

Evolutionary perspectives on enhancement ethics: from autonomy to service

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Forthcoming in the Hastings Center Report

Abstract

In enhancement ethics, the human evolutionary sciences have been largely perceived as supporting the liberal view on enhancement, where decisions to enhance are regulated predominantly by the principle of autonomy. In this paper I critique this view in light of recent scientific developments. Cultural evolutionary theory suggests a picture where individual interests are entangled with community interests, preventing a fruitful application of the principle of autonomy. This is particularly relevant for enhancement ethics since motivations to enhance are often *de facto* influenced by status hierarchies. The proposed ethical view is not one of collectivism, but rather one where principles of service and trust take center stage.

Keywords: ENHANCEMENT – EVOLUTION – AUTONOMY – STATUS HIERARCHIES
– TRUST – SERVICE

1. Introduction

Scientific theories are not necessary to make ethical arguments, and some proponents of the is-ought distinction might say they are never relevant. Nonetheless, ethicists often appeal to scientific developments, if nothing else, in order to add to the persuasiveness of their arguments and to detract from that of their rivals. Enhancement ethics in particular has often drawn on the evolutionary and psychological sciences. However, has this been done in a justified manner?

Two broad evolutionary arguments can be discerned. In the first, evolutionary perspectives on human are used to debunk concepts such as human nature and givenness, and thus to undermine ethical approaches relying on these concepts (Kass 2003; Sandel 2007). In the second argument, evolutionary perspectives are used to highlight the maladapted state of human phenotypes, and

thus to emphasize the potential benefits of enhancement. One could think of the negative evolutionary argument as supporting the *right* to enhancement, and the positive argument as supporting a *duty* to enhancement. As such, both arguments seem to bolster what can be called the “liberal view” on enhancement, where the principle of individual autonomy weighs most strongly on ethical deliberation.

Depending on one’s concept of liberty, the epithet “liberal” spans the political spectrum from social liberalism to libertarianism (cf. Gaus and Schmidtz 2018). However, in context of enhancement ethics, many of the most prominent liberal views have assumed a strong libertarian flavor (Harris 2007; Savulescu, Sandberg, and Kahane 2014a; Kahane and Savulescu 2015; Bostrom and Sandberg 2007; Agar 2005).¹ Hence for the purposes of this paper we will operate with the following understanding of the liberal view on enhancement, where distributive justice is acknowledged but Millian autonomy emphasized:

THE LIBERAL VIEW ON ENHANCEMENT. Enhancements are to be judged as Millian ‘experiments in living’: as long as they are justly distributed, and do not actively harm others, they are ethically commendable as expressions of individual autonomy.

The purpose of this article is to examine more carefully how precisely evolutionary arguments have been used to bolster the liberal view, and to evaluate to what extent these arguments are sound.

The negative part of the paper (sections 2, 3, and 4) sketches how liberal-libertarian views ignore or downplay the role of the social and cultural environments, something that is untenable given recent scientific developments in cultural evolutionary theory and evolutionary psychology. The upshot is that current maladaptedness is *not necessarily* grounds for enhancement, but can also be grounds for changing the social and cultural environments. This part of the paper makes a structurally similar argument to the one Buchanan and Powell have recently made in a series of papers and a book (Buchanan and Powell 2018; 2015; Powell and Buchanan 2016). However, where this paper diverges is in what positive lessons should be drawn from recent evolutionary science.

¹ The reason for this lies in the history of population eugenics and state intrusion. For further discussion of the libertarian approach of many enhancement ethicists, see (Sparrow 2011).

In the positive part of the paper (sections 5 and 6), I submit that the very distinction between the process of individual valuing/deliberation and the community's valuing/deliberation is undermined. This undermines the basis for the primacy of individual autonomy, and with it, for the liberal view. As a concrete example, it is discussed how the evolution of status hierarchies, a type of social structure, shows how what is important for us as individuals is very often shaped by what happens to be important for others. This is especially true of desires to enhance, which are at least often (and perhaps always) undertaken for status-related reasons (this is argued in detail in section 5). Approaching enhancements as Millian experiments is thus an unsatisfactory abstraction of how decisions to enhance are actually embedded in a social network. As an alternative, the "service view on enhancement" is suggested, where it is explicitly recognized that the most important individual valuing is not directed at own goods in the strict sense, but at the goods of others and of the community at large.

2. Evolution and the Liberal View of Enhancement

The history of eugenics illustrates how readily evolutionary theory can be coopted for ethical and political ends. A mere decade after *On the Origin of Species*, Francis Galton was already pointing out the implications of the theory of natural selection were such that it would be "quite practicable to produce a highly gifted race of men by judicious marriages during several consecutive generations" (Galton 1869; cited in Kevles 1985 p. 4). Such goals were also driven by fears that the high fertility of lower socioeconomic classes would lead to the deterioration of "human stock". In fact, this seemed to be exactly what the theory of natural selection implied, and this reasoning was so persuasive that many leading intellectuals of the early 20th century identified as eugenicists (Bernard Shaw, Winston Churchill, Pearson, R.A. Fisher, and many others).² The history of eugenics is a reminder of how misguided scientific reasoning can be used to support ethically disastrous conclusions.

