Rewrite Resolution 3181. New Developments in Genetic Science

I. Foreword

The ethical implications of new developments in genetic science continue to make themselves known as new aspects of the technology are introduced in medicine, agriculture, and forensic science.

The 1988 General Conference approved a statement affirming the positive prospects and warning of the potential dangers of genetic technologies and authorized the establishment of a Genetic Science task force to:

1. review and assess scientific developments in genetics and their implications for all life;

2. take initiatives with industrial, governmental, and educational institutions involved in genetic engineering to discuss further projections and possible impact;

3. convey to industry and government the sense of urgency to protect the environment as well as animal and human life;

4. support a moratorium on animal patenting until the task force has explored the ethical issues involved;
5. cooperate with other churches, faith groups, and ecumenical bodies sharing similar concerns;

6. explore the effects of the concentration of genetic engineering research tasks and applications in a few crops;

and

7. recommend to the 1992 General Conference such further responses and actions as may be deemed appropriate.

II. Our Theological Grounding

The United Methodist doctrinal/theological statement affirms that “new issues continually arise that summon us to fresh theological inquiry. Daily we are presented with an array of concerns that challenge our proclamation of God’s reign over all of human existence.” (1988 Book of Discipline, ¶ 69)

One of the concerns that merits critique in light of theological understandings is genetic science. The urgent task of interpreting the faith in light of the biotechnology revolution and evaluating the rapidly emerging genetic science and technology has only begun. The issues demand continuing dialogue at all levels of the church as persons from diverse perspectives seek to discern and live out God’s vision for creation.

The following affirmations provide the theological/doctrinal foundation of the task force’s work and recommendations. The task force urges the whole church to join in the urgent task of theological inquiry in what has been called the genetic age.
A. All creation belongs to God the creator

Creation has its origin, existence, value, and destiny in God. Creation belongs to God, whose power and grace bring the cosmos out of nothingness, order out of chaos, and life out of death. Creation is a realm of divine activity as God continually seeks to bring healing, wholeness, and peace. The goodness of our genetic diversity is grounded in our creation by God.

B. Human beings are stewards of creation

While human beings share with other species the limitations of finite creatures who owe their existence to God, their special creation “in the image of God” gives them the freedom and authority to exercise stewardship responsibly.

The image of God, in which humanity is created, confers both power and responsibility to use power as God does: neither by coercion nor tyranny, but by love. Failure to accept limits by rejecting or ignoring accountability to God and interdependency with the whole of creation is the essence of sin. Although the pursuit of knowledge is a divine gift, it must be used appropriately with the principle of accountability to God and to the human community and the sustainability of all creation.

C. Technology in service to humanity and God
God has given human beings the capacity for research and technological invention, but the worship of science is idolatry. Genetic techniques have enormous potential for sustaining creation and, for some, improving the quality of human life when they are applied to environmental, agricultural, and medical problems. When wisely used, they often provide positive, though limited and imperfect, solutions to such perplexing social problems as insufficient food supply, spread of disease, ecological deterioration, overpopulation, and human disease. When used recklessly, for greedy profit, or for calculated improvement of the human race (eugenics), genetic technology becomes corrupted by sin. Moreover, we recognize that even the careful use of genetic technologies for good ends may lead to unintended consequences. We confess that even our intended consequences may not be in the best interest of all.

D. From creation to redemption and salvation

Redemption and salvation become realities by divine grace as we respond in faith to God’s action in Jesus Christ to defeat the powers of sin that enslave the human spirit and thwart the realization of God’s purposes for creation. Having distorted God’s good intention for us in creation, we now are called to be conformed to God’s true image in Jesus Christ.

The community of Christ bears witness to the truth that all persons have unity by virtue of having been redeemed by Christ. Such unity respects and embraces genetic diversity, which accounts for many differences among people. Love and justice, which the Scriptures uplift and which Jesus Christ supremely expresses, require that the worth and dignity of the defenseless be preserved and protected.
III. Issues in the Development of Genetic Research and Technology

A. Genetic science affects every area of our lives

The food we eat, the health care we receive, how crimes are prosecuted, our biological traits, and the environment in which we live are all affected by research and developments in genetic science. As stewards of and participants in life and its resources, we seek to understand, to evaluate, and to utilize responsibly the emerging genetic technologies in accordance with our finite understanding of God’s purposes for creation. The uses of genetic science have the potential for promoting as well as thwarting these aspects of the divine purpose.

