JBE Research Article

Nature, Nurture, and No-Self: Bioengineering and Buddhist Values

By
Michael G. Barnhart
Kingsborough Community College, CUNY
Brooklyn, New York
MBarnhart@kbcc.cuny.edu

Journal of Buddhist Ethics 7 (2000): 126–144

I

Although many of us, if asked, would explicitly reject the view that genetics is destiny, our actions sometimes suggest implicit acceptance. We choose mates according to looks, pedigree, intellectual capacity, and so on, not just because we are ourselves attracted to such features, but because we wish to pass these advantages on to our children. We expect our children will be like us, not just because we raise them, but because we are genetically linked. And we are not surprised when an adopted child shows a markedly different nature from the adoptive parents, a more pronounced difference from a couple's natural children. Infertile couples who utilize assisted reproduction, when required to use donor cells, seek out donors whose life and character they most admire, those whom they would most like their children to resemble. Such examples suggest two different attitudes toward the balance of nature over nurture. On the one hand, we may believe that our genes are the most important or dominant element in our makeup. On the other, we may believe that they are at least equal in importance with nurture and environment. Genetic science tells us that most if not all of our physical, intellectual, and behavioral traits are genetically based, so such attitudes are hardly unreasonable. However, our faith in free will notwithstanding, we clearly believe in the predetermining power of our genetic makeup to some degree or other. In short, we are either "hard" determinists or "soft" determinists; very few of

us believe, at least for practical purposes, in the independence of nature and nurture.

In other words, the scientific discovery of the exact mechanism whereby nature works its will over our characters has forced us to confront two possible versions of the "Genes-R-Us" point of view. Understanding the terms "phenotype" as the apparent features of an organism and "genotype" as its genetic makeup, then either (1) all of one's phenotypic traits correspond to and are simply the expression of a given genotype, or (2) some of one's phenotypic traits correspond to a given genotype, and only some of one's phenotypic traits are simply the expression of any given genotype; other factors, generally environmental, are also responsible for, or at least play a role in, individual development. (1) represents "hard" genetic determinism while (2) represents "soft" genetic determinism. (2) suggests that most if not all traits have a genetic basis, but not all traits depend solely on genetic factors for their expression.

While (1) is difficult to defend, (2) is fairly plausible. First of all, the signal acts of growth and development, especially the growth and development of intellectual and moral qualities, seem to be easily influenced by environment. Indeed, even relatively simple behavioral traits, such as a cat's ability to pounce (which depends on developing edge-detectors in the brain's visual processing hardware), are triggered by environmental stimulation at a crucial point in development. Secondly, while (1) requires a very strong version of physical reductionism, because it insists on a physical explanation of every characteristic of an organism, (2) is far more moderate, even agnostic in regard to reductionism. To say that a trait has a physical basis is not to say that everything about the trait is causally dependent on physical factors alone. If intelligence, for example, is environmentally conditioned as well as genetically based, then there are emergent elements within the trait itself that do not "reduce" to their physical correlates.

Some philosophers and biologists even argue that (1) is fallacious. Not only do the facts of biology contradict it, there is also none of the necessary correlation between the complex behavioral and intellectual traits we exhibit and our physiology. However, physicalism, the ontological position that physical elements are all there is, is still a dominant view and leaves open the possibility that (1) is true. Where does Buddhism stand in regard to genetic determinism, whether hard or soft?

Of course, it is hard to characterize a tradition in general, especially in the case of a world religion, for the obvious reason that there are many different varieties and deep doctrinal differences. Buddhism, divided as it is between the Theravāda, Mahāyāna, and Vajrayāna traditions, and spread out as it is over East and Southeast Asia, not to mention Europe and espe-

cially North America, is a very difficult phenomenon to encapsulate. However, there are certain doctrinal and textual uniformities. All Buddhists accept the early sermons of the Buddha, the Four Noble Truths and the Eightfold Path, the doctrine of mutual dependence or dependent co-arising (*pratītya-samutpāda* or *paṭicca-samuppāda*), and the lack of a self or substance at the core of individual existence, the doctrine of no-self (*anātmana* or *anattā*), which is closely related to the doctrine of impermanence in regard to all basic existential elements, or *dhammas*. So, following the lead of Damien Keown, one can detect a kind of fundamental or bedrock "textual" Buddhism, based on the most accepted, authoritative sources.[1] Keown calls this version "fundamentalist," however the term need not be understood as reactionary, as indeed much Christian fundamentalism, for example, appears to be.