Turning to the debate of the past two decades or so, two types of evolutionary argument can be discerned in the context of enhancement ethics. The first sets out to debunk concepts such as human nature as without reference or nonsensical, and by doing so, to undermine views where

² As a morbidly fascinating illustration of just how mainstream this brand of eugenics was: in the 11th edition of the *Encyclopedia Britannica*, the article on "Civilization" stated that the human progress was to depend at least in part on "the organic betterment of the race through wise application of the laws of heredity" (cited in Kevles 1985, 63).

respect for human nature is a constraint on individual autonomy (e.g. Kass 2003). Thus it is relatively straightforward to show that, if human nature refers to some set of essential properties, then there cannot be such thing as ‘human nature’ (see Hull 1986 for a first formulation of this argument). There have been some attempts to resuscitate human nature as a scientifically useful concept (e.g. Ramsey 2013), but nothing substantive enough to support ethical views where human nature is accorded intrinsic moral value are on the horizon (Hannon and Lewens 2018).

The concept of “givenness” (Sandel 2007) has suffered a similar fate. An even cursory familiarity with human evolution makes it abundantly clear that humans have been technologically enhancing their “given” capacities since the dawn of the *Homo* genus about two million years ago (Harris 2007). Going out to manipulate ourselves and the world around us is business as usual. Our evolutionary history thus seems to paint humans as enterprising, autonomous individuals.

The focus of this paper will be on the second, positive evolutionary argument. In brief, the predominant strategy has been to draw on the view that the vast majority of human evolution took place in an environment of small-scale hunter-gatherer societies, and hence that human traits and human cognition in particular are designed for the specific challenges of the ancestral environment. In other words, humans are great at the type of ecological problems posed by Paleolithic tribal living, but relatively hopeless when it comes the challenges posed in an age of urbanized, anonymous, and increasingly online living.

Here is an instance of such an argument:

After all, our brains are products of evolution, which is a blind process that hardly seeks to maximize the good, or make us morally best. Evolution ‘cares’ only about reproductive success. Moreover, even if the evolutionary process somehow led to what is in one sense an optimal result, this result may be optimal only in the environment in which our very distant ancestors lived. It is very unlikely to be optimal in our utterly different modern environment. (There was, for example, no police in the primeval savannas, nor were there planes or hijackers . . .) (Kahane and Savulescu 2015, p. 138)

What is the function of this evolutionary argument for ethical reasoning? What such statements of human evolution do is, in effect, to shift the utilitarian calculus in favor of enhancement: the current state of human phenotypes is very maladapted, and this maladaptedness is engrained in our genetic

makeup (i.e., our cognitive development is still largely the same as it was before the end of the last ice age), and hence the potential benefits from enhancement are very large.

The upshot is that evolutionary arguments, both in negative and positive guise, have been used to advance “enthusiasm” for enhancement, where the benefits of enhancement are emphasized (Parens 2015). Interestingly, there is nothing in the liberal view that implies enthusiasm. If an enhancement technology erodes individual autonomy, then the liberal view advises caution.³

Why the liberal view is most closely identified with enthusiasm makes more sense when we situate it within the larger context of liberal views going back to the Enlightenment. Think of how a liberal view such as that of Condorcet identified barriers to autonomy in “ignorance” and the “yoke of authority” (political or religious authority), and that “progress” could only be achieved by overcoming these barriers. Today liberal views do not speak of ignorance but of “cognitive biases” (Bostrom and Ord 2006; Caviola et al. 2014), and one could almost be tempted to think that thinkers like Leonard Kass or Michael Sandel are perceived as vestiges of the “yoke of authority”. However, interestingly, the liberal views supported by the positive evolutionary argument above go further still, because the barriers to progress are found in potentially all evolved human phenotypes. That is why the old liberal interventions of policy and education are insufficient: the maladaptedness is so deep that technological phenotypic or genotypic interventions are necessary (“a boost by biomedical means”: Persson and Savulescu 2019). In this way, the seeds for transhumanism and with it, the demise of liberalism, are contained within the liberal view itself (because once even desires and thought processes are viewed as suboptimal and untrustworthy, autonomy loses its value as a principle).⁴

Variations on this positive evolutionary argument have been widely adopted by prominent ethicists (Bostrom and Ord 2006; Persson and Savulescu 2012; Kahane and Savulescu 2015; Pugh, Kahane, and Savulescu 2016; Earp and Savulescu 2020)⁵. In this way, enhancement ethics has been strongly influenced by a popular picture of human evolution based on the evolutionary

³ For instance, cautionary arguments against moral enhancement through pharmaceutical means have been grounded on the fact they would erode autonomy (Harris and Chan 2010).

⁴ These seeds only come to clear fruition in the work of Yuval Harari (Harari 2017); see discussion in Desmond (forthcoming).

⁵ For direct quotes, consider for instance, Bostrom and Ord 2006, p. 665-666: “... our current environment is in many respects very different from that of our evolutionary ancestors ... [and] places very different demands on cognitive functioning than did an illiterate life on the savanna”. Or alternatively, Pugh, Kahane, and Savulescu 2016, p. 407: “.. the relatively contingent and arbitrary features of human nature, selected as they were blind evolutionary processes...”

psychology of the 1980s and 1990s.⁶ For the purposes of this article, I will term this view of human evolution as an *individual-centered*. In this view, the process of adaptation is analyzed in terms of interactions between individual and its direct environment, and hence when the environment changes, the individual is no longer adaptive.

