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Designs for Life

I argued in the last chapter that it's not clear that the indefinite postponement of death, though probably perfectly morally permissible, would have to make a great difference to the goodness of our lives; it is therefore possible to doubt whether it's something that would be high on the agenda of someone who was interested in maximizing his flourishing.

The intention of this chapter is to defend the idea that there are some enhancements that are potentially worth defending and pursuing. I shall claim that there is a range of modifications and manipulations of the human body that can much more easily be justified. And there is a couple of notable, and related, characteristics of the justification. The first is that the welfare component plays only a small role – and in fact, it might be that some of the modifications and enhancements I have in mind could be construed as being contrary to welfare. The second is that at least some of the modifications I have in mind are more-or-less useless, and so might be expected to rank as being among the least worthwhile things that we can or should do from some perspectives.

I'll begin by considering the use of enhancement technologies in sport. This part of the chapter will not address the contribution that enhancements can make to the good life directly, but it is useful for a couple of reasons. First, sport provides a context in which there is already a great deal of discussion of enhancements (and a great deal of this discussion is not confined to academic debate) – but it is a context in which the positive arguments in favour of enhancement seem to be tolerably, and perhaps surprisingly, strong. Second, the discussion of enhancement in sport will lay the groundwork for what comes in the subsequent parts of this chapter. The enhancements that are first to cross most people's mind in respect of sport are pharmacological – but in the middle third of the chapter, I'll push the boundary of this a little, and look at physiological enhancements. This will provide a bridge to looking at other interventions that a person might make to the fabric of the body – and these do, via a version of the claim about projects that I've been pushing so far, potentially contribute to the good life.

Enhancement in sport

There is a number of contexts in which a person might feel that they have a reason to make use of enhancements. Sometimes these reasons will be to do with gaining positional advantage; at other times, they'll be related to non-positional benefits. One of the most obvious contexts is provided in the sporting arena, where athletes may seek to improve their performance by chemical or biomedical means. Indeed, 'enhancement' is a word that is very easily associated with sport, and any number of scandals and disqualifications of athletes found to have used performance-enhancing techniques of one sort or another.

There is a number of ways that an athlete (or his performance) could be enhanced, and the most obvious is by doping: the administration of some pharmacological agent that boosts muscle development. However, athletes might also consider 'blood-doping', which is the practice of siphoning off red blood cells and then re-injecting them to boost oxygenation capacity; and it is possible that we might one day see gene-doping, which would involve parents selecting or implanting genes in their unborn that will make them more likely to be high achievers. Whatever the technique, though, a great deal of effort is devoted to ensuring that athletes are not doped; and there is no shortage of public interest or scandal if an athlete is found to have used performance enhancers.

Is there any justification for this, though?

For the time being, I'll limit my attention to pharmacological interventions – although other kinds of intervention would probably not be too hard to work into the argument, and what goes for pharmacological interventions probably goes for them, too. There's a range of arguments that we might find marshalled against the use of enhancements in sport. One is that to use enhancers is cheating, and – since we ought not to cheat – we ought therefore to avoid them. A second is that there are safety worries that merit a ban on enhancements. A third is that the use of enhancement erodes desirable characteristics in athletes; and a final concern is that performance enhancers erode the character of the sport in question. As we'll see, it's only the last one of these that is particularly ethically interesting.

The cheating argument can be eliminated fairly quickly and easily. Though I have no desire to deny that cheating is wrong and that athletes ought not to cheat, the premise that performance enhancers are necessarily cheating is patently false. Quite obviously, athletes make use of all manner of performance enhancers. Participants in the newly-revived Olympic games at the end of the nineteenth and beginning of the twentieth century took strychnine, for example; modern athletes take full advantage of the fruits of dietary science to make sure that they get the optimum balance of nutrients in their diet. Moreover, they make use of shoes designed specifically for their discipline; swimmers wear

goggles so that they can see what they're doing, and cyclists wear helmets that allow them to take greater risks when overtaking. Athletes train at altitude; and they avail themselves of all manner of other techniques and equipment to make sure that their performance is as good as it possibly can be on the day of the competition. Since all these things are undeniably intended to be performance enhancing – that is the whole point of them – and at least some of them will be effective, and since none of these things normally raises an eyebrow, we have to admit that performance enhancement *per se* is not a problem; and nor is it cheating, because all these things are allowed. What *is* a problem is illicit enhancement; and this is a problem because it tilts the playing field in favour of those willing to break what rules there are, and is therefore unfair. However, this will not tell us that the rules are necessarily all that morally compelling, or that anything would be lost were they to be altered. Were the rules altered, using (say) steroids would no longer be unfair, since they would simply be one more technique that an athlete could take or leave. More generally, it looks so far as though the use of performance enhancers, if it is wrong, is *malum prohibitum* rather than *malum in se*.

But – we might worry – this leads naturally to the safety objection. Mightn't the worry that his competitors are using it drive an athlete to use a drug the safety of which is not clear? Many drugs are unsafe in at least some sense; the justification for using them therapeutically is that the dangers they present are outweighed by the medical benefits. But for the athlete, there are no medical benefits, because there is no illness; and so the warrant for taking the risk may seem to be accordingly less. However, this argument has to overcome a number of objections. First, it has to demonstrate that medical benefit is the only thing that can warrant taking pharmacological risk, and this is far from a given. In Chapter 1 I suggested that ill-health (and, implicitly, health) could be understood within the context of a set of claims about projects and the possibility of their fulfilment; and if this is correct, it seems to indicate that it's those projects that are in the moral driving seat and could help determine whether a certain procedure or intervention is warranted: medical benefit is, on this account, at least partially a function of other things. It might be that athletic glory is just one of the projects that a person might adopt. Whether a doped athlete can claim glory is a different matter, and one to which I'll return in a little while. But what counts at the moment is that, while illness may be sufficient to generate a warrant for intervention, we can't assume that it's necessary.