The rapid growth of genetic science has increased our awareness of these concerns, has created new concerns, and has accelerated the theological, ethical, and pastoral challenges that genetics poses to persons of faith.

B. Scientific change now leads societal change

A major dimension of the biological revolution is genetic science. Fewer than fifty years ago, the actual genetic substance of living cells, DNA, was firmly identified. Now, altering DNA in plants and animals, even humans, in order to correct disorders or to introduce characteristics that are more desirable is being done. Genetic developments in medicine and agriculture promise to alter the very nature of society, the natural environment, and even human nature.

C. Genetic science challenges society
Extensive research has been conducted in plant and animal genetics, with significant implications for the food supply, farm policy, agricultural economics, and ecological balance. New developments in genetic engineering, collectively called, synthetic biology are allowing the re-engineering of whole organisms. Bioengineers have “printed out” from computers linked vials of nucleic acids of DNA and RNA, whole viruses and bacteria using these synthetic biology tools. These enhanced kinds of genetic engineering are already being used to make new drugs and new foods (See “Principles for the Oversight of Synthetic Biology” available at: http://www.synbiowatch.org/2013/05/principles-for-the-oversight-of-synthetic-biology/). Delays in commercializing some of the new technologies may afford society and the church additional time to address the implications, but the time available for serious reflection on the consequences of these technologies prior to their implementation is brief.

IV. Questions about Biotechnology

Although genetic technologies are similar to other technologies, genetic science and technology force us to examine, as never before, the meaning of life, our understanding of ourselves as humans, and our proper role in God’s creation.

Several basic questions can provide a framework within which to evaluate the effect of genetics or any other new technology on any segment of society. The questions revolve around issues of appropriateness, availability, efficacy, and accessibility.

V. The Patenting of Life Forms
The patenting of life forms is a crucial issue in the debate over access to genetic technologies. Some claim that patenting of life will give complete control to the owner and so limit access. Others insist that the scientists and funding agencies or institutions must have some return on their investment. A compromise that many societies have worked out in order to provide economic returns for those who have developed a technology while providing access, eventually, to the entire society is the patent or exclusive control of a technological invention for a period of years.

In 1984, the General Conference of The United Methodist Church declared genes to be a part of the common heritage of all peoples. Therefore, exclusive ownership rights of genes, organisms, and cells as a means of making genetic technologies accessible raises serious theological concerns and profound ethical concerns.

While patents on organisms, cells, and genes themselves are opposed, process patents — wherein the method for engineering a new organism is patented — provide a means of economic return on investment while avoiding exclusive ownership of the organism and can be supported. In 2013, the U.S. Supreme Court ruled that genes are not patentable subject matter, but still allowed copies of the genes to be patented (http://www.supremecourt.gov/opinions/12pdf/12-398_1b7d.pdf).

VI. Recommendations

A. Medical implications

1. Testing and treatment
a. We support the right of all persons to health care and health-care resources regardless of their genetic or medical conditions.

b. We support equal access to medical resources, including genetic testing and genetic counseling by appropriately educated and trained health-care professionals.

c. We support human somatic gene therapies (recombinant DNA therapies that produce genetic changes in an individual that cannot be passed to offspring) that prevent or minimize disease and its effects. But we believe these therapies should be limited to the alleviation of suffering caused by disease. We are concerned by reports of deaths of patients in somatic-gene research programs and urge that strengthened guidelines and government regulations be developed for the use of all somatic gene therapies. We oppose human germ-line therapies (those that result in changes that can be passed to offspring) because of the possibility of unintended consequences and of abuse. We are concerned that both the U.S. and the United Kingdom are considering approving the first experiments that would deliberately change the DNA of a human embryo. With current technology it is not possible to know if artificially introduced genes will have unexpected or delayed long-term effects not identifiable until the genes have been dispersed in the population.