Drawing on such fundamental sources as the early and commonly accepted doctrines, especially that of *anātman*, Buddhism implicitly rejects physical reductionism and hence the ontological basis for hard genetic determinism. In its most basic form, the doctrine of *anātman* replaces the doctrine of a soul, or central, eternal, immutable self, with that of the *skandhas*. The *skandhas* represent the various elements or strands that are the elements making up the sum total of a composite personal identity. Usually, the *skandhas* are five in number: the body, sensation or feeling, thought, dispositions, and consciousness.[2] Most of the early sources in the *Piṭakas* argue that these are independent elements that we associate by use of a proper name or other form of reference. However, the name should be viewed as a mere counting term as it is said, signifying merely the combination of these elements as opposed to the presence of some spiritual unifying substance of which these are the attributes. The whole in this case is no more than the sum of its parts, or, using the vocabulary of Wittgenstein's *Tractatus Logico-Philosophicus*, the self is not a simple. Much of Buddhist metaphysics goes on to argue the same point in regard to all things, that they are substantively empty, devoid of material or spiritual substance (*Milindapañha*).[3]

Is this a universally accepted interpretation of the Buddhist position on personal identity? Of course, there are occasions where Buddhists have postulated enduring substances. The Sarvāstivādins come most readily to mind, and especially in the Tibetan tradition, Buddhism speaks of a transmigrating element of one's individual existence that attaches to the body in the process of conception and transmits the requisite karmic history over various rebirths.[4] However, when this sort of element is introduced, it is always held to be one factor in the sum total that is the living, breathing person. That is, it is never the whole person, perhaps in the same sense that

someone's DNA may not be the whole person. As Damien Keown notes in *Buddhism and Bioethics*, "It would be wrong to regard *viññāna* [his interpretation of such a transmigratory and individuating element] as the subject of experience, as if it were a spectator peering out through the windows of the senses. Buddhism denies there is any such 'ghost in the machine.'"[5] So, even if one of these elements expresses, in this case, our "moral identity," it is an identity disconnected from our sense of self. By contrast, in traditional Hinduism, the spectator self is the seat of such moral or karmic identity so that there is an experiencing self at the core of one's moral identity, and consequently comparisons with a soul or self make much more sense.

Physical reductionism, therefore, becomes completely untenable. No *skandha* can be assumed to have priority as far as the self goes—in other words, as far as that which is named or pointed out. The body or physical form (*rūpa*) is only one element among others. Furthermore, the body and the mind constitute very different elements. The early texts suggest, for example, that each poses very different challenges in terms of achieving enlightenment. We find it generally easier to detach from the body because of its evident mortality and changeableness, while the mind, because of its intimacy and constant renewal from one moment to the next, is a much harder element to detach from.[6] However, besides the point that different predicates apply to different *skandhas*, if one element were held to be more basic than the rest, then the doctrine of *anātman* would lack foundation. Why couldn't a self or soul be identified with such a basic or simple element? And more tellingly, if there is no central self or soul, what purpose could reductionism serve? Even if we can explain one *skandha* in terms of another, if there is no central fact of identity, what do we hope to achieve? Furthermore, if each *skandha* itself is in turn explained as a confluence of independent elements, a mere counting term, reductionism faces the possibility of an infinite regress again undermining any moral or scientific motive for pursuing such an explanatory strategy.

Lacking a physical reduction of feeling, thought, disposition, or consciousness, there seems little philosophical ground on which to base hard genetic determinism. Genes only deterministically control one *skandha*, the body. However, could Buddhism support a softer genetic determinism? Could the doctrine of *anātman* be reconciled with the proposal that our traits are physically based rather than physically determined? The answer to this question depends largely on how we interpret the word "based." In a sense, the *skandha* theory already suggests a physical basis to human existence: human physical form is an indispensable element in individual life. Take it away, and there is no individual life; alter it, and you

fundamentally alter the person. However, especially when we look to the genetic components of our behavioral and mental attributes, it's far from clear that Buddhism supports even softer forms of determinism.

To explain, if "based" means "determined," again we are faced with the question as to whether such determinism implies a corresponding reduction of the phenotypic to the genotypic. But if so, then whatever traits or aspects of our traits are so reduced we might as well treat as belonging to the *skandha* that is the body and not, say, that *skandha* which is dispositional. In other words, the "determination" of one *skandha* in terms of another suggests an eliminative reduction of the determined *skandha* in favor of the determining *skandha*, in which case and paradoxically, there is no interesting determinism to be had.

If "based" means "corresponding," that is, if correlative with any behavioral or cognitive trait, there is a physical element, one that is generally present, then Buddhism might be consistent with a weakened or nondeterministic form of genetic determinism—call it genetic correlativism or correlationism. Thus, the Buddhist position might be that, in the life of the person, physical elements co-arise with mental ones, that is, with feelings, thoughts, and dispositions. However, there is no deterministic relation among these elements in either a physicalistic or a mentalistic direction. In fact, to the extent that I understand the view, Donald Davidson's use of Moore's concept of "supervenience" seems to be the kind of relationship the *skandha* theory endorses.[7] According to Davidson, although Moore undertook to explain the relationship between evaluative terms and the descriptive characteristics on which they are based, his model of supervenience lends itself naturally to an account of the relationship between psychological/mental characteristics and physical characteristics. Within the supervenience model, the body/mind (or more properly, brain/mind) relationship is a noncausal one in which the mind always correlates with specific brain states, but there are no strict covering laws governing the correlation. Mental or intentional states as a type supervene over correlating types of physical states, never existing without some physical state, but not reducible to any specific type of associated physical states, either. Hence, we would expect that the physical laws that explain neurological events in the brain are not necessarily similar to the phenomenological laws governing experience. What this suggests is that brain states and intentional states are not simply different descriptions of the same basic, physical mechanism, the kind of physicalism that, for example, Daniel Dennett seems to favor.[8] Rather, brain states and intentional states are descriptively incommensurable as states. However, unlike Cartesian dualism, a Buddhist supervenience theory expects an exact and systematic correlation between given brain and intentional

states. In other words, it expects correlation without reduction based on the thesis of dependent co-arising, the universal condition of all phenomena.