But that aside, there is no particular reason to suppose that biomedical enhancements *have* to be unsafe – and there's plenty of room to turn the safety argument against itself by pointing out that the prohibition of certain drugs may exacerbate safety worries by making quality-control and regulation impossible. Most importantly, if people were primarily concerned about their health, this would militate against elite athletics. Though sport may have health

benefits for most of us, those health benefits are fairly low-hanging fruit; the kind of commitment required to become an elite athlete is far greater than that required for health. Given the injury risks and increased likelihood of (say) joint problems in later life, someone who was concerned to maintain their physical welfare probably ought positively to avoid elite athletics. This is as much as to say that those who want to be elite athletes are probably committed to taking risks with their health anyway – and the risk from a performance-enhancing drug is just one from a list.

It's perhaps worth adding one other thing here about the way the safety argument can be turned against itself: even if some drug has a history of being physically damaging to athletes, this might actually generate a reason to legitimize it. After all, though many drugs will have been tested on healthy volunteers for the sake of assessing their safety, not all will – there may be some that we expect to be risky and whose use is justified only by the greater risk of the illness they are meant to cure (one would not test radiotherapy on healthy volunteers, for example); and even among those that are tested on healthy volunteers, it may be that the physiological differences between the man on the street and the elite athlete would make a difference to the way that the body responds to the drug. Hence there may be a gap in our knowledge about safety in respect of a particular drug. The way to plug this would be by means of more research into how that drug is processed by the kind of body that we might expect an elite athlete to have – but that's exactly the kind of research in which an athlete has a strong incentive not to participate, precisely because it'd preclude competition. This is as much as to say as that keeping the drug banned might not be justified out of concerns for safety – it's being banned might be one way to ensure that safety worries cannot be properly addressed.

A wholly separate line of argument against the use of performance enhancers is that they erode some important characteristic that is worth preserving in the athlete. This is an argument advanced by Michael Austin.¹ For him, one of the good things about sport is that it instils in us admirable characteristics like self-discipline – for example, sporting excellence requires that we be prepared to sacrifice that extra beer or bacon sandwich for the sake of the 'higher' goal of sporting excellence. So even if we are not inclined to think that sport is a good in its own terms, we have a reason to accept that it is good inasmuch as that it nurtures attitudes that are worth nurturing for the sake of excellence more widely construed.² But performance enhancers, the argument goes, reduce the need for such desirable traits as self-discipline, and so run the risk of being morally corrosive. (Austin adds to this a claim that admirable people seek excellence in all fields, but that such moral corrosion would be the kind of thing that those who are truly excellent would avoid.) We might add to this the thought that the use of a performance enhancer is simply *infra dig*, because it allows an athlete to get something

for nothing: a cyclist cannot claim to be excellent if he's taken a drug for the same reason that he can't claim to be excellent if he's fixed a motor to his wheels.³ This kind of argument might even speak directly to concerns about the good life. Martha Nussbaum's 'capabilities approach' to understanding human flourishing and dignity allows for us to make claims about 'central human capabilities' that are worth pursuing or nurturing.⁴ The capability to be vicious is not one of the things worth cultivating – but, by the same token, we might think that the capability to display certain virtues *is*; and so we might try to encourage self-discipline not as a means to achieving the good life, but as a part of it.

Yet this objection to the use of enhancements fails simply because it overestimates wildly what the use of most performance enhancing drugs can do. An athlete may find that the use of certain drugs sharpens his performance, his speed of recovery from injury, his effectiveness in training, and so on – but unless he is prepared to make efforts that to the rest of us seem outlandish to hone his own performance, and unless he has the physical capacity to begin with, they will not make much difference. Notwithstanding that using a certain drug may allow an elite athlete to shave a tenth of a second here and there from his time, we ought not to lose sight of the fact that he would remain an elite athlete without it. A doped elite athlete is much superior to most of us in his chosen field – but so is an un-doped elite athlete, and the difference is marginal. Granted this, such techniques take none of the graft out of becoming an elite sportsman, and cannot compensate for the fact that most of us simply don't stand a chance of getting anywhere near an Olympic podium; they are aids to, not substitutes for, very hard training. So whatever the morally desirable aspects of the pursuit of sporting excellence, it doesn't seem at all obvious that it's threatened by the use of performance enhancers.

Relatedly, neither does there seem to be a great deal of mileage in the idea that the achievements of a doped athlete are not 'real', or *as* real, as the achievements of the un-doped, with the implication that doping removes from sport whatever it is that we find valuable. As we've seen, there's any number of performance-enhancing techniques already in use – things like controlled diet, hyperbaric chambers, physiotherapy, gait analysis and so on – and none of them strikes us as devaluing real achievement. It seems just as likely that we could say that these are things designed to cultivate real achievement. But it's not clear why we might not say the same about currently illicit performance enhancers: there's no reason in principle why we couldn't say that these aren't just things that help a performance be all that it can be. At least on the face of it, to insist that doping means that an athlete won't show real achievement is a bit like saying that someone who feeds his plants will not get real tomatoes. Call this the *Real Tomato Argument*; it'll show itself again in Chapter 7. For the time being, I'll move on to what is, I think, a better way to think about what is and is not acceptable in sporting enhancement.

The character of the sport

So far, it looks as though enhancement *qua* enhancement is not too big a moral problem in respect of sport, not least because many enhancements are in everyday use and allowed by the rules anyway. For as long as they are legally accessible by all participants within a competition, each of whom can take or leave them as part of their preferred regimen of preparation, there is nothing unfair about them. Legitimization would also ensure that, to the greatest degree possible, justice could be maintained in the sphere of competition, since no one would be rewarded for breaking the rules as they may unwittingly be now. And safety would, likely as not, get better.

