably would remain a mystery for years and years in the future without governmental commitment to the project, both in the form of funding and encouragement to patent new genetically engineered life forms.<sup>2</sup>

### The Need for Regulation

In many situations, governmental funding has been followed by extensive governmental regulation. The Atomic Energy Commission, a captive of the industry, was replaced with the Nuclear Regulatory Commission, a watchdog that prevents most but not all trouble. The bottom line: We have more than occasionally come to regret our encouragement of science. We split the atom before we learned how to prevent harming people with radiation or polluting the planet, and we now stand on the threshold of uncovering the secrets of our genetic legacy before we have learned what to do with the information and other risks of genetic engineering.

One notorious example: at the same time American judges were condemning the Nazi Doctors, the United States Government was funding the Tuskegee Experiment, which required physicians to lie to African-Americans in order to secure their “permission” to remain untreated for syphilis.<sup>3</sup> Similarly, as we returned to post war rebuilding in the 1950s, several branches of the Federal Government tested radiation exposure<sup>4</sup> and powerful drugs like LSD<sup>5</sup> on totally unknowing human subjects, many of whom died as a result.

By 1964, a prestigious Harvard physician named Henry Beecher concluded that ethical violations in non-therapeutic research on humans were widespread and documented the “existence of a serious situation.” He acknowledged that attention to ethics was viewed in “sophisticated circles” as blocking progress, but quoted Pope Pius XII: “science is not the highest value to which all other orders of values should be subordinated.”<sup>6</sup>

Beecher’s expose necessitated extensive federal regulation of research involving human subjects, which remains necessary but still inadequate in some situations today.<sup>7</sup>

### The *Laissez Faire* Alternative

The enlightenment of the Eighteenth Century ushered in renewed faith in the power of human reason. *Laissez faire* economic and social policies of the Nineteenth Century grew out of that optimism. Faith in intelligence meant that we should leave the creative entrepreneur alone. We would all benefit if we simply looked the other way while those with brains and curiosity (prodded by the profit motive) were left alone to innovate.

The only trouble with *laissez faire* policy is the problem and power of original sin. In legal terms, the problems of bad motivations, conflicts of interest and the risks of unforeseeable harm can lurk even in the most well-intentioned endeavors. In the realm of science in this century, research involving human subjects was legally unregulated until after World War II. That *laissez faire* attitude led to the forced use of human beings as guinea pigs by the Nazi, Japanese and American Governments to foster the war effort. Of course, the victors imposed criminal penalties through the Nuremberg Code in 1947. American judges in Nuremberg concluded that Nazi defendants had committed crimes against humanity by forcing prisoners and concentration camp victims to serve as “volunteers” in their medical research.

And so the *laissez faire* alternative, like the encouragement option, often has led to legal regulation of scientific enterprise. Even then, however, abuses have not been prevented. The bottom line: Left alone, scientific curiosity may produce valuable insight, but, especially when combined with a profit motive, may produce human misery and death as well. Scientists often pursue worthy goals, but may lack the incentive or the wisdom to grasp the human or environmental harm that can follow. Even when regulated, the seduction of discovery intensified by the power of profit has led to human tragedy.

### The Promises and Pitfalls of Banning

Identifying behavior as “illegal” has several virtues. First, such a label clearly identifies an activity as morally wrong. Second, creating a category of illegality can express a deeply held and fundamental moral belief, often buttressed by religious faith. Examples involving science include legislative prohibitions of abortion until 1973 and current bans on assisted suicide in most states. Occasionally, we ban only after we learn lessons about the dangers of a scientific discovery. The current prohibition on human experimentation with the artificial heart is one



recent example. Cross-species organ donation from animals to humans is another.

On the other hand, history is full of examples of scientific breakthroughs initially banned by religious or secular authorities that were eventually forced to give way to the relentless accuracy of the discovery. Consider Galileo, who believed that the sun, not the earth was the center of the universe. He reminded the church to interpret scripture allegorically when it conflicted with scientific truth. He went on to warn of “a terrible detriment to souls if people found themselves convinced by proof of something that it was made then a sin to believe.”<sup>8</sup> Even after it became clear he was right, the Roman Catholic Church took over 300 years to apologize for condemning his work. Or, consider Darwin, another scientist whose evolutionary theories threatened the religious and some of the secular authorities of his day (and ours?).

The bottom line is this: We can use law to express deeply held beliefs, but we also have learned that such bans eventually may embarrass us. For this reason, a legal prohibition will be only as effective as the reasons for outlawing the behavior in the first place. Those vested with the authority to enforce the law ultimately must believe that the legal standard makes moral sense. Otherwise, prosecutors, judges and juries are likely to excuse the behavior, either by ignoring it or refusing to enforce laws that prohibit it.

## Our Response to Cloning

To date, our response to human cloning has used all four of these legal signals. We have encouraged the related, but distinct human genome project with both government funding and the promise of profit through the granting of patents. We have adopted a *laissez faire* attitude toward animal cloning. At the same time, we continue to regulate research involving human subjects extensively. And we have banned federal funding of human cloning, but only for a while. Have these legal responses been just? Let us examine these alternatives in light of the legal issues that are likely to arise should human cloning occur.

### Encouragement?

One can imagine a headline similar to the one in September 2000 on the front page of the *New York Times* about our new trade with China policy: “New Realism Wins the Day: Huge Market’s Lure Becomes Irresistible.”<sup>9</sup> Should we adopt a similar realism and embrace cloning even if it means ignoring human rights?