The body and its associated genetic endowments do not, on a Buddhist account, determine the rest of our nature in any interestingly lawlike manner. Consequently, anxiety over the genetic endowments of one's offspring may be somewhat misplaced from a Buddhist standpoint. While it may be true that some genotypical traits strongly correlate with various physical, behavioral, or even mental traits, we oughtn't to make too much of such associations. More realistic might be the attitude that these are not necessary correlations, and other possible correspondences cannot be discounted. In short, appropriating Einstein's genotype will not necessarily give you Einstein's thoughts or his disposition and character. Hence, wisdom might consist of letting go of the quest to control that which is largely or fully contingent in the first place. Our desires, in this case as in every case, are self-defeating, given the unpredictable nature of the world, and represent a permanent source of despair and suffering.

However, we mustn't go too far and assume that Buddhism makes all forms of genetic engineering appear hopeless. So far, we have considered the attempt to control for traits that represent complex dispositional states: intelligence, moral qualities such as compassion or sincerity, personal qualities such as a sense of humor or poise under stress. Buddhists are quite unexceptional in classifying such traits as dispositional and distinguishing them from more physical or bodily traits, which clearly have a stronger genetic basis. So, while it appears ludicrous to engineer for the more complex dispositional traits from a Buddhist perspective, the same cannot be said of hair color or height, for example. And while we may not be tempted to cultivate such features, the case is different if we are talking about eliminating heritable illnesses such as Tay-Sachs disease or cystic fibrosis. We certainly cannot argue that the *skandha* theory makes such efforts at control appear futile. While there may exist no exact nomological correlations between, say, feeling, thought, and the body, there is no reason to rule out such causal connections within a particular *skandha*, in this case the body. It is certainly true that other Buddhist metaphysical concepts might suggest only limited control in bioengineering the body. The doctrine of dependent co-arising, which governs all relations, not only those between the *skandhas* but also any within the scope of a single *skandha*, offers the vaguely Humean "arising" as in one thing arising from another or in conjunction with another as the basic existential relation. Arising is not necessarily causing, either in relations among the *skandhas* or with the elements within each *skandha*. However, I think such an interpretation may be too limited. I shall say why presently. But let me point out that if we do

possess such power over the body, then the question is not can we do it but should we do it. And this is a moral question. Fundamentally, it is not that Buddhism has any particular causal theory to offer that leads me to say that causal regularities may prevail within the scope of a single *skandha*, in this case the body. Rather, it is a question of what a Buddhist metaphysics may exclude. Turning to the ancient Pāli texts, we find the following discussion of the nature of the body:

> The windy element is characterized by its activeness … Resting in the earthy element and held together by the watery element and preserved by the fiery element, it props up the body. And it is because the body is thus propped up that it does not fall over, but stand upright. And it is when the body is impelled by the windy element that it performs its four functions of walking, standing, sitting, or lying-down, or draws in and stretches out its arms, or moves its hands and its feet. Thus does this machine made of the four elements move like a puppet, and deceives all foolish people with its femininity, masculinity, etc.[9]

Even allowing for a certain freedom of translation, this passage clearly suggests, perhaps crudely, a set of causal relationships not unfamiliar to medical science. And in fact, a number of texts from the Pali canon enumerate all sorts of putative causal relationships between sensation and desire, existence and birth, and so on.[10] In other words, causal relationships are not excluded within Buddhism. However, what is excluded is the possibility of causal relationships that depend on the existence of a single factor or element such as a soul would be. I don't see any reason to deny causal relationships within the body's elements. No implications follow whatsoever regarding the real existence of an ego or personal self as the basis for such causal connections as they are all circumscribed within the single *skandha*, the body. Indeed, as Buddhism has evolved into the scientific era, the tendency has been to seek common ground between the results of science and the doctrines of Buddhism.[11] In many ways, the relationship between Buddhism and science has been unusually trouble-free in the experience of world religions. An understanding of the body's complex physiology and anatomy has been one of modern science's greatest achievements. That is not to say that medical science fully understands the body, especially at the subcellular and biochemical level, fully or perfectly. Nor is it to claim that modern medical science is the last word on the matter.[12] In fact, as science has evolved, many elements of traditional medicines have demonstrated their worth, even from the stance of science. However, no serious consideration of our "machine" can ignore the results of medical science.

If causal relationships exist between the body's elements, whether they be only four or inconceivably many in number, then the question again becomes not can we bioengineer the body and, of course, affect the resulting person, but should we. However, in order to appreciate the distinctive answer Buddhism gives to this question, we should pause to consider the range of answers contemporary bioethical reflections serve up.

