
QUEERIN' THE PGD CLINIC: HUMAN ENHANCEMENT AND THE FUTURE OF BODILY DIVERSITY

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Working paper only. A version of this paper appeared as

Sparrow, R. 2013. Queerin' the PGD clinic: human enhancement and the future of bodily diversity. *Journal of Medical Humanities*. 34(2): 177-196. Published Online First March 10, 2013. DOI: 10.1007/s10912-013-9223-y.

Please cite that version.

ABSTRACT:

Disability activists influenced by queer theory and advocates of "human enhancement" have each disputed the idea that what is "normal" is normatively significant, which currently plays a key role in the regulation of pre-implantation genetic diagnosis (PGD). Previously, I have argued that the only way to avoid the implication that parents have strong reasons to select children of one sex (most plausibly, female) over the other is to affirm the moral significance of sexually dimorphic human biological norms. After outlining the logic that generates this conclusion, I investigate the extent to which it might also facilitate an alternative, progressive, opening up of the notion of the normal and of the criteria against which we should evaluate the relative merits of different forms of embodiment. This paper therefore investigates the implications of ideas derived from queer theory for the future of PGD and of PGD for the future of queerness.

Keywords: Queer theory; disability studies; bioethics; preimplantation genetic diagnosis (PGD); human enhancement; sex.

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I. INTRODUCTION

As Foucault (1994) famously observed, the institution of “the clinic” transcends any particular hospital or doctor’s waiting room. Most fundamentally, “the clinic” is a regime of power/knowledge that brings into existence and structures contemporary relations between medical science and human bodies. In recent years, the clinic has begun to concern itself not only with the bodies of existing individuals but with the bodies of those yet to be born.¹ Technologies of foetal ultrasound, selective termination, prenatal testing, and preimplantation genetic diagnosis (PGD) empower medical science to rule on the question of what sorts of human bodies are acceptable and what sort of bodies are not — and consequently should be aborted or “selected against” or otherwise prevented from coming into existence (Buchanan et al. 2000; Glover 2006; Mills 2011; Rose 2007).

Of these technologies, PGD, which involves the creation and “testing” of embryos outside the human body, is the least widely used. Yet it is also the technology that possesses the most power to determine what sorts of people get to be born and that has generated the most discussion about the future of human nature (Habermas 2003). Rather than being about the experiences of those who identify as queer when seeking PGD, then, this paper will examine the implications of ideas derived from queer theory for the future of PGD and of PGD for the future of queerness.

Current protocols for the application of PGD typically encourage its use to prevent the birth of children who are likely to have severe impairments but discourage or even prohibit its use to try to ensure the birth of a child with above-average capacities. These protocols have come under attack from two directions. Disability activists (Parens and Asch 2000) have criticized the use of PGD to determine what sort of people get to be born and to enforce problematic norms about healthy and sick bodies: these criticisms have both been influenced by and influenced queer-theoretical perspectives (Davis 1995; McRuer 2010; McRuer and Wilkerson 2003; Scully 2008; Wendell 1996; Wilkerson 1998). On the other hand, advocates of “human enhancement” have argued that we *should* be using medical technology to choose our children and criticised the idea that we should limit our selection only to ensure that children are born “normal” (Harris 2007; Silver 1999; Savulescu and Bostrom 2009). Instead, they insist that we should strive to have the “best children possible” (Savulescu 2001; Savulescu and Kahane 2009).

Both of these lines of criticism concur that there is nothing special about being “normal”. However, in a number of recent publications (Sparrow 2010a; 2010b; 2011a; 2011b; 2011c) I have drawn attention to a hitherto unacknowledged implication of giving up on the normative significance of the normal in these debates: it suggests that parents have strong reasons to prefer children of one sex (most plausibly, female) over the other. The standards by which advocates of human enhancement suggest we should evaluate the welfare of future children – expected welfare and/or “openness of

¹ Medical science has, of course, long had ambitions to shape future as well as contemporary bodies, most notoriously with its enthusiasm for eugenics programs that arose alongside the development of the science of genetics (Kevles 1985). However, only since the development of technologies of prenatal testing has it had the power to do so.

future” — both imply that female children have better life prospects at birth. Indeed, as long as we allow that we have any reasons to prefer some capacities over others in our children then, once we give up the idea that our reasons lapse once we have secured normal health for our children, it would seem that there will be one “best genome” in any given environment (Sparrow 2011d). In the context of contemporary enthusiasm for human enhancement, then, the critique of the normal risks reducing the social space for human variation rather than expanding it.

