

GENETIC FRONTIERS: CHALLENGES FOR HUMANITY AND OUR RELIGIOUS TRADITIONS

by *Philip Hefner*

Abstract. Genetic research and its applications pose a significant challenge today, in particular to religious communities. The most critical challenge is to our understanding of human nature and values. This article surveys the challenges and the resources that the monotheistic religions can bring to bear in response. It is important for those religious communities to communicate to the larger society both their common beliefs and values and the diversity among them.

Keywords: genetics; healing; human nature; image of God; monotheistic religions; shared beliefs

The issues of genetics are among the most challenging that have ever faced the human community. Few issues impinge on our common experience as vividly and urgently as those on the genetic frontier. Often we deal with esoterica that are perceived only by certain groups. Even such central challenges as those pertaining to weapons of mass destruction or human rights may be less obvious than the issues we deal with today, since they often are hidden from our sight either because they do not occur in our everyday experience or because it is possible to keep them isolated in certain segments of the population.

The challenges on the genetic frontier, however, are close to us because they are embedded in the practice of medicine that may touch every one of us in our daily living. Every hospital in the country may be an arena of reflection, debate, and practice of medicine and health care that are shaped by genetics. I describe this situation with the term *genetic medicine*. Every woman in the process of bearing children, as well as her partner and family,

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may find herself within the domain of genetic medicine. Her rabbi, priest, imam, or minister may find him- or herself called upon to share her experience. And each of us, in nearly every segment of the human life cycle, may find ourselves in the same domain when we come into contact with the health-care system.

This embeddedness in medicine and health care points to an even larger context in which genetics is bundled. This context is important, because it is the point where genetics intersects our common human experience. We cannot interpret adequately the challenges we face if we try to isolate them from this interconnectedness. The bundle of experience that I refer to includes the science and technology of genetics as well as the practice of medicine and the health-care system, which in turn reaches out to include our understandings of health, illness, and death, which in turn reverberate in our personal understanding of human life and the domain of our religious and spiritual worlds. I am assuming this broad and rich context of embeddedness in my comments, and I make no effort to separate out any single element as if it could stand alone. I suggest, as well, that everyone who is concerned for the challenges on the genetic frontier must also take the context of embeddedness into account, be they scientist, technologist, physician, health-care giver, lawyer, insurer, biotech entrepreneur, member of the clergy, administrator of public policy, or politician.

Let me mark this as one of the priorities that religious communities should press upon themselves and also upon our society: to recognize the rich human context in which genetics and genetic medicine take place and to act in ways that are sensitive and responsible to that context.

FIVE CHALLENGES THAT FACE US ALL

There are five items on my list of basic human challenges posed by genetics and genetic medicine. I discuss them in the order of their urgency in my mind.

1. We now have both the technological capability and the desire to alter human persons and in some sense even to alter basic human nature. This is the fundamental issue raised by genetics and genetic medicine. From the earliest days of the human species, we have attempted to shape human nature by social conditioning and education, and now we add the tools of biological, genetic alteration to our repertoire. We are able to alter individuals in what we call somatic gene intervention; in "germ line" interventions we affect future generations as yet unborn. Is genetic engineering now an integral element in human nature? Is this ability now a defining mark of what it means for us to be human? That is the bottom-line question raised by genetics for us today. This is the first and basic challenge that I bring to our attention today.

2. Regardless of how we answer this question, either as individuals or as representatives of a religious tradition, we must recognize that the ques-

tion is no longer an exotic one, no longer confined to science fiction. This is the second challenge on my list—that these challenges are not exotic but are rather inherent to the human condition today. I have said that the issue of genetic engineering is a quintessential human issue; I mean that this is exactly the kind of issue that we should expect to arise, given the basics of human nature and the current state of our science, technology, and cultural predispositions in many societies of the world, including those of the United States and western Europe. The challenge does not arise because we are sinful or perverted in some way; rather, it grows out of the givenness of our human nature and our current situation. It would be very strange if issues such as these did *not* appear on the scene.

3. These challenges raise the issues of the meaning of illness and the purpose and scope of healing. I see an attitude toward illness and healing growing in our society that has not been created by genetic medicine but into which genetic medicine has been folded. This attitude looks for the curing of every disease and considers it an inalienable right of every person to have all illnesses and defects remedied. This attitude is applied to all persons in our society and in some cases to all future generations. The disease may be a form of cancer or, as has been bandied about, immunity to colds and flu.

