Brassington, Iain. "Bioscience and the Duty to Research, Part 1: Ways to Make Life Better." *Bioscience and the Good Life*. London: Bloomsbury Academic, 2013. 165–186. *Bloomsbury Collections*. Web. 26 Apr. 2023. <<http://dx.doi.org/10.5040/9781472544315.ch-008>>.

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Bioscience and the Duty to Research, Part 1: Ways to Make Life Better

If we cast our minds back to the end of Chapter 3, two claims should have been apparent: first, that there was no duty not to enhance ourselves or others; second, that there was no duty to do so either. This leaves the possibility that there are still reasons to pursue enhancement for the sake of the good life – but the last four chapters have been devoted to the defence of the claim that those reasons are not particularly compelling, and that interventions to promote the good life need not be bioscientifically-led. The insights generated by the biosciences are most likely to make a difference for the good when they're put to work in the pursuit of ostensibly trivial things like sport and art. Generally speaking, there is no pressing reason to pursue bioscientific innovation down the road towards enhancement.

But this isn't going to be enough to tell us that there is no reason to pursue bioscientific innovation; and there *is* a reason to do so. Concentrating on what I called 'bare enhancement' makes it easy to forget that therapy is a kind of enhancement; and there are conditions that generate reasons to pursue bioscientific research for therapeutic reasons – that is, for the sake of being able to guarantee at least a minimally acceptable quality of life for their beneficiaries. I'm willing to accept more or less as axiomatic that the recognition that the quality of a life falls below a level we would find acceptable generates a reason to do something to improve it. Such improvements may be generated by means of research in the biosciences; hence we may have a reason to pursue such research. The question that I want to address in this chapter is this: is that reason overriding, amounting to a duty – incumbent on individuals, or on society as a whole – to pursue bioscientific research?

I'll be claiming that there is not a duty to research for the sake of promoting the good life. In the next, I'll look at the idea that there might be a duty to research based on other considerations, and claim that the case for such a duty has not been compellingly made there, either.

The first question we have to ask is whether anyone thinks that research in the biosciences is a duty to begin with. Certainly they do. John Harris (latterly, alongside Sarah Chan) has claimed explicitly that participation in, or at least support for, scientific research – particularly research in medical and bioscience – is a moral duty. That one of his papers is called 'Scientific Research is a Moral

Duty'¹ is ample to establish this. (From hereon, I'll use the phrase 'duty to research' for the sake of ease.) This is a claim that, he thinks, follows from a much broader claim to the effect that '[t]here is a universal responsibility to pursue the good, for ourselves and others'.² It's quite clear from the context that 'responsibility' here should be taken as sufficient to indicate a duty. If it's correct to say that there's a duty to pursue the good, if research is a means of doing so, and if nothing is more immediately demanding of our attention, then research could count as a way of discharging the duty; and if it's the *best* way of pursuing the good, it would be obligatory. And though Harris will attract the lion's share of my attention over the coming pages, plenty of other people argue that there's a duty to research, as we shall see over the coming pages.

As in Chapter 3, I'm going to treat the word 'duty' as meaning that action the omission of which would reasonably be blameable. I'm also going to assume that the duty is owed to at least one other person or thing; for while there could well be self-regarding virtues and duties, and that pursuing one's own good might coherently be one, it would be unclear who would be bothered if one fell short of discharging such a duty. There might be all kinds of reasons and incentives to pursue the good on your own behalf, but to talk about duties and responsibilities in this context suggests more than that. (Treating a reason to act in one's interests as a duty is a trap into which Stjernschantz Forsberg et al. fall.³) A responsibility to pursue the good is something I take to make most sense when it's at least related to a duty of beneficence. And, indeed, an appeal to beneficence might well be precisely the sort of thing that'd plausibly provide a foundation for a duty to research anyway.

Other things hinge on what we mean by 'pursuing the good'; as we'll see in what follows, even if we can get everyone to agree that we have a responsibility to pursue the good, there could be reasonable disagreement about what this entails. Obviously, given the interest that this book has in 'the good life', this is an important question. All in all, *any* claim that there's a duty – or, more softly, a responsibility – to pursue scientific research has at the very least a number of notable questions it needs to confront. The hypothesis that I want to advance is that it can't answer them.

Is there a duty of beneficence?

It's very tempting to try to ground the idea that there's a duty to research in some kind of appeal to beneficence: that in pursuing research, we are contributing to an improvement in the world and the lives of the people therein, and that it is that contribution that makes research morally valuable. But something's being valuable is not the same as it being obligatory; and if we are sceptical about whether beneficence is obligatory, then we can make all the noise we like about the link between it and research: it won't after all tell us that participation

in, or support for, research is required. I can't begin to offer a comprehensive analysis of the questions that surround a proposed duty of beneficence here – much less to answer them. But I can begin to add a little to the sketch of reasons to be sceptical about such a duty that I offered in Chapter 3.

I shall not deny that it is good and admirable to be beneficent. I'll also take as read that we have a *ceteris paribus* duty to avoid causing harm. Nevertheless, a duty not to make the world a worse place is not the same as a duty to make it any better, just as my duty to rob you is not interchangeable with a duty to make you wealthier; and establishing that there's a positive duty to confer benefit other than by *fiat* is not all that easy a task. How might the idea that there's some kind of duty of beneficence be bulked out?

One strategy might be to invoke Mill. Mill thought that he had demonstrated in *Utilitarianism* that happiness – which we may construe more widely as welfare – was the measure of the good, and the only thing desirable as an end ('there is in reality nothing desired except happiness'⁴), and that we ought to pursue the greatest happiness for the greatest number. Yet the problems with Mill's attempt to aggregate are famous. In the first place, he manages to fall victim to his own sleight of hand by moving from a claim about happiness being desirable in the sense of capable of being desired, to a claim about it being desirable in the sense that we ought to desire it. Hence he is vulnerable to the charge that he begs the question, being able to argue that providing happiness is a duty only inasmuch as that he has helped himself to this conclusion already.