II

Contemporary biotechnology has developed an astonishing range of competences in a very short period of time, but much of what it promises lies in the future. Even genetic tests for various heritable illnesses are dependent on results from the Human Genome Project, which aims to map the entire human genetic code. Consequently, much of the resulting moral debate involves either deploring worst-case future scenarios or alternatively finding reasons why the risk of various horrifying scenarios is overstated. Nowhere is this pattern more evident than in the recent flap over the issue of human cloning (somatic cell nuclear transfer, hereafter SCNT).[13] Every argument ever deployed against such reproductive technologies as *in vitro* fertilization (IVF), artificial insemination by donor, somatic cell and germ line cell genetic engineering, and genetic research into human violence and sexual orientation, just to name a few, was advanced in a flurry of condemnation. Though few have risen to the defense of cloning, the same serviceable arguments that defended past technologies can be and have been marshaled in its defense.

First, the criticism. Writing in *The New Republic*, the eminent and longtime critic of biotechnology Leon R. Kass remarks,

> People are repelled by many aspects of human cloning. They recoil from the prospect of mass production of human beings, with large clones of look-alikes, compromised in their individuality; the idea of father-son or mother-daughter twins; the bizarre prospects of a woman giving birth to and rearing a genetic copy of herself, her spouse or even her deceased father or mother; the grotesqueness of conceiving a child as an exact replacement for another who has died … the Frankensteinian hubris to create human life and increasingly to control its destiny; man playing God. … Revulsion is not an argument … however, repugnance is the emotional expression of deep wisdom, beyond reason's power fully to articulate it.[14]

Let us call this the Frankenstein or playing God argument. Kass himself has made it before, most notably in condemning assisted reproduction and such techniques as IVF.[15] In regard to cloning, Kass argues that there are three distinct objections that fall under the Frankenstein argument:

(1) Cloning "threatens confusion of identity and individuality";

(2) Cloning encourages us in the "commodification of new life"; it leads us to regard procreation more as the "production of human children as artifacts, products of human will and design";
(3) Cloning "represents a form of despotism of the cloners over the cloned, and thus (even in benevolent cases) represents a blatant violation of the inner meaning of parent-child relations, of what it means to have a child, of what it means to say 'yes' to our own demise and 'replacement.'"

By this last objection, Kass has in mind the mystical significance, or as he says, "soul-elevating power," that sexuality has in its role as "an opening to the future beyond the grave, carrying not only our seed but also our names …children are a testament to the possibility of transcendence."[16]

Much of the weakness of the playing God argument does not lie where Kass seems to think. That is, it is not that human repugnance isn't an argument against some human practice. In fact, from a Buddhist point of view, I will argue that it may well be a good indicator that moral principle is at stake. Rather, the weakness is more in how we should interpret the significance of the three areas of repugnance. To start with (1), cloning might well engender the sorts of confusion that Kass mentions, and certainly no one thinks such confusion a good thing. The question is: Does cloning necessarily engender such confusion? Or is this only a possible negative effect? And if so, couldn't we possibly do things to avoid against or mitigate such confusion of identity? For example, perhaps cloning should only be employed for a parent willing to accept suitable counseling and follow-up. Only if cloning necessarily or unavoidably causes such confusion is it worthy of our absolute condemnation. So, if that which appears repugnant in regard to cloning can be dealt with, then we have no reason to deplore cloning altogether. However, if the genetic copy is unavoidably in some measure the original because it is the copy, then cloning necessarily confuses our sense of individuality.

The same considerations apply to the second objection Kass mentions. Cloning may indeed feed into a human tendency to confuse progeny and product, to commodify children and life in general for that matter. Does it do so necessarily? Only, I think, if you believe that we are actually producing children, that is, designing and producing children after the manner of God. In fact, all SCNT does is allow us to substitute one set of DNA for another, and thus represents only a difference in the degree of our control of our offspring from the old-fashioned way of sexual procreation, not a difference in kind. We no more create life in the one case than we do in the other. I assume God has no need for cloning. However, if one believes that to control the genotype is to control the person in all his or her complexity, then

cloning would be the production of people.

As to Kass's third concern, that cloning breaks with our longstanding understanding of transcendence, our wager with death as it were, again we must wonder whether the prophesied effects are merely possibilities among others or whether they necessarily afflict the cloners and the cloned. Kass seems to be claiming that cloning irrevocably breaks the connection of sex and birth, or sex and procreation. In elaborating on (3), Kass contrasts natural acts of procreation with cloning, insofar as procreation is "saying yes to the emergence of new life in its novelty, saying yes not only to having a child but also, tacitly, to having whatever child this child turns out to be. In accepting our finitude and opening ourselves to our replacement, we are tacitly confessing the limits of our control." By contrast, "In cloning …overbearing parents take at the start a decisive step which contradicts the entire meaning of the open and forward-looking nature of parent-child relations. The child is given a genotype that has already lived, with full expectation that this blueprint of a past life ought to be controlling of the life to come. Cloning is inherently despotic, for it seeks to make one's children (or someone else's children) after one's own image … despotism—the control of another through one's will—it inevitably will be."[17] In short, Kass seems to believe that such consequences are virtually inevitable. One cannot clone without despotically ruling the life of another. And presumably anything we might do to limit cloning to those who don't seek to despotically rule the life of another would therefore be in vain.