And yet this is not an encomium for performance enhancers. There is more to be said about the use of enhancers in relation to what their use might do to the character of the sport in question: I want here to advance the claim that there is such a thing as one enhancement too many, and that this might give competitors a reason not to use at least some. All being well, this part of the argument will lead into a more general consideration of body-modification and the contribution that it may make to a good life.

The basis of the claim here is that there is room for a kind of essentialism in sport; there are some things that athletes cannot do while remaining true to the essence or character of the sport in which they are ostensibly taking part. Over-enhancement might mean that one has departed from the essence of the sport in question; hence there are certain enhancements that one ought not to use because they are antagonistic to the end that they're meant to achieve. The idea here is perhaps best served by giving a couple of examples.

I mentioned almost as a throwaway a moment ago that a cyclist who fixed a motor to her bike would struggle to maintain the claim that she was a particularly great cyclist. But it's actually quite a significant point: in having attached the motor, she has departed from what a cyclist is generally understood as being. As such, she would not have enhanced her capabilities *qua* cyclist. Similarly, there might be room to wonder whether an athlete who has had his legs amputated and replaced by carbon-fibre blades is an enhanced sprinter, or something else. (Oscar Pistorius, the South African blade-runner, competed in the 2012 London Olympics, but his participation was not without comment.) This sort of consideration does not apply to people who make use of hyperbaric chambers, or even pharmacological enhancements – whether or not we approve of the method used to improve performance, the nature of the activity in which they are engaged is unchanged by their attempts at enhancement.

Of course, where we draw the boundary between what is within the character of a sport and what turns it in to something else is as tricky to decide as where we draw the line between species as one evolves into another. Sometimes an enhancement might not detract from, but might even contribute to, the spirit

of the event: as Sandel admits, ‘running shoes highlight rather than obscure the excellence the race is meant to display’.⁵ At other times, it might be genuinely difficult to decide whether the line has been crossed. However, this does not mean that there is nothing to say. Those with an acknowledged expertise in the sport – either as competitors, pundits or fans – will be able to draw on that expertise to enter meaningfully into debates about what it is reasonable to expect from athletes and what it is reasonable to forbid. By analogy, though there might be no litmus test concerning what makes a good gymnastic display, there is still such a group of people who can claim expertise, and who constitute the judging panel; the same sort of process applies here. Though there may be no bright line dividing what is and what isn’t acceptable, this doesn’t mean that there can be no reasoned expert debate on the matter.

It’s the appeal to expertise of this sort that helps us solve the normative question raised by the appeal to a given sport’s essential characteristics; these will be defined by a set of features that are agreed by people with a stake in that sport to be vitally important to its nature. The assessment may well be irreducibly aesthetic, and perhaps not defensible by terms that can easily be articulated: it might just be that there are some performance enhancements that are held to be *just not cricket*. The standards agreed by the experts in question would provide a means to justify the current rules at a given time; they would not need justification in themselves.

This kind of analysis would seem to fit well with arguments placed against certain performance-enhancing techniques by real sportsmen. For example, there exist kinds of swimsuit made from polyurethane, which minimize drag within the water. One might expect these to be popular with swimmers; but this is not actually the case. The BBC reported that the Olympic swimmer Michael Phelps supported a change in the rules to ban them in 2009, saying that

a solution needs to be found to the issue of swimsuits as *this is not swimming any more*. Technology has to go forward but I am looking forward to the time when we can go back to pure swimming.⁶

In one sense, Phelps’ statement is nonsensical: swimmers using the new suits are, plainly, getting from one end of the pool under their own power – and, as such, it’s hard to see how they are doing anything but swimming. But in a wider sense, Phelps seems to have been making a broadly essentialist claim: that the suits somehow eroded whatever it was that makes swimming the sport it is – hence the claim about ‘pure’ swimming. Those who use them may benefit from their effect; but if everyone can make a choice to use them, that benefit will cancel out. Phelps’ point seems to be that it doesn’t matter that it would, though: their use would erode the sport, and allowing everyone to use these suits would simply increase the speed of the erosion.

But even given all of this, if a particular performance-enhancing technique is deemed to be contrary to the character of this or that sport, it doesn’t follow

that it is contrary to the things we find entertaining or admirable about sport in general. It might just be that we end up admitting that (say) running with carbon-fibre ‘blades’ in place of missing lower legs in the manner of certain athletes is a different sort of thing from conventional running, requiring a different set of skills, and something at which a person may be more or less excellent and admirable depending on speed, endurance, style, and all the rest of it.

Becoming a blade-runner

But this does prompt a question. Suppose someone is watching an athletics meeting, and decides that they fancy having a go at competitive running, with a view to becoming the champion. The way is open for them to find an appropriate club, begin the training, and see what happens. But now suppose that someone sees Pistorius in action, and comes to believe that what he does is not running as conventionally understood, but is something different – that blade-running is *sui generis* as a sport; and so taken is he by this sport that he decides that he would like to be a blade-runner; and not only decides that, but adopts such a vision of himself as being central to his life, even though he has (at present) perfectly and unremarkably serviceable legs. How should we think about the possibility that he might want to take the step necessary to becoming a blade-runner, and have those perfectly and unremarkably serviceable legs removed?

Inasmuch as such an operation would be non-therapeutic, but would be carried out for the sake of realizing the would-be amputee’s vision of a good life, I think that it would not be unreasonable to treat it at least *prima facie* as an enhancement – a surprising one, perhaps, but an enhancement nonetheless. Would it be permissible, then, or even reasonable, to amputate? As I argued in Chapter 1, the fact that someone *thinks* that something would be a good idea is not sufficient to show that it actually is; and a person may be mistaken in her identification of flourishing and the good life, even for herself. Might an amputation, then, turn out to be nothing more than a *prima facie* enhancement?