### Funding

We are not likely to halt funding of the human genome project. If human cloning becomes a reality, some are certain to cite this precedent as an argument in favor of funding cloning as well. Funding

has the virtue of making a scientific discovery available to more people. But it also accelerates the implementation of a scientific development, making it harder for law to keep up with appropriate regulation. In short, the genie may be out of the bottle before we can manage it.

### Family Matters

Those who encourage the development of human cloning point to the need to provide another treatment for infertility.<sup>10</sup> They argue that cloning is just the next step after *in vitro* fertilization, which is largely unregulated in this country. Should human cloning become possible, several novel legal issues will arise. First, can a person who fails at reproduction demand cloning because he or she has a constitutional right to it? (Put the other way, would a ban on human cloning be unconstitutional?)<sup>11</sup>

Cass Sunstein at the University of Chicago has written two potential Supreme Court opinions of the future addressing this issue.<sup>12</sup> Both opinions acknowledge a constitutional right “to some form of individual control over decisions involving reproduction,” based on *Roe v. Wade*<sup>13</sup> (the abortion decision). Both opinions also cite *Washington v. Glucksberg*<sup>14</sup> (the assisted suicide case) for the proposition that “there is no general right against government interference with important private choices.” The first opinion points out that “cloning produces a life where abortion destroys it” and concludes that “if there is a right to abort fetal life, there must be a parallel right to create life.”<sup>15</sup> The second opinion finds the nature of a constitutional right to reproduce “bounded” by “a specific judgment about *reproduction*, understood by our traditions as a distinctive human interest with a distinctive human meaning.”<sup>16</sup> It then identifies cloning as *replication*, a completely different moral and legal category that is entitled to no constitutional protection.

Regardless of the outcome of this constitutional matter, several other issues of family law will doubtless arise if human cloning occurs. First, who are the parents of the clone?<sup>17</sup> The Baby M. case, concerning a surrogate mother who claimed rights to a child not genetically related to her, would hold that the genetically related person is a parent, but a surrogate mother is not.<sup>18</sup> State family law statutes would add that the person giving birth to the child, if married to the cloned person (the “clone-donor”?) would also be a parent. What about the parents of the clone-donor? Are they grandparents of the clone, even though each gave one half of their genes to that person? What about the donor of the enucleated egg who contributes a bit of mitochondrial DNA? What about the parents who rear the child if neither are genetically related to the clone? Will they have to adopt her before they are legally recognized as “parents”?

These issues become extremely complicated when we think about divorce. Will the genetically unrelated parent have diminished or no custody rights to the child? Would a court want to give custody to a parent of a child who is a genetic copy of the very person the parent wishes to divorce? Does this mean that the genetically related parent will have presumed custody rights?<sup>19</sup> Or should a court bow to the wishes of a cloned child who wants to avoid scrutiny by or comparison to the clone-donor and, therefore, seeks the custody of the non-genetically related parent?

#### *Patents*

Equally interesting is the potential for patenting a human clone. Article I, Section 8, Clause 8 of the United States Constitution grants Congress the power to legislate “to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.” Thomas Jefferson, who believed that “ingenuity should receive a liberal encouragement,”<sup>20</sup> authored the first patent act of 1793, all the while worrying about the monopoly power he participated in creating.<sup>21</sup> Today, that law grants a patent (the right to exclude others from making, using or selling) to “whoever invents or discovers any new and useful . . . composition of matter, or any new and useful improvement thereof. . . .”<sup>22</sup> In 1980, the United States Supreme Court ruled, in a five to four decision, that a genetically engineered bacteria qualified as patentable subject matter, because it was “nonnaturally occurring.”<sup>23</sup> The court said that only “the laws of nature, physical phenomena and abstract ideas have been held not patentable.”<sup>24</sup>

Thus, a human clone would be viewed as nonpatentable if it were characterized as “created by nature unassisted by man,” and patentable if its “cultivation is unique . . . and not repeated by nature.”<sup>25</sup> Since clones of already living persons are not created by nature, but unique cultivations by humans, it may be arguable that current law would allow a patent on a human clone. This means that we would have to amend the patent act if we wish to produce a different result.

On the other hand, to the extent such a property right limits the free will of the cloned individual and subjugates that person to the control of another,<sup>26</sup> such a determination of patentability would probably violate the Thirteenth Amendment’s prohibition of slavery and involuntary servitude.<sup>27</sup> A court also might find that such a patent contravenes public morality.<sup>28</sup>

#### *Laissez Faire?*

We currently allow a private market in sperm and ova donation and *in vitro* fertilization. Some argue that no scientist and no parent would seek to clone another human unless such a procedure was safe.<sup>29</sup> They point to the self-regulation of *in vitro* fertilization clinics as

proof. It also is possible that some existing state laws governing research on embryos or *in vitro* fertilization might reach human cloning.<sup>30</sup>

But the National Bioethics Advisory Committee found all of this law completely inadequate to regulate what it viewed as the one issue it reached consensus on: the significant risks of physical harm to cloned offspring. This consensus reflects the fact that 276 failed attempts preceded the cloning of Dolly.<sup>31</sup> Producing a human clone is likely to require even more trial and error. These risks mean that current legal rules governing human experimentation might prohibit us from ever cloning a human being. On the other hand, similar safety arguments were made about *in vitro* fertilization before Baby Louise’s birth proved them wrong.<sup>32</sup> One thing is clear: We have learned that research involving human subjects requires extensive regulation, because market incentives alone invite neglect and abuse of human beings who participate in research.<sup>33</sup>