Every society at one time or another has to deal with the question of priorities in the accessibility of health care. In most cases, the priorities are governed by funding and the availability of competent caregivers. Today, however, we possess technological means never before available, of which genetic medicine is a major component, and we face a new kind of question: Are illnesses and defects to be considered “sling and arrows of outrageous fortune,” or the “roll of the dice,” as previous generations of human beings have been compelled to say? Or are they targets in the process of developing cures, access to which is a basic human right in our society? There are strong cultural forces that argue for the latter. Here, too, our image of what it means to be human is brought into play. Is unmerited suffering and death due to illness inherent in the human condition? Or is it an abnormal condition that we should try to remove in every possible instance?

These questions give us occasion to distinguish what we mean by such terms as *defect*, *disability*, *illness*, *cure*, and *healing*. Their definitions are not as self-evident as we may think. Who decides what these terms mean?

4. The fourth challenge concerns our relationship to the rest of the world, particularly those societies that are not as affluent as we are. Issues of genetics and genetic medicine are currently most urgent in the wealthy and technologically advanced societies of the world. What we in the United States and among the affluent classes may consider to be common, everyday health-care possibilities are unusual or even impossible elsewhere. Furthermore, the human, financial, and natural resources that enable these

health-care options are concentrated in north-of-the-equator societies far out of proportion to the percentage of the world's population in those countries. At this point we face questions of justice and how we relate to the larger global human community. If genetic medicine is basic to our human nature and a right of all, is it tolerable for it to be concentrated in only certain societies? These questions of justice arise in our own society as well. Will genetic medicine be available to every social class and ethnic segment of our society, or limited in its availability?

5. These challenges raise the question of how we are related to other species, since they also are part of God's creation. What is our proper relation to other species? Humans are distinctive from other animals, but the boundaries are blurred today, particularly by the knowledge that we share so much of our genetic composition with other species. Our genetic similarity enables us to gain knowledge from other animals that serves as a foundation for modern medical practice. Without this knowledge, our medical success would be significantly hampered. In addition to knowledge, there are experimentation on animals and transplants between species. Many ethicists who oppose cloning and other genetic interventions in humans look upon other animals as cost-effective substitutes for experimentation. In some countries, organizations have been formed (such as People for the Ethical Treatment of Animals [PETA] and Fund for the Replacement of Animals in Medical Experiments [FRAME]) to monitor and even oppose experimentation on other animals. This issue will not go away but only grows more urgent. There is talk about computer simulations replacing many animal experiments. This would be a welcome development.

SHARED BELIEFS THAT RELIGIOUS TRADITIONS BRING TO THE CHALLENGE

I have described the challenges as those that face us all, including those of us who stand in specific religious traditions. For us, however, these common challenges are folded into our long traditions of reflecting on God, humanity, healing, life, and death. In this section I add nuances to the common challenges by relating them to certain critical traditions, mostly Christian, and I trust that these comments will serve as an invitation to commentators from traditions other than my own.

The rationale for this conference¹ includes forming coalitions—among all members of our society and among the religious communities. There are certain common beliefs that Jews, Christians, and Muslims hold that we should acknowledge among ourselves and declare clearly for our society in general. Among these are:

1. All life is the creation of God, and humans are created in the image of God. To be created in God's own image means that there is purpose for

our lives, and that purpose is part of God's purposes for the fulfillment and redemption of the creation.

2. God desires the flourishing of human life, and at the same time God is the power for transforming our lives here on earth and for eternity.

3. In this life, God works for healing, for justice, and for obedience to the divine will. This work of God forms the purpose for human life, as well. God wills that all human life should serve the fulfillment of the creation and its creatures.

4. At the same time, we recognize that justice and healing are not fully realized in our earthly lives. God brings completion only in eternity. This dual emphasis—on the significance and value of earthly life and on the reality of God's perfection in eternity—is central to the vision of the three monotheistic religions.

These common beliefs make a difference. They give a strong and definite direction to our thinking and acting with respect to genetics and genetic medicine. They also are quite formal in their statement, which means that they can be interpreted in different ways and result in actions that are sometimes in conflict with one another. As religious communities and individuals, we want to articulate both of these elements—the importance of the beliefs we share in common and the authenticity of our differences in interpretation and behavior. I believe that the current situation in our society underscores the importance of this double-edged vision and requires its clear enunciation.

Three clarion notes are struck in the chord of our common belief. First, we hold the flourishing and healing of human life to be a primary value. Second, the flourishing of human life must be directed according to the purposes that God gives our lives. Third, our perspective focuses both on this earthly life and on eternity—and on both as they are held in the hands of God.