The problem is one of translating good into duty – of making the leap from a claim about what does motivate people's actions (primarily in respect of themselves), and what ought to motivate people's actions (especially when the good supposedly desired accrues to others). Attempts to ground obligation in empirical claims about motivation are not up to the job. The obvious response is simply to bite the bullet, admit that there's a gap between what we're likely to do or what rational self-interest tells us we ought to do for prudential reasons, and what we ought morally to do, and say that the job of public policy is to bridge it. If we acknowledge that research is welfare-maximizing and that we ought to maximize welfare, then policymakers would have a warrant to generate the kinds of carrots and sticks that are necessary to get people actually to support research. This response is fair enough – but it still takes as read the idea, which seems to be central to the claim that we should pursue research as a means of beneficence, that we ought to *promote* welfare, rather than simply recognize it as a good thing.

That it should be promoted is something else that Mill thinks he can demonstrate. His claim in this context is that, since his own happiness is desirable to each, so the aggregate of people will desire the good for the generality.⁵ But this misses two things. The first is that the aggregation of individual agents desiring their own happiness will not – certainly not with any certainty – give us anything except a fractious crowd of people who each

desire their own individual happiness. What is in the interests of everyone is not the same as what is in the interests of each; and in trying to make the jump from the claims about each to claims about all, we need to take care to ensure that the desires of each are mutually compatible. In the context of claims about a duty to research, this is a serious problem, because each of us might have different accounts of what is necessary for happiness; it is far from certain that what I would do for the sake of my happiness is what you would do for the sake of yours.

The second is that, even if we could aggregate, it's unlikely that an individual would be indifferent between his actions generating happiness for himself and those same actions generating happiness for the generality. If community-mindedness does not generate as much happiness for the individual as would selfishness, then whatever reasons there might be for community-minded action would not be derived from the same source as those for self-interested action – which, again, means that the aggregation claim is unconvincing.

Again, there is a problem in moving from incentives to duties; but in this case, it's combined with a problem about scaling up from individuals. Hence there is no guarantee that we would be able to come up with any coherent plan about what research to do, even if we were satisfied that research of some sort ought to be on the agenda.

Once again, we might say that it's the job of public policy to fill these gaps; but that assumes that they *should* be filled, and this presupposes that there is a duty to be other-regarding; and so the important moral question remains open. And even if public policy was designed to increase the likelihood of us performing actions that benefit the generality, this position all but amounts to abandoning beneficence properly so-called: what gets people to contribute to the public good on this account is not the fact that it is the public good, but the straightforward fact that policy has been designed to incentivize certain desired behaviours. The most that can be said is that we end up with what generalized beneficence would have given us if it gave us anything. There is nothing new about this argument; but it's worth noting from the point of view of conversations about a beneficence-based duty to research.

Another attempt to ground a duty to research in beneficence, this time based in deontological thought, offers to be able to fill these gaps more successfully. As with utilitarians, deontologists have to provide an argument that will show that putative duties really are duties. The *locus classicus* when trying to establish a duty of beneficence seems to me to be the argument that Kant presents about a duty to aid as set out in the *Grounding* and the *Metaphysics of Morals* – an argument that I mentioned in Chapter 3. At least by Kant's normal standards, the argument in both texts is pretty clear. His opening gambit for establishing the duty in the *Grounding* is to ask us to imagine a man for whom all is going well; he sees others whom he could help 'struggling with great hardships', but decides not to assist:

Let everybody be as happy as Heaven wills or as he can make himself [our protagonist says]; I shall take nothing from him nor even envy him; but I have no desire to contribute anything to his well-being or to his assistance when in need.

Kant admits that this maxim of indifference could exist as a law of nature. But, he adds,

still it is impossible to will that such a principle should hold everywhere as a law of nature. For a will which resolved in this way would contradict itself, inasmuch as cases might often arise in which one would have need of the love and sympathy of others and in which he would deprive himself, by such a law of nature springing from his own will, of the hope of aid he wants for himself.⁶

Much the same argument is presented in *The Metaphysics of Morals*:

To be beneficent, that is, to promote according to one's means the happiness of others in need, without hoping for something in return, is everyone's duty.

For everyone who finds himself in need wishes to be helped by others. But if he lets his maxim of being unwilling to assist others in turn when they are in need become public, what is, makes this a universal permissive law, then everyone would likewise deny him assistance when he himself is in need, or at least would be authorized to deny it. Hence the maxim of self-interest would conflict with itself if it were made a universal law, that is, it is contrary to duty. Consequently the maxim of common interest, of beneficence towards those in need, is a universal duty of human beings.⁷

Beneficence, the promotion according to one's means the happiness of others in need, is only an imperfect duty – that is, it is impossible to *will* coherently that it should be a law, but not logically impossible for it to be one – but it is still a duty for all that.

I argued when I first considered this argument that it does not establish that there is a duty to enhance; does it fare any better in demonstrating that there is a duty to pursue beneficent research? Probably not. This is for a couple of reasons. The most important is that it seems pretty clear that the word 'need' is important: Kant is setting out an argument against stinginess in the face of situations in which people's suffering is an immediate concern. He does not appear to endorse any stronger duty about generalized beneficence in the absence of particular need. As a matter of wringing the most rhetorical power from his argument, had he anything stronger in mind, he would have been well advised not to appeal simply to situations of need when arguing for the duty.

The second reason is that, even if a wider claim is intended, along the lines that there is a generalized duty of beneficence irrespective of need, it wouldn't be convincing. This is because it is *always* possible to do good for others; hence treating beneficence as a universal duty in this sense would seem to require beneficence at all times, which amounts in practice to treating oneself as a means to realizing those others' good. Not only would this itself violate the

Categorical Imperative – we must, after all, treat humanity not only as a means but also as an end in itself regardless of whether that humanity is in ourselves or others – but it would also be vulnerable to a slightly reworked version of the ‘integrity objection’ to utilitarianism articulated by Williams,⁸ inasmuch as that it would require that we see people’s lives as being given over to providing benefit to others.

