

INTRODUCTION

This book addresses subject matter that turns the reader in two opposite directions, and for that reason, it is divided into two parts. Part one turns us to the past, raising the question “Who are we?” in light of our origins as human beings. This involves a consideration of biological evolution and how it can be incorporated into the Christian’s understanding of human nature. It also brings a Christian response to the philosophical materialism that often poses as a necessary accompaniment of biological and genetic assessments of the human being. Part two turns us to the future and once again raises the question “Who are we?” but now in light of the future impact of biotechnology. Particular attention will be given to efforts at genetic enhancement, including strategies for overcoming human mortality. In light of projections being made by microbiologists and bioengineers, what changes lie in store for the human community, what will they mean for the future identity of human beings, and how are we to respond to these possible developments as Christians? These questions will become increasingly urgent in coming years with the growing impact of technological advance; the frontiers of biotechnology are being continually pushed back in the quest for greater control over our minds and our bodies.

Throughout the centuries, theologians have reflected at length on the distinctive features of a Christian understanding of human nature, always in response to the cultural currents that have influenced their times. The era in which we now live is particularly challenging in light

of scientific and technological developments that appear to threaten traditional Christian understandings of who we are. Any reflection today on this subject matter—what we call “theological anthropology”—must therefore address the biosciences and biotechnology if it is to be relevant and helpful to the Christian community. If the church’s theologians are adequately carrying out their task, they will have one foot firmly planted in their tradition and the other just as firmly planted in the culture of their own time, which for us is deeply influenced by the mind-set of science and technology. It is a conversational enterprise that requires openness on the part of theologians to the cutting edges of their culture as well as discernment of where and how those edges should be challenged or affirmed. A critical part of this discussion is identifying the genuine problems and challenges that mark the divide between science and religion, and avoiding the creation of false differences and unnecessary tensions.

It is instructive to reflect on this ongoing cultural conversation between science and religion and the different shape it has taken in succeeding centuries. In the sixteenth and seventeenth centuries, the emerging science of astronomy challenged the reigning Ptolemaic view of the cosmos, which served the church’s teaching by placing the earth at the center of God’s universe. Humanity, after all, was at the center of God’s attention, and the cosmos reflected that fact. The theories of Copernicus and Galileo brought a profound shock to this thinking; quite understandably, there was considerable resistance, and throughout the seventeenth century, it was common for universities (Harvard, for example) to teach both the Ptolemaic and Copernican views side by side. What was taking place was not just a scientific debate, but a religious and cultural struggle. It took time for people of faith to reassess their understanding of the cosmos, but that reassessment happened long ago, and the church has adjusted to it. Astronomy is not the final authority when it comes to defining who we are as human beings.

From the late nineteenth century to our own times, the principal scientific threat to Christian self-understanding undoubtedly has been the theory of biological evolution identified with Charles Darwin (1809–1882). This theory has been a significant challenge to the church, because its impact on our understanding of who we are has

been more personal and immediate. Given the intense negative reaction to Darwinism in many Christian circles to this day, most people are surprised to learn that already in the nineteenth century, there were notable theologians who responded positively to Darwin's concept of biological evolution. Some incorporated it into their theology as a framework for understanding God's relation to the world, or "God's way of doing things." Such was the view of the Reverend Charles Kingsley, chaplain to Queen Victoria and a respected intellectual of his time, who acknowledged in a letter to Darwin that his book, *The Origin of Species* (1859), had compelled him to reassess his understanding of God's relation to the world. One of the more conservative theologians of the time, Benjamin B. Warfield of Princeton Theological Seminary, accepted evolution as "a theory of the method of divine providence," arguing the necessity of a divine author behind the process of evolution.¹ Darwin himself refers to the grandeur of biological evolution in the conclusion of *The Origin of Species*: "with its several powers having been originally breathed by the Creator into a few forms or into one." In his later years, he acknowledged that agnosticism was closest to his "state of mind"; he didn't regard biological evolution as offering a definitive proof one way or the other as far as God was concerned.²

The latter half of the twentieth century saw an increasingly fruitful exchange between scientists and theologians, helping to forge a spirit of dialogue between their disciplines (unfortunately, a dialogue that is far removed from most of the public discussion). I have not been a part of that dialogue and do not have the credentials to contribute to it, but it provides a helpful background to a work of this kind. My focus is limited to a consideration of human nature, touching just incidentally on broader issues in the science-and-religion dialogue. A substantial part of my discussion (in chapters 2 and 3) will focus on philosophical and ideological arguments that too easily infiltrate what is identified as a "scientific worldview," causing much of the tension between scientific and religious assessments of human nature. This is not to deny that advocates on the religious side have also muddied the water with claims that strike many Christians today as obscurantist, showing disdain for scientific findings that have long found consensus in the scientific community.

Even though public polling in the United States on the subject of biological evolution has always revealed considerable resistance to it, there have been signs lately of a gradual easing of this conflict; I believe a significant percentage of the laity and clergy in the older denominations are ready to put this divisive struggle behind them. A recent indication of this fact has been the appearance of the Clergy Letter Project, a national campaign organized to counteract the influence of creationists and fundamentalist churches and to affirm the compatibility of religion and science. A special feature of its program is the Evolution Weekend, which by 2008 had grown to more than eight hundred congregations from every state of the union and nine foreign countries, all committed to devoting an annual worship observance or a class to the subject of evolution and a proper religious response to it. More than eleven thousand clergy members have signed a statement in support of evolutionary teaching. At its 2008 General Convention, the United Methodist Church added the acceptance of evolution to its *Book of Discipline*, stating, “We find that science’s description of cosmological, geological, and biological evolution is not in conflict with theology.”

