Remaking Ourselves?
A Buddhist Perspective on Biotechnology

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> As human beings our greatness lies not so much in being able to remake the world as in
> being able to remake ourselves.   (Gandhi)

But what does remaking ourselves mean?   We can suppose that Gandhi was not thinking about genetic engineering when he emphasized its importance.   Buddhism has also developed this notion, in ways that are more in line with what Gandhi had in mind.   Whether or not Buddhism is a religion or a philosophy, it is a path that helps us remake ourselves in order to overcome our *dukkha,* our inability to enjoy our lives.   (Thich Nhat Hanh: "Buddhism is a clever way to enjoy our life.")   This requires conscious efforts to transform our greed, ill-will and delusion into their more positive counterparts: generosity, loving-kindness, and wisdom.

Now, however, we have access to a new way of remaking ourselves.   How shall we evaluate it? For most of us, our excitement about this alternative way to reduce some types of *dukkha* (most obviously, by treating hereditary genetic diseases) is shadowed by worries about its dangers.   In addition to the problem of accidents, which are inevitable, there is the question of who will own and control this technology, and for what ends.   Given the increasing domination of market principles, will we end up with an elite of super-smart, super-beautiful and super-healthy people who control the rest of us?   Some scientists are already discussing the likelihood of this, and not all of them see it as something to be worried about. . . . Given both its promise and its dangers, then, how do we evaluate such extraordinary new possibilities?

To a large extent, in much the same way that we have tended to evaluate most new technologies: by distinguishing between nature and artefact, between the "world of born" and the "world of made" (e. e. cummings) — in order to take sides between them.

Our preoccupation with this dualism may be traced all the way back to the Greek origins of Western civilization, to its distinction between *phusis* and *nomos,* nature and convention (which, once recognized as a construct, allows the possibility of restructuring society and our natural environment).   Much of the Western tradition can be understood in terms of increasing self-consciousness about their difference.   Diderot, Rousseau, Herder, the Romantics, etc. contrasted the organic and spontaneous with the artificiality and sterile rationality of convention; Kant, Hegel, Marx, Comte, etc. were optimistic about our progressive capacity to understand and control the laws of our own development.

One could argue that the historical dialectic between them *is* the Western tradition, and as a result our ways of thinking about such issues "naturally" (or unconsciously) tend to bifurcate into

that dualism.   In terms of bioengineering, this means that some people want to dismiss it out of hand as unnatural, while others cannot understand why we are so reluctant to take charge of our (otherwise random?) genetic destiny.

Those who yearn for nature usually evoke some period in the past, while those who are optimistic about our social and technological self-determination have high hopes for the future. As usual, nobody is satisfied with the present.   But what motivates this dualism?   That is a crucial issue if we want to escape the sort of deadlock that usually ensues.

I suspect this bifurcation has a lot to do with the conflict between two of our most basic human needs, security and freedom.   This is more obvious individually: We feel a need to be free, but becoming free makes us more anxious and therefore more inclined to sacrifice that freedom for security, at which time we again feel a need to be free . . . We need to feel that we are unique, special in the universe, but then we want the security of being just like everyone else. "Between these two fear possibilities the individual is thrown back and forth all his life" (Otto Rank).

In short, two of our primary needs, for freedom and security, conflict.   Is the same thing true collectively?   With regard to the relationship between nature and culture, one basic issue is the meaning of our lives.   To accept our culture as natural is to be grounded in the sense that that our role in life is determined for us (often by religious belief), while the freedom to discover or construct our own meaning is to lose that security due to the lack of such a "natural" ground. Materially, however, something like the opposite is true: for most premodern societies, the physical conditions of their survival were often precarious, so we embrace technology to control and secure those conditions.   The irony of the ecological crisis, from that perspective, is that our technological efforts to secure ourselves materially over the last five hundred years are what have caused the biospheric degradation that threatens our very survival.

Collectively as well as individually, then, we have tended to alternate between yearning for the security of a "natural" grounding, and the technological freedom to reconstruct the conditions of our existence.   Each has its own attractions and problems.   And today our ambivalence is complicated by the fact that, whether or not the technological genie should have been released from his bottle, he cannot be put back inside.   Once human culture has been recognized as convention, you can't go home again, for an essential condition of those "closest to nature" is that they do not *know* they are close to nature.   Nor would we want to return (even if we could) to a "natural" premodern society such as Tokugawa Japan, where hierarchical and exploitative political structures were presented as perfect because they conformed to "the order found in the manifold natural phenomena of heaven and earth."   That is simply not an option for us.

So where does that leave us?   If much of our thinking today about this new technology of bioengineering remains trapped within this dialectic, is there any other approach that might shed light on our ambivalence?

