

Justifying Human Enhancement: The Accumulation of Biocultural Capital

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Introduction

‘Life’ becomes ‘enterprised’, flowing through the multinational channels of capital in which species acquire the status of brand names (Haraway, 1997:12; cited in Zylinska 2005: 144).

Over the last twenty years, Donna Haraway’s concept of the cyborg has been inextricable from cultural constructions of humanity’s technological future. Her invitation to a genderless society, where the distinction between biology and artifice collapses and where societies become more tolerant of genotypic and phenotypic variation, has become integral to the appeal of human enhancements via biological modification. It is some wonder, then, that a number of bioethical explorations of cyborg advancements have drawn attention to the inherent injustices that could arise as a result of granting such ‘morphological freedom’ (Sandberg 2001). For instance, Fukuyama (2002) scrutinizes what he describes as the inevitable commercialization of human enhancements that would emerge as a result of allowing access to such non-essential medical interventions. He considers that an open culture on human enhancements, instead of reinforcing individual autonomy, would restrict a more fundamental kind of freedom and frustrate the fulfilment of deeper, valued life goals. Fukuyama is also concerned that such freedom to modify would diminish the enjoyment of human rights, which are the foundations of modern, liberal democracies. In this sense, human enhancements present social, ethical and political issues of critical importance, as they engage matters of social order. Indeed, in subsequent work, Fukuyama clarifies that his ‘end of history’ argument was always inextricable from the teleology of science and technology (Fukuyama 1999), which is embellished in his recent piece that identifies ‘transhumanism’ as the world’s most dangerous idea (Fukuyama 2004).

Yet, when articulating her ‘cyborg manifesto’ (Haraway 1985), Haraway did not envision a society that is composed of better humans or, more accurately, super humans. Her interest was more in bringing about a more positive, social evaluation of human *differences*, rather than the possibility of extending the capabilities of humans beyond the boundaries of *species-typical*

functioning.¹ Haraway was interested in building a more tolerant and just society and cyborgology appeared to offer this conceptual – rather than wholly technological - possibility. After all, if societies could conceive of granting rights to robots, then how could they not afford full rights to people who hold marginal beliefs or who conduct lifestyles that are currently not granted such recognition? Her ideas sparked the imagination of those who challenge the sanctity of narrow definitions of humanness and the rights, privileges and status that is afforded to particular categories of biology. It is some wonder then, that such a socially nurturing position would become the posterchild for transhumanist visions, which have provoked such great criticisms from those who argue that *genuine* public needs, such as health care insurance and shorter waiting times in hospitals, should take priority over human enhancements (such as The United States President’s Council on Bioethics 2003, Turner, 2003).

These two visions of humanity's future seem diametrically opposed, though my task is partly to tease out their differences and suggest how it is possible to endorse human enhancement without being insensitive to the contested values that such practices engage. There are various aspects of the debate on human enhancements that frustrate the possibility of reaching consensus on its legitimacy and I will be able to consider only a limited range of these here. However, it is useful to outline some of the more crucial obstacles that must be overcome before any agreements are possible. For instance, crucial disagreements arise in the context of determining the range of values associated with biological modifications, establishing the limits of individual autonomy, the inviolability of religious beliefs and the precise circumstances that should govern the implementation and regulation of ethical conduct. A considerable part of the problem also involves the difficult task of distinguishing between therapeutic and enhancement interventions. In this case, two issues arise: a) rationalizing medical interventions and b) the slippery slope arguments.

Rationalising Medical Interventions on a Slippery Slope

Those who favour restrictions on access to human enhancements often refer to the proper goals of medicine, as an explanation for why enhancements are of secondary concern. On this view, it is assumed that healthcare must be *rationalized* and that priorities must be set, in an attempt to distribute resources fairly. Similar arguments are visible in a range of non-enhancement health care issues, such as treatments for obesity and smoking related disorders, each of which have found themselves subject to questions about the role of healthcare in the treatment of conditions that are brought about by lifestyle choices. In both the cases of obesity and smoking, this is a dubious presumption to make, since it raises further questions about what are the causal factors that lead to such conditions. Yet, the argument that it provokes about rationalization of medicine has tangible force and decisions in medicine *are* made as a result of such inquiries. For instance,

¹ Species-typical functioning is a concept developed by Christopher Boorse (1975; 19757) that is used to designate a specified normal range of what any given species can do. While there are variations within this range, any radical departure from the norm calls into question the species category of – and subsequently the moral rights afforded to – any given entity.

if it is considered that a smoker or alcoholic is less likely to benefit from an organ transplant, then this could influence which patient receives the donor organ.

