

The Future with Cloning:
On the Possibility of Serial Immortality

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Abstract

We speculate about how human sexuality might be evolutionarily re-configured by access to cloning technology. Then, by combining the possibility of genetic cloning with ingredients of Bernard Williams's celebrated thought experiment about body-swapping, we raise the possibility of a recipe for serial immortality.

1 Introduction

The cloning of human beings, which was once only a science-fictional possibility, now appears eminently feasible even if not imminently so—eminently, because being able to do it to sheep and monkeys really *does* mean being able to do it with human beings; but not imminently, because the ethical crisis over the prospect has already caused a storm in the public media, and is likely to result in strict legal prohibitions. And this would be a good thing. For I do believe that not even the science-fiction writers or the philosophers who conduct thought-experiments in this area have dealt with all the frightening scenarios that could arise from cloning, and the impact that these might have on our concepts of personal identity and our conceptions of lives worth living.

The philosopher, in his or her thought laboratory, conducts thought experiments—speculations about bizarre possibilities that stretch everyday concepts to the limit, with the intention of revealing what is essential, and what accidental, in the nature of things. I make no apology, therefore, for the wild character of the following speculations. They go way beyond even the ‘just so’ stories that have been told about our evolutionary *past*. Perhaps they should be described rather as ‘God forbid so’ stories, in so far as we care about, and might be able to influence, our evolutionary *future*.

My plan in this paper is to look first at the possible consequences of having cloning as a live reproductive option. Then I shall describe a ‘cloning extension’ of a famous thought-experiment about ‘body-hopping’ due to Bernard Williams. This will put us in a position to contemplate even more frightening consequences than those afforded by cloning alone, or by body-hopping alone.

2 Cloning

The philosophical literature has dealt with ‘telecloning’—the sort of thing that can happen if two copies of Scottie are beamed up. What I would like to do here, however, is consider the more straightforward, biological kind of cloning, such as that of Dolly the sheep. This is the kind that involves creating a new zygote (= fertilized egg) from the cellular material of an organism so as to create another (younger) organism—the clonal offspring—genetically identical to its clonal parent. We shall set aside as irrelevant any shortcomings of present cloning processes that might result in the clonal offspring being ever so slightly different, genetically, from the clonal parent. Slight differences might arise, for example, from the way parental mitochondrial DNA fails to be duplicated exactly in the new offspring. My own thought experiments will here be premised on the thoroughgoing genetic identity of clonal parent and clonal offspring.

3 Lives worth living

3.1 Straight sexual psyches at present

Evolutionary psychology is beginning to underscore just how much of our normal psychological baggage has been accumulated in the struggle for survival and reproduction.¹ Finding a mate at sexual maturity is the central project around which most of heterosexual human personality is buttressed. Our bodies and our characteristic male and female psychologies are (at least statistically) adapted to finding other bodies of the opposite sex with which to mix genes to create further offspring. Throughout our evolutionary past, there has been only one way to do this, namely, by having a sperm fertilize an egg and then having one or other parent (usually the egg-provider) harbour the fertilized egg until it has grown to the point where it can assume a spatially separated existence (albeit with further nurturing during a prolonged stage of dependency).

Heterosexual human beings are now ‘wired’ to behave in ways likely to conduce to conceptions of offspring—semi-copies of each parent, with half their genes coming from their father, and the other half from their mother. This basic genetic fact—that half of your offsprings’ genes have to come from someone else—is what so powerfully shapes each normal human being’s life-projects. We cannot make high-fidelity copies of ourselves; we can only make semi-copies, genetically

speaking. The evolutionarily stable strategies that our species has arrived at involve (according to the sociobiologists and evolutionary psychologists, as well as Grannie): suppressed oestrus; great male sexual jealousy and preference for nubile youth; female coyness, reticence and preference for men with status and control of resources; greater visual tittilatability on the part of the male, and preference for sexual variety; elaborate courtship rituals; a largely monogamous mating system; characteristic rates of philandering; and intense emotional loyalties to children, especially on the part of their mother. Such is our conditioning by the constraint of semi-copying that we invest enormous time and psychic energy into evaluating potential mates, and fantasizing about how ‘special’ the resulting offspring might be, by virtue of the respective genetic contributions of their parents. We hope that the partners who attract us will ‘breed true’, and we discreetly check out their family backgrounds to try to determine whether they will.²