As a way to evaluate genetic engineering, I am suggesting, such a distinction between natural and unnatural is inadequate — and also, as it turns out, not very Buddhist.   Shakyamuni's

dharma did not distinguish them, and insofar as some such dualism may be read into his teachings, the Buddhist emphasis may be somewhat on the unnatural, e.g., the celibacy of the *sangha*. (Perhaps the only place where naturalness may be seen as privileged in Buddhism is occasionally in those schools influenced by Taoism or Shinto, such as Ch'an/Zen.)

In the same way, Buddhism provides no support for those who seek a return to some (pre-agricultural?) golden age in the distant past.   The Buddha couldn't find the beginning of our *dukkha* and wasn't much interested in that anyway; his sole concern was to show us how *dukkha* could be ended.   Nor did he express any interest in a technological solution to (part of) our *dukkha,* although such an approach wasn't much of an option for his culture anyway.   You will not be surprised that I have not been able to find any references to bioengineering anywhere in the Buddhist scriptures, but it is clear that critiques which argue genetic engineering is unnatural are somewhat unnatural to Buddhism.   The Buddhist angle is different, although no less acute.

In short, our discomfort with bioengineering needs to be articulated in a different way than simply trying to privilege the nature side of the nature/technology dualism — and Buddhism offers us one such way.   According to Buddhism, we are unhappy, and make each other unhappy, because of the *three roots of evil*:   greed, ill-will, and delusion.   As mentioned earlier, these need to be transformed into their positive counterparts: generosity, loving-kindness and wisdom.   That is because actions motivated by negative intentions tend to bring about bad consequences, while actions motivated by good intentions tend to bring good results.

This implies that one way to evaluate this new technology is to look at the *motivations* behind our eagerness to exploit it.   If this eagerness is motivated by generosity, lovingkindness and wisdom, we can expect it to bring about good results.   We should be much more cautious if the motivations are wrong, because that will tend to increase our *dukkha,* not reduce it.[1]   Of course, it is not a simple issue of "either-or", for there is a wide spectrum between these two extremes; and both individually and collectively, our motivations are usually a composite of various factors.

Nonetheless, and despite all the public rhetoric about its potential to improve our lives (which cannot be denied), it is not difficult to find the three roots of evil motivating much of genetic engineering as it is being pursued today.   The most evident is greed, in the form of personal desire for gain and corporate desire for greater profits.   The recurring squabbles over patent rights for bioengineered life forms, and even for parts of the human genome itself, make that all too obvious.   Since this problem has been so well exposed, there is no need to go into it any further, except to emphasize how this "root of evil" works to circumvent the kind of slow, long-term evaluation necessary for even the most innocuous and benign applications of genetic engineering.   The rush to make big bucks from GE tends to make us all into laboratory rats.

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[1]This challenges Adam Smith's notion of an "invisible hand" and its modern versions, which argue that personal greed leads to public benefit, but this is not the place to criticize such views.   See David Loy, "The Religion of the Market", in the *Journal of the American Academy of Religion,* vol. 65, no. 2 (summer 1997), pp. 275-290.

The role of ill-will is less obvious, and one hopes less pervasive, but such motivations are present in the competitive pressures that often drive researchers' eager for Nobel Prizes and corporations eager for lucrative patents.

The least obvious factor, however, may be the most problematic one: our collective ignorance or delusion.   The issue here is other possible motivations behind our preoccupation with GE. Do we really understand why this technology has suddenly become so important to us?   Are we simply excited about new ways to help people (as well as make a buck), or is something else driving us here?   There seems to be a psychological law that when we are motivated by something unconscious, which we do not understand, our actions are much more likely to lead to unfortunate consequences.   So it is important for us to be clear about all our motivations.

As one way to approach this, I would like to develop further the parallel between our individual motivations and our collective ones, to see what light this may shed upon our general obsession with technological solutions to human *dukkha,* as well as bioengineering in particular.

From my Buddhist perspective, what is most striking about our collective problem today is how much it resembles the central problem for each of us as individuals: the sense of separation between an ego-self "inside" and an objective world "outside".   For Buddhism, this subject-object dualism, which we tend to take for granted, is a delusion — in fact, the root delusion that makes us unhappy.   It causes us to seek happiness by manipulating things in the objective world in order to get what we want from it, but that just reinforces our illusion of a self inside alienated from the world "out there".