#### **Regulation?**

Nearly everyone who discusses the subject of cloning favors some kind of regulation if human cloning is developed. For example, the British Medical Association suggests “a strong and effective regulatory mechanism” and recommends amending their Human Fertilization and Embryology Act to require that a governmental license be required before anyone could clone a human.<sup>34</sup>

#### *Research*

Any cloning of a human being would require research involving at least two human beings—the clone-donor and the cloned. Some recommend a legal analogy to the current regulation of genetic engineering research involving human subjects. They advocate regulation by a federal agency with an advisory body that provides for oversight of cloning and other novel reproductive technologies. And they propose extending regulation to private clinics as well as those that receive federal funds.<sup>35</sup> In fact, the Food and Drug Administration asserted the power to regulate human cloning nearly three years ago.<sup>36</sup>

Just this past year, however, and despite extensive current federal regulation, we have witnessed the death of eighteen-year-old Jesse Gelsinger, who was enrolled as a research subject in a gene-transfer trial at the University of Pennsylvania. It now appears that he was welcomed as a research subject in an experiment far too risky for his degree of illness. Subsequent investigation has uncovered hundreds of other instances of failure to report serious adverse consequences suffered by human subjects during research trials involving genetically engineered treatments. Why? Because scientists and institutions feared that report of injuries to human subjects would slow or curtail their profit-motivated research.<sup>37</sup>

One way of circumventing these abuses might be to avoid the market that encourages such behavior. We have chosen this path in regulating organ donation. The National Organ Transplantation Act prohibits the sale of organs, but allows their donation.<sup>38</sup> The common law offers another legal analogy. Not too long ago, the California Supreme Court faced a case where a cancer patient sued his physician for “using his cells in potentially lucrative research without his permission.”<sup>39</sup> The physician had patented a cell line developed from the patient’s spleen after it was removed as a cancer treatment. The court refused to grant the patient a property right in his spleen, thereby preventing a profit-share in the dividends for the patent. It did recognize, however, a dignity interest by requiring informed consent whenever a researcher has an economic interest that may conflict with patient care. This precedent certainly would require a physician who clones to obtain the informed consent of the person cloned. It would also require disclosure of potential profits the physician might obtain.

But even if these regulatory analogies are followed, difficult and unique questions will arise. For example, whose consent is necessary to clone? Is the consent of the clone-donor enough or will the donor of the egg used to replicate the cells also need to consent? Does the consent need to specify a number of potential clones to be valid? Can the cloned individual carry on the family tradition by consenting to be cloned after his or her genetically identical parent has died? Should it matter whether the clone-donor only consented to be cloned once?

Further, the problem of informed consent involved in the Gelsinger and Moore cases raises impossible questions when applied to human cloning. Would the informed consent of the clone-donor ever be sufficient to authorize risks of harm to the cloned person? These risks may include genetically deformed, diseased, or abnormally large newborns, as well as unforeseeable abnormalities that develop after birth due to genetic mutation.<sup>40</sup>

And if a cloned individual is produced, how will we regulate research designed to observe that person’s psychological and physical development?<sup>41</sup> You might recall research observation of an abused and neglected “wild child” in California some years ago. Researchers at prestigious universities “adopted” the child for the purpose of studying her development, but dropped the “adoption” once research funds dried up. A civil lawsuit claiming lack of appropriate consent followed, which the universities quickly settled.

#### *Privacy*

We are in the process of learning that genetic information is private and that new medical privacy laws are needed to protect the misuse of this information

by insurers, employers or health care providers. Many states have passed laws that protect genetic information. Many more have yet to act and in 2000 President Clinton issued an executive order that prohibited discrimination in federal employment, based on protected genetic information.<sup>42</sup> The concept of a DNA data bank may not be far away.<sup>43</sup> Cloning adds another dimension to these issues. Who controls the genetic information of the cloned person? Can that person consent to disclose her own genetic information even if her genetically identical parent or clone-donor objects? Cathleen Kaveny points out that these questions reveal an atomistic individualism that flaws our existing thinking about privacy. We should consider whether we need to rethink privacy in relational terms, including whether those genetically related to us have some legally protected interest in the information.<sup>44</sup>

#### **Ban?**

##### *Commodification*

The Council of Europe has prohibited “any intervention seeking to create a human being genetically identical to another human being, whether living or dead.” In addition to “serious difficulties of a medical, psychological and social nature” that such a practice might imply, the Council also warned of commodification or “the instrumentalization of human beings.” They saw such a development as “contrary to human dignity” and characterized it as constituting “a misuse of biology and medicine.”<sup>45</sup>

Some American commentators agree.<sup>46</sup> Others prefer regulation, but because they see no “fail-safe restraint on undesirable cloning,”<sup>47</sup> they recommend a ban as the next best alternative.<sup>48</sup> One thing seems certain: The purely instrumental use of cloning (for example, to create spare parts for the clone-donor) would violate the Thirteenth Amendment’s prohibition of slavery and involuntary servitude.<sup>49</sup>