3.2 These immortal coils?

Imagine now what would happen if we no longer needed to find mates to make semi-copies of ourselves. Imagine, that is, that cloning technology were available, even if at a considerable price. This technology would offer the possibility of perfect genetic copying, without all the hassle involved—enjoyable though it may

be—in finding a mate for semi-copying. There would be the other hassle of having to bear and raise the clonal offspring. That would set in train other, extremely interesting, selective forces. (In speaking of ‘hassles’ here I do not of course mean to imply that it is a fraught and unsatisfactory business. On the contrary; we are now wired to derive considerable satisfaction from these reproductive projects, and accordingly to be motivated to undertake them.) All it would take is *some* heritable variation in preferences for the old way versus the new way of creating offspring, and natural selection would go to work with a vengeance.

Think of a person as perfectly endowed as can be—a person with universally acknowledged good looks, a tremendous intellect, a wonderfully agreeable personality, a fine moral character, possessed moreover of a considerable fortune. Such persons are of course hard to find. But let us suppose that there were such, and that this person were female.

Why should this wonderful woman *risk* mixing her genes with those of a man, if she has access to cloning technology? She could ‘conceive’ and bear a child all *on* her own and *of* her own. With the maternal resources to provide for her, this daughter would not need resources from a man.

What if our perfectly endowed person were male? Jane Austen, in *Pride and Prejudice* said that it is a truth universally acknowledged that such a *man* would be in need of a good wife. But *would* he, if the question to be answered concerned

only his *inclusive genetic fitness* (not his personal happiness) in an environment where cloning technology is available?

Why should this wonderful man *risk* mixing his genes with those of a woman, if he has access to cloning technology? Or, rather, why shouldn't it be a much better strategy for him to go for a 'mixed' portfolio of genetic investment? Such a mixed strategy might involve considering bids from interested mates prepared to undertake the (bearing and) nurturing of his clonal offspring in return, say, for his occasionally allowing them to reproduce in the old-fashioned, gamete-uniting way. He just might have some takers with such a proposition.

Consider now the long-term impact on the human psyche (both male and female) if these new niches of reproductive opportunity were allowed to work long enough with their selective forces for the psychological dispositions that would make men (and women) exploit them to best advantage (from the genes' point of view). Who would win out eventually?—the straight copiers (the cloners) or the straight-sexers (the semi-copiers)? How would a distant descendant in such a regime of opportunities feel himself impelled to apportion his time and effort between, say, admiring and lusting after attractive women, and admiring and lusting after the most impressive cloning-incubators-cum-robotic-child-minders on the market? Remember that he might be around only because of the latter sort of lusting on some distant ancestor's part. All our speculation is premised

on there being some heritable differences, however small, among human beings with regard to the proclivities I am imagining. It may be that they will arise only by random mutations; but it may also be that they are already within us, latent, waiting to be invoked and engaged by the advent of the new technology. Human beings are perverse and varied enough for this not to be beyond the bounds of possibility.

What would become of quiet parental pride in the achievements of one's offspring? Would clonal parents still be able to *admire* their clonal offspring for what they accomplished? Or would they feel that *they themselves*, in some more literal sense, deserved *all* the credit for their offsprings' accomplishments? Consider the mathematicians who proved the four-colour theorem, by (famously) deploying a computer to trudge through thousands of special cases. The special cases lent themselves to algorithmic decision. But this need not be the case in general. Suppose there were a mathematician with particular gifts and honed insights into a special corner of the mathematical universe, who knew that the only thing that stood between him and the Fields Medal was some very non-algorithmic and insightful 'crunching of cases', for which he himself had the native ability, but not the required *time*, before the age of forty. Suppose he accordingly cloned himself one hundred times and set the whole company of himself to work on the problem in parallel. Could he reasonably claim credit

for the eventual theorem proved by that *ensemble* of ‘himself’? My colleague Harvey Friedman, himself a very gifted mathematical logician and pianist, has mused out loud about the desirability of being able to make two copies of himself, and instruct one to work on certain foundational problems, and the other to concentrate on finding hitherto unrealized nuances in Chopin’s fourth Ballade.