I want to argue here that there is no particular problem in principle with this sort of intervention. In doing so, I’ll open the way to being able to make a range of claims about the way in which the biosciences broadly construed can make a significant contribution to our living flourishing lives.

In July 2010, a story appeared in the *Manchester Evening News* concerning a schoolgirl called Danielle Bradshaw. Bradshaw was, according to the article, born with a congenital dislocation of both hips and her right knee. Her preferred course of action was to have the right leg amputated. Amputation was not medically indicated – other surgical interventions would have allowed her to

keep the limb, although it would not have been of any use. However, from Bradshaw's point of view, another factor played into her decision. According to the news report, she decided to pursue amputation

because she wants to become a world-class athlete. Danielle Bradshaw, 11, does not need to have her useless right leg removed but has chosen to go under the knife in a bid for sporting glory as a Paralympian.

Tired of repeated trips to hospital and having to watch her friends play out without her, and inspired by gold medals, Danielle stunned her parents by declaring she wants to have it amputated. They agreed and she will have the operation in Sheffield in August. When the wound heals she will be fitted with a prosthetic replacement and friends are already rallying round to raise money for a running blade and sports wheelchair.

She said: "I'm not scared, I'm excited. I can't wait for it to be done so I can start running and training."

She said that seeing documentaries about soldiers who had lost limbs overseas and watching Heather Mills on *Dancing On Ice* helped her make her decision. She said: "I saw that and it helped make my mind up. And I am sick of all the operations. I just want to be a normal kid. I see people running and I want to know how that feels."⁷

It was reported in August 2010 that Bradshaw had had the amputation.⁸

There is a number of questions that we might be tempted to ask about this story. Some of them are fairly workaday in respect of the clinical ethics questions raised. For example, we might want to know who paid for the operation: noting that there is a difference between consent to and demand for treatment, there might well be a question to be answered about whether public funds ought to be used by the NHS to provide things that are medically unnecessary. We might wonder whether an 11-year-old really is capable of making a decision as big as whether to have a leg amputated; and, if she is not, whether anyone in fact would be. Finally, there is a question concerning whether the operation was warranted in any sense.

I'll put the funding question to one side, because it's peripheral to my concerns here. The question of warrant is much more important, and in order to get at that, and for the sake of the claim I'm going to be advancing, I'm going to tweak the *MEN's* story a little bit. In my version, the protagonist of the story – let's call him Paddy – is someone who does not have any prior medical condition; hence the desire for amputation is wholly on 'lifestyle' grounds. Moreover, while someone who was really intent on becoming an Olympian blade-runner may very well be best off starting to train quite early in life, perhaps before the age at which we would be quite comfortable allowing them to make decisions about whether to have parts of their body chopped off, I'm going to allow myself the fiction that age does not matter – either all young teenagers are perfectly competent to decide they want a healthy and functional limb removed, or else older people will have no difficulty making up the ground in training.

To get the argument proper going, it's worth spending a little while looking at the justification for any surgery whatsoever; this done, we can apply this to the particular kind of surgery that would be required to remove someone's legs for the sake of becoming a blade-runner.

In most cases, providing the justification for surgery will be a very straightforward matter. Surgery is harmful and risky – it involves causing injury to the body and exposure to dangerous chemicals – but there is nothing too *outré* about the claim that inflicting this harm and this risk can be warranted, and frequently is warranted if it's a necessary part of the provision of a person's physical (or, in the case of at least some cosmetic surgery, psychological) well-being. This kind of rule offers us a way to say if and when surgical intervention is warranted – and nothing appears to be ruled out in principle. Thus even a major harm such as that caused by having your thoracic cavity opened will be warranted if it is a necessary precursor to the removal of a life-endangering tumour, for example. Neither does it have to be the case that the person who faces the risk from surgery will be the one who stands to benefit from it: extracting bone marrow is an invasive procedure, and brings with it a certain level of risk; but we generally do not have any trouble accepting it if the intention is to provide a treatment for leukaemia.

Working the other way, if we can say that a given intervention is warranted, this suggests that we could say in principle that another intervention is not. For example, there is a significant debate about the propriety of amputating apparently healthy limbs in the context of body dysmorphic conditions. Sometimes, we think that surgery should not happen.

When it comes to deciding whether the possibility of becoming a blade-runner is sufficient warrant for surgery on Paddy, it would seem that there is room for a great deal of disagreement. It is easy to say that there is a moral import to surgery that will provide medical benefits to the person undergoing it, or to another person; it is much less easy to say that those benefits are there for the taking in cases like this. It may be that no decent surgeon would be willing to operate. After all, if a would-be pole-vaulter decides that she doesn't enjoy the sport after all, she can return to her old life having lost nothing more than the price of some equipment and a few evenings at the stadium; this would be a waste of resources to some degree, but she would not subsequently find herself in a seriously harmed state. A would-be blade-runner, though, would have lost far more, and the amputation of the limb could potentially come to be seen as a significant and lasting harm to someone like Paddy. (Of course, the same thing applies in respect of other body modifications like tattoos – but these are less radical, can often be hidden, and can at least sometimes be erased completely. Something like scarification is not so easy to hide – but even this is much less radical than amputation.⁹) So maybe surgeons would hesitate before operating – especially if they think that their job is the promotion and safeguarding of health. And maybe they would hesitate for an indefinitely long time.

However – as should be clear from preceding arguments – there is no particular reason to think that health is the only thing that could, as a matter of principle, warrant surgical intervention. Being reasonably capable to engage with reasonable projects matters. Health *per se* is valuable inasmuch as that it impacts on those projects – but health without projects, howsoever minimal, does nothing to ensure flourishing; and it (or, at least, its importance) is best understood within the context of those projects and a life of a particular sort. Health, in short, is and ought only to be the slave of flourishing in a wider sense. If it's projects that matter, though – and, notwithstanding that a deep and abiding desire to be a blade-runner is perhaps a somewhat idiosyncratic project, though we might not agree that this ambition is all that pressing, it does not seem to be incoherent or any less reasonable than any number of other ambitions or projects that a person might adopt – then the point that the amputation of someone's legs does not further their health need be neither here nor there. If a surgeon thinks that what he does is enable people to realize their projects by means of therapeutic intervention, he might just as easily think that what he does is enable people to realize their projects by means of non-therapeutic intervention. Hence, though some surgeons may hesitate, others may be happier to operate without obviously having made an evaluative mistake.