In sum, the individual-centered view of evolution both erases barriers on individual autonomy such as human nature or givenness, but in particular also supports a libertarian approach to individual autonomy. It is a type of reasoning where the impacts of enhancement on the individual phenotypes are given most weight, and where (as will be argued in the next sections) abstraction is made of how the social environment impacts individual decision-making and how individual actions can impact social norms. It supports, for instance, defining individual well-being without reference to others or the community: for instance, as a “state of an [*individual*] person’s biology or psychology” (Savulescu, Sandberg, and Kahane 2014b, 7; my emphasis). Hence, if evolutionary science is perceived as telling us that the biology and psychology of human beings are, by and large, stuck in suboptimal, arbitrary states of affairs, then this forms a strong rationale for a libertarian view where one sets out to improve well-being by improving individual capacities by any means.

3. Group-Centered Views

Individual interaction with the environment, mediated through innate cognitive mechanisms or mechanisms of individual learning, are important, but they do not tell the entire story of human behavior and how it evolved: social learning must be taken into consideration as well (see discussion in Boyd and Richerson 1985). One particularly oft-cited example is how human and chimpanzee toddlers are about equally good at individual problem-solving, but that human toddlers vastly outperform young chimpanzees when it comes to imitating adults (Herrmann et al. 2007). And imitation is the most basic form of social learning, where knowledge and skills are transmitted from one individual to the next, and from the older generation to the younger generation. Social learning is at the basis of how humans accumulate know-how over the

⁶ To be more precise, a distinction should be made, following David Buller (Buller 2006, 881), between “evolutionary psychology”, the scientific theory, and “Evolutionary Psychology”, the representation in wider academic circles and popular media. While the former makes narrow, testable predictions about certain cognitive process (e.g. about mate preferences, sexual taboos, or emotions as disgust: consult Buss 2019), the latter makes sweeping statements about all human traits. Enhancement ethics seems to have been influenced by Evolutionary Psychology.

generation (Sterelny 2012), and has often been argued as central for the geographic expansion and population growth (e.g. Henrich 2016).

This means that the environment of most direct importance to individual humans is the social-cultural environment, which consists of the behavioral habits, the moral norms, or the technological know-how of others in the community. This remains true, a fortiori, today: think of how a person's life history is often determined by how well they navigate various social environments, ranging from educational institutions to professional environments. An important part of the story of human evolution and of our evolved cognition is not simply what cognitive mechanisms we inherited from Paleolithic times, but how we learn from the social-cultural environments we develop in. This can be called the 'group-centered' view of human evolution, where the community is the central evolutionary unit, adapting to changes in the external environment and undergoing selective competition (e.g., in warfare).

Note that there is no simple nature versus nurture dichotomy at stake here. Some cognitive mechanisms, such as some aspects of mate preferences or sexual taboos (e.g. incest), seem relatively impervious to changes in the social-cultural environment. Moreover, humans possess innate cognitive mechanisms that facilitate social learning. Thus, for instance, our cognition is characterized by a "success bias": we tend to pay attention to and imitate individuals who display a high degree of competence in an activity (e.g. hunting), or that are successful in some other way. Similarly, there are conformism biases, where the majority is imitated, and prestige biases, where high-status individuals are imitated (for an overview, see Henrich, Boyd, and Richerson 2008). Thus while the behavior of the majority may change across different social-cultural environments, or the characteristics of high-status individuals, our cognitive tendency to pay attention to the majority or to high-status individuals does not.

Two lessons can be drawn from these considerations. The first is that the case for the moral necessity of technological enhancement is likely overstated. Persson and Savulescu have argued our moral psychology is in need of a "boost" from pharmacological enhancement (Persson and Savulescu 2012; 2019). Perhaps they are right – it is still an uncertain and speculative matter – but the conclusion is not supported by the view suggested by cultural evolutionary theory, where changes to the social-cultural environment are very potent causes of change in individual behavior. This lesson has already been drawn in detail in context of the ethics of enhancement (Buchanan and Powell 2018) and beyond (Wilson 2019), and will not be further discussed here.

Instead, I would like to focus on how a lesson that goes to the heart of principle of autonomy. Conceiving of wellbeing in a libertarian way, fleshed out in terms of individual capacities and activities that an individual can change and manipulate in any way he or she sees fit, is not supported by the group-centered view of human evolution. Individual actions have ripple effects throughout the community, by altering relationships and strengthening or undermining norms. The *consequences* of action cannot be confined so easily to the individual, but even the *reasoning process* itself cannot be thought of as independent from the community. Individuals grow, learn, and flourish only through the nurturing of the community, family, and being taught by the older generation. Conceptualizing ethical decisions as actions of self-determining reason is an abstraction – a justified abstraction, perhaps, in certain contexts, but as I will now endeavor to show, not one that can be justified when it comes to decisions to enhance.

4. Status and Decisions to Enhance

One of the most concrete illustrations of how the group-centered view of evolution offers no support for the liberal view is how our psychology is intertwined with *status hierarchies*, and how decisions to enhance in particular seem to be driven by status norms in the social-cultural environment.