For human enhancements, the ability to make any such distinction between therapy and enhancement is also complex. While one might attempt to distinguish between, say, the alleviation of suffering (therapy) and the achievement of additional happiness (enhancement), this neat separation quickly encounters complications when examining complex health related characteristics and when considering differing moral systems of healthcare. Moreover, the importance of making such a distinction on the basis of concerns about social justice – perhaps by deeming the alleviation of suffering to be a higher priority than providing additional happiness – disappears in an environment where such services are not dependent on public funds, or where there is a clear governmental commitment towards supporting an expansive notion of health and well being. For instance, in the Netherlands, cosmetic dental work is offered through the state system, which is not the case in many other countries. On this basis, the justification for limiting medical interventions to ‘merely’ alleviating suffering, becomes less meaningful, since healthcare should aspire to promoting general improvements in wellbeing, of which body modifications might be a part. Consider, for instance, the ballerina who requests body sculpting in order to make her a more effective dancer or, indeed, the model who requests cosmetic surgery for the sake of his career. While one might call into question the social norms that legitimize and valorise such decision-making or such practices, these are not persuasive reasons to forbid access to such freedoms.

Another component of the therapy-enhancement problem involves the so-called *slippery slope* argument in its various guises.² This argument dictates that one might reasonably withhold access to A, where it is considered likely or inevitable that such freedom will lead to circumstance B, which is undesirable. The desirability of A in this case varies, but if we consider an example, the moral dilemma emerges quite clearly. Genetic selection for sex-related disorders already has some legal legitimacy within the United Kingdom, though it does not for what has been termed *family balancing* (Human Fertilization and Embryology Authority 2003) – where a couple has, say, three daughters and would like their next child to be a boy. In this case, the slope might be characterised in the following way: Allowing access to sex-selection for family balancing (A), would lead to an acceptance of creating designer babies where it becomes a moral and legal entitlement to select embryos on the basis of a range of characteristics, such as height, hair colour, and so on (B). In this case, withholding access to A is justified by the slippery slope argument, on the basis that it would lead to circumstance B, which is wholly undesirable. In this case, the slippery slope mediates between two kinds of enhancing cases – genetically selecting sex for family balancing and genetically selecting for other characteristics.

Yet, similar arguments have been made even in relation to limiting access to certain kinds of therapeutic intervention – such as gene therapy or the development of nanotechnology – on the basis that it would lead to an undesirable enhancement freedom. For instance, within the field of nanotechnology, experimental research is still endeavouring to find treatments to a range of life-threatening or debilitating conditions, such as Parkinson’s disease. The implementation of a nano-sized device into the brain could provide a long-term solution to such conditions. However, some

² For various versions of the slippery slope argument, see Burg (1991) and Resnik (1994).

have argued against the introduction of permanent devices into the brain on the basis that it could lead to the modulation of a range of characteristics that would typically be described as being subject to the will of the individual – such as eating patterns. There are various forms to the slippery slope argument that should be considered, each of which with varying levels of persuasiveness. Moreover, the force of the slippery slope argument is not limited to matters of human enhancement, but has been a feature of many ethical debates within bioethics, from the use of contraceptives to concerns about euthanasia. However, its persuasiveness relies on the inadequacy of regulative structures.

A final problem with arguing on behalf of an ethical distinction between therapy and enhancement relates to the developing capabilities of medical technology. Science is beginning to reveal that many interventions will be most effective when undertaken early on in life, when an individual is pre-symptomatic and, thus, still healthy. As such, the distinction collapses since it will not be possible to argue that many forms of disease prevention are designed to alleviate suffering, since, at the time of intervention, no suffering will be taking place. Moreover, with successful treatment, the disease is hoped to not occur at all. So, for an age-related illness, such as Parkinson's or Alzheimer's, it will be necessary to intervene early in life in order for the intervention to be effective. Making sense of the results of such an intervention is difficult. While there is an increasing trend to treat such modifications as improvements to 'healthspan' – increasing the duration in life for which one can expect to enjoy good health – there is also a concomitant extension of lifespan.

