

THE INTEGRATION OF CHRISTIAN ETHICS AND HUMAN CLONING

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1. Christian Ethics in Academia

The depth and sincerity of Christian beliefs are well known and have been essentially unchallenged through the years [1]. Therefore, I believe it is possible to be a Christian scientist whose faith interacts fundamentally with science, emulated by some of our modern Christian scientists. Contemporary science, technology, and medicine have provoked numerous tough ethical problems which we cannot expect to address adequately without having a theology of science. In addition, our own personal development as individual people of faith scream for purposeful integration, on account of modern science producing many explicit issues which challenge Christian faith (or are often perceived to do so) [2]. As lovers of the unity of truth, we should not tolerate what amounts to intellectual schizophrenia; the separation of two parts of our brains, one for faith and the other for science and/or reason, one for Sundays and the other for the rest of the week.

2. Difference in Behaviors between Christian and Secular Scientist

The integrative task is obviously important for people like me who teach at religious colleges, where we serve as mentors for other Christians who seek to answer their own personal questions about science and faith. But Christian faculty at secular institutions in America also need openly to discuss their faith in relation to science, for they, too, can mentor Christian students who otherwise would assume they must ignore or even contradict their faith when thinking about science [3]. Furthermore, they can in this way offer nonreligious students and colleagues a witness to the wholeness of Christian thinking and living in an environment filled with the need narrowly to specialize and the fragmentation of the mind which often accompanies this field. Non-Christian students need to realize the modern secular view of science as truth and theology as nonsense is not the only way of understanding how scientific knowledge relates to other forms of knowledge: if Christian faculty do not take it upon themselves to demonstrate this, then who will? All Christian scientists, inside and outside the academy, at all sorts of institutions,

should seek to model the transforming power of Christian thinking about science and everything else. Their students, their colleagues, and even the general public will benefit from their witness: the whole culture needs the whole gospel [4].

It is not simply that people in the modern world often find religion irrelevant to science. For many, including a number of prominent scientists, Christianity and science have for centuries been engaged in open conflict, with science winning the war for cultural and epistemic territory [5]. My own discipline, education of psychology, has been instrumental in debunking this myth, which has specific ideological roots in the eighteenth and nineteenth centuries; it actually tells us more about the people who believe it than about the history it purports to relate [6]. In fact, Christianity has often provided a powerful motivation for the practice of science and medicine, and it has helped to mold science into the highly successful empirical enterprise which it has become during the last two centuries [7].

No less important, much recent scholarship in the history of science serves to “demythologize” the common image of science as purely objective knowledge and faith as purely subjective belief, from which the warfare view easily follows. We now know scientific knowledge is determined not by observations and experiments, but by the outcome of debates about how to interpret observations and experiments, debates are influenced by a variety of factors: philosophical, religious, sociological, political, and personal [8]. It is now possible as never before to see both science and religion as containing deeply held, rationally structured beliefs, some of them not directly testable [9]. Indeed, for many in the modern world, science itself wears the mantle of religion: it provides a creation myth, reveals our true human nature, proclaims the promise of material and cultural salvation, gives us every good and perfect gift, offers eschatological hope, and functions as the ultimate arbiter of truth. Science performs a religious function: by detailing the intricate constructions of marvelous creatures, it called attention to their creator, in a manner which could not be equaled by other means [10]. Thus the scientist is a type of priest, and the moral character of the scientist should be highly relevant to success.

Yet scientists are human beings like everyone else, subject to the same foibles and heirs of the same fallen nature. The proper response to this is not arrogance, but humility: a quality chiseled in the Christian scientists of today, though hardly universal among scientists. Although it is important to aim toward the establishment of truth, none of us can be certain we have achieved it. Humility, and the intellectual openness which accompany it, are the most important attitudes to bring to the integrative task [11]. In practice, this means no particular way of relating Christianity and science is going to answer all important questions satisfactorily. We must expect to encounter difficulties which have no clear solutions, and we must be careful not to hitch our theological wagons too tightly to any particular scientific or philosophical horses, while at the same time we must recognize, without particular horses, we can only stand still [12]. Above all, we must retain that combination of mystery and faith which breathes life into the dry bones of human existence.