##### *Justice*

Bans on human cloning also may be motivated by the kinds of justice concerns Margaret McLean calls to our attention. On the one hand, cloning probably will be available only to the very rich. Those already in power will be able to create more of themselves, while others struggle just to exist. Asking or demanding the service of cloning seems profligate in a world where many individuals still need basic human services. On the other hand, we could make cloning available to a much larger number by subsidizing its development. That might ease some justice concerns within this country, but would not address the global needs of others. It also would exacerbate another problem. To the extent cloning becomes widespread, genetic diversity, our hedge against an uncertain future, may be put at risk.<sup>50</sup> Charles Darwin was the first to observe that sexual reproduction produces



healthier offspring that better adapt to their environment. We now know that this is true of both plants and animals.<sup>51</sup>

Eric and Richard Posner have taken on the challenge of imagining what changes might be made in the human population, should human cloning become a readily available option. They created an economic model that forecasts the future demand for cloning. Their estimations, based on freely available cloning, indicate that the number of infertile individuals will increase dramatically, as will those who chose cloning for other reasons, such as homosexuality, narcissism, or other personality disorders.<sup>52</sup> The Posners worry that concerns about clones carrying these kinds of “defective” genes might then lead to calls for governmental control over who can clone—“thus raising the spectre of eugenic regulation.”<sup>53</sup> They conclude “Cloning may also aggravate inequalities in genetic endowment and in wealth, undermine the already imperiled institution of marriage, alter the sex ratio, and create irresistible pressure for eugenic regulation.”<sup>54</sup> While the Posners acknowledge that there may be simply too many variables to estimate, (including too heavy an emphasis on the power of nature as opposed to nurture), they conclude that their analysis “. . . does provide a rational basis for the widespread disquiet that the prospect of human cloning has aroused.”<sup>55</sup>

## Conclusion

Examining these legal issues and their current legal analogies leads me to the following tentative conclusions:

*First*, we should not encourage human cloning. This means that we should not fund its development and we should not allow patents on human clones or on the process of developing them.

*Second*, *laissez faire* is too dangerous to tolerate. The physical dangers of human cloning alone convinced the NBAC that extensive regulation is wise. The justice issues raised throughout this consultation admonishes us to consider also call for much more than benign neglect.

*Third*, if we are to allow some forms of cloning, extensive regulation will become essential. This means that current legal structures, which govern research involving human subjects, are not enough and that at the very least, a national advisory panel must be established.

*Fourth*, to put the utility of cloning to its test, profit should be banned in a manner similar to organ donation. If no one will offer human cloning except for profit, we will have learned a lot. If they will, we will have learned that those who see the value in this technology may have something important to offer.

In short, I believe that when addressing the potential of human cloning, at the very least, we should put the burden on those who wish to use it. If they demonstrate its safety and benefits, that cloning would encourage the development of noble human qualities,<sup>55</sup> then perhaps we should proceed, but only with legal regulation designed to address the issues I have outlined. This means that we cannot remain silent. We will have to act to reverse the usual legal presumption in United States jurisprudence: “everything is allowed unless it is specifically prohibited.”<sup>56</sup> Even then I remain concerned about trusting my duly elected representatives with the power to decide which noble human qualities to foster. Do we really want a governmental agency to decide if the Raelians have good reasons for cloning?<sup>57</sup>

Finally, even if I could be convinced that the benefits of cloning outweigh its risks to those immediately affected, I continue to worry about justice on a broader scale—who will benefit and at what short and long term cost to others? I am comforted that those who most understand human exploitation share my worry. Interestingly, one NBAC report indicates that both the African American churches and Native American culture favor a legal red light on cloning because they worry about discrimination and diverting attention away from basic care.<sup>58</sup> Of course, Roman Catholics also condemn cloning as a “violation of the dignity of the human embryo and the intrinsic goods of human sexuality.”<sup>59</sup> Some mainline Protestant denominations, emphasizing their permission to “sin bravely” (not what Luther had in mind, unless I am greatly mistaken) in the pursuit of progress, apparently are willing to allow both research and cloning if it presents a reasonable expectation of benefit. I tend to agree with those who stress human fallibility, misplaced self-confidence, and the risks of arrogance.<sup>60</sup> For me, the jury is still out. Until I see the benefits for more than a few, I prefer a moratorium on human cloning.

## Endnotes

1. Peter R. Martyn (D. Min. Ashland Theological Seminary 1999; M. Div. Lutheran School of Theology at Chicago, 1971)
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5. See, e.g., *United States v. Stanley*, 483 U.S. 669 (1987).



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14. 510 U.S. 2021 (1997).
15. Sunstein, *supra* note 12, 211.
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17. Nanette Elster, "Who Is the Parent in Cloning?" 27 *Hofstra Law Review* (1999), 533.
18. *In re Baby M*, 537 A. 2d 1227 (N. J. 1988).
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20. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).
21. Donald S. Chisum, Craig Allen Nard, Herbert F. Schwartz, Pauline Newman and F. Scott Kieff, "Principles of Patent Law", 18 (1998).
22. 35 U.S.C. Section 101 (2000).
23. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980).
24. *Ibid.*
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26. An anti-subjugation principle stands at the core of the post Civil War amendments. See Lawrence H. Tribe, *American Constitutional Law* at 1516 (2d Ed. 1988).
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28. The Patent and Trademark office has refused to consider an application for a patent on a human-animal chimera because the invention violated public policy and morals, an additional condition of the patent law first suggested by Justice Story in *Lowell v. Lewis*, 15 F. Cas. 1018 (C.C.D.Mass. 1817). Japanese patent law is more explicit about this limitation. See, Craig M. Borowski, "Human Cloning Research in Japan: A Study in Science, Culture, Morality and Patent Law", 9 *Indiana International & Comparative Law Review* 505 (1999).
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42. Executive Order 13145, 65 *Federal Register* 6877 (Feb. 10, 2000).
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44. M. Cathleen Kaveny, "Jurisprudence and Genetics", 60 *Theological Studies* 135, 140-144 (1999).
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We Should Ban the Cloning of Humans”, 32 *Valparaiso University Law Review*, 679 (1998).