This is because the preventive intervention will have eliminated the debilitating condition that, otherwise, would have, insofar ended a person's life prematurely. Obviously, the absence of such conditions does not extend life in any radical sense for any given individual. Neither does it indicate the possibility that people would live for any significantly longer amount of time – though many would argue that any additional life span is significant. However, it does remind us that the objectives of medicine are, in large part, to continue pursuing mechanisms through which life can be prolonged, even if this conflicts with some natural process of ageing. While talk of life extension often raises all kinds of alarms, there are conceptual overlaps between such objectives and the role of, more familiar interventions, such as inoculations for children, which have similar preventive functions. This example is also useful for situating the, often, abstract concept of enhancement. It describes a prospect whereby one might imagine senior citizens still engaging in the kinds of physical activities they enjoyed when they were in their mid-thirties. As such, these modifications have the guise of enhancement, without there having been any kind of radical boost to specific functions.

Within this brief overview of possible modifications, it is apparent that the word *enhancement* performs a range of value-laden functions. While general mobility – the ability to walk, move limbs and so on – seem the kinds of goods that do not warrant justification, there is clearly a part of this claim that is more ambiguous. It is not obvious that an octogenarian would find value in being able to enjoy the physical activities they experienced as a younger person. This leads us into a new terrain, where human enhancements require some justification, some rationale for seeking them. Before elaborating on this, we will stay with the semantics and ask further questions about the other part of this phrase – the use of the word *human* within the concept of human enhancements. The contested moral status of human enhancements arises, in part, because it abstracts the types of activities under consideration to an unreasonable generalisation, the

consequences of which are impressions of eugenic-like practices. We are asked – unreasonably - to imagine what kinds of modifications would have some general consequence of enhancement for humanity. To this degree, the language of human enhancements becomes politicised from the outset, since it requires identifying particular lifestyles where such modifications would be beneficial. Such contested terrain has become the contested terrain within bioethics on enhancement issues. I will argue that it does not make sense to think about enhancements in this decontextualised manner.

These various objections often form the context of debates about the value and ethics of human enhancement. As such, any justification for human enhancement must satisfactorily respond to the potential risks arising from the prospect of liberalising human enhancements. My approach here will be to deal with the particular complex of concerns surrounding the commercialization of life that human enhancement is deemed likely to imply. I will respond to arguments that indicate we should not embrace such liberties on the basis that it will give rise to unruly, commercial services that will diminish human flourishing, rather than enrich it. In so doing, I will advance a position based upon what I describe as the *accumulation of biocultural capital*, as a defence of such liberties.

Biology Lives Life as a Commodity

Earlier, I referred to Fukuyama's concern that human enhancements would involve the commercialisation of life and the corruption of various values that are attached to it, such as human dignity. His treatment of human enhancements as artefacts of is apparent in a range of literature that has discussed the emergence of biotechnologies, which, perhaps, stem from Robert Nozick's (1974) concept of the 'genetic supermarket'. Yet, while one might identify an intuitive appeal to protecting life from commercialization and, indeed, to requiring higher standards of vigilance against the unruly execution of such industries, it is useful to scrutinize the precise objections that arise from this, as they relate to human enhancements. Such postulations benefit from a wealth of teachings throughout history that depict the unsavoury practices of commercializing life. Arguably, concerns about such practices have their roots in aspects of human slavery and various instances of human exploitation through science, not least of which is the continual reference to Nazism within the literature on this subject. Moreover, there are certainly risks to embracing a wholly commercial exchange of health products and treatments. For instance, in the context of arguments about commercial organ donation, some have argued that it would diminish the 'gift' exchange value that a non-commercial system implies, where donation constitutes a formidable act of altruism.³ Of course, the large numbers of patients who continue to wait for donor organs offsets the value of such altruism. However, this type of exchange is not our current focal point, which is simply to identify the potential trade-off between different kinds of value that commercialization is likely to imply.

It seems paradoxical that biological consumerism should be regarded as debilitating to human flourishing, when it is such an integral and valued part of many cultures.⁴ Even if one steps back

³ See Richard Titmuss (1970) for an eloquent elaboration of this concept.