There is, I would contend, no particular reason to suppose that the amputation of Paddy's healthy limbs and replacement with carbon-fibre blades would be particularly impermissible; and it is at least conceivable that Paddy would find himself flourishing more after the operation than before, for just so long as his ambition to be a blade-runner was undiminished. A non-therapeutic amputation could, in at least some cases, not only be compatible with flourishing: it might be something that's positively worth considering for the sake of maximizing it.

Of course, we ought not to dismiss easily the possibility that Paddy is about to make a big mistake that he'll come to regret about the kind of life that will generate flourishing for him or the means to achieve it; but there is at least a passing resemblance between his situation and that of any number of other people who might seek surgery for non-therapeutic reasons. A man who has recently converted to Islam or Judaism will have to be circumcised, for example: there are situations in which it is fairly straightforward for a person to undergo some kind of surgery in order to realize a particular vision of the good life, even if it's a decision that's non-reversible in the event of regret. It's part of being a self-controlling adult – and that's as much as to say that it's a part of human flourishing – that we should be able to make decisions even if we might come to regret them. Our blade-runner seems to be at least potentially nothing more than a particularly unusual member of this class of people: he has a vision of the kind of life that he wants to live, and is willing to adapt his body accordingly.

Another possible objection to Paddy's proposed course of action is that there is some morally questionable aspect to any project in which a person seeks to make himself disabled. This thought may be cashed out in one of a number of ways. The first would be that the biosciences ought to aim to remove disability, not inflict it. An initial response to this is that it runs afoul of the social model of disability, according to which disability arises when the world fails to accommodate the needs of individuals: that the objection takes for granted a particular and ultimately disputable normative account of what bodies should be like. The most we can say is that the role of the biosciences is to help us live a good life, which is exactly what Paddy has in mind. Moreover, if the point of the biosciences is that they should act as enablers rather than disablers, Paddy seems to be able to say that the replacement of his limbs with carbon-fibre blades *just is* an enabling intervention, inasmuch as that it will mean that he can subsequently do something to which he attaches importance that he could not have done before. Nor would a slightly more sophisticated version of the objection – in which the word 'hardship' replaces the word 'disability' – carry all that much more weight. This is because Paddy could conceivably deny that the operation would cause hardship, or, if it did, he could insist that it was worthwhile. Training to compete as an elite athlete in more familiar sports also involves hardship, after all, and a comparison might be drawn with conventionally therapeutic surgery, which often causes at least some degree of hardship that it is justified by an appeal to the things that, overall, it will allow. The same sort of analysis, he might argue, could be brought to bear on his situation, which is not paradigmatically different.

Another line of objection may be that there's something distasteful about an able-bodied person treating disability as a kind of consumer choice – that it diminishes the lived experience of the 'genuinely' disabled. However, this line of argument would, to be consistent, have to object to the choices of those who opt for surgery to remove disabilities when such surgery is possible; they, too, are treating disability as something that it's within their gift to accept or reject. And since that kind of objection looks to be absurd, it is not obvious that it would be any less absurd when applied to Paddy.

Finally, there may be an objection to Paddy's project along the lines that it is perfectly possible to live a good life without the intervention, and that there is a virtue to be found in accepting the life that one has, with all its limitations. Maybe Paddy ought, on this sort of line, simply to reconcile himself to the facticity of the body that he has. Such a line of argument might be derived from the equanimity in the face of death that I championed in the last chapter. However, part of the argument there was that life *qua* life wasn't worth pursuing except as a substrate of projects, which are. And although it oughtn't to matter to us whether those projects are, in the end, unrealized,

inasmuch as that it's their pursuit that matters, it doesn't thereby follow that we might as well abandon them. Abandoning projects is a good way to avoid disappointment, but it is not going to provide anyone with a rich life.

It goes without saying that the permissibility of leg-amputation is insufficient to demonstrate that it will ever be anything like a priority. Resources being what they are, it is possible and likely that the importance of medical interventions like this will always be trumped by more traditionally therapeutic interventions; but that's for another debate.

It's not hard to carry all this back to Bradshaw's case. Her ambition to be a Paralympian may turn out to generate sufficient warrant for the amputation of a disabled, though basically healthy, leg without too much difficulty. (The fact that the leg was disabled makes the decision easier, if anything: after all, some kind of medical intervention was warranted anyway; the question to ask in this case is simply one of how radical we want it to be.) Given that, taking Bradshaw at her word, she would still find her disability a hindrance were she to receive the less radical intervention, it could be argued that the aim of the surgery would be better met with the more radical intervention.

On me, not in me

So, this argument – if successful – ought at least to give us reason to think that there are times when non-therapeutic biomedical interventions might be acceptable – even if not exactly straightforwardly so – and, more, that they might be justified by making an appeal to the projects that a person might have and around which one might model one's life. Once we've accepted this principle, a way seems to have been opened to all manner of interventions on the body that have the biosciences at their heart.