According to Buddhism, this ego-self is an illusion because it corresponds to nothing substantial: it is *sunya,* "empty".   Instead of being separate from the world, my sense-of-self is one manifestation of it.   In contemporary terms, our sense-of-self is an impermanent, because interdependent, construct.   Furthermore, I think we are all dimly aware of this, for this *lack of self-grounding* means that our sense-of-self is haunted by a profound *insecurity* which we can never quite manage to resolve.   We usually experience this insecurity as the feeling that "something is wrong with me", a feeling which is understood in different ways according to our particular situation and character.   Contemporary culture conditions many of us into thinking that what is wrong with us is that we do not have enough money; academics, like aspiring Hollywood actors, are more likely to understand the problem as not being famous enough.   But they encourage the same trap: I try to *ground* myself by changing the world "outside" myself. I try to subjectify myself by objectifying myself.   Unfortunately, that is like trying to fill up a bottomless pit at the core of my being, because no amount of money or fame in the world can ever be enough if that is not what I really want.

According to Buddhism, such "personal reality projects" — these ways we try to make ourselves feel more real — cannot be successful, for a very different approach is needed to overcome our sense of lack.   Instead of trying to *ground* ourselves somewhere on the "outside", we need to look "inside".   Instead of running away from this sense of emptiness at our core, we need to become more aware of it and more comfortable with it, in which case it can transform from a

sense of lack into the source of our creativity and spontaneity.

Now the big question: Is the same thing true collectively?   Can this shed any light on our contemporary attitude toward technology generally?   Individually, we usually try to solve the problem of our lack of self-grounding by grounding ourselves somewhere *in* the world — in the size of our bank account or in the number of people who know our name.   Are we attempting to solve the problem of our *collective* lack of self-grounding in a similar way, by trying to ground ourselves *in* the world?   That is, by objectifying and transforming it?

"Technology is not applied science.   It is the expression of a deep longing, an original longing that is present in modern science from its beginning.   This is the desire of the self to seek its own truth through the mastery of the object."   (Verene)

What is that deep longing?   Remember the problem of meaning that lies behind the nature/culture dualism.   Despite their material insecurity, most premodern societies are quite secure in another way: the meaning of their lives is determined for them, for better and worse. In contrast, our freedom to construct our own meaning means we have lost such security due to the lack of any such "natural" ground for us.   In compensation, *has modern technological development become our collective security project?*

Today we have become so familiar with rapid scientific and technological development that we have come to think of it as natural, which in this case means: something that does not need to be explained.   But in what sense is it natural to "progress" from the biplane to a space shuttle during one lifetime?   (Bertrand Russell was already an adult when the Wright Brothers first flew; he lived long enough to watch men land on the moon.)   In response to our anxious alienation from a "natural" condition, we try to make ourselves feel more real by reorganizing the whole world until we can see our own image reflected in it everywhere, in the "resources" with which we try to secure the material conditions of our existence.   This is why we can dispense with the consolations of traditional religion: now we have other ways to control our fate, or at least try to.   But we must also understand how that impels us: because the traditional grounding security of religious meaning has been taken away from us, we have not been able to avoid the task of trying to construct our own self-ground.

Insofar as there is something unconscious about this, however, there has been a distortion: no amount of *material* security can provide the kind of reality we crave, the sense of self-being we most need (which is, fundamentally, a *spiritual* need).   Unfortunately for us, we cannot manipulate the natural world in a collective attempt to self-ground ourselves, and also hope to find in that a ground greater than ourselves.   The meaning of our lives cannot be discovered in this way.   Our incredible technological power means we can do almost anything we want, yet the irony is that we no longer know what we want to do.   Our reaction to this has been to grow and "develop" ever more quickly, but to what end?. . . Our preoccupation with the means (the whole earth as "resources") means we perpetually postpone thinking about ends: where are we all going so fast?   Or are we rather running away from something?

Another way to put it is that our technology has become our attempt to own the universe, an

attempt that is always frustrated because, for reasons we do not quite understand, we never possess it fully enough to feel secure in our ownership.   For many of us, Nature has taken over the role of a more transcendental God, because both fulfill our need to be grounded in something greater than we are; our technology cannot because it is motivated by the opposite response, attempting to banish that mystery by extending our control.   Our success in "improving" nature means we can no longer rest peacefully in its bosom.

However, doesn't this approach smear all technological development with the same Buddhist brush?   Such a perspective risks falling into the same pro-nature, anti-progress dualism that was questioned earlier.   Furthermore, it is difficult to see how this offers any specific insights into what is distinctive about biotechnology and its ethical challenge today.

In response, it is necessary to emphasize that even if my supposition is true (and how does one evaluate something like that?), this does not imply anything like a wholesale rejection of modern technology.   Remember that the Buddhist emphasis is on one's intentions, for it is our problematic and confused motivations that tend to lead to the consequences we don't like.   This allows us to evaluate in specific situations by applying a Buddhist rule-of-thumb: is our interest in developing this new technology due to our greed or ill-will, and — applying the third criterion of ignorance or delusion — can we become clear about why we are doing this?   Among other things, this means: do we clearly understand how this will reduce *dukkha,* and what its other effects will be?