From this limited claim about a duty of beneficence, we are not required to admit that love and sympathy need amount to anything much more than acting to ensure minimal decency. And what this means for the sake of our argument here is that the fact that research stands a chance of making the world a better place than it might be will not, in and of itself, show that we have a duty to research, because Kant seems only to be talking about a duty of beneficence in cases need – and being in a position to benefit from something is not the same as being in need of it. However, research probably isn’t mandated in times of acute need, as I’ll argue in the next chapter. And, of course, Kant’s demand can only plausibly be that we assist people according to our means: if – say – the cure for cancer does not exist, this means that our obligations will be manifested in terms of an obligation to provide what medication we can, or to provide non-medical support. It doesn’t so clearly indicate that we need to expand the means available to us.

More importantly, even in these situations of acute need, it does not seem too implausible to imagine someone who would expect and want nothing more than *care* from others, rather than anything more radical. While it’s likely that most cancer sufferers would welcome more research into a cure being done, this desire is compatible with seeking other manifestations of beneficence at least as much; and it’s possible that bioscientific innovation is welcome, but not necessarily what is morally required. I’ll make more of this idea later in the chapter.

(A certain kind of Kantian retort might be offered at this point. Kant claims in the *Grounding* that ‘the ends of any subject who is an end in himself must as far as possible be my ends also, if that conception of an end in itself is to have its full effect in me’⁹. Doesn’t this mean that, if a person decides that (say) living longer is his end, then I must adopt his longevity as my end also? And if that requires research into new drugs, then isn’t there at least an obligation grounded in a hypothetical imperative to pursue or support such research, such that *if* longevity requires research, *then* we ought to research? Actually, no: this argument is naïve. The mere fact that something is someone’s end can’t *de facto* mean that I have obligations to realize it – or at least not overriding ones – on pain of not treating the humanity in me as an end. We have to ask what a reasonable attitude to that end would be, and how far it ought to inform our activity. And on the basis of the argument in Chapter 4, it would appear that life-extension is not automatically all that important a consideration. The same sort of consideration applies in respect of other ends.)

This point probably demands a lot more attention than I can give it here; but the point I want to make is that, overall, establishing a claim that there's a duty to research based on a duty of beneficence is not a straightforward task, because establishing that beneficence is mandated by duty is not easy.

Beneficence, benefit and obligation

But let's assume, for the sake of the argument, that some kind of duty of beneficence can be established: will this suffice to tell us that *research* – particularly bioscientific and biomedical research – is a duty? Not necessarily.

The first thing to note is that there might be a point at which actions that satisfy a strict definition of beneficence do not really match with what a duty of beneficence implies on a more intuitive level. Imagine that there exists a wealthy industrialist who sets up a trust fund specifically to pay the university fees of the sons of millionaires. We would be hard-pressed to deny that this is beneficent. But this munificence will probably not make all that much of a difference either to the lives of the recipients or anyone else; if we're talking about a duty of beneficence, this would probably not be quite the sort of thing that we had in mind. What seems to be more in line with our intuitions about what a duty of beneficence would look like would be something more general – something like an obligation to make the world a better place in a more readily perceptible way.

Already, this speaks to what a putative duty to research would look like. Since there are several million people around the world whose lives do not meet what we would accept as a reasonable criterion of goodness, it would appear that they would have first call on our attention when it comes to beneficence: acting to improve the lot of those whose lives are already at least minimally decent seems to be a much less pressing requirement, and is probably supererogatory rather than required. However, it is not at all clear whether further research is quite what the worst-off people need. For while a malaria cure would improve lives and would be welcome, the reasonable response to the suffering of those in need might turn out to be that we should offer what relief we can. And (as I mentioned a little while ago) a duty to take what means we can to improve lives does not imply a duty to increase the scope or number of those means. A person's life may be sub-optimal, but still at least reasonably decent, if we can provide decent treatment when the fever does rise – not least because 'reasonable' will be informed by what's currently available. (Of course, if someone does come up with an effective, cheap and simple cure, our duties might alter to encompass providing that.) Correspondingly, if we think that there's a duty to prevent infection in the first place, that might be manifested as a duty to do what we can to drain the swamps in which *Anopheles* mosquitoes breed, rather than necessarily researching a vaccine.

And even if, implausibly enough, there is a situation in which research *can* be shown to be the only thing that fits the moral bill, this will tell us at most that there is a duty to support *certain kinds* of research, rather than research *in toto*.

For the sake of clarity, it's worth iterating that, in accordance with the model sketched out in Chapter 1, it might well still be the case that there would be all manner of innovations – perhaps motivated by market stimuli – and that gradually we would come to expect that different standards of acceptability be met: today's desirable life might be tomorrow's minimally acceptable one. Such eventualities might generate new duties. However, unless there is a duty to innovate to the extent that what counts as acceptable today may not tomorrow – an idea that is barely credible – then there doesn't seem to be all that much more to be said. No duty would be violated if, the lives of all having successfully been made at least minimally acceptable by the standards of the day, the economy and culture generally entered a steady state henceforward: as Hans Jonas wrote in 1969:

Unless the present state is intolerable, the melioristic goal is in a sense gratuitous, and not only from the vantage point of the present. Our descendants have a right to be left an unplundered planet; they do not have a right to new miracle cures.¹⁰

So a (possibly narrow) range of fairly specific duties might be the kind of thing that we could ground in a duty of beneficence; while doing more than this might be admirable, and the kind of thing that more-than-minimally-decent people might well at least consider, it is not obligatory. It is not obvious that research falls into this narrow range. By contrast, if there's an ongoing duty to research, and if beneficence has anything to do with grounding it, then – at least so far – it would seem that we'd have to accept that it doesn't necessarily have to do so much with providing benefit in response to need, as with providing benefit *per se*. And for reasons that I outlined above, that might not always be that compelling a candidate for inclusion on the list of duties.

What would be beneficial research?

But, notwithstanding the last paragraph, let's allow that the putative duty to research is wide enough in scope to cover the provision of benefit to those not in acute need. There's still a range of questions that warrant being asked. Notably, we might reasonably begin to wonder who the beneficiaries of our research ought to be, and whether the kind of benefit matters. As I write this, for example, NASA's *Curiosity* rover has already spent several weeks trundling across the surface of Mars, zapping bits of rock with a laser, and analysing the gasses released as it goes. This mission promises to tell us a great deal about

the history of Mars, some of which might help us work out if there could have been life there, and to make contributions to planetary science generally. It is, unquestionably, research. There would seem to be plenty of scope, though, for saying that one thing that it is not is beneficent – certainly not in the sense of being the kind of thing that gets a person a reputation as a philanthropist.