The *New Scientist* reported in February 2005, for example, that a company called Biojewelry was searching for a couple to have cells from bone fragments grown into wedding rings.¹⁰ Biojewelry was in fact a project devised by Toby Kerridge, of the Royal College of Art, and drew on the medical expertise of Ian Thompson, of Imperial College London. It exploited the fact that it is possible to take living bone tissue and grow it on a lattice, which can be designed according to need. The ability to take bone tissue from the body and grow it according to a deliberate design is obviously of interest from a therapeutic point of view. However, it is easy to see that once you've worked out how to grow bone-tissue *in vitro* according to a design of one kind, the same technique could be used to grow that tissue according to a design of any purpose, well beyond that for which the technology was originally intended. In the Biojewelry project, tissue from the bone fragments would be cultured, and the living cells grown to form

a ring, which would then be decorated with silver. Effectively, this procedure would allow each partner to wear a part of the other: each would be wrapped around the other's finger.

There were objections from the ethics committee overseeing the project that had to be overcome: notably, it was stipulated that if the project were to go ahead, it could only be using bone material recovered during the extraction of a wisdom tooth. (This criterion was not the only ethical point made in relation to the project,¹¹ but it is the one that is of most interest here.) One can see why such stipulations might be made: recovering bone tissue is an invasive procedure, and it is not entirely surprising that some people should worry about the propriety of invasive procedures carried out for non-therapeutic purposes. Irrespective of whether or not those worries would be powerful, they would be much less prominent in respect of those already facing therapeutic surgery: the risk added to a tooth extraction by removing a sliver of extra bone is likely to be negligible, it does seem to be fairly morally unproblematic for this bone to be removed in the course of a previously indicated procedure. We can present a similar argument in respect of the thought that the removal of the bone sample represents a waste of resources on fripperies when those resources could be put to better medical use.

Hence, when there is some appropriate procedure slated already, concerns about harm will not present any insurmountable objection to taking a little more bone. This does not mean that there is any particular obligation on the surgeon to perform such an extended procedure – he may have no desire to comply, and might point out that the procedure lacks the moral pull of medically necessary surgery. But neither would there be any particular obligation on him *not* to do so that is based on harm avoidance, as there might have been was there no other reason to operate.

And yet this line of thought takes for granted the supposition that the only thing that can serve as a warrant for surgery is medical need. This is a supposition from which I've already distanced myself. Would it be so crazy to consider removing a sliver of bone even in the absence of any medical need?

It is worth looking again at some of the reasons that a person may offer for the justifiability of surgery. Making sense of a person who is seeking surgery involves accepting that he expects that surgery to be worthwhile. Since surgery is unlikely to be pursued for its own sake, its being worthwhile will depend on its being for the sake of something else. This applies just as much to therapeutic as to non-therapeutic surgery, of course; even if the aim of the surgery is nothing more than to forestall death (and whether or not being alive is categorically or hypothetically worth having is beside the point for the moment), it still has to be justified by something beyond itself.

The rings that we'd be growing out of bone might be felt to be valuable for their own sake – worth having in themselves – but it's at least as likely

that they, too, would derive their value from something else. So we need to ascribe to the person undergoing the procedure a belief that the procedure is worthwhile as a means to get bone-grown rings, which are, in turn, worth having because the exchange of bone-grown rings is better in some sense than is the exchange of mere (!) gold ones. The chain of justifications may be very long, and there is no particular reason to suppose that it terminates in anything that is clearly a good-in-itself – *except the pursuit of a particular vision of what a good life would involve*. Yet the warrant for therapeutic surgery also has to be located by tracing a chain or network of reasons for wanting it; and this chain, too, will terminate in a particular vision of what a good life would involve. To this extent, the warrant for surgery for artistic reasons appears to be the same. No obvious reason presents itself for thinking that a sufficient warrant for pursuing surgery in the name of bone-grown jewellery cannot be forthcoming.

Thus we might imagine someone who cheerfully admits that any given procedure – in this case, the kind of thing necessary to harvest bone cells – is risky and injurious, but that this injury is warranted by his project – in this case, the project of obtaining bone-grown jewellery. The argument that his welfare will not be diminished by not having this jewellery will simply bounce off such a person, since his claim was not couched in the language of welfare or wellbeing in the first place. Moreover, though it might be pointed out to him that persevering with the retrieval of tissue could plausibly diminish his welfare, he may be unmoved – again, either because concern for welfare maximization isn't what motivates him, or because he thinks that the welfare loss would be a price worth paying.

Interestingly, we might also present the opposite argument: that that a project involving wellbeing is just as *little* worthwhile as a project involving bone-grown jewellery, inasmuch as that the value of each and any project that a person might adopt sits within a network of beliefs, values and prejudices, none of which is self-sustaining. As it happens, we happen to believe that some projects are important enough to warrant surgery. However, there is no reason to suppose that this belief is beyond criticism or that our values key into anything *objectively* worthwhile.

Of course, I do not imagine that anyone actually *does* suppose that surgery to harvest bone cells has the same value as surgery to remove a tumour. But such a supposition is possible, and it is not obvious to me that it would be based on a mistake or misunderstanding about values. Indeed, it is not clear what the scale is against which we may attempt to measure competing accounts of what is and what is not a worthwhile use of the surgeon's time and art. (This point prefigures a claim that I'll be pursuing in Chapter 8, by the way.) Hence there is no obvious reason why a suitably qualified person might not admit that, while his surgical skills are most frequently put to work in the pursuit of wellbeing – that is, to remove tumours or straighten noses for the sake of

a standard of health, however broadly construed – they might also be put to work in pursuit of some other end – in this case, something artistic. Granted, he might say, surgical intervention *qua* medicine is properly directed to wellbeing – but this does not preclude the possibility that a surgeon may sometimes wear a non-medical hat.