Two underlying assumptions seem to underpin the authority of Kass's arguments. On the one hand, he appears to believe that short of remaking oneself (or another), one would have no compelling reason to clone a human being. On the other hand, he offers a kind of genetic determinism: By controlling the genotype of another, we are controlling, manufacturing, and manipulating the identity and individuality of the other. We are illicitly appropriating a power that should belong only to God. Much of his objection to the practice has to do with the inevitability of confusion of identity, commodification of the human being, and despotic control of the other. Such inevitability is so only if we cannot avoid such consequences, and such consequences are unavoidable only if we accept the thesis that to control the genotype is to control the person. Especially if we consider the reasons why individuals might actually wish to clone, any objection to cloning's dangers would have to rest on an assumption of genetic determinism.[18] Commonly, parents might wish to clone in order to avoid passing on unwanted genetic defects from one parent to their offspring without introducing donated sperm or eggs and hence an external biological heritage. Individuals might also wish to clone in order to provide a sibling

with bone marrow or a compatible kidney, transplantable organs, or tissues. Experiments in cloning might also provide vital information on the process of cell specialization and therefore give science the ability to grow scarce organs for transplant in the laboratory. While not everyone would approve of all such uses of cloning, most would concede that these are not reasons that suggest a desire for despotic control of one's offspring or to continue one's own personal existence in perpetuity. If we cannot keep cloning to such uses, it must be because the very act itself implicates us in a power that is not ours to use, the power to create and control the person by creating and controlling the genotype.

Of course, to be fair to Kass, he might only be arguing that those who would be attracted to cloning would be those who sought a Godlike power over their offspring, not that cloning actually gives one that power. However, if that is the case, then much of his concern loses its urgency, because in that case, we ought to worry about people's motives, not the existence or availability of the practice. Our repugnance is not for the practice itself, but for certain uses of it. But given the ways Kass describes his sense of repugnance and the claims he makes regarding the "decisive step which contradicts the entire meaning of the open and forward-looking nature of parent-child relations," it is for the practice itself that Kass reserves his moral condemnation. Which is to say, the process itself is inappropriately deterministic. A similar kind of genetic determinism also underlies another familiar objection to biotechnologies such as cloning. Hans Jonas and Joel Feinberg have on separate occasions argued the case that cloning might well violate one's right to ignorance in regard to the future or one's right to an open future.[19] That is, insofar as a later clone must live in knowledge of life's likely outcomes for his or her genotype, or to the degree that one's future may be foreshadowed, one's basic individuality and autonomy has been compromised.

As Dan Brock has pointed out, the only way in which a later clone's right to an open future, or a unique identity for that matter, can be taken away is if genetic determinism is true.[20] If it is not, then "if the twin's future in reality remains open and his to freely choose, then … [no one] has violated his right to ignorance or to an open future."[21] Even if someone undertakes to mislead the clone as to the openness of his future, no one can in fact violate his putative right to his future unless we accept what Brock labels a "crude genetic determinism." All of which brings us to the possible defenses of cloning. Two related arguments must be mounted. The first consists of the rejection of genetic determinism together with an assertion of a right to procreative freedom; the second involves a weighing of potential risks and benefits. With genetic determinism disposed of, the possibility of

an a priori argument against cloning, based on its evident injustice to the cloned, is foreclosed. The idea that cloning simply represents a technological extension of our ordinary powers as parents to obtain the best for our children so that cloning becomes an exercise of procreative freedom completes the moral argument in favor of the *prima facie* acceptability of cloning. A favorable balance of benefits over risks is obtained when we realize that the risks to the clone are minimal, or at least no worse than in cases of IVF, a currently accepted practice of assisted reproduction.[22] Whatever harms may be involved, they are of a very general social sort, the kind that are notoriously hard to document or evaluate, such as the diminution of human respect for life. In any case, we will generally assess such claims by looking for evidence of such consequences in existing practices that are similar, such as IVF, where the evidence is at best equivocal. Such risks, when weighed against the benefits of exercising one's procreative freedom, which will always involve action taken to control how one's children turn out, together with possible benefits associated with the reasons why people are actually tempted to try cloning, suggest that what was before a demonized practice may be distinctly reasonable.

Hence, in contemporary bioethical debate, the question as to whether we should or should not utilize various genetic technologies seems to hinge on whether we are playing God in some important sense. Those who think we do play God and that that is a bad thing seem to do so because they regard us as in fact usurping a power that is not ours to have. In other words, they believe in genetic determinism whatever they may profess, because the plain fact is that we can only play God if in fact our power over our genetics is a power over our person. Those who defend these practices do so by first denying the truth of genetic determinism, and thus our power to actually play God, and then outlining the fairly modest and reasonable motivations that in fact tempt us in our use of whatever technology.