Yet this does not mean that it would be appropriate to call the mission a waste of time, effort, and money. Arguably, it does contribute in an important way to human wellbeing, and so could plausibly be counted as beneficial. This is for a couple of related reasons. The first is that missions like this promise to provide questions to answers that at least someone – and probably a good many more than one person – finds worth asking. Some value is attributed to finding an answer; but the attribution of value to its outcome is the only thing that it would make sense to think makes any research whatsoever worth doing. This does not preclude scepticism about whether the money given to NASA might be better spent elsewhere – but I'll come back to this problem in a little while.

But I think we can push this a little further, and make the suggestion that, even if people do not have a particular hankering for the answer to a given question, the kind of thing that *Curiosity* is doing is worthwhile *just inasmuch as that it makes lives richer*. The same sort of point could be made in respect of any number of other avenues of research. The discovery that the feathered dinosaur *Sinosauropteryx*, which lived in the early Cretaceous, probably had dark chestnut-coloured stripes¹¹ is perhaps not the most useful piece of information. However: this kind of discovery is – to use a term not used in academic work nearly often enough – *very cool indeed*. It is, in a non-trivial sense, life-enhancing. We are richer for it, and for many other useless discoveries.

This is no small point. Even if we think that duties of rescue mean that the primary obligations we face have to do with ensuring that a certain threshold of basic need satisfaction is reached, once it *is* reached, whatever duties to research remain – still allowing, *arguendo*, than any remain at all – will derive their merit from their ability to make an already-good-enough life better. Since, as I argued in Chapter 1, a condition of the good life is that it should have some content, it seems at least possible that improvements of a good-enough life could be provided by enriching the content thereof. But the field of areas of research that enrich our lives in some way – and so make it better – is very wide indeed; and this is not just because some research that looks to be otherwise useless may actually be indirectly useful (as would be true of the techniques to grow bone on a lattice that I explored in Chapter 5): it applies to things that genuinely are otherwise useless. So the way would appear to be open for people engaged in activities like planetary science or palaeontology to claim that what they are doing counts as being beneficent, *and for this claim to have some mileage*. A researcher might genuinely believe, with more than a small hope of

accuracy, that what she is doing will benefit either presently-existing, or future, people; and it's not at all inconceivable that she might be right. The enrichment of a life is an aim worth pursuing; if our concern is with the good life, then such a claim should not be all that hard to defend.

Crucially, once we have admitted that there might be benefits to be had in terms of enrichment and improvement of human lives even from research that we might dub 'sterile' – by which I mean that it will not lead directly to benefits beyond those that it brings itself – there is only a small step that needs to be taken to admit that the same benefits can be had from things that are not research at all, even though they, too, are sterile. (It might actually be harder *not* to make the step than to make it.) Living in a rich culture might be a benefit in its own terms. Claims that I made in Chapter 5 about the permissibility of strange body modifications serve, indirectly, to support this: if there are interventions that are defensible and worth doing notwithstanding their lack of 'objective' utility, then there might well be other things that are similarly defensible and worth doing despite being of limited obvious utility. Humanity as a whole is likely to benefit, albeit in an intangible sort of a way, by allowing people to pursue activities that are not directly beneficent, but which do enrich humanity in some way – culturally, for example. (This point echoes the idea mooted towards the end of Chapter 7 that the world as a whole might be better off by allowing individuals behave in a manner that is not obviously virtuous.)

The argument boils down to this: there are benefits to be had from sterile research in (say) physics; and if we accept this, then the same ought to be available in spades when it comes to research in philosophy, philology, or philately. We could stop doing all of these things without causing harm. But there might nonetheless be something valuable lost.¹²

And this point throws light on John Harris' claim that

we can be simply curious if we like, but the justification for science and for philosophy is not simply in terms of the disinterested pursuit of knowledge but in terms of the benefits that such a pursuit can bring.¹³

If the justification for a research programme is in the benefits that it generates beyond itself, then it is plain that a sterile research programme, or artistic pursuit, will be at best less justified than one that is non-sterile. But what Harris minimizes here is the possibility – one that he nevertheless admits – that the disinterested pursuit of knowledge might be good in its own terms; its sterility may not be a problem. None of this makes any difference at all to the idea that it might be wrong to pursue the arts, or planetary science, or palaeontology, if doing so detracts from duties of rescue; and if that duty of rescue is best discharged by means of research (*pace* the argument in the next chapter that it almost certainly never is), then not researching will be blameable, and research *pro tanto* a duty. But since these conditions will be met in only a very few cases if any, it would probably be foolhardy to generalize too much.

This idea does prompt a couple of secondary questions. First, we might want clarification about whether putatively obligatory beneficence is properly directed at individuals, or at humanity in general (though coming down on one side or the other won't make a big difference to the argument here). Since there's a logical difference between humans and humanity, there might be things that benefit one without benefiting the other. (A tertiary question would concern whether, if it's properly directed at individuals, it's only currently existing people that matter, or whether – and to what extent – potential future people count as potential future beneficiaries.) Second, we might wonder whether the motivation of the people providing the benefit matters when assessing the discharge of a duty. By this, I mean that it is not obvious that a NASA scientist, or a palaeontologist, or an artist, would necessarily be motivated by beneficence to do what they do, even though it does create benefits; any benefits that do accrue would be a desirable side-effect. If we think that the duty of beneficence that we ostensibly face reduces to a duty to do things that could reasonably be expected to generate benefits, people like NASA scientists and artists could turn out to be morally in the clear, even if they are indifferent to outcomes that benefit others. If, though, intention matters, so that a benefactor has to create benefits for beneficence's sake, then the NASA scientist who is not motivated by benefit, but by (say) wonder, would still count as morally lacking. But, by this token, then so would the person whose discovery of a cure for HIV – who, that is, has done groundbreaking bioscientific and medical research – is motivated by the desire for a Nobel prize or a bare fascination with problems of biology. Meanwhile, there seems to be no reason why an artist couldn't claim to be working for the sake of beneficence.