CHALLENGES TO OUR RELIGIOUS TRADITIONS

Let us be more specific in defining the challenges that genetics and genetic medicine pose to our traditions today.

1. How do we understand genetic interventions and alterations within the purview of God's will for humankind? Are they alien to God's purposes for us, or are they to be understood as dimensions of our God-given destiny?

2. Must the religions be fundamentally negative toward genetic engineering? A survey of statements issued by our various communities and by individual theologians and ethicists shows that by far the greater emphasis is on the negative possibilities of genetic medicine. Genetic interventions are spoken of as "a slippery slope" leading down to degradation and as arrogant efforts to "play God," to tread on territory that is forbidden to us, since it belongs to God alone.

Such a negative stance may prove to be unwise and even unfaithful. The capabilities and desires that come to bear in genetic medicine are so intrinsic to what makes human beings tick that I believe they must be related constructively to God's will. I cannot say what the correct response is to every detailed question that arises in genetic medicine, and I am not oblivious to the possibilities for sin and evil in the practice of genetic interventions. Nevertheless, the human community calls for constructive visions that will point the way for our research and therapeutic activity. Who is more accountable to provide such visions than the religious communities? Such visions will not be open-ended and relativistic. Their constructive and future-oriented power will include guidelines for caution and restriction. They will include, at least implicitly, guidance concerning what is right and wrong. However, they cannot be only prohibitions, "Thou shalt nots"; they must give direction to human hopes and human achievements. What we want are visions that speak faithfully and incisively about how genetic medicine should serve the creation and its creatures. This is the issue about which we are so uncertain, but religious leaders and thinkers are still called upon to meet the challenge.

3. If we consider human life to be sacred, can genetic alteration be included in our concepts of the sacred? Our traditions bring different perspectives to this question. Jewish thinkers, for example, speak of the beginning of human life in terms different from those of the Roman Catholic tradition. Both traditions hold human life in highest esteem, yet they differ on such issues as abortion and *in vitro* fertilization, both of which accompany genetic medicine.

4. How do we understand the possibilities of genetic alteration within traditional concepts of natural law? This question weighs particularly strongly in Roman Catholic thinking. How far can we proceed in altering the human person and still conform to the nature God has created?

5. How do we balance the voice of the community and the competence and responsibility of individuals? My Lutheran tradition and many Protestant Christians will underscore the individual as the locus of responsibility in these questions, whereas other traditions will emphasize the authority of pronouncements by the community and its leaders.

6. How is genetic alteration to be interpreted in light of our common belief that we are created in the image of God? This is the most important teaching that the three monotheistic religions offer concerning humans—that we are created in the image of God. This teaching is applied in conflicting ways, but even secularists adopt it as an implicit warrant for their positions. On the one hand, stem cell and embryo research is opposed on the grounds that it may destroy life that is created in God's image; on the other hand, such research is demanded on the grounds that it will enhance the life that is created in the image of God. What does it mean to say that humans are created in the image of God, and what does it have to do with

genetic research and medicine? We who adhere to a monotheistic tradition are challenged to clarify our belief on this point. Throughout our history, we often have used this teaching to establish the superiority of humans over all other species. This is a misuse of the tradition. I believe that, to the contrary, it is a statement about the purposes of humanity, namely, that we are placed on earth to actualize the presence of God and the will of God in the world.

7. How do we value healing and curing? Christians have underscored Jesus' own concern for healing the sick, and other religions relate healing to their central figures. Healing is a high priority for the Buddha, for example. All of the major religions have long traditions of establishing and maintaining hospitals. How do we understand God's will for human healing? Is God the agent of healing and curing? Is God the God of the dying, as well? How far do we extend the right to be healed? Do we construct a hierarchy of priorities for healing and curing? Are healing and curing exclusively the domain of medical practice? Or is it the case, as some Christian healers have emphasized, that we must devote more attention to the care and comfort of those who are sick but clearly will never be healed, at least not in the body? What does the life of such people tell us about human nature and God's will? Some illnesses cannot be healed, no matter what advances are made in medicine. Not only must we temper our expectations of medical practice, but we also must offer positive consolation to the uncured and the incurable who live in our midst.