⁴ For an explication of consumerism generally, see Miles (1998).

from consumption as a means of financial exchange – thus, to not restrict our treatment to consumption within particular kinds of capitalist system – consumption seems also to be an act of differentiation, both collective and individual. People establish their sense of identity and belonging through the consumption of various devices – ideas, products, and so on. Moreover, to suggest that pre-human enhancement medicine is devoid of consumerism is a bogus position to espouse. From the international trade of pharmaceuticals to online sales of Viagra, health, illness and medical treatments are inextricable from the logic of global markets. While these examples might require that we stop short of talking about *life* as commodified – despite examples of, say, surrogacy, paid organ/egg donation, and so on, they suggest how commerce as consumption forms part of the world in which biotechnology finds itself.⁵ In this sense, life is already a commodity in some sense; there are simply disagreements about which parts are commodified and how.

The value attributed to life, clearly, also extends beyond its function as a commodity, though there are also disagreements about what kind of value this is. Yet, concerns about commercializing life are not limited to considerations of whether it would lead to some form of moral degeneracy. Rather, there are fears about the capacity of various kinds of governance systems to regulate any such commercial system. For instance, if one examines the values espoused by the egg and sperm auctioning site RonsAngels.com, a range of characteristics that it exhibits are reasonable grounds for concern about how a free market on biological products might radically transform the values and assumptions of healthcare. In this site, clients bid for the sperm and ova of donors, with specific products going to the highest bidder. While this might be enough to raise concern for some critics, this particularly instance of commercialised human biology is made more complicated by the fact that the donors seem to be participants of Ron Harris' pornographic film industry, thus bringing an uncomfortable closeness between two kinds of social enterprise: health and pornography.

While one might appreciate the irony of drawing these two enduring aspects of human enterprise together – procreation and pornography - they are clearly quite distinct as arenas of social regulation and, indeed, consumption. Such an example warns of the challenge to regulate commercial systems, though it does not diminish the character of consumerism that pervades health-related choices. Nevertheless, it remains to be explained what kinds of consumption we might talk of when considering the consumption of human enhancements and what moral force this might have in the debate on whether access to such technologies should be granted. To elaborate on this, I offer the following argument, which relies on conceptualising human enhancements as artefacts of consumerism.

The Accumulation of Biocultural Capital

The likely commercial character to human enhancement services also explains the reasonableness of seeking to undertake such modifications. Such practices should be conceived as the pursuit of accumulating *biocultural capital*. This concept explains human enhancements as acts of

⁵ It is important to note the revived appeals to commercial organ donation recently

consumption, whereby individuals locate some source of meaning that they seek to acquire via the modification. This term derives from the French social theorist Pierre Bourdieu, whose concept of *cultural capital* is usefully articulated by Rojek

The term 'cultural capital' refers to the knowledge of and skills in the discursive realm relating to society, the arts, leisure, sport, science, politics and all the other elements recognised as 'culture' in society at large (1995: 68).

In this sense, Bourdieu's cultural capital tells us how the pursuit of consumption is a function of the drive towards personal differentiation, as a social norm. Bourdieu considers extensively the role of the body in this accumulation of cultural capital and even discusses the body as an unfinished product, though he does not allude to the role that biological modifications might play in this accumulation. Nevertheless, this concept of unfinishedness offers close conceptual ties to the language of trans- and post- humanisms when arguing on behalf of the liberty to undergo radical human enhancements. I wish to extend Bourdieu's thesis by considering how human enhancements can be considered as instances of *biocultural capital*. In doing so, it will be helpful to identify the overlaps with Bourdieu's concept. As Shilling (1993: 128) notes,

[Bourdieu] displays a clear interest in the unfinishedness of the body, and maintains a more comprehensive view of the materiality of human embodiment than those theorists who focus exclusively on language, consciousness, or even the body as flesh. Bourdieu recognises that acts of labour are required to turn bodies into social entities and that these acts influence how people develop and hold the physical shape of their bodies, and learn how to present their bodies through styles of walk, talk and dress. Far from being natural, these represent highly skilled and socially differentiated accomplishments which start to be learned early in childhood. As it develops, the body bears the indisputable imprint of the individual's social class (Bourdieu, 1984).

Bourdieu's concept makes a number of important distinctions between types of cultural capital, though of particular use is his expression of *symbolic* and *embodied* cultural capital. These attributes bear particularly close resemblance to my development of *biocultural capital*. However, some modifications are still necessary, since human enhancements are ambiguously placed in relation to some aspects of Bourdieu's thesis. For instance, how would one discuss the consumption of a pill that improves attention span, as an 'act of labour'? Indeed, anti-enhancement advocates would argue that such an undertaking is troubling precisely because it implies no labour on the part of the individual – and so derives the critique of enhancements as quick fixes that undermine the importance of human will and struggle in the achievement of certain goods.