47. See James Q. Wilson, “The Paradox of Cloning”, in Leon R. Kass and James Q. Wilson, *The Ethics of Human Cloning*, (1998) 73.

48. Robert Mullan Cook-Deegan, “Cloning Human Beings: Do Research Moratoria Work?” in *Report and Recommendations of the National Bioethics Advisory Commission, Cloning Human Beings*, Vol. II at H-19 (1997).

49. This argument relies on a concept of “genetic bondage” that equates with the Supreme Court’s construct of the badges or incidents of slavery prohibited by the Thirteenth Amendment. It was first articulated by Francis C. Pizzulli in “Asexual Reproduction and Genetic Engineering: A Constitutional Assessment of the Technology of Cloning”, 47 *Southern California Law Review* 477, 516-528 (1974). See, Lori B. Andrews, “The Current and Future Legal Status of Cloning”, in *Report and Recommendations of the National Bioethics Advisory Commission, Cloning Human Beings*, Vol. II at F-6 (1997).

50. Leon Eisenberg, “Would Cloned Humans Really Be Like Sheep?” 340 *New England Journal of Medicine* 471-475 (1999).

51. Neil A. Campbell, Jane B. Reece and Lawrence G. Mitchell, *Biology* 913 (5th ed. 1997).

52. Eric A. Posner and Richard A. Posner, “The Demand for Human Cloning”, in Martha C. Nussbaum and Cass R. Sunstein, eds., *Clones and Clones: Facts and Fantasies About Human Cloning*, (1998) 233-256.

53. *Ibid.*, 258.

54. *Ibid.*, 257.

55. This is Willard Gaylin’s guideline. He lists the following as his “valued set of certain special human attributes: a life of imagination, esthetics, and hope; autonomy and freedom; a range of feeling that includes joy and pride, but also guilt and shame; a romantic sexuality; a joy in work (as distinguished from labor); a developed conscience; and that line of traits that leads from identification to friendship and love.” Willard Gaylin, “Fooling with Mother Nature”, 20 *Hastings Center Report*, Jan.-Feb. 1990, 17-21.

56. R. Alto Charo, “Cloning: Ethics and Public Policy”, 27 *Hofstra Law Review* 503 (1999).

57. Recently, a religious group called the Raelians, who follow a former sportswriter who calls himself Rael, announced that they believe that human cloning is the key to eternal life. Their scientific director indicated that they have procured the funding to produce and implant cloned embryos in 50 surrogate mothers who have already consented. The clone-donor is a ten-month-old girl who recently died following a medical accident. See Rick Weiss, “Human Cloning’s ‘Numbers Game’; Technology Puts Breakthrough Within the Reach of Sheer Persistence”, *Washington Post*, October 10, 2000.

58. Courtney S. Campbell, “Religious Perspectives on Human Cloning”, in *Report and Recommendations of the National Bioethics Advisory Commission, Cloning Human Beings*, Vol. II at D-21-22; D 31-32(1997).

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## **Section Four**

# **Table Talk**

## Threads from the Conversation

Roger A. Willer

The dialog that followed each presentation at this consultation served to advance understanding of the issues and perspectives. In order to capture some sense of that important conversation, I have culled this set of observations from the weekend. The fact that discussion developed along the threads highlighted below suggests their merit for attention in further deliberation. (Some items have been moved from their original context or collated for the sake of good order.) Some of the material below offers additional insights raised in discussion. Some suggest areas of contention or points where further dialog is clearly needed. Finally, some of these points warrant what I have called “agreement” because the comments around the table seemed to tend toward a common, if general, understanding. These items I have indicated by the notation “*Agreement . . .*” and placed in italics. Yet, the words are mine and the consultation included no organized attempt to hammer-out assent. This effort does not represent a comprehensive report, nor do the paragraphs incorporate every aspect of any specific conversation. I do hope, though, that the notions expressed below are relatively faithful “pointings” to the lively conversation among participants and that identifying them will help sharpen the deliberation this consultation intends to foster.

As noted at the consultation, the participants shared “sufficient agreement” to make a consultation possible and “ample diversity” to make it both necessary and lively.<sup>1</sup> The first set of observations, then, are several convictions about cloning that I believe created the common framework for such a conversation. These may well stand in contrast to convictions sometimes present in other discussions of human cloning in church and society.

### Common Convictions

#### The possibility

Members of this consultation believed they worked within a social environment in which human cloning, including procreative, is a contemporary possibility.

#### About genetic science

Participants affirmed, in principle, the work of genetic science as a realm of knowledge with potential for healing, societal improvement, and the care of creation. It represents one gift of God’s loving intention for the human enterprise.