Previously, I have argued that the only plausible response to this dialectic is to affirm the moral significance of sexually dimorphic human biological norms (Sparrow 2010a) – a conclusion that is controversial and arguably conservative given the powerful queer, intersex, and disability critiques of such norms (Butler 1993; Butler 2004; Dreger 1998; Dreger 1999; Fausto-Sterling 2000; Kessler 1998; Laqueur 1990; McRuer 2010). My purpose here, after outlining the logic that generates this uncomfortable conclusion, is to suggest that it might also facilitate an alternative, progressive, opening up of the notion of the normal and also of the criteria against which we might evaluate the relative merits of different forms of embodiment. While my argument will be presented using the language of normative bioethics – and, as such, must be acknowledged as originating from “the clinic”, with all the problems that entails – my aim is to demonstrate how influential ideas within contemporary debates surrounding the ethics of PGD generate new possibilities for destabilising and criticising hegemonic ideas within this discourse at the same time as they pose a powerful challenge to the future of diversity.

II. EMBRACING DIFFERENCE

PGD is a technology designed to allow parents to reduce the risk of bringing a child into the world with a genetic disorder. As the name suggests, it involves conducting genetic testing on embryos created outside of the human body, through *in vitro* fertilisation, so that knowledge about the genetics of different embryos may inform parents decisions about which embryo to implant in order to try to bring a child into the world.

The invention of technologies of prenatal diagnosis, of which PGD is only the most advanced, was met with scepticism and resistance from (some) people with disabilities. Disability activists were already contesting the medical profession’s treatment of disability and arguing in favour of a “social model” that understood disability as something *imposed* on those with different bodily capacities by a hostile social environment (Charlton 1998; Oliver 2009). The idea that “disabled foetuses” should be killed in the womb after being identified through prenatal testing, or that people with disabilities should be prevented from coming into existence through PGD, appeared, to some writers at least, to represent the chilling logical conclusion of the medical profession’s hostility to those who challenged its ideas about what was “normal” (Hurst 2006). Moreover, a number of disability critics argued that the development and application of these technologies “sent a message” that it would be better if “people like us” were never born (Davis 1987; Kaplan 1993; Wendell 1996, pp. 83, 153-154; Saxton 1997).

In this paper I will not be discussing the validity and implications of the “expressivist” (Nelson 1998) version of the disability critique of prenatal testing. In part, this is because the question of whether the expressive content of our reproductive decisions gives us reason to reconsider them has been discussed extensively elsewhere (Asch 2000; Nelson 1998; 2000; Parens and Asch 1999; Parens and

Asch 2000; Press 2000; Skene and Thompson 2008; Sparrow 2008a; Stainton 2003). However, it is also because, although PGD does involve discarding human embryos and also asserting the superiority of some embryos over others, it does not involve “killing an unborn child” in order to replace it with one with superior capacities. That the procedure does not require abortion greatly dilutes, even if it does not entirely eliminate, concerns about the “expressive” force of the decisions made in the course of PGD. Finally, as I and others have noted elsewhere, the application of the “expressivist critique” is most plausible in the context of an argument that the conditions that are being screened out are not deleterious to those born with them (Buchanan 1996; Nelson 2000; Sparrow 2008a; 2010d). Concerns about what one’s reproductive choices might express, or about how others may respond to them, do not seem sufficient to justify imposing significant burdens on one’s own child (Baily 2000). Thus the expressivist critique seems to depend on a prior claim that the conditions being “screened out” through prenatal testing or PGD constitute harmless variations rather than deviations from a norm that harm those who are born with them.

Queer theory has in general been sympathetic to the goals of destabilising notions of the normal in favour of the recognition of diversity of embodied subjectivities (Butler 2004; Grosz 1994; Salamon 2010; Sullivan and Murray 2009). Medical norms — and their role in bioethical debates — are problematic for a number of reasons (Wilkerson 1998). They are notoriously historically and socially contingent, with a long record of being shaped by quackery and bigotry (Davis 1995). While often represented as “scientific”, they inevitably contain within them value judgments: some differences are accepted as normal variation, while others are labeled pathological (Kittay 2006). These value judgments are also evident in the way in which those who fall outside of the norm are treated. Any conception of what is normal will exclude some individuals who will thereby be rendered deviant or pathological and consequently will be more likely to be stigmatised, persecuted, and abused (Warner 1999). Finally, in so far as concepts of the normal inevitably contain value judgments, any attempt to define norms will involve asserting the superiority of one’s own value judgments over those of other people. Insisting that medical norms are scientific or based solely on “biology” only serves to obscure the value judgments inherent in them and to mobilise the authority of science in defence of particular social interests.