III

So where does Buddhism stand on the moral acceptability of using such genetic technologies? To begin with, if the conclusion of our initial discussion of Buddhism and genetic determinism is correct, then Buddhism cannot take a position similar to Kass's. That is, Buddhists cannot argue that we are in fact playing God when we clone people, that we are depriving individuals of their future or their right to an open future, which, in a Buddhist context, would mean, I suppose, their right to achieve individual enlightenment, or *nirvāṇa*. Cloning is not the Promethean fire that elevates humans to a divine status because cloning does not in fact involve deterministic control over the life of another. It may involve deterministic

control over the genotype of another, but that is not the same thing, according to the *skandha* theory. However, cloning may face other concerns and objections from a Buddhist standpoint.

Buddhism, generically speaking, recognizes a variety of purposes worthy of seeking and that are enshrined in its various moral precepts such as the precept against deliberate killing. However, as a number of scholars have argued, this is not the last word on Buddhist morality. Rather, such rules point to a deeper layer of goods and life purposes that motivate the sincere Buddhist practitioner. This deeper layer is variously understood. Keown has suggested that it comprises the three fundamental goods of wisdom, friendship, and life. David Kalupahana has further identified it with the achievement of *nirvāṇa* (or *nibbāna*). But whatever the details of these accounts, the point of a Buddhist life is ultimately somehow connected to the goal of enlightenment and freedom from bondage to the ego-self. Of course, different Buddhist traditions have understood this quest differently. Arguably, the early Theravādins saw it as a matter of individual enlightenment, becoming an *arhat*, while Mahāyāna Buddhism tended to encourage collective enlightenment after the example of Avalokiteśvara, who puts off his own achievement of final release until all sentient beings are enlightened and freed. But again, whatever the differences, the importance of achieving *nirvāṇa* cannot be understated. Furthermore, such an achievement involves thorough confrontation with the personal ego through meditative practice and generally selfless behavior. The main obstacle to enlightenment and a constant source of suffering remains human bondage to the ego, which is rooted in the delusion of a substantial self at the core of an individual life.

Because a self or soul remains the delusional issue for all varieties of Buddhism, ego-transcending conduct is of universal value in all Buddhisms. Correspondingly, egocentric conduct constitutes the great moral error. Thus, in confronting various human practices such as genetic engineering or cloning, Buddhist moral judgment is probably most productively directed toward examining the intentions and desires that motivate their use. Disapproval of a practice in itself would have to be rooted in a finding that the only motivating reasons are purely egocentric ones. That is, a specific practice would have to obstruct the pursuit of *nirvāṇa* to merit explicit moral condemnation on the part of Buddhism. This is perhaps the reason why so few practices other than the usual murder, theft, and mendacity are explicitly prohibited by Buddhism, and also the reason why Buddhist moral discourse seems so overwhelmingly focused on recognizing the connection between desire, egocentricity, and suffering—that is, on moral psychology.

In light of this, what does Buddhism have to say regarding the moral acceptability of cloning, IVF, gene therapy, or other biotechnological innovations? Do any of these practices deserve blanket condemnation? If not, are there any general regulatory guidelines Buddhist moral reflection can offer? In answer to the second question, I think not. That is, there is no problem in principle with such practices in themselves. Or, to put it differently, there are potentially acceptable uses to which these technologies may be put. The moral problem is not the instrument but the mind of the user. However, in saying so, we meet the objection that the use of cloning specifically and assisted reproduction generally is always self-regarding and therefore egocentric. As such, it might be supposed worthy of Buddhist disapproval. If we examine the reasons behind the decision to clone, even those that seem least objectionable, one might argue, they remain entirely self-regarding. Take, for example, the desire to avoid passing on dangerous heritable illnesses to one's child. Typically in these cases, the reason not to use donated reproductive cells, or even to contemplate adoption for that matter, is to have a child that is, biologically speaking, one's own. Is this not an exercise in self-gratification? It certainly is not undertaken solely to benefit the child or better the lot of any existing person. In what sense is it an act of compassion, for example? How could Buddhists approve of or recommend such action? And if all rationales for cloning are based on this desire for a child "of one's own," so to speak, is this not a good Buddhist reason to at least morally disapprove of the practice?

However, I'm not convinced of such casuistry because I'm not convinced that self-regard and egocentrism are exactly the same thing. To be egocentric is to be selfish, that is, concerned with one's own welfare exclusively, to be unwilling to elevate another's needs in importance over one's own. To be self-regarding is another matter. As Mill pointed out, there are some decisions and situations that concern primarily ourselves alone, for example, in matters of thought and expression, and where self-regard is entirely appropriate. In fact, it would be highly perverse to act without self-regard in such circumstances, and one must remember that Buddhism condemns self-punishment as strongly as it condemns self-gratification. The salient issue is not whether the self is a matter of moral concern; it is in how one conceives of the self, the manner of one's regard. To seek either to punish the self or indulge the self is to treat it as having a transcendent value that it cannot merit. Nor is it the case that the self cannot be a matter of moral concern because of the doctrine of *anātman*. However, such a doctrine does place certain constraints on the nature of our self-regard. If self-regard is aimed at a "plan of life" (to use Mill's phrase) that is primarily preoccupied with achieving a specific identity, a list of attributes