We need to introduce an entirely different line of thinking which elegantly links the character of the Christian Scientist with the actual practice of science. The Christian Scientist should be known for the following traits: placing the pursuit of truth over personal gain, openness and generosity over secrecy; humility, possess a great and ingenious modesty of mind; personal honor and trustworthiness; devotion to one's work as a divinely ordained vocation, even a religious duty; and reliance on the "visible testimony of nature", not human opinion [13]. Primarily, a Christian scientist's piety will be the driving force behind their interest in science and their vision of science as a particular type of knowledge. Closely tied to spirituality is the profound belief in an omnipotent creator who has made the world freely, not out of necessity; thus the laws of nature could not be found a priori from first principles, but have to be discovered from the works of creation [14]. The voluntary choices of a free creator, rather than ways in which God's choices are determined by the dictates of reason, either human or divine. One of the most attractive features of the mechanical philosophy was the extent to which it removed mediating influences between God and the world, thereby preserving God's sovereignty. *Ex rerum Causis Supremam cognoscere Causam* ("From the causes of things, to know the First Cause") [15].

I am arguing, then, we must integrate faith and science, reason and religion, in an overall coherent and rational worldview. Each aspect of our worldview, both faith and science, have their place. Each is open to modification in the light of the other. Faith and science must be in dialogue and mutual modification, as we seek an overall worldview which is rationally satisfactory and existentially meaningful. I have been arguing we should recognize and publicly admit our trust or faith during scientific investigations. We must not separate faith and science again in our culture, for this leads to terrible destruction. But what then is the right understanding of the relationship between faith and reason?

3. Stem-Cell Research and Human Cloning

One of the most publicized misunderstandings of Christian Ethics and science I believe has been that of human cloning. In the following pages I will explain what cloning is, provide some background on faith in relation to science, and then look at the ethics of cloning. The possibility of cloning, producing genetically identical copies of a single living organism has fascinated scientists for some time. Prior to the cloning of Dolly, researchers in the United States and elsewhere had performed cloning experiments on frogs (genetically less complex creatures) with some success [16]. Even so, it had become clear cloning was more successful with embryos than with mature cells.

Researchers believe once cells differentiate, that is, once they mature and become specific types of cells (blood, muscle, brain, etc.), then segments of the DNA within those cells shut down, no longer allowing those cells to perform the generative activities of embryonic cells [17]. This is why cloning embryos have

been a fairly common practice with cattle, however cloning such mammals from mature, differentiated cells had proven to be a much more difficult “trick”.

Just this February the decision was made to grant a United Kingdom institute a license to create cloned human embryos. This poses ethical problems beyond the strict legality of the proposed research, as they aim to produce cells which exhibit motor neuron disease for studying the causes of this awful disease, but is this reason enough to be unethical and to make cloned embryos? [18]

The institute’s proposal is the perhaps most persuasive case so far made in that it would provide a long term supply of cells which carry this incurable disease. It has a very high probability to achieve major medical breakthroughs which nothing else could hope to do. Such a case has so far not been made in the public domain. We would expect to see a careful medical and scientific appraisal of the realistic expectations, evaluated against other options. Would such cells be available, for example, from surplus embryos in pre-implantation genetic diagnosis, without needing to use cloning?

It seems we no longer care about whether something is ethical or not as long as it puts money in our pockets. *Biotech companies want to be able to commodify human life. They want to clone human beings and then murder them within two weeks of gestation to harvest their stem cells. This is nothing more than biotech child sacrifice. We haven’t done that in our country since the end of slavery. We will be paying women to harvest their eggs and cloning human beings to harvest their fetal tissue. This is the commodification of human life. It degrades us all, and it is a dangerous step to take. The legalization of human embryonic stem cell research would establish – in law – classes of human life,* said Daniel Heimbach, professor of Christian ethics at Southeastern Baptist Theological Seminary in Wake Forest, N.C. [19]. This policy would assert there is a class of human life, in embryonic form, which we don’t have to treat at the same level, that is not as valuable as other human life, and that we can choose to keep or sacrifice. I believe this is the first major ethical issue we have had since slavery. The “greatest happiness principle” Steve Lemke, provost and dean of the graduate faculty at New Orleans Baptist Theological Seminary said “the sacrifice of a few human beings would be worth the price if it benefited the greatest number of people, putting a price on a human life is a dangerous thing” [20].