Independently of the “expressivist” version of the disability critique of prenatal testing, then, disability activists have contested the “therapeutic” use of PGD on the grounds that it involves the imposition of contestable social norms on the bodies of future persons.

III. TRANSCENDING NORMS

There is another group of thinkers who have recently emerged as vociferous critics of the idea of the normal — advocates of “human enhancement”. While they typically present themselves as defenders of individual freedom they are ultimately, I will argue, partisans not of difference but of a different notion altogether — the “better.”

A number of prominent bioethicists are now arguing in favour of, variously, the moral permissibility of (Agar 2004; Buchanan 2011), the desirability of (Glover 2006; Green 2007; Stock 2003), or even the moral requirement for (Harris 2007; Savulescu 2000; Savulescu and Kahane 2009), “human enhancement”. The precise definition of enhancement is a matter of some controversy in this literature. Enhancement is usually contrasted with therapy, understood as the use of medicine (or

science) to treat injury, disease, or impairment in order to restore individuals to normal functioning (Elliott 2003).² For some, then, enhancement is any “non-therapeutic” use of medical (or other) technology (Anderson 1989; President's Council on Bioethics 2003, pp.13-14). Other authors resist making the notion of enhancement hostage to current medical practice and insist that enhancements are simply interventions that increase individuals’ welfare (Harris 2007; Savulescu, Sandberg, and Kahane 2011). This has the advantage of highlighting the (alleged) essential continuity between medical treatment and enhancement, which is that both are fundamentally concerned with increasing welfare and are justified where they do so. However, defining any increase in welfare as an enhancement loses contact with the ordinary language use of the term and risks attempting to settle the ethics of enhancement through philosophical sleight-of-hand. It is more plausible, then, to define enhancement as the use of medical technology to increase human capacities beyond those that are currently considered to be normal.

There are two main arguments for human enhancement used by its advocates.

First, they point out that what we currently think of as a normal human body is a historically and culturally specific product of a wide range of technologies (Buchanan 2011; Harris 2007). Average height, intelligence, and life expectancy – and thus what we consider to be normal with regard to each – have all increased steadily in wealthy industrialised nations over the past four decades at least due to improvements in public health infrastructure, medical care, and food security. A child born to wealthy parents in the First World today is already greatly “enhanced” compared to a child born to parents of the same social class 100 years ago or to the vast majority of parents in sub-Saharan Africa today. And, of course, in at least some parts of the world, homosexuality is now thought to be a part of the normal range of human variation rather than a deviation to be “cured.” Given how much our ideas about what is normal have changed in the past as a result of technological interventions and social struggles, to insist that we should not use new technologies to further improve human capacities seems to be little more than “status quo bias” (Bostrom and Ord 2006).

Second, advocates for enhancement argue that the reasons that we have to avoid incurring deficits from normal human functioning are also reasons to prefer traits in excess of normal human functioning (Harris, 2007, pp. 9, 45-46; Harris, 2001; Harris, 1993; Savulescu, 2006; Savulescu, 2005). There is little reason to think that whatever is desirable about being healthy, happy, sensitive, talented, intelligent, or long-lived, etc, ceases to be valuable once we exceed the level of these goods currently believed to be normal. In short, for advocates of human enhancement, as far as desirable human capacities go, “more is better” (Harris 2007; Savulescu 2001).

IV. CHOOSING (FOR) OTHERS

My interest in this paper relates specifically to arguments for human enhancement through embryo selection — that is, to the non-therapeutic use of PGD to try to select embryos with “superior” capacities. However, it is worth noting in passing that advocates of enhancement also typically exhort the use of technology to enhance the capacities of existing individuals (Buchanan 2011;

² Whether “normal functioning” here should be understood as normal functioning for the individual being treated or “normal human functioning” is a further, controversial, question, with important implications for the logic of the debate about enhancement.

Hughes 2004a; Savulescu, ter Meulen, and Kahane 2011). Where this involves adults choosing to modify their own capacities, concern for personal liberty suggests that they should be free to do so. Thus, much of the queer theory literature around sex/gender reassignment surgery defends the rights of individuals to determine their own morphology (Butler 2004; Grosz 1994; Salamon 2010; Sullivan and Murray 2009). Interventions involving the capacities of children, or of those who are otherwise unable to make autonomous choices, are more controversial but may, at least, be resolvable through a familiar set of negotiations between concerns for parental rights, the child's right to an open future, and the balance of harms and benefits (Dreger 1999; Kessler 1998; Parens 2006).