It really is a mind-boggling spectrum of possibilities—one that threatens to completely unravel and re-stitch every thread in our gendered psychic make-ups. Sexual *frisson* and sexual yearning could become a thing of the past; or a highly seasonal thing; or an environmentally triggered thing, that could skip several generations, outside conditions permitting. Parental devotion to clonal offspring could become a frighteningly fanatical thing.

3.3 The war between the sexes

Since any clone is genetically identical to its parent, a more alarming prospect looms. There will be clones of males, and clones of females. And females will have the edge. For only a female can bear her own clone, whereas a male would still have to find a female to bear his. It wouldn’t be long before there were no longer any males around, given social and economic circumstances that rendered their testosterone-linked special traits less survival-enhancing. For the average woman prepared to bear a clone would be acting much more in her own genetic interests

if she simply bore her *own* clone! The only inducement to bear a man's clone might come in the initial stages of the new technology, while men still had a monopoly of the political power and economic resources that could coerce or entice women to do clonal grunt labour (surrogate motherhood)—perhaps, as suggested above, in return for some old-fashioned spawning from time to time, or even, if they could wangle it, for some opportunities once in a while to *clone themselves* by means of their employer's machines. This in turn could set up a new selective force—for greater discernment, on the part of males, of those traits in females that are likely to be inherited by the females' own clones, and that would incline them to bear the men's clones for them in return for the odd sexual or clonal favours just mentioned.

3.4 An end to parent-offspring conflict and sibling rivalry?

Only one optimistic note can be sounded on this score: if the standard gene-selectional account of sibling rivalry and of parent-offspring conflict is correct, we could expect greater harmony within the (clonal) family. Ego's degree of genetic relationship with Parent would be 1, as it would also be with every Sib.

But then there would be another selective force to contend with—the one favouring viciousness towards recombinant siblings, and fierce loyalty to the fullest of full sibs, namely the clonal ones. Moreover, since females would have

the innate upper hand in the cloning age (by not needing male gametes or male bodies for their own replication) it could turn out that the most ferocious competition would break out *among females* for access to, and control of, cloning technology. Perhaps it would be *females*, rather than males, who would eventually commit by far the greater proportion of homicide and infanticide!

Clonal technology would massively disrupt the present psychological equilibrium of our species. Initially it would be used within a gendered species still loaded with the dispositions to sexual behaviour inherited from the recombinant, dizygotic past. It is hard to say how many generations would be needed before the psychologies of men and women had been fundamentally shifted in adaptation to the new selective forces set up by the existence of cloning technology. But it is safe to say that our speculations as to what sorts of inclinations would assert themselves as selectively optimizing have only just begun. The family as we know it could disappear, and a newer, uglier war of the sexes could begin. People could even start paying for mutagens that could provide a modicum of genetic variability within clonal broods, at a carefully tailored level way below that of recombinant semi-copying.

I was cautious to anticipate greater harmony only within the *clonal* family. What of the ordinary family, though?—the kind with Mum and Dad and kids that mix the two? This social unit might become a thing of the past, or at least

of the poorest regions of the globe. Those who distrusted the lack of genetic variability induced by cloning, and who put their faith in hybrid vigour, might start a new religion: ‘Blessed are the sleek and wild, for they shall inherit the earth.’

3.5 Altered appetites

Manufacturers of the new clonal technology might try to gain a competitive edge by exploiting ancient and still powerful aspects of sexual psychology before they became thoroughly outmoded—equipping their new products with pheromone emitters, perhaps, or even making them not shiny, but fleshily textured and shaped like human beings! There could be a fascinating interplay, down through generations of clones and their cloning technologies, between the appetitive structure of the clones’ personalities and the perceptible features of their cloning technologies. Imagine the motivational shake-out that would be involved in switching from having to find and retain a mate to having to find and make most efficient use of a cloning machine! How might our current modes of sexual desire and receptivity be built upon, or rendered obsolete, by the new selection pressures? Would distant clonal descendants need to experience anything analogous to sexual desire in order to be motivated to clone themselves further?