#### Sin

Participants lifted up with equal conviction a steady reminder that all human action is permeated by sin. The dangers wrought by human arrogance will be great in genetic science primarily because it unleashes immense new powers.

#### The technological imperative

The conviction surfaced, at various points, that the technological imperative (*we will, or should, do what we can do*) must be challenged. Clear disagreement remains about where to draw appropriate lines, but this disagreement simply warrants ongoing dialog to determine those boundaries.

#### The church and the need for public debate

Participants shared a robust conviction that the church needs to confront explicitly this cluster of issues. They also shared the related conviction that the church has a distinctive contribution to make to any public debate. The church should help press the case for a genuine and broad public dialog about human cloning.

#### Hermeneutical humility

Finally, participants noted repeatedly that all human activity requires a hermeneutic (an interpretative exercise) that struggles with seeking out what is the true, the good, and the beautiful. In this vein participants expressed a desire to learn and listen to one another, especially across discipline lines.

### The Science

#### Rapid development

Scientific knowledge and technological ability related to cloning is expanding rapidly. Some advancements,



such as the developing knowledge of imprinting (the biological phenomenon that determines, for certain genes, whether the father's or the mother's alleles will be active in the individual), suggest that reproductive mechanisms are more complicated than anticipated even a couple of years ago. However, the initial obstacles to reproductive cloning (its safety and efficiency) have been rapidly reduced. A recent cloning of pigs achieved a success rate of one in seven.

#### Sooner rather than later

Some experts are predicting that the cloning of a human adult is now possible and, in fact, might occur within a year or two.

#### Viral hitchhikers

Cloning's promise to enable widespread harvesting of immune compatible animal organs remains significantly hindered at the present time by viral hitchhikers that might harm the human recipient, even though harmless in the donor animal.

#### More than science

Conversation about human cloning must be placed within a larger one involving questions about scientific protocol, social implications, and the question "What is the greater good?"

## The Social Context

#### Quiet but not gone

The issue of cloning has disappeared from prime media attention but the public situation remains one of both concern and lack of understanding. In so many words many in the public are saying, "Somebody has to give us guidance soon." If a vigorous social debate does not occur, the market will determine the outcome.

#### The church's potential role

The church could play a critical role in fostering social debate. It remains a question whether it will do so. Its potential contributions include: activating congregations as communities of moral deliberation; bringing together diverse parties for conversation within a framework of faith commitment; raising a strong voice about justice questions; articulating its vision of the good, especially of the common good.

#### Cloning and race and poverty

*Agreement: We must make explicit the questions of race and poverty in any discussion of biotechnology. These concerns must be factored into decisions about whether human cloning should proceed.*

#### Cloning on the farm

Several participants raised concern about the impact that widespread animal cloning might have on sectors of the economy, especially the farming community, as well as upon the environment. They point out that credible voices have detailed the unintended but negative impact of previous biotechnologies.

These voices claim (from current evidence as well as from the Green Revolution) that:

1. Capital-intensive technology exacerbates existing social and economic inequalities. The horizontal and vertical consolidation of corporations has created dependency and a sense of powerlessness among farmers, both in developed and in developing countries;

2. Current biotech agriculture has done little but remove farmers and others from an intimate connection with the rest of creation, thereby degrading human relationships with nature and with each other. *Agreement: The church must raise questions about these issues and also ask the overlooked questions about who is benefitting and who is deciding. Special attention needs to be given to marginalized voices in this debate and the church could also take a leading role in this.*

#### Cloning and globalization

Human cloning is not just a concern in the United States, but a global one. For example, biotechnology is not as regulated in Canada as it is even in the United States; this entices biotechnology corporations to headquarter there. This concern may be generalized to other nations. Any successful attempt to regulate human cloning must be global in nature.

#### Healthcare and cloning

*Agreement: Cloning must be considered within the context of health care and access issues as well as with questions of social priorities and systemic injustice.*

## Theological Resources

#### What is the human place in nature?

Cloning (like much genetic engineering) spotlights the recognition that humans are now able to do to humankind what we have been doing to the rest of the *ecosphere* for decades—manipulating it to our own purposes. This ability to control human development urgently raises questions about the place of humankind in nature. The line between natural and artificial is no longer clear. May we conclude God has created humans as beings who can correct nature at a fundamental level? Are there boundaries of natural law that we transgress at our dire risk? What are they? *Agreement: These questions are critical, if difficult, and require rethinking on the part of the Christian tradition.*

#### Created co-creator versus stewardship

Are human beings created co-creators (suggesting a genuinely novel role and registering a more optimistic view of human creativity) or are we fundamentally stewards of God's creation (suggesting a conserving role and management of the processes of creation)? A commitment to either position tends to shape one's initial response to cloning. Adherents of the created co-creator idea tend to see cloning as an

expression of the essence of humanity while adherents of the traditional stewardship model tend to question whether the practice of human cloning irresponsibly breaches divine boundaries.