But in the end it will be the “rich who will benefit” from a legalization of embryonic stem cell research. Embryonic stem cell therapy will be a luxury only the rich will be able to afford. The legalization of embryonic stem cell research would put America’s poorest women under pressure to sell their eggs to “stem cell brokers”. The potential for exploitation alone should be enough to stop embryonic cloning research. Stem cells are undifferentiated cells in embryos and adults alike that have the ability to give rise to the specialized cell types that make up an organism [21]. The issue of embryonic stem cell research made its way into this year’s presidential campaign, most notably when the son of former President Ronald Reagan made headlines during the Democrats’ national convention in Boston. Ron Reagan’s emotional plea during the Democratic National Convention

to allow embryonic stem cell research to help Alzheimer's patients like his father, the former president, was built on insufficient, inadequate, incorrect and immoral information [22]. If each child that is conceived is a person, than each harvest is an immoral act of murder. We must focus on reality and get past the wild and exaggerated claims of embryonic stem cell research.

While scientists have been working with stem cells for decades, it was only in the past six years when it was discovered how to isolate and grow embryonic stem cells that interest skyrocketed. The truth is embryos are not the only source of stem cells, noting that stem cells occur naturally throughout the body. Scientists have been very effective at isolating and collecting them for regenerative and reparative therapies in humans and adult stem cells are "much more controllable than embryonic stem cells". The fact is while no diseases have been successfully treated by embryonic stem cells, at least 45 diseases have been treated by adult stem cell therapy [23]. Researchers have used adult cells from the spleen to regenerate insulin-producing cells and cure diabetes in mice. Neural stem cells have been used for structural brain repair. Clinical trials are underway in the United States for the treatment of heart disease using stem cells from adult bone marrow. And scientists have discovered bone marrow stem cells, when exposed to damaged liver tissue, can quickly convert into healthy liver cells, and according to new research from the Johns Hopkins Kimmel Cancer Center.

Despite the fact that embryonic stem cell research has so far proven relatively fruitless in its search for medical breakthroughs, opponents of the research shouldn't simply rely on that defense: "We have to have a moral argument in case the science turns around and determines more can be done with embryonic stem cells. The destruction of human embryos is still morally reprehensible" [24]. Embryonic stem cell research requires the destruction of developing embryos and it is nothing less than cannibalism of human embryos for their parts. To dissect members of our species for so-called therapeutic or experimental purposes is a form of barbarism that we ought to avoid. For the vast majority of people in the United States, they assume what is legal is moral; describing what is called the "pedagogical effect of the law." The law has an influence on how people view an activity, he said, underscoring why public approval of embryonic research might well follow the adoption of public policy that allows embryonic stem cell research.

We run the risk of legitimizing the perverse incentives, when public policy allows harvesting of human stem cells from embryos for experimentation. He noted the motive may be good, to heal disease, but he warned once such policy is endorsed, there will be an "explosion of political pressure to allow more and more cases of killing innocent lives for other so-called good reasons. This is a shift in status from being in a *stewardship trust* to an *ownership relationship*", he continued. This flawed reasoning would have a "tremendously perverse effect on how people treat human life. God alone is Creator. If you really own something, you can do with it what you want, including giving permission for it to be killed. There is a danger that some would want to strike a compromise between those who

want embryonic stem cell research to be completely legal and those who want to tightly control it, as is now the case” [25]. This compromise view would permit experimentation only on existing embryos left over from in-vitro fertilization procedures at fertility clinics.