The argument from incommensurability

But maybe we're getting ahead of ourselves here. After all, in his articulation of the duty to research, Harris writes that

there is a clear moral obligation to participate in *medical research or any research that has a reasonable prospect of enhancing our lives or our material condition in certain specific circumstances*. This obligation is importantly not confined to purely therapeutic research but also involves all beneficial research.¹⁴

The emphasis is added by me. Suspicious as we may be that this restriction on the nature of the obligatory research is arbitrary and imposed by *fiat* – especially allowing that the argument from Chapter 3 about enhancement not being a duty is sound – if we take it in good faith and on its own terms, it does seem to provide us with a way to rank the benefits of a given piece of research: the obligatory things are those that have a reasonable prospect of enhancing our lives or our material condition in certain specific circumstances. And, on

similar lines, when Harris says that the justification for research is not simply' in terms of the disinterested pursuit of knowledge, that does at least suggest that the disinterested pursuit of knowledge might be good for its own sake, irrespective of whether or not any real difference is made to the world or the lives of actual people. It so happens that, for Harris, the importance of such speculative endeavours is trumped by that of medical research; but that is not to deny it's good, any more than a gambler's King of Hearts being trumped by his opponent's King of Spades would allow us to deny that the King of Hearts was a king to begin with.

Yet even if such hierarchicalization has an intuitive attraction to it, this attraction does conceal a puzzle: by what standard is medical research more important than astrophysical or archaeological research? And by what standard is any research preferable to other ways of filling the day that are not research based at all?

It's worth restating here the working hypothesis that, if research is a duty, it is so because of the good that it will generate; but from that we ought to infer that there will be nothing that is capable of generating the same amount of good – the same improvement in people's lives. For if it were to turn out that some other, non-research, activity was capable of generating the same amount of good, and it's beneficence that is our driver, then that would mean that our duty was not to research, but to do that other thing. Maintaining the privileged position of scientific research requires the provision and use of some account by which we can say that what it provides is of such a value that there is no competing moral reason to do anything else – and it's hard to be sure that we could ever have such an account. It seems likely to me that the good that might be generated by further research, and the good that might be created otherwise, are qualitatively different. And if this is true, then the idea that we ought to choose one rather than the other on account of its ability to provide welfare is in serious difficulty.

Let's imagine someone who, at a certain stage in his life, is given the choice between becoming an artist and becoming a research scientist. Call him Ernest. Ernest is assured that the rewards that accrue to him will be about the same either way; so at least as far as he is concerned, he might as well flip a coin to decide which option to take. He realizes, though, that his choice will have an impact on the world around him; being a magnanimous sort, he decides to choose the option that could reasonably be expected to generate the best outcome. He now finds himself confronted by the question I asked a moment ago: By what standard should he assess the options? What's the metric by which the desirability of each possible future world is to be measured?

This is not an empty question. It makes sense to talk about two possible treatments for an illness in terms of which is better; that can be measured in terms of things like QALYs. It might even be possible to apply something like

this rubric to different areas of research. For example: if we're ever to have commercially viable nuclear fusion reactors, this will probably require a great deal of work from materials scientists to identify what materials we should use to make the things.¹⁵ We could, in principle, calculate the QALYs generated by fusion research, and compare them against the QALYs generated by malaria research, and use that to decide how we should spend our money. (Naturally, if a QALY score isn't to your taste, some other metric might serve. The point stands that, if you're going to say that one ought to ϕ rather than ψ , you're going to need some way of establishing that ϕ -ing is better.)

But not all research will fit into this rubric. The calculation of the Hubble Constant will never save any lives – but since that's not what draws people to understanding the universe in the first place, this seems like the wrong stick with which to beat the enterprise, if beat it we must. And just as there're goods to be had – in terms of enriching human lives – from non-biomedical or bioscientific research, there seems to be scope for similar goods to be had from activities that really aren't research at all. Nor does it bespeak a failure of rationality to prefer something useless over new bioscientific interventions. And just as a low QALY score isn't enough to demonstrate that astrophysics isn't good, so it won't be enough in respect of other things.

For example: imagine that Silas is a wealthy man who contracts a deadly but slow-to-progress illness like multiple sclerosis. Silas believes that he could fund research into a treatment, and that he would perhaps benefit from it himself, but decides that he will nevertheless sink his resources into the construction of a grand mausoleum for himself and family. This is not necessarily an irrational preference so much as a non-rational one: he simply has a vision of the kind of world he would want to create – a world informed by the idea that mausolea are important, and cures for MS are not so important. On the other hand, it is not hard to see why people might think his preference somehow indefensible, and seek to persuade him to do something with his cash that *would* help MS research or something of the like. And this would certainly be so if we're going to run with the twin assumptions that beneficence is a duty and that supporting research can be a way to discharge that duty – assumptions with which I'm happy to play along for the sake of the argument. Building a mausoleum is not obviously beneficent, and if building it comes at the expense of discharging that duty, then it might be positively wrong.

But now imagine that, instead of being a miser dedicating his funds to memorial architecture, Silas decides that he's going to spend it on endowing a fund that would pay for theatre trips for disadvantaged kids from the other side of town, or a piece of public art, or something like that. Here, the idea that there's a duty of beneficence doesn't seem nearly so powerful when it comes to constructing an argument about his obligation to support research instead, because Silas could claim to be acting beneficently: he thinks that humanity

sensu lato, or some disadvantaged slice of humanity, will benefit – and that benefit was what motivated his bequest. Had Silas sufficient belief in his own talents, he might be tempted to say the same thing in relation to his own pursuit of art rather than science. What would have to be shown however the matter is viewed is that he is not acting in the most beneficent way possible – but to establish the importance of that would require showing not only that there is a duty of beneficence, but a duty of *maximal* beneficence, and also that there is a clear manner of comparing the benefits of each option. It's this latter criterion that represents a particular weakness for the claim that there's a duty to research.