In part, this is why it is necessary to extend Bourdieu's thesis towards the concept of *biocultural capital*, since his original conception does not distinguish explicitly between labours of the will versus labours of biological adaptation. For, while any such pill might not imply labour of one kind – perhaps the kind that involves exercising to lose weight - it does require a physiological adaptation to occur, can also be conceived as labour. Thus, as technology develops, our relationship to experiences of labour has also been transformed. A further modification relates to the claim that Bourdieu's concept of cultural capital is class-based. While the specific criticisms of this vary - from the suggestion that access to cultural capital is entirely socially stratified to the

possibility that class is no longer a helpful concept - it is useful to mention that my conceptualization of biocultural capital draws attention to the cross-cultural practice of human enhancements. Thus, taste and cultural capital are accessible across the entire spectrum of any imaginable class based differentiation.

My concept of biocultural capital also draws attention to the absence of many enhancement practices within society – human enhancements remain aspirations. As such, the consumption of human enhancements is predominantly via the consumption of biopolitics; it is a consumption of ideas, of possibilities. Of course, there is both an increasing number of exceptions to this and various examples that present interesting, ambiguous instances. For instance, human cryonic suspensions involve participants purchasing a prospective enhancement – the capacity to be brought back to life some time in the future.

Understood as a culturally specific form of taste, the accumulation of biocultural capital can be justified only by locating the moral framework of a particular ‘habitus’ within which such decisions are deemed to be valuable. This might suggest some kind of moral relativism, though it is more of a reflective equilibrium, since it is likely that any given habitus will employ a range of moral norms that are also present in other types of habitus. In any case, when thinking about the ethics of human enhancement, it is important to note that Bourdieu’s labour makes no claim about the legitimacy of specific modes of appropriation over others. However, Rojek (op. cit: 68) notes that Bourdieu is interested in ‘how society evaluates this cultural capital through visible and tacit systems of reward and punishment’. This is also why I suggested earlier that it is not sensible to talk about ‘human enhancements’ in abstract, decontextualised terms. Each person will arrive at their own taste for particular forms of human enhancement, via their particular social circumstances and interests. This is not to eliminate the role of judgements either at a personal or societal level, though it remains the interest of the state, in particular, to legislate over tastes. Thus, to anticipate the critique that this would lead to moral anarchy – the so-called ‘anything goes’ view - the argument from ‘tastes’ does not offer an open door to all kinds of practices. Rather, it calls for limits to be placed on the expectation for individuals to justify their tastes and, following John Stuart Mill, this limit is set properly at those activities which might harm others. Where human enhancements are concerned, it is not at all apparent that any such harm to others arises.

On this basis, asking what value accrues from human enhancement is rather like asking what value accrues from the consumption of any aesthetic artefact, from a new tie to new breast implants. The biocultural capital argument refutes the moral claim that would reject such choices, on the basis that decisions to undertake human enhancements constitute appeals to an aesthetic standard, which Bourdieu describes as ‘taste’. A suitable comparison might arise in the context of aesthetic appreciation more generally. The request for a moral justification for human enhancements is like asking what value accrues from having heard a Bob Dylan song or having strolled around a Frank Gehry building. Such occurrences, along with the desire to experience them, cannot be explained via some precise moral framework of utility. Instead, through the consumption of these ideas and via the desire to expose ourselves to them, we enter into a transaction whereby the expectation for benefit is not preconceived or, at most, where there is a vague expectation of what might be gained from the exposure. In sum, the strongest value claim that one can make in relation to body modifications is conceptually no different from the value claim one might make about reading a book or watching a movie. There is no objective,

conclusive benefit that will arise from either action, but we do not deem it necessary to justify this before undertaking the activity. Moreover, one might be suspicious of being able to outline specifically what benefit has accrued.