Status hierarchies minimize conflict in a group. Thus the ‘pecking order’ among chickens allows a group of chickens to work out which individual may peck at food first, which individual second, and so on, without conflict. Such hierarchies are widespread among mammals, birds, fish, as well as invertebrates (Ellis 1995) – and also among humans. The main difference lies in how humans are not determined by dominance alone. Prestige is freely given to an individual (as opposed to forcibly taken), and indicates that the person is a high degree of *competence* in some activity, such that others would benefit by learning from him or her. Hence others confer various privileges on the prestigious individual, expecting the individual to contribute to their followers in some way.

Prestige hierarchies attempt to solve the same evolutionary problem as dominance hierarchies – work out how to minimize intragroup conflict when desirable resources (food, shelter, mates) are scarce. However, they do so by placing the individuals with most desirable

competences at the top of the hierarchy, thus allowing status hierarchies to work to the benefit of the group as much as possible (and more so than pure dominance hierarchies).

Why should we care about the evolution and psychology of social status in enhancement ethics? Because the types of enhancement humans are in fact interested in, and moreover, the types that seem ethically problematic, are very often those that involve status. Consider an enhancement that clearly does not have anything to do with status: for instance, some hypothetical drug allowing the user to blink “abnormally” fast. Why is there no industry researching and investing in breakthroughs for blinking drugs? Why are lawmakers and ethicists not debating the acceptability of such enhancements? Nobody cares: nothing is at stake. Perhaps some biohacker might find some interest in such enhancements, but even so, others would most likely just let the biohacker proceed in some state of bemused tolerance. Enhancing the capacity to blink is truly a Millian “experiment of living”.

Conversely, if we look at some of the most controversial enhancement types, concerns about status never seem far off, and very often are directly involved. As perhaps the most basic illustration, consider height enhancement. As any evolutionary psychologist would say: height, as a dimension of physical formidability, is unconsciously associated with having high status. This cognitive mechanism is present in humans, but can be found across animal species. Together with strength and aggression, height is one of the main indicators for status in various species (together with strength and aggression: Ellis 1994; 1995). Humans may otherwise not have much in common with lizards, but both assign a higher rank to large individuals. Thus demographic regression shows that height correlates with military and corporate rank, and with income (Blaker et al. 2013). Taller males in particular benefit from height, as they are perceived as possessing superior leadership, intelligence, and even health compared to short males (van Vugt and Tybur 2015; Blaker et al. 2013).

Given this background, the medical and parental reactions to “idiopathic short stature” – the name for the condition of short stature without any underlying pathology – are perhaps sad, but unsurprising from evolutionary perspective. Parents report wanting to enhance their child’s height for the sake of their well-being, and to prevent any disadvantages they might have in their social life and career (Allen 2017, p. 146). The FDA sanctions human growth hormone therapy when the child is in approximately the 1st percentile for height – regardless of whether the child is actually suffering from a growth hormone deficiency. In short, even though what has counted as

‘short’ has fluctuated considerably over history (Steckel 1995), idiopathic short stature is viewed as a “disability” (Allen 2017, 150).

To what extent are the parents who authorize hGH therapy for their short child making an *autonomous* decision? To what extent are they engaging in an ‘experiment of living’? What seems to in fact be the case is their decision is driven by fears that their child will be bullied, passed over for jobs, and so on. The norms of the social-cultural environment – manifested in the prejudices of others towards short stature – are driving the parents’ decisions.

Similar points could be made of other pharmaceutical enhancements where significant empirical data exist. In one of the few empirical studies of the motivations of athletes to dope (Kegelaers et al. 2018), the connection with status becomes immediately clear: most of the motivations not directly pertaining to athletic performance concern improving one’s image, increasing respect from others, gaining friends, obtaining “hero status”, more media attention, and making financial gains – these are all dimensions of social status. It is doubtful that athletes would be interested in taking dangerous substances to run or cycle faster if there were not significant prestige (and power, in the form of money) to be earned with winning athletic competitions.

Similarly, when anabolic steroids are used for athletic success; increasingly they are used as cosmetic enhancements, i.e., to increase muscle mass. Studies of the motivations of users of anabolic steroid point to the desire for “enhanced confidence” (Wright, Grogan, and Hunter 2000), but basic evolutionary psychology suggests here that users care about muscle mass because, as a way of increasing one’s physical formidability, it increases perceived dominance status (Buss 2019).

How deep is the link between enhancement and status increases? Enhancements do not need to be used to increase status, but they do provide the *potential* to do so: improving capacities allows for the individual to either gain a competitive advantage (in a competition for dominance) or to provide a better service (and hence increased prestige). The evolutionary perspective on status provides a reason to believe that motivations to enhance will also *actually* involve status-related motivations. Sensitivity to status is engrained in our evolved psychology, and can be discerned, for instance, in studies documenting how humans – including toddlers – quickly make decisions about the relative status of individuals, pay disproportionate attention to high-status individuals, and are inclined to imitate them (Atkisson, O’Brien, and Mesoudi 2012; Chudek et al. 2012).

Moreover, if one considers the advantages that status confers, this makes sense: Anderson et al. conclude in their review study that social status affects subjective well-being, self-esteem, and mental and physical health (Anderson, Hildreth, and Howland 2015) – people from lower socio-economic classes have higher chance of disease, and mortality from all causes (Wilkinson 2001; Marmot 2005). In their review study, Anderson et al. conclude that our evolved desire for status is a *universal* human motivator: it is discerned across cultures, genders, ages, and personalities (Anderson, Hildreth, and Howland 2015).