There are some 400,000 “spare embryos left over” from in-vitro fertilization attempts in fertility clinics across the country, Mitchell had said, but they are insufficient in number and quality even if embryonic stem cell research was a moral activity. Heimbach suggested the assumption would be: These embryos have been left to die; let’s put them to good use. The broader assumption is that if others for whatever reason have decided that a certain group of humans are going to die anyway, we have moral permission to harm, kill or experiment on that human life, Heimbach continued. If you accept that idea, he said, scientists would be justified to harvest the organs of prisoners on death row and do experiments on people with terminal illnesses because society would be getting a public benefit out of such work, Heimbach explained.

If and when these procedures become mastered, it would be possible to select the finest and fittest of our sheep, horses, cows and, yes, humans, and then to produce clones of these champions. In this way, cloning would become the surest form of genetic engineering. Amazing! But amazement isn’t enough. Is it a good thing to do? What does any of this look like in the light of Christian faith? Just what does Christian faith provide us as we consider the ethical dimension of contemporary issues like cloning? A little story by the late spiritual writer Henri J. M. Nouwen provides a clue. It goes something like this:

Once upon a time there was a sculptor working with a hammer and chisel on a block of marble. Standing off to the side there was a little child. The child didn’t see what was really going on, but simply saw large and small blocks of stone falling away to the right and to the left. But a few weeks later the child returned to the studio and saw, with great surprise, a large powerful lion sitting in the very place the marble had stood! With wonder and excitement the child asked the sculptor, “How did you know there was a lion in the marble?” The sculptor smiled for a moment and responded, “My dear, I knew there was a lion in the marble because before I saw the lion in the marble I saw the lion in my own heart. And the secret is this: It was the lion in my heart that saw the lion in the marble” [26].

The artist was not simply humoring the little child. There is truth to the idea that the artistic act begins not with what one does, but with what one sees. I suggest the same is true of ethics, including Christian ethics. Morality is not first and foremost about what we do, even though what we do is very important. Most fundamentally morality is about what we see; it is about how seeing leads to living. Christian faith thus shapes our morality. Most moral theologians agree today that the most direct and pervasive difference Christian faith makes for the moral life is that it provides a certain way of seeing ourselves, our relationships and the world

around us. Our faith serves as a lens through which we can see what is important about what is going on, and then begin to discern what is to be done.

Before jumping immediately to the “what is to be done / not done” questions about cloning, we would do well to consider first our Christian faith. How might some of the things we believe as Christians influence how we view cloning? [27] The convergence of three features of our faith – our vocation to stewardship, our call to co-creativity and our commitment to reverence for life – provides a lens.

First, we are called to be stewards of all creation. This is how theologians today commonly interpret the biblical call in Genesis: *Be fertile and multiply; fill the earth and subdue it. Have dominion over the fish of the sea, the birds of the air, and all the living things that move on the earth* (Genesis 1:28) [28]. But let us be careful. Increasingly, Christianity has emphasized that the words subdue and dominion ought not to be understood as permission to treat the rest of God’s creation recklessly. Our gifts of intelligence and creativity mean that we human beings have a special role to play in caring for the rest of creation.

Stewards must be neither too timid nor too bold. Stewards know they are not creators or owners. What is entrusted to their charge is not their possession. We may be intelligent – indeed clever – but we must be mindful that what we have received we have received as gift from the creator. At the same time we are created in God’s image in a unique and wonderful way. We need not shrink from using our gifts in their fullness as we respond to our call to stewardship. Does this tell us exactly what we are to do in regard to cloning? I don’t think so. But stewardship provides us a way to look at who we are and what our posture is toward the rest of creation. That is a good start.

In addition to being stewards, we are called to be instruments of God’s creation. This is related to stewardship, but the emphasis here is bolder, and indeed very relevant to questions about cloning. Although God is and remains the creator, God has chosen to use humanity (as God did in and through Jesus) to be instruments of God’s ongoing creativity in this world. This idea flowers in the dramatic New Testament image of a new creation. We are invited to believe that God is fashioning a new heaven and a new earth (Revelation 21:1-4), a new creation marked by reconciliation, healing, harmony, peace and love (Romans 8:18-25) [29].