Would there come a point at which manufacturers would be much better off

just using their current product to clone away at *themselves*, rather than diverting their time and effort into the further R&D needed to make even better cloning aids for the wider market? Would they become even more industrially secretive, trying to reserve the ever-better prototypes for exclusive use by themselves and their own clonal offspring? Would this very incentive become so great that—Heaven forbid—it *destroyed the market as we might presently know it* for cloning technology? Could this possibly mean that one would *not* receive in the mail unsolicited catalogues from cloning technology companies?! When matters get so out of hand that even the *market* is disrupted, then we know we have a crisis of potentially unmanageable proportions. Disappearance of the family as we know it?—well, all right. Intensification of the war between the sexes?—well, we had suspected it was happening all along. But disruption of the *market*, for any one of its innovative products?—God forbid!

Indeed, why should we even think that the altered sensibilities of the future would include any analogue of sexual desire, involving arousal and intentional focus on a body of the opposite sex? The relevant kinds of conscious experience (whether merely epiphenomenal, or genuinely causal), on the part of clones whose best genetic bet would be to carry on cloning themselves, might be radically different from those of people for whom sexual reproduction has been, and is, the only live option. New sorts of fantasizing would probably arise, involving

intentional fixation on the technological methods and/or apparatus involved in cloning. Members of the opposite sex might become an *absolute irrelevance*—indeed, a competitive hindrance—to the business of replication. But, given the great likelihood that the technological apparatus involved in cloning would undergo great shifts in materials and design concepts, the new intentional focus for the clonally randy might have to be set at quite an abstract level. This in turn could set up selective forces for those aspects of a cognitive apparatus that could serve up the abstract foci and keep them suitably engaged with the appetitive drives involved in goal-directed planning. Just as there has been, according to sociobiology, natural selection for self-*deception*, so too now might there be natural selection for self-*seduction*, itself building on the earlier capacity for self-deception!

4 Personal identity

4.1 Body-swapping revisited

Bernard Williams, in his well-known paper ‘The Self and Its Future’, described a thought experiment in which two persons, A and B, are subjected to a ‘memory and personality’ switch. It was a cobbler-and-prince scenario, for a more egalitarian technological age. After the sophisticated procedure of brain scans

and electronic infusions invoked in Williams's make-believe, the A-body-person seems to have the memories and the personality of B, and vice versa.

A and B are told about the procedure they are about to undergo. Each is asked to choose which of the two post-operative persons—the A-body-person or the B-body-person—is to be tortured, and which is to be given a considerable financial reward. They are asked to make their individual choices in an entirely selfish way. Williams sets out to show how the pre-operative choices of A and B, and the post-operative behaviour of the A-body-person and the B-body-person, lead one to suppose that personal identity (so far as A and B are concerned) is bound up with the continuity of their respective memories and personality rather than with the spatio-temporal continuity of their bodies. We should note, moreover, that in Williams's scenario, unlike Locke's of the cobbler and prince, there is good reason to believe that the continuity of A's (or B's) memories and personality is *causally* underwritten. The psychological entity or structure is continuously embodied in, and sustained by, physical things and processes: first a brain, then (via a recording device) a floppy disk, then (via an infusing and over-writing device) another brain. The post-operative A-body-person and B-body-person do not just wake up one morning, like the cobbler and the prince, to find themselves the subjects of a miraculous body-swap or mental migration. Rather, the tokenings of their psychological (=person?) types form continuous

spatio-temporal worms that just happen to have funny segments within them—namely, their sojourns ‘on’ a floppy disk.

It was an interesting part of the thought experiment that Williams entered the proviso that A and B should be sufficiently similar in physical appearance for it to be possible for an acquaintance of A to ‘see in’ the post-operative B–body–person the personal characteristics of A. This would be highly unlikely if, say, A were a man and B were a woman; or if A were a blond Scandinavian giant and B were a short dark New Guinean. Williams asked his reader to acquiesce in the assumption of close enough physical resemblance to rule out such cases; and the reader could readily concur.