The importance of the biosciences for theology has not been easy for theologians to accept. The cultural setting for theological anthropology has been largely shaped by philosophical currents quite apart from the findings of the natural sciences. Even where theologians have been open to the implications of the biosciences and specifically to the theory of biological evolution, many at best (myself included) have felt less than comfortable in permitting these subjects to influence their theology in meaningful ways. Yet any treatment of who we are as human beings has to recognize that we are rooted in the natural world and that our nature and identity cannot be understood apart from that reality. We are mortal beings, bound by the limitations of our bodily selves, and we are intimately related to the rest of the natural world, both animate and inanimate. By raising the question “Who are we?” specifically within the context of biological evolution and biological attempts to modify and “re-create” the human condition, we gain answers that are all the more fruitful and significant for us. Christian theology must dialogue with the biosciences simply because it is the responsible thing to do, but beyond this, it provides the opportunity to bring new insights to

the understanding of our humanity and to the philosophical and moral issues we are facing.³

As we survey the contemporary scene, it is likely that recent developments in genetics and molecular biology are going to fuel one of the most intense and critical confrontations yet seen between science and religion. These developments involve the subject matter of part two, which raises issues that our ancestors could hardly have imagined. The reason for this is simple enough: the primary object of these scientific explorations is not the world “out there,” but the inner world of humans themselves. The Human Genome Project has transformed our knowledge of human beings at the genomic level, and the ongoing inventions of computers and other machinery that enable scientists to study the human subject at the molecular level are opening up new dimensions of understanding. How the worlds of science and religion respond to these developments should be of interest to everyone; there is the potential to further alienate and divide these two worlds or to generate new and promising understandings that can deepen the respect of each for the other.

The current tensions, however, go well beyond the relation of science to religion. The handmaid of science is technology, which transforms the results of scientific research into a magnificent array of practical applications that serve the human community in countless ways. The capacity not only to study but also to manipulate and modify the human being at the genetic level is raising momentous ethical issues that will dominate the public discussion for years to come. Indeed, some of the most intense ethical issues of our time have literally been created by biomedical technology, and they apply quite directly to the issues I will be addressing in part two. Underlying these ethical issues are fundamental questions of human identity that are supremely important to the person of faith. “What should we do?” is a question that carries with it the deeper question “Who are we, and what is the purpose of human existence?” This question underlies the subject matter of this book.

My purpose in writing is to help particularly those in the Christian community to gain a better grasp of current developments in genetics and biotechnology and to help them forge an appropriate theological and ethical response. To do this at all adequately, I thought it necessary

to discuss at some length the biological and genetic material that I am addressing, assuming also that most readers are not all that familiar with it. My professional education as a theologian and ethicist equips me for the theological dimensions of this work, but my limited background in the natural sciences has required an extensive (and, I must say, a most rewarding) reading program on genetics and biology in order to do justice to that dimension. I'm well aware of scientist-theologian John Polkinghorne's comment that "theologians often do not achieve great sophistication or insight when they turn to science," nor for that matter do scientists when they turn to theology, but he is quick to acknowledge that "the moral is not that we should all return to the comfort and safety of our professional home grounds."⁴ While interdisciplinary work is inherently risky, theologians still need to be doing it for the sake of the church's witness in the world. It is a task that requires humility and openness to what we can learn, as well as confidence that we bring a perspective that needs to be heard.

There are many "battlegrounds" where science and religion have come into conflict, but certainly the central one has been the status of the human being. My primary task has been to lift up a theological and anthropological perspective that is rooted in the Christian revelation and to relate it to the findings in genetics and biology. What does our creation "in the image of God" mean in relation to our biological heritage, and what does that heritage have to say to us in understanding the image of God? What can we learn from the new genetics about ourselves, and what conclusions and inferences are to be drawn from that knowledge? What constitutes responsible interpretation of the results of genetic investigations as they relate to larger issues of human meaning and destiny? Part one in particular addresses these questions in forging a Christian view of human nature; the reader will find a summary of my conclusions at the beginning of chapter 4 before I turn to the subject of biotechnology.

As a forecast of what is to come and to give the reader a preliminary indication of my own stance, I mention here some of the themes that will play an important role in the pages that follow. My basic thesis concerning the current conflict between science and religion, governed on the scientific side by genetics and molecular biology, is that

it is a philosophical debate that involves flawed assumptions and inferences on both sides. In every chapter, I will be challenging what I call a “genocentric” or reductionist view of human nature that replaces the macro world of human relationships with the micro world of molecular activity as a source of explanation for who we are as human beings. Central to my understanding of human nature is the fact that we are relational beings, with our relation to God and to each other making our humanity possible. This understanding establishes community as the goal of human life, a goal that captures the meaning and promise of life together. It also takes our bodily character seriously, recognizing the biological rootedness of our spiritual life and insisting on the holistic character of our nature, in contrast to the dualism of body and soul that has dominated the Christian tradition. I bring these understandings to the consideration of the ethical and theological issues raised by biotechnology, particularly the challenges of genetic enhancements and attempts to overcome human mortality.

Each of these themes warrants a book in itself, but I hope the overall picture I present will be helpful for inquiring readers in developing their own theological and ethical stance, as well as whet their appetite for further reading on the issues that are raised. I also hope this work contributes to the education of the church, equipping it to address issues that are critically important both for its own life and for that of the larger society.