A final point to note in relation to my conceptualization of biocultural capital involves the use of term ‘biocultural’ and the recent literature where this concept is articulated. While I have used it thus far to discuss biological modifications, as objects of consumption, there is a dual intention to my use of this term. The word biocultural is increasingly being used to articulate the middle ground between liberal and conservative approaches to human enhancement practices and the convergence of philosophical and cultural engagements with such practices. In Smith & Morra (2005), their title ‘From a Posthuman Present to A Biocultural Future’ engages a diverse range of aspects to this subject, from debates about the meanings associated with disability and prosthesis (Sobchack 2006), to the fetishisation of amputation (Smith 2006). In their case, biocultural is used in contrast to *biomedical*, the former of which describes a critique of fundamental concepts within medicine – such as health. In particular, it draws attention to the relevance of cultural conditions to health-related terms, such as the contested meanings associated with life and death, in the practice of medicine. Such conditions have a considerable bearing on what are defined as the proper goals of medicine. Moreover, the appeal of biocultural is in its recognition of how health is medicalized within 21st century medicine and the prominence of cultural politics in health care. So, when the actor Michael J. Fox presents a campaign advertisement about stem cells on behalf of U.S. Senator Clair McCaskill, his intervention becomes part of the sphere in which debates about the ethics of such technologies takes place (McCaskill4Missouri 2006). Moreover, it constitutes a disruption to the traditional processes through which expertise and (moral) authority are typically conveyed. These parameters of human enhancements are constitutive of their presence within society, perhaps in ways that earlier eras of health care were not. By implications, the moral distinctions between, say, therapy and enhancement might similarly no longer have the same currency they once had. Indeed, the instance of increasing healthspan via biogerontology is, again, a useful example of this problematic.

Counterpoint: Reducing Human Diversity?

Since Donna Haraway first envisioned the ‘cyborg manifesto’ in the mid 1980s, she has expanded towards the concept of ‘companion species’ to more fully articulate her original aspirations for cyborgology. Among other things, Haraway spends considerable time talking about the relationship between people and their pets, as an indication of what it is like for humanity to share its expanding circle of moral concern with other species. Today, her writings convey a sense of disappointment over and redundancy to the cyborg paradigm. Instead, the new language of biocultural posthumanism reinvigorates the debates she began in a range of helpful and exciting ways. However, a further criticism of human enhancements might be that their commercial character will lead to the reduction of human diversity. On this view, one might draw attention to how practices of body modification tend often to be constrained by, ultimately, limited, normative ideas about beauty, particularly the notion of the body beautiful.

One of the strongest criticisms of such trends is that human enhancements could lead to a form of cultural complicity (Little 1998), where people aspire to the same kinds of enhancements. Of

concern here is the degree to which such choices might a) reinforce sociologically questionable assumptions about beauty and, in doing so, b) impoverish human diversity. The former of these views is visible in many feminist accounts of the body, where the tortuous practices of wearing stiletto shoes, corsets, and even foot binding are viewed as practices of bodily subjugation in the name of some preconceived notion of beauty. Bourdieu's response to this is important; he argues that, while social norms contribute to the ideals of beauty, individual agents can also influence these social norms. He discusses how individuals are both the products of structure but how they also 'make and remake this structure, which they may even radically transform under definite structure conditions' (Bourdieu 1992: 140). This interactionist approach to the world offers some response to the claim that cultural complicity should concern us too greatly. However, my response is not limited to Bourdieu's appeal to individual action. It also takes into account the precise criticism of consumerism in relation to body or mind modifications and considers how fashions of enhancement might change. This position also responds to b): that embracing human enhancement would impoverish human diversity.

Whether or not the range of choices available through human enhancements is likely to reduce human diversity depends on two factors. First, it presumes that the human capacity to imagine a range of enhancement possibilities is less than the range that is conferred by natural selection. Second, it asks whether such choices will be available to all people all of the time. For the former, it is important to remember that a world that embraces human enhancements benefits from the *combined* range of choices offered by natural selection *and* humanly imaginable enhancements, not simply the latter.⁶ Whether the human enhancements will be available, instead, relies on trends within scientific research – what kinds of enhancements are financed and so on. While it is debatable as to whether this will be broad or narrow, the relevant point seems to be that the biopolitics of scientific research, as an integral part of social governance is a *relevant* process through which such priorities are set. Consequently, there can be no objection to bringing such choices under the guise of governance, while one might be critical of leaving such trends merely to chance.

In any case, there is reason to doubt that the limits of human imagination to conceive of varied enhancements would be unreasonably narrow. While in the short-term, one might expect trends towards certain fashions of body modification, which has the guise of cultural complicity; the long-term consequences are more likely to broaden the limits of normative characteristics, as people become more sophisticated at distinguishing themselves biologically from others. In the same way that one might talk about the fashion of clothing, or music tastes as wonderfully varied, a culture of human enhancements would similarly lead to greater, rather than less diversity. Indeed, to extend the analogy further, there are greater moral concerns about *not* having enough choice, rather than having too much.