It's a weakness that won't be strengthened by having it pointed out that a new treatment for MS is probably important to other people. After all, the fact that something is important to one person doesn't mean that it is important objectively, or that others ought to adopt the subjective sense of importance. (That Stoke City FC should win the Champions' League is probably important to some people; it doesn't mean that it's important, or that anyone else has a responsibility to realize the dream.) Moreover, expanding the cultural horizons of the least well off is important to Silas; and it would appear that it's at least as important to him as MS research is to others. He doesn't have to deny that researching new MS treatments is a good thing; he might even admit that he's idiosyncratic in his preferences. It's just that research doesn't exert a particularly strong pull on *him*. Besides: if others' desire for a cure ought to influence his spending decisions, it's not easy to see why his preferences oughtn't to sway theirs as well, giving him the same complaint against them that they have against him. Merely pointing out that something is valuable to someone isn't normally enough to make a strong claim about others' obligations in respect of that something.

(Along similar lines, the anti-hero of BS Johnson's novel *Christie Malry's Own Double-Entry* contracts cancer, and berates the book's author for his choices:

“In any case,” he said, almost to himself, not looking at me, “you shouldn't be bloody writing novels about it, you should be out there bloody doing something about it.”¹⁶

(But Malry – it has to be said – is hardly a disinterested observer. The fact that he – or anyone else – would prefer others to be doing something about his illness doesn't necessarily carry all that much weight when it comes to deciding what they should do, and his preference does little to refute the idea that there might be a qualitative difference between the goods provided by different sorts of activity. A person can think any number of things worthwhile within the context of his own life, and that some of them will benefit humankind to boot.)

The point is this: even if we think that there's a duty of beneficence, and are satisfied that this duty when unpacked amounts to being a duty of

maximal beneficence, working out what is maximally beneficent may not just be hard: it might be impossible, because the goods generated by ϕ -ing may be qualitatively different from those generated by ψ -ing. If the benefits biomedical or bioscientific research are qualitatively different from the benefits of planetary science, ichthyology, or poetry, then it won't be possible to tell the poet that she ought to have done otherwise simply by pointing out the benefits that could have been accrued. If we happen to think that bioscientific research is the most important thing we can do, then this is fair enough: but it looks like an aesthetic, rather than a moral, claim that we're making.

And lest it be thought that I'm making too bold a claim here about the incommensurability of goods, I can afford to weaken it, and simply say that the onus would be on the defender of the putative duty to research to show that there is some metric by which they could be compared. Whatever metric is suggested will have to be carefully chosen, though, to ensure that it packs the normative punch that is required: it's not going to be enough simply to show that, as a matter of fact, more people do happen to value research highly than value non-research highly. This is because what people *do* prefer and what they *ought* to prefer are two different things, and it's what they ought to prefer – between some research activity and some non-research activity – that's at the heart of what matters here; and if we could show that, there'd be no obvious need to wonder what people do actually prefer.

There's a couple of other points of merit in this context. The first is that establishing a metric by which we could compare the importance of biomedical or bioscientific research and other activities would potentially create one great hostage to fortune, since the defender of the duty to research would still have to be sure that a given course of action – in this case, research – genuinely does provide more benefit than anything else; if it doesn't, then to privilege it amounts to an endorsement of the less good over the better. Moreover, if the privilege – and the concomitant duty claim – is to be robust, it ought to apply not just to affairs as they are now, but to a range of states of affairs – and all of them, if at all possible. If it should turn out that there is a possible world – including ours in the future, depending on the marginal utility curve of further scientific research – in which the benefit provided by non-scientific research is greater than that provided by scientific research, there will be no obligation to pursue science, and a potential obligation not to. Put another way: scientific research's position would appear to be only contingently privileged. This contingent privilege is precisely what one would expect, of course, if one adverts to the claim that the duty to research is just one version of a more generalized duty of beneficence. But to make this kind of move would be suicidal for anyone who wants us to take seriously the idea that there is a general duty to research rather than a set of duties to pursue certain particular areas of research, each of which would require separate argumentative support.

The other point is this: whatever metric we might generate to compare goods would – it appears – require a good deal of philosophical argument and analysis. This is as much as to say that establishing a duty to support scientific research is parasitic on endorsing something other than scientific research as well. Being able to say that we have a duty to pursue the good through science requires a conception of the good the like of which science is incapable of providing.

The argument from anthropology

Scepticism about the means by which we compare the goods accrued from a range of activities is supported by an appeal to a kind of anthropological relativism.

The appeal emerges when we note that there exist several cultures around the world that are minimally technological, and appear not to have conducted any significant scientific research for thousands of years: for example, there are tribes in the Amazon that have little technology beyond the bow and blowpipe. In some cases, technological development appears not only to have halted, but to have regressed; Timothy Taylor talks about how the stone tools used by aboriginal Tasmanians at the time of European exploration were demonstrably as simple as those used by chimpanzees¹⁷ – but, more importantly, less sophisticated than those Tasmanians' own ancestors': by the time the Europeans arrived, they went naked despite the climate being not much warmer than that of the colonists, and some tribes seem to have abandoned permanent shelters altogether in favour of basic wind-breaks. They had – so it looked – even lost the ability to make fire for themselves, relying instead on fire-sticks that were kept alight from previous fires and carried from place to place.¹⁸ To the eyes of the Europeans who met them, they had done nothing very much to advance themselves beyond a state of nature. Their world was more or less completely unimproved.

On the face of it, then, and assuming that there is a responsibility to pursue the good (perhaps through the pursuit of biomedical or bioscientific research), we have to ask how it could be that certain whole cultures are so fallen as not to discharge this duty, or even to abandon advances already made. Echoing a question asked by Harris and Holm,¹⁹ must we assume moral turpitude in non-technological cultures?

This question invites a range of possible answers. One is that these cultures are simply morally lacking. A duty such as the duty to rescue drowning children when doing so is easy is one that we think applies universally: anyone who failed to attempt it without a very good reason indeed would be blameable; and the putative duty to research insofar as it's a means of rescuing people from a harsh life could easily be cut from the same cloth, and supporting

or participating in research or some sort of technological advance could be a requirement of anyone, anywhere. Yet there's clearly something a little queasy-making about writing off whole cultures as morally lacking, at least as a first resort. For while the practices of the past and of different cultures may strike us as morally indefensible now – we no longer burn witches, and we are confident that this is a moral improvement – the idea that a culture could make this kind of basic moral mistake for so many thousands of years brings us uncomfortably close to the idea that the people living within it were somehow constitutionally incapable of discharging the duties incumbent on the rest of humanity.