Such questions encourage us, in effect, to transform our motivations, in a way that will enable us to evaluate technologies in a more conscious and thoughtful fashion.   One crucial issue in this process is, of course, who the "we" is.   Transformative technologies have often been initiated without much thought of their long-range consequences (e.g., cars), but sometimes they have been imposed by elites with a firm belief in their superior understanding (e.g., nuclear power). The evaluation process I am suggesting would involve engaging in a much more thorough and wide-ranging discussion of what we collectively want from a technology.   This will not stop us from making mistakes, but at least they will be our collective mistakes.   Also, this will inevitably slow down the development of new technologies, something I see as being not a disadvantage but an advantage that will allow for a more painstaking scientific evaluation less subverted by desire for profit and competitive advantage.

What, if anything, does this specifically imply about biotechnology?   In one way, nothing. Genetic engineering is not distinguished from other technologies in that they all need to be evaluated in the above fashion.   But in another way,   biotechnology is indeed special, because it presents us with the most extreme version (and perhaps the most extreme *possible* version) of the difficulty with technological objectification generally.   The Buddhist claim that we are nondual with the world, not separate from it, means that when we objectify and commodify the world, we ourselves end up objectified and commodified, by it and in it.   As the world has become reduced to a collection of resources to be managed, the physical and social structures we have created to do this have ended up doing the same to us, and we find ourselves increasingly subjected to them, as "human resources" to be organized and utilized in various ways.

Biotechnology signifies the completion of this commodification process. Life, or at least human life, has traditionally been seen as the last bastion of the sacred in our increasingly desacralized world, but now this last resistance to commodification is being overcome, and the category of "sacred" ceases to correspond to anything in our experience. There are many places and phenomena we cannot yet commodify, but in principle nothing now remains outside the scope of technological transformation into "resources" by a species which has yet to demonstrate that it is mature enough to exercise this power in a healthy way. Up to now, we have labored to ground ourselves by reconstructing our environment. Suddenly there is a new possibility: trying to ground ourselves by reconstructing our own genetic codes.

This raises in an especially acute way all the ethical and spiritual issues adumbrated above. If we allow the commodification of market principles the freedom that is now accepted in most other areas, this technology will become available mainly for those who can afford it, including wealthy parents concerned about the competitive advantages of their offspring, and wealthy individuals concerned to immortalize themselves with clones. In addition to this obvious challenge to more democratic aspirations, can such a technology be entrusted to a species unable to cope with its own death? To people who do not understand their own sense of lack -- with historically disastrous consequences for them and those around them? Do we want the genetic code of life itself to become another hostage to our inability to accept the impermanent conditions of our existence in the world, to our inability to accept our own empty (nondual) nature?

In this fashion biotechnology not only creates special dangers and possibilities, it prompts us to address all such technological issues in a more conscious and open way.

More concretely, what does this mean for how genetic engineering is being carried out today? From the Buddhist perspective I am offering, I see no way to escape the conclusion that GE as it is presently being developed should be suspended, while we engage in a thorough democratic discussion of what we collectively want from it. The greed, competition and delusion that motivate so much bioengineering research and application today are a recipe for disaster. Needless to say, we should have no delusions of our own that such a full public debate will happen unless we fight for it. The economic and political powers-that-be have too much of a personal stake in pushing it.

Nevertheless, it must be emphasized that *none of the above implies that all genetic engineering is intrinsically bad.* It does not deny the possibility that sometime in the future we may have economic and political conditions which enable us to conduct it with more conscious and humble motivations: to reduce human (and perhaps other species') *dukkha.*

That is because the essential point of Buddhism is not to return to some pristine natural condition but to reduce our *dukkha.* Despite all the obvious dangers, there is the possibility that biotechnology may do that — for example (and most obviously) by treating inherited genetic diseases. Today we cannot expect the CEO of Monsanto Corporation to be a *bodhisattva,* but we can hope that this may someday be a world where a much more cautious approach to genetic engineering will improve the human condition more than it will threaten it.

That, however, is unlikely to occur unless we also learn that it is more important to remake ourselves spiritually than to remake the world.   And that brings us back to the issue of how we are to apply the Buddhist rule-of-thumb in evaluating technologies.   Earlier, I emphasized the importance of becoming clear about why we want to develop a new technology, but *how* can we become clear about this?   In conclusion, I think we cannot evade yet another parallel between the personal and the social.   As a society, we cannot expect to become sufficiently aware of our collective motivations unless we also make the effort to become more aware of our individual motivations.   I suspect we will not be able to resolve our group sense of lack unless more of us individually address our personal sense of lack.   If the root problem in both cases is due to our felt lack of reality, we cannot expect wholly "secular" solutions to technological problems that, I have argued, provide us with a spiritual challenge.