A final caveat might be to recognise the complexity of making enhancement decisions, particularly the likelihood of there being 'trade offs' to enhancement choices. So, deciding to maximise the number of slow-twitch muscle fibres in legs might make a particularly good endurance runner, but not such a good sprinter. Additionally, many such trade-offs will have

⁶ I will not attend to the arguments from 'coercion' in this paper, though it is not obvious to me that all people will feel coerced into the same kinds of enhancements.

unknowable consequences, as is true of therapeutic interventions. For instance, the sickle-cell gene also carries a protection against malaria, and the common cystic fibrosis mutation encodes a protein, which may function at low temperatures, which may be an advantage in some countries. As such, engineering away certain characteristics must – to return to our underlying premise – always be cultural located. Yet, the prospect of things going wrong is not, in itself, a reason for abstaining from making such choices. Rather, it is a reason to strive for gaining more knowledge about the effects of such decisions.

On this basis, one should not disvalue enhancement, but can look forward to it yielding greater diversity among the human population. People will arrive at their enhancement choice after having considered a wide range of possible enhancements that they might value. The act of taking a decisive action over one's biological character offers a way of affirming one's place in the world, of cultivating the authenticity that is critical to justifying enhancement.

Conclusion

The argument from biocultural capital indicates that the pursuit of human enhancements is an integral part of cultural development. It is a process of acquiring ideas, goods, assets, and experiences that valuably marks out one from another, either as an individual or as a member of a community. While one might – and should - scrutinize the merits of individual choices, we should recognize the limits of this scrutiny. Certainly, when one imagines the range of potential enhancements, the options are likely to be restricted to the goods around us – perhaps some enhancement to our bodies will make us more desirable, or a cognitive enhancer will make us more intelligent and more capable of understanding the world. Yet, if one looks closely at nature, there is no shortage of variations that can inform these imaginable choices. These observations should inspire how people conceptualize human enhancements. In this area, we learn from stories and tales that, themselves, become constitutive of the moral and cultural landscape of human enhancements. The prospect of human flight or of mimicking the capabilities of other animals, are carefully articulated in the stories of Superman and Spiderman respectively. The contribution of such cultural texts to debates within bioethics on human enhancement is most effectively as reminders of what enhanced humans might imagine as their possible modifications.⁷

This explanatory argument of biocultural capital achieves one important conclusion. It reveals that it is inappropriate for enhancement choices to be imposed on individuals by the state. While general consensus on enhancements might have legal force, they will not necessarily have a persuasive value since enhancements function within particular cultural contexts. As such, the precise value attached to any particular enhancement cannot be assumed to be a shared, universal good, particularly where choices of enhancements involve a trade-off. For example, if one chooses enhancement to achieve greater height, then one sacrifices the enjoyment of activities where too much height is a disadvantage. However, many such choices bear a close resemblance to the kinds of goods that are attained when improving health. In this sense, there is even further

⁷ A useful and beautifully written article by George J. Annas engages with some ideas, albeit to undermine the legitimacy of such applications of science.

reason to relax access to enhancement choices. Nevertheless, while the biocultural capital argument empowers individuals to make such decisions, such a trade-off cannot be calculated from an abstract vantage point. As such, the state's role is to enable such individual decision making to take place; its task is one of empowerment.