A second possible answer is that non-technological cultures are marked by a succession of attempts at technological improvement, pretty much every single one of which has failed. This avoids the rock of suggesting that some groups are constitutionally morally lacking, but lands us squarely in the hard place of suggesting that some groups are constitutionally good but stupid. Besides: given the apparently obvious advantages that even a small technological advance would give a competing culture, it would remain a mystery how it is that these recalcitrant cultures survived as long as they did, or – even if they never developed anything on their own behalf – why they didn't simply steal technological ideas of one sort or another from their neighbours.

A more interesting possible explanation is that they actually have improved their lives and the world around them in some way: it's just that their standard of improvement does not take them down a technological route. And this is the hypothesis that Taylor articulates in respect of Tasmanians. If, he suggests,

you can adapt psychologically and physiologically to a life without clothes in a high latitude, then you are freed from an awful lot of sitting around, weaving, sewing, mending, and, of course, getting damp and cold.

No bone tools means no awls means no clothes means no pockets means nowhere to keep tinder and fire-making kit; that means no fire-making, which means carrying fire all the time. That means quick fires whenever you want, which means it is okay to have no clothes. Carrying fire all the time means it is safer not to wear clothes, so you don't catch fire by accident. It also reduces what can be carried. No composite tools means no axes, so no log boats or all-weather craft, which means no fish – but with lots of sudden storms, why risk orphaning the children when seals can fish and you can eat seals. Inshore, you can grease up and dive for lovely stuff. Naked, of course, because you don't want damp clothes. You want to get dry and warm as fast as possible by the fire, and eat abalone, wallaby, and tree-harvested possum.

Without a complex toolkit to lose, or surpluses to be stolen, or clothes to dry, you don't really need a house, and since you carry fire everywhere, the risks of burning one down would be high. With no houses and little personal property, there's not much hierarchy. Accounting is unnecessary, so you don't need writing or numbers. You have no maps, but you are not lost. You know where absolutely everything you need is. And because you don't have to look after it, you can get it when you want it.²⁰

Tasmanian technology was honed to the bare essentials, to be sure – but this did not indicate a failure, so much as a certain rugged efficiency. For sure, they may have suffered hardships that other groups did not suffer – but, on the other hand, others suffered hardships that they did not. Importantly, and only tacit in Taylor’s account, it may be that the hardships facing the Tasmanians were only particularly stark to the Europeans; and, equally, it’s possible that they’d have considered apparently unobtrusive aspects of the European lifestyle – the requirement to labour, to maintain housing and clothing, and the whole mechanism of capitalist accumulation – as a ridiculous and needless burden. Their way of life may have been Spartan – and it does not (at least to my eyes) look particularly attractive; but it is a heck of a leap from saying that to saying that by not developing certain technologies, and abandoning others such as boat-building and fire-making, there was any moral failure.

Rather, what they had was a – fairly radically – different way of life. Presumably, it was not one in which people felt any particular need for a great deal of technology – or, implicitly, a great deal of medical innovation. There’s no real need to wonder about a failure to discharge a duty of beneficence if the kind of life that is currently lived is accepted as being good, or at least good enough. Indeed, if Taylor is correct in his assessment of the possible advantages of becoming less ‘entailed’, we could even mount a case for thinking that a culture that divests itself of certain notional badges of development does so in response to a nudge from a beneficent invisible hand.

The same applies for other cultures that have not, historically, followed the same developmental route as the urbanized and technocentric West. We can argue about whether the kind of life adopted by a culture (and its members) really is the best one; but those arguments are not massively important here. What matters here is the claim that a putative duty of research is best seen as simply an aspect of a much wider duty of beneficence. Research is one of the ways – and only one of them – in which the culture with which we’re most familiar has chosen to discharge its duty of beneficence; but ‘beneficence’ makes sense only in the context of a claim or set of claims about the kind of life worth pursuing. With a different account of the good life, and of the ultimate justification for any action, a different measure of what would count as beneficent might dictate non-research pursuits. So while it is in a sense possible that the failure to pursue biomedical or bioscientific research is attributable to some colossal collective moral failure by the members of non-technological cultures, that is not the only explanation, and it isn’t really a very good one.

Ecology and economy

Though it’s a little bit of a distraction, I think it’s worth spending a couple of paragraphs talking about another aspect of a putative duty to research – an aspect that covers what we might dub ‘ecological’ reasons to research.

In a nutshell, the argument goes something like this: the world is a finite place, and the ‘economics of coming spaceship Earth’ are such that we can be reasonably sure that current lifestyles are ecologically unsustainable and environmentally damaging; this means that there is a chance that the lives of future generations may be avoidably blighted. Bioscientific research may give us a way to avoid any such blight. For example, synthetic biology takes what we have learnt about genetics and offers the promise that we could design and build microorganisms that would be able to produce petrochemicals in a near carbon-neutral way, clean up chemical spills by digesting toxins, and so on. In other words, there’s a range of ways in which bioscience might help us neutralize the risks generated by our current lifestyles.

Yet the tacit assumption here is that our current lifestyle is either inevitable or sacrosanct. It might be that research in the biosciences is required *if* we want to retain the kind of economic model to which we’re used – but this imperative is only hypothetical, and there’s nothing to say that we could not permissibly opt for a steady-state economy, or even one in which we forego certain aspects of modern culture and thereby replace one kind of plausible good life with another. I argued in Chapter 1, after all, that culture can play a significant role in determining what counts as a good life. It does not strike me as impossible in principle that some future culture might decide to opt for a different lifestyle – one that is not so polluting. Historians in this future world may look at our lifestyle and wonder how on Earth we ever found it tolerable, preferring as they do fewer gadgets but more free time. Or it might be simply that the putative obligation to carry out research to mitigate the impact that we have on the world is matched in its benefit by a putative obligation to have fewer children, thereby reducing the human population to sustainable levels. If we’re considering obligatory changes to lifestyle, after all, that might be the kind of thing we should countenance.