In short, it remains to be seen whether there is any ethical reason why a surgeon might not say that, at least at the moment, he is interested in participating in an aesthetic rather than a healthcare project. When we tell surgeons that they are to do no harm without reason, this can generally be taken as an abbreviated way of talking about having sufficient *medical* or *therapeutic* reason; but *generally* does not imply *always*. Almost certainly, a person who argued that surgical harm was warranted because his continued wellbeing was predicated on the possession of bone-grown jewellery would be presenting a weak case. But a surgeon could still take this project seriously without impropriety: to claim that surgeons ought only to concern themselves with medical or therapeutic interventions is indicative, we might say, of an arbitrary prejudice against some projects. (Further, we might add, we risk inconsistency if we are at the same time willing to allow surgeons to perform other non-therapeutic procedures such as circumcision.¹²) Surgery as a means to get jewellery might not be *medically* justified – but this does not mean that it is not justified at all.

Other objections

The objections that I've considered to harvesting bone cells for the sake of jewellery – and, for that matter, to amputating limbs for the sake of athletic ambition – have so far focused around the idea of whether such operations are particularly sensible from the point of view of the person who desires them. But there're other sources of objection.

For example, one other source of objection to such interventions comes by virtue of a Kass-like appeal to grotesqueness. This is more directly relevant to the case of bone-grown jewellery, but it could be applied to other cases too. One version of the objection would be based on an insistence that there is something grotesque, and so something disreputable, about treating human tissues as the raw material for artworks – or, more generally, that there is something grotesque about treating the body as a raw material for any particular project. Another version would be based on the insistence that there is something grotesque about a part of one person's body being worn as adornment by another.

However, the fact that some practices could be described as grotesque does not make much of a moral difference unless an argument can be produced to tell us, in the first place, that the description is *true*, and, in the second,

that this carries normative weight sufficient to overcome whatever reasons are produced in favour of the allegedly grotesque practice. But since I do not want here to get involved in questions concerning how disputes in matters of taste should be resolved, or whether they can be resolved, or of how one person's essentially aesthetic claims ought to impact on another's behaviour, I shall satisfy myself for present purposes by trying to circumvent such debates altogether by the expedient of adverting to the claim that people who find something grotesque need not be exposed to it if they prefer. The mere fact that something is grotesque is not of great ethical significance.

(Incidentally, if appeals to the grotesquery of using the body as an artistic medium were to turn out to be important, something like bone-grown jewellery would have many potential companions in guilt. The artist Marc Quinn makes a sculpture of his head every five years by casting around 4.5 litres of his own frozen blood – one of these works became the subject of urban legend when the rumour escaped that the sculpture's owner had accidentally unplugged the freezer unit and melted it. Quinn has also made a bust of his baby son, Lucas, from Lucas' placental and umbilical material. Going back a little further, the Italian conceptualist Piero Manzoni sold tinned 'merda d'artista' – artist's shit – as a comment about human production. And sometimes, the body can be seen as a canvas in its own right: all over the world, people tattoo, pierce, and scarify for the sake of adornment. Plainly, at least sometimes, such use of the body is seen as worth doing.)

Maybe the appeal to grotesquery is a slightly unsophisticated mask for something else, though, such that someone who makes such an appeal might turn out to have something else in mind. It might be that, once we unpick it, the appeal is actually an appeal to a worry about objectification, that would run along the lines that we ought not to pursue such things as bone-grown jewellery because to do so objectifies or commodifies the body, and does so problematically. The expanded argument might be that there are serious moral objections to treating persons as commodities; that using bone tissue to make jewellery involves treating the body as a commodity, and so commodifies it; that it is hard to maintain the difference between commodification of the body and commodification of the person; and so we ought not to commodify the body. From the point of view of an investigation into the good life, this kind of worry might bring a concern that a commodified life is unlikely to be flourishing. However, it is not obvious that people who want to use parts of their body in some kind of artistic endeavour really would be commodifying themselves, at least any more than are people who use parts of their body or mind to do their job; it is possible in just about any plausible account of human affairs to treat one's body, labour, mind, talents or whatever as a commodity – something that has a price and can be traded – without thereby treating oneself wholly as a commodity. If people who have to work for a living really are commodifying

themselves, it is not obvious that this is morally problematic, either; we might want to distinguish between the propriety of voluntary commodification and involuntary or non-voluntary commodification, for example. In short, while it may be possible to wrong someone by treating them or their body either as a commodity or as a source of commodities, this does not tell us a great deal at all about the propriety of using the body or tissues in artistic pursuits generally; it simply tells us about the moral qualities of certain kinds of relationship between specific people. (It is noteworthy that, in a passage that seems particularly apposite to the possible use of bone tissue to make wedding rings, even Kant concedes in the *Rechtslehre* that, since marriage is ‘the reciprocal giving of one’s very person into the possession of the other . . . neither is dehumanised by the bodily use that one makes of the other’.¹³) Since I take it that working is compatible with the good life – particularly if that work facilitates the pursuit of some project of one’s own – then there ought to be no particular reason why using one’s body in cases like this would clash too horribly with the pursuit of the good life.

Another worry might be that a person could, conceivably, be coerced into undergoing a surgical procedure that they would not otherwise have considered. One of the partners in the Biojewelry project might feel that participation is expected by the other for some reason: participation in the project mightn’t be ‘authentic’. Such worries may actually be more acute when the thing that will be made is a wedding ring, since there is a particular dimension to the relationship between the person who will wear the piece and the person from whom the raw materials will come that does not apply in many other relationships; we may worry that one partner is, wittingly or unwittingly, pressuring the other into having surgery that he or she would otherwise not choose. In this regard, the ethics committee’s concern that the person having the bone harvested ought to require a wisdom tooth removal might actually exacerbate worries. After all, it might well be difficult to persuade an otherwise unwilling partner to submit to surgery if the only reason were provided by the prospect of interesting jewellery – but things could conceivably be a good deal different if surgery was *already* indicated: arm-twisting arguments would seem to be much easier to make if they can be contextualized with a ‘since you’ll be unconscious anyway . . .’-type appeal.