The argument from biocultural capital explains that the designation of a biological modification as a human enhancement does not correspond with some prescribed or abstract value system - hence, the earlier objection to the 'human' of 'human enhancements'. There is no good in itself against which one can objectively justify enhancements, other than the good of self-determination, which would be frustrated if enhancements were restricted. Neither is there always an objective, tangible good that can be unequivocally defended as beneficial to either the individual or the good of humanity. For instance, if I were to enhance the efficiency of my digestive system to allow me to assimilate foods that are generally shown to be unhealthy, it is difficult to argue that this is a tangible enhancement, other than through its allowing me to satisfy the desire of always wanting to eat foods that I find tasty but which would, otherwise, be unhealthy. While it is obvious that such a modification would be beneficial to me, it is unlikely to withstand the scrutiny of those who have no such desire. Such a choice also faces the criticism that one's taste cannot develop in a positive sense if one closes off the potential to find value in other tastes. So, if I were a twelve year old and really like McDonald's food, I might find value in enhancing my metabolism to assimilate such food, rather than to treat it like junk food. In doing so, I then restrict the possibility that - in failing to choose alternative foods - I would develop a taste for other foods.⁸ Yet, again, it seems premature to panic too much about such a prospect. Rather, it seems likely that one's taste will develop and that moderation will emerge. Similarly, we should have little objection to the pursuit of cosmetic surgery, nor worry too much that open access to such technology will lead to greater obsessions with employing such in the pursuit of bodily perfection, though there will undoubtedly be cases where this occurs. The point at which such pursuits becomes a destructive part of one's life is when there is cause for concern, but this is not how one should imagine a culture of human enhancements.

Importantly, my advocacy of human enhancements does not extend to the freedom to modify others - for example, through genetically engineering embryos - since this will extend the limit of my argumentation beyond what can be demonstrated here. More cautiously, my objective has been to explain the value of pursuing personal, biological enhancements and, as such, to suggest why such self-determination should not be withheld. My position does not reveal why people should pursue any particular forms of enhancement. To this end, my position also explains why there is a lack of resolve between bioliberal and bioconservative positions on the merits of human enhancement. On this, Parens (2005) argues that the two perspectives operate out of a different framework of virtue, whereby those who argue on behalf of enhancements consider that we should be 'creative' with our biology. Alternatively, those who argue against enhancements use the language of 'gifts' to describe the moral commitment to not tampering too much with nature.

⁸ I introduce the specific instance of a minor here to complicate our case. While I have not distinguished between adults and children, there are good reasons to presume the need to distinguish levels of freedom to modify and I do not extend my argument to adolescent freedoms here. However, following the English court case of Gillick competence (*Gillick v West Norfolk and Wisbech Area Health Authority* 1985), one might argue on behalf of such an ability to consent.

While, I am not making the same argument as Parens, I support a similar conclusion, which is to say that the middle ground - perhaps strong regulation - can be occupied only by those who are able to find value in the others' lifestyle.

In conclusion, asking why we should enhance ourselves limits the discussion prematurely. It prescribes a particular kind of moral justification, which might give reason to a choice that makes sense only in the particular. However, treating such actions as micro-ethical processes, contrasts with the macro-ethical task of regulating the commercial and non-medical use of such interventions. In short, I cannot offer a good reason for why any people should enhance themselves, since each reason would require my embedding the clause within a particular context that another individual might not deem to be valuable at all. So, improving my attention span, or enhancing my sexual function would require understanding the specific subjective conditions that give rise to that interest. Instead, I can give reasons for why a motorcyclist might value an enhancement to protect the durability of her head, or why a ballerina might welcome enhanced strength in specific parts of her body. I would also find it easy to argue why a mathematician or a chess player should welcome cognitive enhancements, why a surgeon should value the use of beat-blockers to steady her hand, or why a woman might desire larger/smaller breasts. These are all sensible human enhancements for particular kinds of people, but are not generally good enhancements for all kinds of people.

My discussion of these matters presumes the existence of a commercial market for human enhancements, as distinct from a state funded interest to enable citizens to take enhancement decisions. As such, the rationalisation for my position is not undermined by an argument from social justice, particularly as I will build into our heuristic the premise that the state funded system is reasonably effective at meeting healthcare needs for those who are suffering. Nevertheless, the concerns about regulation previously discussed will have important implications for the robustness of my position. That said, I suspect that one might not find reason to imbue the debate about the regulation of human enhancements with any greater moral concern than one might find relevant to discuss about the social injustice inherent to any market system, where individuals make choices based upon the means of disposable income. Thus, we should not presume that there is greater social injustice from the different kinds of enhancements individuals might select, compared with, say, the kinds of advantages afforded by the possession of mobile phones or cars. Some people will purchase a car, rather than take a holiday and many people will be able to afford neither. While a publicly funded system would be preferable to a private funded one, areas of human need are always likely to outweigh the funding priorities of lifestyle decisions, even if one can aspire to a certain level of care. As such, it is sensible to imagine a commercial structure to any culture where human enhancements are available. On this basis, the argument on behalf of human enhancements must come to terms with how people accumulate biocultural capital through the pursuit of various bodily practices.

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