Williams did not think of improving his thought experiment at the time by postulating that A and B were identical twins who had been separated at birth and re-united only at the time of the experiment. That would have made it as easy as possible for an acquaintance of A to ‘see in’ the post-operative B–body–person the personal characteristics of A. But precisely that strength would also have entailed a corresponding weakness. For, in the case of identical twins—even ones who have lived apart all their lives, and accordingly have been exposed to very different influences moulding their characters, and have acquired very different memories—acquaintances of each could be inclined to confuse him with his twin, even without the memories-and-personality-swap procedure having

been performed. Such confusion stems from the exact physical likeness, and (usually) exact similarity of gestures and facial expressions, which are exactly similar because they are so strongly genetically controlled. The conclusion that the B–body–person might be taken for A is therefore much less arresting, in the case of twins, than it would be in the case of non-twins who were nevertheless not so dissimilar in physical appearance as to make it impossible to secure that ‘take’.

Both the twin-involving version, and the original non-twin-involving version, of Williams’s thought experiment share the feature that the persons A and B are contemporaries—of exactly, or roughly, the same age, respectively. The transfer of the person of A to the body of B (and vice versa) is an arresting possibility; but each could look forward to normal lives subsequently. And normally, lives end in death. This is the point at which my own thought experiment will make a difference.

4.2 Rip, Rip* and Rip**

4.2.1 Rip

Recall the Rip van Winkel story. Rip falls asleep under a tree, and stays asleep for 25 years. Of course, he ages while asleep. His features grow more wrinkled and he loses some hair. When he awakes his memories cover only that stretch

of his life up to the point at which he fell asleep. Of the intervening 25 years he knows nothing—except that he was asleep during that time under that tree. He becomes a figure of fun among youngsters for being ‘out of it’—for not having up-to-date memories of the recent past. He is also an object of concern for his friends, who have to help him adjust to all that has happened in the past 25 years. But he is still taken for Rip van Winkel; he is still the same person. He just has to learn to live with a rather large gap in his memories—a gap that he seeks to fill with as many first-hand accounts as he can from all his surviving friends. Let us call him the ‘grown-old-Rip’.

4.2.2 The stayed-young-but-caught-up-Rip

Consider now a variant of the Rip van Winkel story. Rip falls asleep under a tree, and stays asleep for 25 years. But while he sleeps he does not age. (We can suppose that he is cryonically suspended—that is, put into such a deep freeze that all cellular activities and processes, including those involved in aging, cease.) When Rip wakes up he is convinced that he has been asleep for only his usual short nap. It is disconcerting and disorientating for him to learn from those around him that he has been ‘frozen in time’, as it were, and that his memories are so far behind. He does not feel, physically, as though he could have missed out on 25 years of happenings around him; but in fact he has.³ He has to learn

to adapt to the strange and the new. He has to pick up from friends information about all that he had been missing. But they (the surviving ones) welcome him back as the Rip they know. It is, however, somewhat disconcerting for them that their old but young-looking friend has not aged along with them. They concur with his recollection of pre-sleep times. They can confirm his whereabouts and the occurrence of various significant events in his earlier life. Gradually their stories help him ‘catch up’ and connect him again with the present.

Rip is the same person as before; he just happens to be in a rather strange predicament. His perseverance in his catch-up education, however, is astounding. He attends so avidly to his friends’ accounts of the past 25 years that in due course it’s as though he had lived through those years with them. By the apparent age of 50, 25 years after his thawing, he is like someone who has lived for 75 years. Of course, he has enjoyed only 50 years of living outside his cryonic suspension—25 years before it, and 25 years after it. The remaining 25 years in the middle—the years of his cryonic suspension—he knows of only vicariously. Still, he has learned all sorts of ways in which he can cover up his lack of any direct experience of what transpired during those 25 years. At the chronological age of 75 but the cellular age of 50, he seems to have ‘packed in a lot of living’. Let us call him the ‘stayed-young-but-caught-up-Rip’.

4.2.3 Rip*

I shall now tell you a story about the ‘for-ever-stay-young-and-never-say-die-Rip’, or Rip* for short. Rip* has a horror of growing old. He is about to turn 50. But he wants to feel once again as though he were 25—full of vim and vigour and creative juices. He has no access to cryonics. Instead, he has access to cloning technology. Rip* creates a clonal offspring of himself. He is a very rich man, and able to induce a surrogate mother to bear his clone for him and bring it up. He even fathers it for a very short while.