#### The centrality of relation and communality

The motifs of relationality and communality often surfaced throughout the consultation. Examples include the proposal to rethink relevant Lutheran ethical themes in light of trinitarian relationality, the insistence on a moral assessment that moves beyond sheer individual rights, and the inclusion of participatory justice in any calculation of whether to proceed with cloning. *Agreement: The relational and embodied character of life must become the fundamental lens through which we understand the nature of life and personhood. In fact, part of the church's contribution to the cloning debate is its commitment to a communal and relational view of at least: 1) the nature of the created order; 2) of what it means to be a human person (this view of a person as individual-in-community contradicts any sheer individualism); 3) the interplay of genes and environment that guards against genetic determinism; and 4) the centrality of the common good. Many of these are shared by those outside our tradition.*

## Should Humans Practice Procreative Cloning?

### Individuality, dignity, and a cloned genome

Some have argued against cloning on the basis (a false one) that individuality depends upon having a unique genome. *Agreement: Human dignity is a gift granted by a relation to God as the source of all value. Human individuality is a gift of God's work carried out through a matrix of biological, social, and environmental factors. Any child brought into the world via cloning technology is as much a child of God as any other. Procreative cloning poses no threat to religious convictions about the human soul or spirit.*

### The theological criterion

The issue of procreative cloning is not a question that may initially be answered with a simple yes or no, or a right or wrong. The Christian question, rather, is whether it could be the loving thing to do, in the proper sense of that phrase. *Agreement: Christian discussion of procreative cloning must ask questions and factor ingredients beyond those of individual rights (the terms upon which much cloning debate proceeds). Procreative cloning cannot be considered in isolation from justice issues and other pressing societal concerns.* The question of the loving thing to do is not an individualistic question. These concerns include questions about the nature of family and good reasons for having children.

### Rights versus love

The insistence on factoring ingredients beyond individual rights is an attack on the adequacy of the rights tradition deeply ingrained in the American psyche and could be seen as disparaging it. Religious thinkers must be careful to affirm rights thinking appropriately. While rights language may have limitations, it is critical in any discussion of law or justice and should be given its appropriate due. Consultation participants would, though, weight its use differently.

### What kind of right?

A key argument for procreative cloning is that of reproductive rights. Some participants pointed out that reproductive rights are often argued as if they were a right of access (to all reproductive technologies), when, in fact, the right protected by law is the right from interference with choices. The change is subtle but significant and bears on cloning questions.

### Scientific versus Christian language

Some participants questioned the legitimacy of accepting scientific or "neutral" language in theological and moral debates. For example, *reproductive* and *therapeutic* cloning are standard terms in the literature but contain unacceptable bias. Alternative terms would be *procreative cloning* and *cloning for therapeutic purposes*. [Both sets have been used interchangeably throughout this publication.] Others disagreed because such language can be useful and is appropriate for the sake of clarity or is the common language of the debate. Participants acknowledged that this discussion is not a matter of word games since language does shape debate and attitudes.

### A patented person?

The legal possibility exists that the genome of a cloned human being could be patented (because the process would have involved human ingenuity). This is troubling. Although laws might be rewritten to address this problem, its existence points to significant questions about the current adequacy of the law to handle the challenges before us. It may not be possible to regulate procreative cloning at all. For instance, how would a law be written so as to permit cloning for one set of motivations but not another?

### A moratorium is warranted

A general conviction seemed to be coalescing around the need for a stronger moratorium on procreative cloning. This position would support a moratorium, not a ban, on all research or efforts intended for procreative cloning. This represents a stronger position than currently exists under the National Bioethics Advisory Commission (NBAC) guidelines of 1997, while it leaves open possibilities for revisiting the issue. The rationale does not depend on a single reason alone but rather upon the combined weight of theological, moral, and scientific factors that

surfaced in the papers and conversations. In short, so many unanswered questions exist that the exercise of moral responsibility would deem a moratorium necessary. These topics include but are not limited to questions about: the safety of somatic cell nuclear transfer cloning (SCNT) for procreative purposes, the Christian understanding of procreation and family as a divine order, possible instrumentalization of children, justice concerns, appropriate social priorities, and regulative workability. This position would reverse the current jurisprudential axiom, meaning that the burden of persuasion and proof should fall upon those who propose projects in this disputed area.

## Should Humans Clone for Therapeutic Purposes?

Stem cell research

Other concerns about cloning for research must not be overlooked, but clearly the most controversial issue involves the use of embryonic stem cells. This issue entailed obvious differences, perhaps the most significant of the consultation, as represented by points of difference in the papers.

The primary moral question of stem cell research is the moral status of the pre-implantation embryo

Is it simply human tissue? Is it a person? What are the duties and rights it warrants? Against most answers to these questions must be weighed the possible, though yet undemonstrated, health benefits of research involving embryonic cells.

A Christian assessment of pre-implantation embryos often invokes the intrinsic value of human life

On this question the ELCA statement on abortion seems to provide ambiguous guidance or, according to some, inconsistent claims. It seems to make an absolute claim that human life at every stage has inherent value.<sup>2</sup> However, the statement's acceptance of abortion, even as a tragic option, suggests that "inherent value" is not intended as an absolute claim, but rather implies gradations of value. Clearly, the statement does not address the nuances that are now being debated around these questions. The statement can be of help but much additional discernment will be necessary.

The Christian claim of *imago dei* (image of God) is often utilized in this discussion but suffers ambiguities of its own

The Christian tradition has offered several explanations as to what exactly constitutes the *imago dei*. There is not a clear tradition as to whether or when it applies to pre-birth human beings. On this point some participants suggested that the biblical notion is applied principally to humankind, and only derivatively to individuals per se. Its normative use is appropriate but difficult. Resources exist for reflection and clarification, but attention to these is needed.