More generally, there might be any number of other body-modifying procedures that a person could be coerced into undergoing. Once again, though, this objection does not speak to the use of body parts in artistic pursuits in general terms – it only tells us about certain kinds of relationship between certain people. Unless we think – implausibly – that the only way a person might be willing to go under the knife for the sake of some non-therapeutic project is under duress, then we will not have any necessary reason to think that coercion is going to be a big enough ethical worry for us to be able to say that there’s something morally problematic about the procedure.

Body modification and the good life

The argument presented over the last few paragraphs does not, at least on the face of things, speak to questions about enhancement: making jewellery out of bone, or altering the body in any other way for the sake of some artistic project isn't an enhancement in any particularly common sense of the word. Nevertheless, the claims that I've advanced in respect of that kind of procedure are related to claims about enhancement; and they are claims about one of the ways in which the biosciences might allow a person to form and pursue projects of a certain type – and might therefore contribute in some way to securing the good life. And there has been, I hope, a coherent line of argument that's threaded this chapter together.

I argued, in the first place, that there is not necessarily anything sinister about the use of performance enhancers in sport – and, more importantly, that their use is not antagonistic to fairness, the virtues of hard work, or the welfare of the enhancee. I argued that the best justification for enhancing technologies of one sort or another being banned by the governing bodies of a given sport is based on a kind of aesthetic-cum-essentialist argument, the core of which is that there is a set of core characteristics that a given sport has with which enhancement may be in tension. Thus, for example, it may be felt by people who know and care about such things that a certain kind of swimming-costume takes its wearer beyond the limits of competition swimming as it is properly understood.

But this does not mean that those enhancing technologies should not be used at all: it simply means that there may be classifications and subclassifications within a given pursuit that demand a certain set of rules – that there is an 'internal morality' to it. Though some enhancement may violate this internal morality, it does not seem likely to me that many enhancements would: as I've argued, for example, there doesn't have to be a problem with fairness in respect of at least some physiological or pharmacological enhancements. Of those that do, there is still plenty of scope for their use to fall within the internal morality of some other sport: so, for example, if high-tech swimming suits violate the norms of conventional swimming, we might imagine a parallel competition in which they're recognized; if we decide that carbon-fibre blades are not compatible with the particular excellences we want to see in a running race, there could easily be a parallel race for blade-runners – they are not displaying one particular set of excellences does not mean that they display none at all.

But if we recognise something as a subdiscipline in its own right, with its own excellences to admire, then we find ourselves faced with a question: if it is permissible – and admirable – for a person to undergo unusual rigours and hardships for the sake of achieving glory in one sporting arena, is there any coherent reason why it would not be permissible or admirable to undergo

unusual rigours and hardships for the sake of achieving glory in another? If a person adopts this particular kind of life as being important to them, and assuming that they have not made a mistake in doing so, then there is at least a *prima facie* reason to think that it would be good for them to pursue the means necessary. Since the pursuit of projects is at least a component of the good life, my claim is that not only would such pursuit be permissible – it might be the sort of thing that is necessary for them to flourish according to the standards they have determined for themselves. And, using the case of Danielle Bradshaw, and an imaginary athlete called Paddy, I've suggested that this kind of thought applies even if that means a fairly radical remodelling of the body. For sure, the more radical and the less reversible the procedure, the more tempting it may be to worry about its wisdom – but there is nothing in principle objectionable to it.

It does not quite follow from a claim that ϕ -ing is permissible that helping someone to ϕ is permissible as well – there is a logical difference – but it seems to me to be only a small moral leap that has to be made to say that it is therefore permissible for a surgeon to undertake to remove even a healthy and functional pair of legs for the sake of helping a person realize her project of a particular sort of sporting glory. That is to say: a person's project may warrant some fairly extreme bodily interventions, some of which are of the sort that are only possible because of, and require, bioscientific expertise of one sort or another. There need be nothing particularly ethically problematic about this; and there need be no antagonism between such procedures and the good life. Once this principle is accepted, there would seem to be very little reason to deny that it could be extended to cover things like bone-grown jewellery – or any other pursuit that requires the modification of the body and/or the manipulation of body tissue for the sake of the realization of a project. The constraint that applies is whether that project really is contributory to the good life, and whether the means chosen to pursue it are particularly wise ones.

But the important point is that the biosciences do offer us the means to realize any number of (admittedly potentially weird and wonderful) projects; and there need be no particular worry about making use of the biosciences in such a way unless one adheres to the idea that the proper use of the biosciences is therapeutic. Since the pursuit of projects is a part of the good life – and, more importantly, since there is no reason to suppose that the non-therapeutic use of the biosciences is a misuse – we can say that the biosciences do promise to contribute to the good life in a manner beyond their therapeutic potential.

In other words, prolonging a person's life indefinitely may not be a staggeringly good use for the biosciences; but making a bodily adornment may be better.

Notes

- 1 Austin, 2009, *passim*.
- 2 Ibid., p. 50.
- 3 Though this is not to deny that a motor may, of course, give an unfair advantage as well. In this sort of context, it's interesting to consider the use of carbon-fibre blades by amputee athletes like Oscar Pistorius; inasmuch as those blades will not tire in the way that muscle tissue in even the most well-trained 'normal' athlete will, it is not implausible to suggest that, *ceteris paribus*, they will generate an advantage; whether or not it's unfair may be a moot point: the IOC, in allowing him to compete alongside and against normal runners, appears at the moment to think not.
- 4 Nussbaum, 2006, pp. 180–2.
- 5 Sandel, 2007, p. 30.
- 6 Anon, 2009a; emphasis mine.
- 7 Anon, 2010a; slightly adapted.
- 8 McKeegan, 2010.
- 9 For a discussion of some of the ethical issues related to scarification, see Oultram, 2009, *passim*.
- 10 Horgan, 2005, p. 15.
- 11 Personal communication.
- 12 On which point, see British Medical Association, 2004.
- 13 Kant, 1998, 4:359.