or social role, for example, then it may well be self-regarding in a delusional sense from a Buddhist perspective. If, by contrast, it aims at enlightenment through wisdom and compassion, it at least sounds more authentically Buddhist.[23] Of course, to pay lip service to such ends and to actually seek them in the acts of a particular life are quite different matters. But whatever the epistemological challenges of defining the necessary and sufficient conditions for identifying an authentically Buddhist form of life, the fact remains that authentic self-regard aims at self-transformation consistent with the sorts of Buddhist goods that Keown mentions, to wit, wisdom, friendship, and life. So, if prospective parents were to argue that they seek a child with whom their biological tie is the strongest possible, because that is the felt imperative of their relationship and their roles as parents, who are we to say that this is egocentric and inauthentic? Certainly, it is self-regarding, but that does not automatically make such a decision egocentric. Why isn't it as much an expression of the compassionate embrace of future life as any other decision to procreate? If such parents embrace the results of their actions, no matter how they turn out, in what way is such a decision a denigration of the goods of friendship and wisdom? And to the extent that such procreative decisions respond to deep existential imperatives within human experience, why can't we say that they reflect a kind of wisdom, a living within one's nature and a refusal to adopt doctrinaire attitudes about one's conduct? To be dogmatic in this matter would be to have a child of a certain sort or in a certain manner because it is right or proper or "correct." Furthermore, such correctness represents an attitude of control and purposiveness that can hardly be called egoless. To acknowledge one's prejudices and predispositions in regard to how one would prefer to have a child and then to act in a way consistent with maximal commitment to the welfare of that future child as a separate individual might well be an opportunity for self-transcending and enlightening action. In other words and despite the insufficiencies in my formulation, the issue is not which choice one has made but the moral psychology that underlies the judgment. Buddhism suggests a specific pattern of deliberation in the execution of practical judgments. It is not obvious that a decision to clone necessarily deviates substantially from that pattern, at least in some cases.

If utilizing gene therapy, assisted reproduction, and so on cannot be directly ruled out within a Buddhist moral framework, then the question becomes what sort of ethical guidelines Buddhism might contribute toward the regulation of such practices. At this point, perhaps Kass's list of objections to cloning becomes more useful than before when considering blanket condemnation of the practice. To reiterate, Kass felt that cloning risked confusion of identity and individuality, represented a commodification

of life, and afforded an inordinate amount of despotic control over the life of the clone. From a Buddhist perspective, as well, these seem to be reasonable concerns in regard to the deep psychological risks associated with not only cloning but any technology that allows greater control over procreation than we presently have. To the degree that we seek to reproduce someone through cloning, say, in cloning a dying child so that he or she may in some sense "live on," we assume there is something to be preserved or passed on. It is just such an ego concept that Buddhism rejects and that is the ultimate source of suffering. Or, should we begin to regard our children as products such that cloning affords us better quality control over the outcome and, therefore, a more desirable way to reproduce, then once again we seek to mold or craft a self and so misunderstand the nature of suffering and compassion. Ultimately, with regard to one's children, it is not the self that they are that is the point, it is their individual capacity to go beyond the self that they are. We ensure such a capacity by providing to the best of our ability the goods central to a Buddhist life—wisdom, compassion, and life (individual). The same applies to the danger of despotic control, that in cloning a parent seeks a means to engineer the person or perpetuate a life already lived. To do so is again to aim at a particular self rather than no self.

The same cannot be said, though, for the decision to have a child free from various heritable diseases. That a parent might use a variety of technologies to avoid passing on cystic fibrosis, for example, does not represent an attempt to despotically direct another life. The fact is that to suffer in such a fashion is to diminish one's ability to realize all goods, including Buddhist ones, and so it is compassionate action to assist a future individual in avoiding such diminishment. Thus, whatever precepts Buddhism might wish to formulate in governing the medical uses of such technologies, they would have to follow such a pattern that they reinforced the guiding elements in the moral psychology, namely, encouraging a focus on nonegocentric and compassionate judgment. The main precept I would offer might be to choose only that which benefits those relevantly affected others as individuals in their own right able to pursue a life of enlightenment and compassion. Following such a precept would require any choice of available biotechnologies to pass the three forms of scrutiny that Kass's list of objections suggests. Namely,

(1) A choice would have to be free of confusion of identity. In fact, it would have to be free of motivations based on the possession or failure to possess a particular identity;

(2) A choice would have to respect the integrity of the natural process without illusions of Frankensteinian powers of control;

(3) A choice would have to respect the integrity and separate individuality of a resulting life. Indeed, such choices must aim at preserving this integrity.

On a metaphysical note, (3) does not imply that there is any core of individuality such as a soul or ego. The individuality of a life is one thing; the question of the basis of personal identity, or even the existence of personal identity, is another. To say that my life is uniquely my own is not to say that there is particularly one thing that I am and you are not.