I am not arguing here that there is anything morally troubling about the current economic model under which we live. (There might be, but it’s not what I’m arguing.) What I am saying, though, is that there’s a set of choices to be made that is often forgotten.

The point is this: the pursuit of things like synthetic petroleum is, arguably, desirable *subject only to a range of unexamined claims about the good life*. Insisting on more research to facilitate the continuation of the kind of life we currently lead is one thing; but it won’t tell us anything about duties unless and until we’ve accepted the idea that continuing the kind of life we currently lead is a *sine qua non* of promoting flourishing. The dilemma that forces us to choose either embracing further research in order to protect the quality of future lives, or risking that those lives will be of a lower quality than we would find acceptable is illusory; it is in fact a trilemma at the very least because there are more options than we might think. Research in the biosciences may be *a* way out of foreseen problems; but (even allowing that there is an obligation to avoid these foreseen problems) unless it can be shown to be the only way, the chance that it’ll turn out to be a duty on this basis looks fairly small.²¹

Is there a duty to research?

Is there, in the end, a beneficence-based and wide-reaching duty to research? While it'd be foolhardy to insist that there certainly isn't, I think that the answer must be that there is at the very least no obvious reason to think that there is. There are certainly reasons to research, but they do not seem quite to tip over into the realm of obligations.

It is plausible to think that the reasons to pursue some kinds of research are more powerful than the reasons to pursue research of other kinds. Notably, research into techniques that would make the difference between a less-than-acceptable life and a good-enough life might strike us as being more important than research into techniques that would make the difference between a good-enough and a more-than-good-enough life. This distinction tracks the T/E distinction as outlined in Chapter 1. Still, being able to describe research as therapeutic or 'therapogenic' will not be enough on its own to legitimize an ascription of obligation.

One of the reasons for this is that, even if we think that therapy is an obligation – even, that is, if we think that we have a duty to intervene to make a person's life or some aspect of it at least good enough – research is not the only, or the best, way to go about it. I'll elaborate on this in the next chapter; but the thought is that though (say) research into malaria treatments might very well be therapeutically-directed, research is by its nature an uncertain enterprise. As such, it might not be the best way to provide relief right now; we might always have a better reason to do something else. Some of the entries on the list of other things that we could do will be related to the relief of symptoms, rather than the condition itself; sometimes, they will be more along the lines of simply attending to the sufferer in wholly non-medical ways: the word 'therapy', we shouldn't forget, has very many senses, not all of which denote cure.

So while research on a vaccine for malaria could be admirable, on the grounds that suffering from malaria is quite probably the kind of thing that reasonable people would hold to be antagonistic to the good life, because research is the work of years, eradication of the parasite that causes malaria might also fit the bill here as the move required to raise standards of flourishing to an acceptable level – and it might be a more effective way to get rid of the disease anyway. To give another example, it might be that research into creating viable eggs from other cell types, which would allow at least some infertile women to have genetically related children, would not be obligatory, on the grounds that having genetically related children is not clearly part of the good life – indeed, such research might actually make some people's lives *worse*, on the basis that it appears to confirm the fallacious and potentially harmful idea that a family is necessary for the good life, and genetic relationship with someone is necessary for them to be a part of your family. (Similarly, recall Brian from Chapter 1: his infertility is a problem in want of a solution only for as long as we treat

as a given that having children generated from gametes that originate in his own body is all that important. If this is denied – as it likely can be – then the imperative to ‘cure’ the problem is somewhat diminished.)

So where does this leave us? The thesis of this chapter has been that the most obvious reason to think that there might be a duty to research would be to tie it to a duty of beneficence (and so, indirectly at least, to an idea of what constitutes the good life). But it’s not clear that a duty of beneficence really obtains.

More importantly, if it does obtain, that it’s not at all clear that it’s strong enough to underpin a duty to support more-than-minimal research; if it goes any further than that, then it seems to collapse into the kind of thing that could equally well support all manner of things that are either what I have called sterile research, or are not research at all. And if the duty of beneficence allows us to pursue sterile research or things that are not research at all, it would not obviously be blameable to spend our time other than bioscientific research; and if it’s not blameable not to do that, then it’s hard to see that it was a duty in the first place.

Still: this is not the only kind of argument that might be mounted to establish that there’s a duty of research. In the next chapter, I’ll turn my attention to a few other candidates.

Notes

- 1 Harris, 2005, repr. in Harris, 2007.
- 2 Harris, 2007, p. 186.
- 3 Stjernschantz Forsberg et al. 2013, *passim*; cf. Brassington, 2013a, *passim*.
- 4 Mill, 1998, p. 172.
- 5 Ibid., p. 169.
- 6 Kant, 1993, 4:423.
- 7 Kant, 1996, 6:453.
- 8 Williams, 1973, pp. 116–17.
- 9 Kant, 1993, 4:430.
- 10 Jonas, 1969, p. 230.
- 11 Zhang et al. 2010, p. 1077.
- 12 In the course of a conversation with Sarah Chan, I was reminded of the metaphysicians of Tlön in Borges’ story, who ‘are not looking for truth, nor even for an approximation of it; they are after a kind of amazement’ (‘Tlön, Uqbar, Orbis Tertius’, in Borges 1998, p. 24). Who would begrudge them that?
- 13 Harris, 2007, p. 186.
- 14 Ibid., p. 192; slightly modified.
- 15 As I understand it, we are at best uncertain about how to build a reactor the fabric of which could stand up to the neutron bombardment it would undergo.

- 16 Johnson, 2001, p. 180.
- 17 Taylor, 2010, p. 33.
- 18 Ibid., *passim*.
- 19 Harris and Holm, 2003.
- 20 Taylor, 2010, pp. 50–2; slightly modified.
- 21 One thing that I don't have time to consider here is the Parfittian possibility that there is no obligation to avert a sub-optimal future in which lives will be unnecessarily hard, but still worth living. If it's possible that the people of that future could not have existed in some alternative future, it might be that we don't wrong them by not taking more care of the environment.