So there are good reasons why motivations to enhance are often grounded in status-related motivations. Yet, the depth of the link between status and enhancement seems to depend in part on the definition of enhancement. Some ameliorations of human capacities are primarily aimed at health: vaccinations stimulate adaptive immunity, and glasses correct for myopia. Motivations to vaccinate have little to do with status. Whether this class of ameliorations forms a counterexample or not would depend on whether they would be categorized as “therapy” or “enhancement” (Juengst and Moseley 2019). Similarly, some ameliorations, like cosmetic surgery or muscle enhancements, also seem to have little to do with status: they aim at cosmetic enhancement and/or sexual attractiveness. However, here less clear-cut to judge that status has nothing to do with such motivations: for instance, for males, success at attracting mates gives rise to increased social status, and vice versa (C. R. von Rueden and Jaeggi 2016).

How deep the link between enhancement and status goes is not something this paper will take a stand on, but even a significant link is sufficient to cast doubt on the principle of individual autonomy. Decisions to enhance may be justified as means to enhance personal well-being (Savulescu, Sandberg, and Kahane 2014b), but the intimate link between status and enhancement casts doubt on whether this decision is genuinely an autonomous one. Consider the chronic anabolic steroid-user, who may believe that enhanced muscle mass is integral to his well-being: in reality the user’s cognitive mechanisms may be hijacked by misguided ideas about what will give him status, self-esteem, or recognition. The challenge here is not that genuine autonomy should be sifted from ersatz manifestations, but rather that *all* our decisions to enhance are influenced by our social-cultural environment, and hence the question becomes how this influence should be directed.

Cognitive enhancement is a special category and should be considered separately. Can one decide to cognitively enhance without regard for status? After all, intelligence has been argued to

be an intrinsic good: increasing one's intelligence is a good way to increase one's well-being (Savulescu, Sandberg, and Kahane 2014b).

It should be noted that technological cognitive enhancements are, by and large, still speculative. We still do not know which suites of genes correlate positively with intelligence, and are not able to select embryos for higher intelligence. Computer-brain interfaces promise to harness the power of the computer revolution (Sandberg 2014), but are still futuristic beyond the most basic of applications (and the latter do not represent much if any cognitive enhancement). The main class of empirically tested cognitive enhancers serve to release hormones and alter concentrations of neurotransmitters (Adderall, Modafinil or caffeine). However, these are crude and indirect cognitive enhancements: they enhance arousal and suppress sleep, but do not directly target useful cognitive abilities, such as problem-solving, memory, let alone specific competences like playing the violin.

Nonetheless, even in a crude form, pharmaceutical cognitive enhancements promise (or threaten) enough advantage for their users to be controversial. Far from being viewed as a means to enhance personal well-being, or as neutral expressions of individual autonomy, recent empirical research – where e.g. students taking cognitive enhancers is judged more harshly than surgeons or pilots doing the same – suggests that common folk intuitions about the ethical acceptability of enhancement are strongly influenced by perceptions of how enhancements are being used to further personal social status (see Desmond 2020b; Dinh, Humphries, and Chatterjee 2020).

By far the most effective cognitive enhancement is a non-technological one: education. One sign of just how effective education is can be seen in how life-histories of humans are organized around receiving education: education is obligatory for young children well under the age of consent, and children must spend many years of their life receiving education. Another sign is how allocations of status, in the form of occupations, are largely made on the basis of certifications of educational attainment (“degrees” or “diplomas”). It would not be unfair to say that education is seen, by and large, today as the closest thing we have to a morally unambiguous good. Nobody denies that education is a good. On the contrary, denying an education to someone is even seen as depriving them of a basic human right. The U.N. charter on human rights lists the right to education under article 26 – just after article 25, the right to “a standard of living adequate for health and well-being”.

Yet even education – like any cognitive enhancement, including artefacts of extended cognition (writing, Internet) – is also often undertaken for status-related reasons. Because allocations of status are made on basis of education, there can be very intense competition in order to get into educational institutions that will give these status-conferring certificates. This competition for is striking in that the body of human knowledge that forms the basis of education is public domain, and freely available regardless of one’s status. The works of Shakespeare, Plato, or Newton are freely available for anyone to read and learn from. Yet, certifications of educational attainment convey more than mere competence: they can come to convey prestige in themselves. This may of course be due to the quality of instruction, but the dynamics are more complex: for instance, alumni who go on to hold prestigious occupations will then reflect on the prestige of an institution. In sum, education can also become a tool for dominance, a tool in the competition for scarce, high-status occupations.

When we look back in history, there were times when this dual nature of education was more apparent than it is today. After all, for most of history, the distribution of the competences to read and write were not ‘just’ at all, and limited to high-status individuals. In ancient Greece, when systematic education was still a relatively new development in human history, sophists and philosophers alike were viewed with suspicion. Thus Isocrates (436-338 BC) was charged with “corrupting the youth”: endowing them with rhetorical skill in order to gain an unfair advantage over peers during court trials or debates over policy. Socrates, of course, was charged and sentenced to death over the same accusation: education, and the rhetorical and argumentative supremacy it afforded, was viewed with suspicion.