To sum up, choices that do not violate stipulations (1)–(3) have at least a *prima facie* Buddhist case in regard to their moral acceptability. Obviously, these considerations apply at the level of individual moral judgment between an individual and his or her conscience, or at most, between the individual or individual couple and a counselor. They certainly do not apply at the level of public policy, although another case might be made that, were it impossible for individuals to sort out such issues within the space of conscience, Buddhistically prudent public policy might dictate the avoidance of such choices altogether. After all, if we face only confusion in such matters, then such choices tend not to edify.

Endnotes

1. See Keown's discussion in chapter one of *Buddhism and Bioethics* and *The Nature of Buddhist Ethics*.
2. I am following Keown in this translation/description (Keown [1995], 23–26).
3. Milindapañha, 25.
4. See Keown (1995), 66 ff.
5. See Keown (1995), 26.
6. See *Saṃyutta-Nikāya* xii, 62, as translated in Warren (1974).
7. For Davidson's discussion on this topic, see his paper "The Material Mind," reprinted in Davidson (1982), 245–259. Davidson's argument in this paper is essentially that psychology will never reduce to physics, even though a specific brain state may indeed cause a specific psychological state. Despite such materialism, we would first have to identify the psychological state in question, and for this task the physical laws that explain neurological events would be of no help. So, although a particular psychological state may be caused by a particular brain state, it doesn't follow or seem likely that we can obtain the same kind of correlation between types of states, brain and psychological, that a reductionist science would of course require. In other words, while specific brain states invariably correlate with specific psychological states, we will never be able to say that they will necessarily be the same correlations.

8. See Dennett (1978), "Intentional Systems."
9. From the *Visuddhi-Magga*, chap. xi (Warren [1974], 158).
10. See *Visuddhi-Magga*, *Milindapañha*, and *Majjhima-Nikāya*, for example, as excerpted and translated in Warren (1974), 159–208.
11. For an interesting take on this relationship and explanation of its nonantagonistic aspects, see Masao Abe's "Religion and Science in the Global Age—Their Essential Character and Mutual Relationship" (Abe [1985], 241–248).
12. A recent example of this debate may be found in a forthcoming issue of *Science* that reviews progress toward a "blueprint for life" together with a number of demurrals from philosophers and medical ethicists. See Nicholas Wade, "Life is Pared to Basics; Complex Issues Arise," *New York Times*, 4 December 1999, p. F3.
13. See the report by the National Bioethics Advisory Commission for a full description and analysis of potential harms and benefits: *Cloning Human Beings: Report and Recommendations of the National Bioethics Advisory Commission* (Rockville, Md.: National Bioethics Advisory Commission, 1997).
14. Kass, Leon R. "The Wisdom of Repugnance," *The New Republic*, 2 June 1997. Excerpted and reprinted in Arras and Steinbock (1998), 496–510. Page numbers refer to the latter version of Kass's article.
15. See Kass (1985).
16. See Kass (1985), 503.
17. See Kass (1985), 507.
18. I realize that Kass himself does not seem to believe in strict or hard genetic determinism. He is arguing rather that "Genetic distinctiveness … only symbolizes the uniqueness of each human life and … can also be an important support for living a worthy and dignified life" (Kass [1985], 505). However, without genetic determinism this doesn't necessarily have to be so, and Kass may be speaking only for some as a result.
19. See Joel Feinberg, "The Child's Right to an Open Future," in *Whose Child? Children's Rights, Parental Authority, and State Power*, ed. W. Aiken and H. LaFollette (Totowa, New Jersey: Rowman and Littlefield, 1980).
20. Dan Brock, "Cloning Human Beings: An Assessment of the Ethical Issues Pro and Con" (Arras and Steinbock [1998], 484–496).
21. Dan Brock, "Cloning Human Beings: An Assessment of the Ethical Issues Pro and Con" (Arras and Steinbock [1998], 491).
22. This may no longer be the case as there is some evidence of premature aging in the cells of the first cloned sheep, Dolly.
23. This is the sense in which all delusions become important as opportunities

for enlightenment from a Buddhist perspective and may explain what Dogen meant when he claimed that "Buddhas greatly enlighten illusion" in the *Shobogenzo*. So our moral concern for the self is for an illusion to be greatly enlightened.

References

Abe, Masao. *Zen and Western Thought*. Honolulu: University of Hawaii Press, 1985.

Arras, John D. and Bonnie Steinbock, eds. *Ethical Issues in Modern Medicine*. Mountain View, Calif.: Mayfield Publishing Company, 1998.

Davidson, Donald. *Essays on Actions and Events*. Oxford: Clarendon Press, 1982.

Dennett, Daniel C. *Brainstorms: Philosophical Essays on Mind and Psychology*. Cambridge, Mass.: MIT Press, 1978.

Kass, Leon R. *Towards a More Natural Science*. New York: Free Press, 1985.

Keown, Damien. *The Nature of Buddhist Ethics*. London: Macmillan, 1992.

Keown, Damien. *Buddhism and Bioethics*. London: Macmillan, 1995.

Warren, Henry Clarke. *Buddhism in Translations*. New York: Atheneum, 1974 (first published Harvard University Press, 1896).