Alternatives to stem cell embryos

*Agreement: Research cloning for therapeutic purposes is a profoundly serious moral issue because it uses human embryos and therefore alternatives to the use of these stem cells should be fully pursued.* This conviction was true of participants regardless of their position on embryonic stem cell research.

## Post Script

Further conversation

*Agreement: This consultation should not be the end of conversation in this church but a beginning. The time is short.*

## Endnotes

1. An observation by John Stumme, director of the Department for Studies of the Division for Church in Society, ELCA.
2. *A Social Statement on Abortion*, Evangelical Lutheran Church in America (1991), 2.



## Participants of the ELCA Consultation on Human Cloning

October 13-15, 2000, Chicago, Illinois

(All participants are ELCA members unless otherwise noted.)

**Lans Alexis**

Pastor  
St. John's Lutheran Church, Baltimore, Maryland

**James Childs**

Professor of Theology and Ethics  
Trinity Lutheran Seminary

**Cynthia Cohen**

Senior Research Fellow  
Kennedy Institute of Ethics  
(Episcopal Church, U.S.A.)

**Richard Crossman**

President-Dean  
Waterloo Lutheran Seminary  
(Evangelical Lutheran Church in Canada)

**Kevin Fitzgerald**

Assistant Professor of Medicine  
Loyola University Medical Center, Chicago  
(Roman Catholic)

**Mark Hanson**

Executive Director  
Missoula Demonstration Project, Montana

**Philip Hefner**

Professor of Systematic Theology  
Lutheran School of Theology at Chicago

**Mary Hendrickson**

Co-director, Food Circles Networking  
University of Missouri

**Tom Kennedy**

Professor of Philosophy  
Valparaiso University

**Tony Kerlavage**

Senior Director, Product Strategy  
Celera Genomics, Inc.

**Duane Larson**

President  
Wartburg Theological Seminary

**Robert Lebel**

Medical Geneticist  
Genetic Services, Glen Ellyn, Illinois

**Charles Maahs**

Bishop  
Central States Synod, ELCA

**Susan Martyn**

Professor of Law  
University of Toledo

**Margaret McLean**

Director, Biotechnology and Healthcare  
Markkula Center for Applied Ethics, California

**Mario Miranda**

ELCA Church Council Pastor and Physician  
Bayamon, Puerto Rico

**George Murphy**

Pastoral Associate  
St. Paul's Episcopal Church, Akron, Ohio

**Paul Nelson**

Professor of Ethics  
Wittenberg University

**Richard Perry**

Professor of Church and Society  
Lutheran School of Theology at Chicago

**Kevin Powell**

Pediatrician and Bioethicist  
Carle Clinic and Univ. of Illinois College of Medicine

**Nancy Reinsmoen**

Clinical Transplantation Immunology Lab. Director  
Duke University

**John Stumme**

Director for Studies, Division for Church in Society  
Evangelical Lutheran Church in America

**Hans Tiefel**

Professor of Ethics  
College of William and Mary

**Roger Willer**

Associate for Studies, Division for Church in Society  
Evangelical Lutheran Church in America  
(Consultation Convener)

**Janet Williams**

Genetic Counselor  
Lacrosse Regional Genetics Services, LaCrosse, Wisconsin



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## Additional Resources and Ordering Information

### *Genetics! Where Do We Stand as Christians?*

A resource designed for use in adult study groups and also as an entry point on genetics for individuals. (Evangelical Lutheran Church in America, 2001)

### *Genetic Testing & Screening: Critical Engagement at the Intersection of Faith and Science*

A multi-authored volume on the issues surrounding genetics from a Christian perspective edited by Roger A. Willer (Kirk House Publishers, Minneapolis, 1998). ISBN 1-886513-11-2, \$10.00.

### *A Social Statement on Abortion*

The ELCA's policy statement on abortion (1991). Item number 69-0062, 15¢.

### *Artificial Insemination*

Part of the "Procreation Ethics Series" of the American Lutheran Church and Lutheran Church in America (ELCA, 1986). Item number 67-1093, free.

### *Ethics of Prenatal Diagnosis*

Part of the "Procreation Ethics Series" of the American Lutheran Church and Lutheran Church in America (ELCA, 1986). Item number 67-1105, free.

### *Genetic Manipulation*

Part of the "Procreation Ethics Series" of the American Lutheran Church and Lutheran Church in America (ELCA, 1986). Item number 67-1109, free.

### *Genetic Screening and Counseling*

Part of the "Procreation Ethics Series" of the American Lutheran Church and Lutheran Church in America (ELCA, 1986). Item number 67-1110, free.

### *In Vitro Fertilization*

Part of the "Procreation Ethics Series" of the American Lutheran Church and Lutheran Church in America (ELCA, 1986). Item number 67-1116, free.

These resources may be ordered from Augsburg Fortress, Publishers by calling 800-328-4648. Single, complimentary copies (except for *Genetic Testing & Screening*) may be obtained by phoning 800-638-3522 ext. 2996.

Many of these resources and more may be found online at < [www.elca.org/dcs/studies.html](http://www.elca.org/dcs/studies.html) > .

This document may be found online in its entirety at < [www.elca.org/dcs/humancloning.html](http://www.elca.org/dcs/humancloning.html) > .

# HUMAN CLONING

Papers From a Church Consultation