Many parents today are somehow aware, consciously or not, of this aspect of education. It is well documented how certain parents are more actively involved so that their children will gain access to status-enhancing educational institutions (Fingerman et al. 2012). The most common motivations cited are concern for the child’s future “well-being” and “success”, where the latter specifically means success in the competition for status (Segrin et al. 2013).⁷

In sum, the ethically controversial enhancement technologies and interventions are often those that can be used as tools in competition for status, simply because such technologies and interventions allow their users to increase their competence. Competence can lead to prestige – in

⁷ There are question marks how effective overparenting is in the longer term, especially with regards to the effect on independence and academic motivation (Schiffirin and Liss 2017).

which case the society as a whole benefits – or can be converted into dominance – in which case mainly the individual benefits. This dual nature of enhancement is observable, even though not always recognized, in the most powerful cognitive enhancement currently available: education.

5. Dealing Ethically with Status and Enhancement

What is the appropriate ethical response to, for instance, parents embarking on hGH therapy in a desperate attempt to secure their child’s future well-being? Their decision, given a social-cultural environment of prejudice towards short stature, may very well be the rational one and in the best interests of the child. However, an ethical analysis that champions parental autonomy to further their child’s interests in the best way they see fit is woefully incomplete if it does not address the fact that this decision is driven by the prejudices of others and cannot really be termed a “free” decision.⁸ Similarly, other decisions to enhance – whether somatic enhancements such as performance enhancing drugs, or cognitive enhancements including education – are significantly influenced by status norms and thus the valuing of others.

This is why the ethical usefulness of the concept of autonomy breaks down. If autonomy is applied strictly, then parents who embark on hGH therapy for their child should be condemned: their decision is driven by evolutionary primitive status norms and not their second-order desires. Yet it does seem right to condemn parents in this way. They may, justifiably, reason that they do not have the power to change the prejudices against short stature, and so the least bad option they have at their disposal is hGH therapy. In other words, a utilitarian reasoning prioritizing the benefits for the child could justify hGH therapy – despite the fact that the parents’ decision is not fully autonomous and, in this sense, “coerced” by the social-cultural environment.

Hence, the question becomes: what principles should guide ethical reasoning about enhancement when individuals are embedded in social networks characterized by status hierarchies? While, as an ethicist, one’s first association with the word “status” might be power, oppression, or some social structure running counter to the principle of autonomy, the scientific

⁸ To flesh this out in a Frankfurtian sense: while the parents desire greater height for their child, their second-order desire may not be lined up in the same way. Other things being equal, the parents would presumably much prefer there not to be widespread prejudice against short stature, and hence they would presumably not desire that they had a desire for their child to be taller.

research on the evolutionary anthropology of status paints a much more nuanced and ethically interesting picture.

Recall that status hierarchies in most animal species are characterized by dominance, whereas human status hierarchies are additionally characterized by prestige, which is the type of status that is freely conferred (i.e., not obtained through violence or the threat of violence) in recognition of a special competence or service rendered. Thus, prestige hierarchies represent ways of organizing status hierarchies (and so to avoid overt conflict about who gets preferential access to resources) in ways that best benefit communities: those assigned high status are not the largest or strongest individuals, but those individuals from whom the community stands most to benefit.

However, human status hierarchies have a significant element of dominance present as well. Job titles can signify competence (and hence prestige) but also the power to hire and fire, promote and demote, and hence are also positions of dominance (Henrich and Gil-White 2001). The threat that a prestigious individual abuses his or her position in the status hierarchy purely for selfish gain is always present. In fact, even though the aims of corporations and of politics is ostensibly to benefit the community, the individual motivations of corporate and political leaders may be driven by dominance rather than prestige: the ‘dark triad’ of personality traits are significantly more prevalent among corporate and political leaders compared to the general population (Machiavellianism, narcissism, psychopathy; see van Vugt and Tybur 2015). Even if an individual was originally motivated by prestige, upon obtaining a position of prestige they by definition hold sway over large swathes of the community, and hence at some later time they can, in principle, convert their social networks into coalitions to suppress a rival (see van Vugt and Tybur 2015, p. 802). Dominance infiltrates prestige hierarchies, and dominance behaviors always lurk around the corner.

This is why human societies have all sorts of moral norms regulating status hierarchies. Some evolutionary psychologists speak of the ‘service-for-prestige’ dynamic, where high-status individuals are expected to provide some form of service (expertise, risk, judgment, time) in exchange for prestige (Price and Van Vugt 2014). These expectations form norms that constrain high-status individuals, and when the latter flouts the norms, they are punished – in the very least by losing followers, and hence status (Price and Van Vugt 2014). Such norms act to counteract the possibility that an individual will convert his or her position of prestige into one of dominance that largely benefits the individual.

There are two lessons to be drawn from this by way of contrast with the liberal view on enhancement. The first is that there is little support for assigning such a prominent place to the no-harm principle as the main constraint on individual autonomy (together with the principle of justice). Usually “harm” is understood as provoking pain in others or as infringing on others’ rights – but the evolutionary perspective sketched above suggests that the consequences of enhancement include impacts on social norms and competition for status. This perspective implies that the *Homo sapiens*, by default, operates with what could be called an *ethos of service*: the social-cultural environment is constituted by norms and default expectations that high-prestige individuals will contribute in some way to the good of the community – by putting their competence to good use, teaching others how to reach similar levels of competence, or by carrying out public displays of altruism. This is the *default*, in the sense that it describes a norm and not all actual, empirical human behavior: self-directed behaviors that damage the community are ubiquitous in human societies. The threat of zero-sum, perverse competitions for dominance is ever present, and something service-for-prestige norms attempt to avoid.