Most of our religious communities would agree with my own denomination in its statement that

Health care and healing services should attend to the physical, mental, spiritual, and communal dimensions of a person's well-being. . . . Functioning and well-being exist for various purposes, however. Health is therefore not an end in itself or a supreme value. As Christians, we understand health to be for living the vision of the gift of life that is shalom, life together in wholeness and in a relationship with God that is marked by thankfulness, praise, obedience, and service to our neighbors in love and through the vocations to which God has called us. (ELCA 2001, 3)

8. No matter how highly developed our medical practices become, genetic or otherwise, we all shall die. Our religious traditions have devoted an enormous amount of reflection and piety to the issues of pain, suffering, dying, and death. As strange as it may seem, one of the challenges we face in an age of genetics and genetic medicine is to talk about suffering, dying, and death in ways that are wholesome, relevant, and life-enhancing. Theologically, this will include our teaching and preaching about evil, sin, and love of God in the face of death. We may not all agree with the answers that Rabbi Kushner offered in his book *When Bad Things Happen to Good People* ([1981] 2004), but we probably do agree that he was dealing with a question that is close to the top of our agenda in the era of genetic medicine.

9. How do we approach the issues of justice in this realm? I do not dwell here on this issue, even though it is fully as important as the others. We know injustice by omission—our failure to make genetic medicine available to all sorts and conditions of persons. United States society knows this injustice only too well. We also know injustice by commission—in such cases as the Tuskegee Syphilis Study of 1932–72, in the fact that as recently as 1999 the genomic mapping tended to include only Caucasian subjects, and in our American traditions of both implicit and explicit eugenics. Eugenics was not solely a strategy of the Nazis; they were proud of the affirmation that their medical practices earned, in the early years of their experiments, from American experts. We should listen carefully to the reservations concerning genetic medicine that come from minority ethnic and religious groups in our society.

CONCLUSION

I leave you with three summary proposals for the response of our religious communities to the challenge of genetic medicine.

1. As religious communities we are in a signal position to bring together all of the specific interests that play a role in genetics and genetic medicine—scientists, physicians, health-care givers, hospital administrators, biotech entrepreneurs, lawyers, insurers, shapers of public policy, clergy, ethicists, theologians, and patients. All of these persons are members of our communities. But as we bring them together, we remember that we are committed to the wholeness of human experience before God. We will be inclusive in bringing people together, and we will always try to be responsible to the rich breadth of the context in which genetic medicine takes place. This is the realm of community formation and discussion.

2. We are called to contribute to the shaping of practical applications in the area of genetic medicine. Most important, we are concerned with the applications that actually are brought to bear upon persons. These include not only the medical applications but also the ethical, legal, philosophical, and spiritual ones that minister to these persons in the wholeness of their lives. This is the realm of pastoral ministry. There is, however, a range of applications involving policy making and practice at levels other than the pastoral. We are also concerned with the commitment of our society's resources—its research priorities and public-health policies, for example. These require different sets of expertise and communication to the pertinent sectors of our society.

3. Our belief systems, our theology and moral philosophy, are central in our response. In our conversation with our American society and across religious boundaries, we must avoid the temptation to give less attention to our beliefs. As I have already said, however, we should first of all explain to our society and to each other what beliefs we hold in common. One of

the chief problems that we face in America today, a paralyzing problem, is the inability to reach consensus on basic principles and serious moral issues. We could easily give our American brothers and sisters the impression that religion divides rather than unites, that it fractures consensus rather than contributing to it. Most Americans probably do believe that religion is divisive. We must make clear to American society why its religious communities—in their diversity—are an important resource for dealing with the challenges of genetics and genetic medicine. In order to do this, we must present the common elements in our worldview and show how this worldview can be a resource for meeting the challenge.

Then, we must give voice to the distinctive and in some ways contradictory ways in which we live in this worldview. This diversity will, of course, be shown to be a diversity within our several communities as well as between them. If we can give testimony to our diversity with a shared worldview, and if we can demonstrate how that worldview gives rise to authentic differences in interpretation and practice, we can help Americans of every persuasion deal with the profound implications of genetic medicine in seriousness and integrity.

The worldview of the religions is perhaps their most important contribution to meeting the challenge. The perspective of eternity and ultimacy is all too seldom brought to bear on our discussions of genetic medicine. Indeed, many people who focus on the ethical, legal, and social issues consider these perspectives to be obscure and unhelpful. We are challenged to demonstrate the opposite—that our religious beliefs and theology are a constructive element in the discussion.

These challenges are by no means easy ones. They are unavoidable, however, and the place of religious communities is central, if we demonstrate the intelligence, sensitivity, and courage to bring our faiths to bear in a constructive fashion.

NOTE

1. A version of this article was delivered as the keynote address for a National Conference for Community and Justice (NCCJ) interfaith conference of Jews, Muslims, and Christians, 14 April 2002, in Detroit, Michigan.

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