4.2.4 Rip**

Rip* calls this clonal offspring of his Rip**. He arranges for Bernard Williams’s memory-and-personality-recording device to take a read-out from his own (Rip*’s) brain, and store those memories and that personality on a floppy disk. He induces Bernard Williams to enter a contract whereby, at the age of 25, Rip** will be subjected to Williams’s memories-and-personality-infusion procedure using his (Rip*’s) stored memories and personality. Upon signing the contract, Rip* calls in Jack Kevorkian and gets done with his 50 year-old body. Rip** is only just out of diapers. The epitaph on his father’s tombstone reads ‘Gone, but not for good’.

On Rip**’s 25th birthday Bernard Williams duly carries out his contractual

obligations. Rip*'s 50 years' worth of memories and personality are infused into Rip**'s brain, thereby wiping out, or over-writing, all of Rip**'s own memories. Rip**'s personality traits, however, are much like those of Rip*, since Rip** is a very exact chip off the old block. He laughs in the same way, abhors Vegemite, is attracted to leggy blondes, loves reggae, and is a weekend cross-dresser, just like Rip*. After the procedure, the Rip**-body-person wakes up, his mind full of 50 years' worth of Rip*'s memories, convinced that he is Rip*. But Rip*'s body died 25 years earlier; and of those intervening 25 years the Rip**-body-person appears to have no memories. The continuous stretch of 50 years that he seems to remember began 75 years earlier. Still, he perseveres. Like the 'stayed-young-but-caught-up-Rip', the Rip**-body-person assiduously absorbs first-hand accounts of those 'missing' and most recent 25 years, and in due course 'catches up'.

Now his 'father' (Rip*) had a friend, Rip#, born on the same day, who did have access to cryonics.⁴ At the age of 25, 25 years before Rip* called in Kevorkian, Rip# had himself cryonically suspended for 50 years.⁵ At the time of Rip**'s procedure 50 years later, Rip# was awoken by thawing. He then attended the 'catch-up' sessions with the Rip**-body-person. The 'stayed-young-but-caught-up-(on 50 years)-Rip#' mistakenly (?) came to believe of the 'stayed-young-but-caught-up-(on 25 years)-Rip**-body-person' that he was none other than the 'stayed-young-but-caught-up-(on 50 years)-Rip*!' To the 'stayed-young-

but-caught-up-Rip[#]', his old friend Rip* appeared to have had the gumption (and, as was well known by all his friends, he certainly had the ready cash) to be cryonically suspended for the same period of time that he (Rip[#]) himself had dared.

The question is: can we say that Rip* discovered a recipe for serial immortality?

4.3 Death, the giver of meaning

In another classic paper, 'The Makropoulos case: reflections on the tedium of immortality', Bernard Williams makes a telling case for the tedium and despair of the life of Elina Makropoulos, the Čapekian character who miraculously lives for 300 years at the apparent age of 42. Arresting the natural cadenza of a life, which normally has built into it a program of graceful waning, and keeping it on some perpetual plateau that for normal human beings would be a transitory stage of their existence, does not, contrary to initial and unreflective impressions, have much to be said for it. The satisfactions of a life well led appear to depend rather heavily on its being a life well tapered. Projects should be undertaken in the fullness of their time (for the person concerned), and one attains grace and happiness by making the adjustments called for by normal aging, which brings with it various normal changes in bodily appetites, career ambitions, mental

strivings and creative inspirations.

It is hard to fathom just how much of the normal Gaussian curve of maturation and decay, and the appropriateness of various undertakings within it, depend on our being dizygotic, sexually reproducing, *mortal* organisms with our particular evolutionary history.

5 Combining the two thought experiments

We have imaginatively sketched some disquieting consequences (given present evolutionarily conferred sensibilities) of having cloning as a live option. And we have looked at a cloning version of Williams's thought experiment about body-hopping. It is time now to combine the ingredients of these two thought experiments, to see what further frightening possibilities might suggest themselves.

First, parental selection of the best clonal offspring for eventual parental re-habitation, *à la* Rip** above, could become the funeral and resurrection of choice.