Hence cultural evolutionary theory lends little support to the libertarian idea that, as long as nobody else is harmed by enhancement, an individual should be able to do as they please. Enhancement for the sake of “subjective well-being” (which, as we have seen, is often *de facto* intertwined with social status), even when no fundamental rights are infringed upon, can serve to increase competition for dominance. This is harmful for a community, since it weakens the information flow and cooperative increases in knowledge and competence that are stimulated in an ethos of service (Henrich and Gil-White 2001).

The second lesson targets social liberal concepts of distributive justice. Enhancements are not *merely* personal goods to be distributed fairly. High-status do confer all sorts of advantages on the individual, and in this respect both status and status-increasing enhancements can be considered personal goods, but high prestige entails responsibilities as well as privileges. High prestige individuals are expected to contribute substantially to the community, in a manner commensurate with the degree of prestige conferred. The benefits of individual prestige thus extend to the community, and thus enhancements are also community-level goods.

To add clarification by means of contrast, consider Rawls’s concern with “social and economic advantages” is primarily a concern with how they should be fairly distributed (Rawls [1971] 1999), and this is regulated by a different principle of justice to that determining what rights

and duties each person is to have. Rawls conceptualizes “social and economic advantages” as goods that individuals should *receive* (via the principle of equality of opportunity), but abstracts away from the empirical reality that these advantages are (at least in prestige hierarchies) not obtained through force or unfairness, but rather through the gifting by others in exchange for services rendered. Conceiving of status merely as “privilege” accruing to the individual person is only a part of the story. Rawls may still be *justified* in conceptualizing of privileges in this individualistic manner – this is not a critique of Rawls – but this particular liberal tenet underlying concepts of distributive justice is not supported by the cultural evolutionary theory of human status hierarchies.

Concretely, the upshot is that enhancements involve *prosocial responsibilities* as well as *privileges*. Even if enhancements would be distributed fairly according to some principle of justice, the ethos of service could still be eroded if individuals were deciding to enhance without any intentions to use their enhanced state (and higher status) to benefit the community. The principles of justice would impose some level playing field, but the predominant interaction between individuals would be competitive and directed towards dominance, instead of towards service.

6. The service view on enhancement

The negative purpose of this article was to argue that the liberal view is not supported by recent scientific developments in human evolution and evolutionary psychology – unlike often presupposed in enhancement ethics. Three propositions (hypotheses and/or systematic observations) stand out: (1) the consequences of enhancement extend into others’ lives, and potentially negatively so by engendering perverse status competition, (2) the social good of enhancement safeguarded by prosocial intentions of individuals (following service-for-prestige norms), and not necessarily only by principles of distributive justice, and (3) decisions to enhance are strongly influenced by the social-cultural environment. Together they undermine various core elements in the liberal view: the no-harm principle, distributive justice, and even the very concept of autonomy.

Instead the following view can be proposed, where it is explicitly acknowledged that: enhancements can and will be used to increase social status, that the effects of enhancement on an individual can extend beyond that individual’s capacities, and that the user’s decision to enhance

is being influenced by norms and values in the community. The ethical question thus does not become how to maintain autonomy, but how to direct enhancement in a way with the most beneficial consequences for the community. These consequences are referred to by the notion of “service”:

THE SERVICE VIEW ON ENHANCEMENT. Since enhancements are tools to increase competence and status of the individual, they should be judged according to how they allow for a service to the community and according to how they contribute to or detract from the ethos of service.

Note that the service view does not “follow” from the evolutionary perspective sketched throughout this paper. In this sense the is-ought gap is not breached: there is an implicit ethical assumption that the ethos of service is in fact to be valued, and something that *ought* to be conserved. Evolutionary sciences only tell us that human evolutionary success has been dependent on a psychology of social learning and prestige hierarchies; they also give information about the consequences of enhancement and of perverse status competition. How these consequences are to be valued is not directly dictated by this scientific knowledge.

There are two concrete implications of the service view I would like to highlight. The first is a cautionary argument, as a way to counterbalance how the liberal view has been predominantly used for enhancement enthusiasm.⁹ This can more formally be represented in argument form as the *cautionary argument from service*:

1. Status is a resource that is both important and in finite supply. Hence there is competition for status.
2. Since many enhancement technologies endow their users with superior competence, they help their users accrue prestige and are thus tools in the competition for status.

⁹ Note that, just as the liberal view can support caution (when enhancements threaten autonomy), the service view can support enthusiasm for novel enhancements *on condition that* such enhancements help individuals serve their community. Hence amphetamine-use by college students solely in order to enhance their own later privilege (through high-status jobs) is difficult to justify according to the service view, but amphetamine-use by pilots or surgeons to better provide professional services could be more easily justified. In this way the service view corresponds more closely to common sense than the liberal view does: see (Desmond 2020b).

3. High-prestige individuals can convert their competence prestige into dominance, where their competence and alliances are deployed without regard for the good of the community.
4. The latter scenario represents an erosion of the ‘ethos of service’ and of trust in high-status individuals.