This new order involves not only humanity, but all of God’s creatures. The new creation will be God’s doing but, astonishingly, it will come about in and through the work of human hands. God uses our efforts at reconciliation, healing, harmony, peace and love as the building blocks of the new creation. In this sense we are co-creators of God’s new heaven, God’s new earth. What this image of co-creativity suggests is that science and technology are not the enemies of Christian faith and tradition. Reason and faith ought never to conflict. Both have their origin in God [30]. This, of course, does not mean that any and all scientific and technological endeavors should be automatically thought of as part of human progress.

But we shouldn't be suspicious of science and technology either. The test is whether or not a new scientific achievement can be found to be compatible with God's creation. Is it designed to cure, to heal or to ease the pains and scars of humanity or of the earth itself? Does it contribute in this manner to reconciliation or healing? Is it likely to promote peace and love among people? Is it likely to foster harmony among all of the creatures of the earth? These questions may seem far removed from the complexities of contemporary scientific and technological questions. But this kind of question can help us see whether or not what we are doing fits with the ongoing work of God's creation.

Finally, we are called to reverence the gift of life, particularly human life. All that has been created is the handiwork of God. Thus, as the poet Gerard Manley Hopkins put it, "The world is charged with the grandeur of God" [31]. Anyone who has ever been brought to silence by the beauty of the autumn trees, been spellbound by the magnificent diversity of the creatures of the earth and of the seas, or been awed by the dearest freshness of a newborn baby knows this. For those of religious faith, the world is not only beautiful, but also holy. It is not only to be respected, but revered as well.

Currently at least, the success rate in attempts at human cloning would not likely be better. Since human life begins at conception, these procedures fall far short of the kind of reverence for life which our tradition upholds. Cloning or other experimental procedures carried out on human embryos involve their necessary or even deliberate destruction. By acting in this way the researcher usurps the place of God; and, even though he may be unaware of this, he sets himself up as the master of the destiny of others [32].

To be sure, we might be able to imagine some seemingly worthy scenarios for duplicating ourselves. Having a second self to be available when one's first self is in need of an organ transplant, for example, is quite an interesting idea. So, too is the scenario of grieving parents requesting a genetic duplicate of a recently deceased infant. The possibilities are many. But in some way such possibilities all flirt with reducing persons to DNA. They seem to involve treating the second self, the duplicate, as an object rather than as a genuine subject [33]. Now that we have all been enlightened to the process and details of human cloning I would like to explain the three main reasons why I believe cloning is unethical in light of Christian ethics. First, there is a significant danger it would lead to the misuse of the technology by maverick scientists in some other country where there was little or no regulation, who wish to make and implant cloned embryos to create cloned babies, regardless of major risks and ethical objections [34]. This is not a case of some future "slippery slope" but something already probable. It is unwise to allow cloned embryo research until there is a worldwide ban on reproductive human cloning. The institute in question is currently stalled by a US-backed proposal to ban cloning for research, for which there seems little prospect of global agreement. The UK Parliament overwhelmingly outlawed reproductive human cloning. In addition, the UK seems to bear a moral responsibility to the wider international community for the outcomes of its research [35]. Secondly, many in the churches

and elsewhere object to human embryo research on a matter of principle. They see the destruction of human embryos in such research as equivalent to killing live human beings for research, which is unacceptable regardless of the future medical benefits [36].

Lastly, for those who accept using surplus IVF embryos for research, cloned embryos poses some special problems. While surplus embryos would be destroyed anyway, some see it as wrong to create embryos just for research. It treats a human embryo too instrumentally and gives a sense it has “special status”, if it is reduced to being a mere research tool or a resource for “spare parts” [37]. While cloned embryo research was made legal in the UK in 2001, in contrast to almost all other countries, the decision has remained a bone of contention [38]. I believe the real question which comes into play is do we consider those embryos preformed children or are they only cells? [39]. Only when this question is answered according to the Truth, may we truly be able to say we are ethical Christian scientists.

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