But, if accumulated experience and wisdom really is survival-enhancing, one might expect there to be competition among clonal offspring for the privilege of being over-written by the paternal memories—unless their much more recently

acquired knowledge is much more valuable than their father's. On the other hand, there might not be much *genetic* sense in vying with exact genetic copies of oneself for the privilege of letting the old block settle into one's own particular chip. Perhaps the whole clonal brood would rather form a coalition in order to preserve Dad in much more distributed form, by *each* being (willingly) overwritten with his accumulated smarts! Imagine the social ceremonies that would attend such an evolutionary development.

We conjectured above that parental devotion to clonal offspring could become fanatical—indeed, in some sense literally self-possessive. But that would be the case only if human organisms continued to live normal lives that end in death and do not involve body-hopping.

With Bernard Williams's technology in hand, however, things might turn out drastically different. There might well be strong selection, in such situations, for *terrible parental neglect* of the usual emotional and cognitive nurturing of clonal offspring, if not neglect of their straightforward need for protection against physical harm. For, if one's own memories and personality are one day going to be infused into these clonal receptacles, thereby over-writing everything in their own poor brains—including their memories of a wretched childhood, and the delinquent tendencies that result—would it *matter*, in the long term, to the newly selected parental sensibilities, whether one's clonal offspring were emotionally

stable and well-nurtured in the interim? Perhaps they could be kept relatively feral and untended, until needed for the ritual of personality infusion. It would then be childhood, not life itself, that was nasty, brutish and short. Of course, given our present naturally-selected sensibilities, we experience outrage at the thought of treating youngsters so callously. But what we have to inquire after here is how those very sensibilities would be *re-shaped* by natural selection in the sort of environment, with its replication opportunities, that we are imagining.

Natural selection cannot be relied upon *a priori* to continue to sustain current ethical sensibilities. A future ethics will *a fortiori* be the ethics of those who won the struggle for survival and reproduction, in an era re-configured by cloning technology.

Such changed attitudes to child-rearing, although revolting to present sensibilities, might initially give cloning body-hoppers the edge, until their parental neglect reached the point where it was counter-productive. Their neglected, rebellious and unappreciated clonal offspring might start looking elsewhere than their immediate ancestor for memory-and-skill infusion, and be willing to consider bids from those who are relatively unsuccessful at cloning future receptacles for their own serial (and eventually parallel!) immortality. The latter might be willing to risk infusing their own memories and personality into a genetically unrelated receptacle. There would be Fagans in search of Artful Dodgers for

back-street personality-and-memory infusions. Much might depend on the relative accessibility of Bernard Williams's technology as compared to that of the Hibernian cloning conglomerates.

6 Conclusion

Evolutionary psychology, reproductive technology, theoretical economics and good old philosophical thought experimentation have hardly begun to join forces on this front. The possibilities are fascinating, bizarre and frightful. They need to be thought through, even if only for their morbid or possibly anti-thanatological entertainment value.

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Notes

¹Good sources with which to start are D. Symons 1979 and M. Ridley 1993.

²But we have to remember that sexual re-combination is not so straightforward. When some famous actress pestered Bernard Shaw to marry her, by asking him to imagine children possessed of her looks and his intellect, his wise riposte was that she should consider what they would be like with his looks and her intellect.

³Interestingly enough, this Rip will be in the same predicament as the space-traveller who accelerates to a great velocity on a trip away from Earth, before eventually returning. According to relativity theory, he will come back to find that all his friends are much older than he appears to be. Now, if we assume that during his (short) flight he was actually *asleep*, then we have the following predicament: after what *really was* (for him) a short nap, he awakes (upon his return to Earth) to find all his friends apparently much older!

⁴Note that father and clonal son enjoy a degree of relatedness equal to one, as the sociobiologists would say (rather than one half).

⁵The reader who thinks that no one in their right mind would ever wish to do have this done to them should read Dennett's book *Darwin's Dangerous Idea*. There Dennett confesses that he might choose cryonic suspension if he could

thereby be assured of the prospect of making the acquaintance of aliens known to be on their way to Earth, but not due to arrive for a good few more decades!