The argument from trust does not provide a moral red line, or “permanent constraint” on autonomy (in the words of Clarke 2016). Rather, it seeks to guide autonomous decision making in a different way than the dominant liberal view does. It outlines how *wiser* decisions can be made: it outlines how individual lives are interwoven with status hierarchies, and how perverse competitions for dominance can inadvertently affect one’s source of self-esteem and push one’s life experiments in unwise directions (e.g. towards prioritizing wealth). It also acknowledges how one’s very personal choices – regarding education or profession – have ripple effects far beyond the narrow confines of one’s personal life. The concept of one’s “own” life is itself an abstraction that, upon closer analysis, cannot really be picked out: we are formed by our parents, teachers, etc.; our deepest concerns are not strictly separable from those of our family or friends; and even in professional life, our economic value is determined by the extent to which others (clients, patients, customers, etc.) value our professional activity.¹⁰

Sophisticated liberal views may better deal with these considerations, for instance distinguishing between genuine and merely apparent autonomy. Also the concern for distributive justice is based on a dissatisfaction with a purely negative concept of freedom (freedom from interference), and social liberals will be concerned with the perverse competition that can arise from exaggerated individualism.

Nonetheless, even though the main concern has been to critique the libertarian views on enhancement (as these, arguably, have tended to predominate over recent enhancement ethics), the service view also diverges from social liberal views, especially with regards to *policy* implications.

Concerns for distributive justice support policies that enhance opportunity, and sometimes also coercive policies. For instance, an unfair distribution of socioeconomic privileges can compromise equality of opportunity, and ultimate basic rights. Hence the policy of taxation, which

¹⁰ In an interesting convergence of nomenclature (and of underlying insight), sociologists tend to define “professionals” not as referring to a full-time or highly-paid or high prestige activity, but rather an activity that is directed towards a “service ideal”. See discussion in (Desmond 2020a).

both supports equality of opportunity through public schools and (at least some) health care in developed countries, as well as imposes considerable constraints on individual freedom (citizens are not given the option to “opt out” of taxation). By contrast, the service view supports softer policy, and education and character development in particular. The reason for this is that it is much more difficult to discern whether an individual is acting out of service compared to judging whether rights have been infringed upon. Imposing service coercively would only stimulate the age-old Machiavellian strategies of claiming to act out of service while surreptitiously advancing one’s own interests.

As an illustration of this contrast, consider again the case of height enhancement. A coercive policy could, for instance, forbid hGH therapy without any underlying medical pathology, or it could increase retributive punishments for the bullies of short children or discriminating employers. By contrast, an educational approach would seek to raise awareness of: how we – like many non-human animals – unconsciously associate physical size with status; how this association has very little sense in contemporary society, where competence is determined by cognitive ability or willingness to learn from others rather than height. A separate education for the general population – the way schools have educational programs that suppress innate tendencies in high-status children to bully low-status children (Redhead, Cheng, and O’Gorman 2018) – would help the population at large to reduce such unconscious biases towards short people.

Likewise, any new enhancement technology – for instance, if we discover in some years how CRISPR gene-editing can be used to enhance some important cognitive ability – should be evaluated in terms of any disrupting effect it may have on the prosocial ethos of service. If the gene-editing manipulation would increase competence immensely, there would need to be an expectation of greater service to safeguard the ethos of service.

This type of ethics of enhancement would parallel what happens in professional ethics. The professions are very dependent on their practitioners conforming and perpetuating an ethos of integrity; although recent decades have seen a push for more external control (e.g. auditing), most professional activities would not be possible if there were not considerable trust in professionals telling the truth and largely acting to further the service ideals of their profession (Desmond 2019). Similarly, in the case of enhancement technologies, one can easily imagine an ethos being imparted through education rather than prohibitive rules.

7. Conclusion

How autonomous are our Millian experiments of living? To what extent are these driven by the community we inhabit, with its norms, values, and patterns of behavior? And to what extent do our experiments of living – to enhance or not, for instance – affect the community which others inhabit?

Darwinian competition for status is neither good nor bad in itself. Without status on the basis of prestige social learning would be much less efficient: we learn imitating each other, and especially from imitating prestigious individuals, like role models. This social learning has been a pathway towards the ‘success’ of our species (Henrich 2016), and lies at the basis of human education: children have a bias to imitate parents, schoolchildren a bias to imitate their teachers. However, status need not always be placed in function of social learning (and the good of the group), but can instead be used as a tool to increase the dominance of the prestigious individual, so that that individual will be able to realize his or her preferences in any situation of conflicting interests.

In pointing to how enhancements, by their very nature, have the potential to erode an ethos of service, the argument from trust goes further than arguments that the distribution of enhancement technologies should be just (Buchanan et al. 2001) Enhancement technology can be justly distributed and the main ethos yet be one of dominance, where the technologies are used to achieve positions of dominance. Hence the ethics of enhancement should not just tell us when to enhance and when not to enhance, and who should and who should not receive enhancement, but also what the enhancements are to be used for. The latter cannot be determined by individual autonomy alone. Service – and not individual autonomy – is the core ethical principle by which enhancements are to be judged: whether the impacts of an enhancement leads to exploitation or an ethos of service.

WORD COUNT: 8200 words

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