Furthermore, we urge that government regulations and professional organization guidelines be developed and effectively implemented for all gene therapies. Given the reports of deaths from somatic gene therapies and the development of genetically engineered leukemia in some patients undergoing somatic-gene therapy, we urge a careful reexamination of the appropriateness of this therapy.
d. We call on all nations to ban human cloning (the intentional production of genetically identical or essentially identical human beings and human embryos), whether such cloning is funded privately or through government research.

e. We call for a ban on medical and research procedures that intentionally generate “waste embryos” that will knowingly be destroyed when the medical procedure or the research is completed. The exception to this is when ova (eggs) are being collected for in vitro fertilization. A woman is at risk for complications each time drugs are given to stimulate ovulation and ova are removed. Obtaining and fertilizing multiple ova may be justified to avoid the necessity of multiple attempts to obtain ova. The first attempt at IVF results in a living child less than 30% of the time thus making multiple attempts necessary.

2. Privacy and confidentiality of genetic information

a. We support the privacy of genetic information. Genetic data of individuals and their families shall be kept secret and held in strict confidence unless confidentiality is waived by the individual or his or her family, or unless the collection and use of genetic identification data are supported by an appropriate court order.

b. We support wide public access to genetic data that do not identify particular individuals, but we oppose using genetic data gathered for purposes other than that to which consent was given.

c. We oppose the discriminatory or manipulative use of genetic information, such as limiting, terminating, or denying insurance or employment.
B. Agricultural implications

1. We support public involvement in initiating, evaluating, regulating, and funding of agricultural genetic research.

   a. We believe the public has an important policy and financial role in ensuring the continuation of research that furthers the goal of a safe, nutritious, and affordable food supply.

   b. We believe that the public should have input into whether a research effort, or its products, will serve an unmet need in food, fuel, fiber production and processing.

   c. We believe that the benefits of research applications should accrue to the broadest possible public, including farmers and consumers.

2. We urge that genetically modified crops and genetically engineered or cloned animal products be fully tested as new food stuff, and that they be labeled so that consumers have a choice in which kind of agricultural products they buy.

C. Environmental implications

1. As stewards of the planet Earth, we should be concerned not only with the well-being of humans, but also with the wholeness of the rest of creation.
2. We urge that genetically engineered organisms be released into the environment only after careful testing in a controlled setting that simulates each environment in which the organisms are to be used.

3. We urge the development of criteria and methodologies to anticipate and assess possible adverse environmental responses to the release of genetically engineered organisms.

4. Prior to the release of each organism, plans and procedures should be developed to destroy genetically engineered organisms that may cause adverse environmental responses.

VII. What the church can do

1. We request that clergy be trained to provide pastoral counseling for persons with genetic disorders and their families as well as those facing difficult choices as a result of genetic testing. These choices might include decisions such as those related to reproduction, employment, and living wills. Churches are encouraged to provide support groups for individuals and families affected by genetic disorders.

2. We call on the church to support persons who must make difficult decisions regarding genetic information related to reproduction. We urge that the church support efforts to improve the quality of genetic testing on embryos and fetuses so that accurate information is provided to couples and their doctors about genetic conditions. We reaffirm the United Methodist position opposing the termination of pregnancy solely for the purpose of gender selection (2012 United Methodist Book of Discipline ¶ 161J).
3. We urge theological seminaries to include courses and continuing education events that equip clergy to address theological and ethical issues raised by scientific research and technology.

4. We urge the church to establish and maintain dialogue with those persons working to develop or promote genetics-based technologies, including especially those working in the fields of synthetic biology. The ethical concerns of the church need to be injected into the laboratory, the factory, and the halls of government in an ongoing manner.

5. Produce resources to educate on genetics science, theology and ethics, including workshops, seminars and resource materials. General agencies of the church should develop additional interpretive resources on genetics issues.

ADOPTED 1992
AMENDED AND READOPTED 2000
Amended and Readopted 2008
Resolution #3181, 2008 Book of Resolutions
Resolution #102, 2004 Book of Resolutions
Resolution #90, 2000 Book of Resolutions

See Social Principles, ¶ 162O.

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