Debates about embryo selection are both more interesting philosophically and more difficult to resolve politically in part because it is much less plausible simply to defer to the choices of individuals. The person whose interests should arguably be at the heart of these decisions – the future child – is not around to make them. In addition, there are two other features of choices about embryo selection that I want to highlight here, as they will be crucial to the argument that follows.

First, the ethics of embryo selection is structured by a powerful analogy between environmental and genetic manipulations of children's futures. The phenotype of an organism — what it is like — is a product of both its genes and its environment (Kitcher 1996). If one wishes to alter the phenotype of an organism, then, one can do so either by manipulating its environment or by manipulating its genetics. Acknowledging this fact reveals why the “genetic essentialism” that is characteristic of many naive responses to debates about PGD is mistaken and also lends significant force to the argument for enhancement. Parents already typically take every care to avoid environmental conditions generating impairments in their children, suggesting that they should also embrace genetic means of doing so – given that the outcome for the child is the same either way. Indeed, many parents already pursue enhancement — the development of above-average capacities in their children — through environmental manipulations such as education, arguing that they should also be interested in genetic enhancement. (Harris 2007, pp. 1-7; Agar 2004, pp. 111-120; Buchanan et al. 2000, pp. 156-161; Harris 1998, pp. 171-174, 203; Savulescu 2008, pp. 51-68; Savulescu 2005, p. 37).

Second, decisions about embryo selection are what have come to be known, in discussions around philosopher Derek Parfit's work, as “non-person-affecting.” By this it is meant that, because these decisions determine *who* is born, there is no individual that is affected by them (Brock 1995; Parfit 1984, pp. 352-379). In particular, such decisions typically do not harm — and may not even benefit — the individuals that brought into existence as a result of them. This paradoxical conclusion results from the fact that we usually assess whether an individual has been harmed or benefited by an event by means of a comparison with what their welfare would have been had the event not occurred. Where the event concerned is “being born” this counterfactual will usually fail. With regards harm, I would *not* have been better off if my parents had chosen a child with better genetics to be born in my place — as I would, then, have never existed. Thus I cannot be said to have been harmed by the decision to bring me into the world.³ The argument about benefit is more complex. If we allow that it is a good thing to exist then it appears that we have benefited from our parents'

³ The exception to the general rule that individuals are not harmed by non-person-affecting decisions involves situations where a person is born into an existence so wretched that it is rational for them to prefer to be dead. In this case we may wish to say that they have been harmed by being brought into existence (Steinbock and McClamrock 1994; Strong 2005).

choice to bring us into existence. Yet, again, this seems to involve a puzzling comparison with what our lives would have been like had we *not* existed. Moreover, allowing that we benefit people by bringing them into existence has troubling implications when combined with a general duty of beneficence: it would seem to suggest that we have an obligation to bring as many people into the world as possible (Parfit 1984, 381-390). For these reasons, we may want to resist the conclusion that non-person-affecting decisions benefit anyone.

As I will discuss further below, the non-person-affecting nature of decisions regarding embryo selection problematises the nature and force of the reasons we have to avoid disability or to enhance future persons. Where the environmental analogy suggests that we have strong reasons to choose the best child possible, the fact that we won't harm anyone if we fail to act on those reasons implies that we do nothing wrong if we ignore them (Savulescu 2002; Sparrow 2011d). The difficulty of theorising the relation between the environmental analogy and the non-person affecting nature of the decisions is what makes questions about the ethics of embryo selection so difficult and interesting.

V. THE LOGIC OF HUMAN ENHANCEMENT

Advocates for human enhancement like to present themselves as brave defenders of individual liberty against the stifling restrictions of medical orthodoxy and the dictates of religious conservatives (Bailey 2005; Buchanan 2011; Harris 2007). In the context of debates about enhancements to existing individuals, this self-image is not entirely unwarranted: they defend the rights of individuals to shape their own biologies however they like using available technologies (Bailey 2005; Hughes 2004a). However, when it comes to the ethics of PGD the logic of the argument for human enhancement points firmly in one direction — the pursuit of the better.

In relation to embryo selection, the advocates of human enhancement argue that we are morally obligated (Savulescu 2001) — or perhaps only “have strong moral reasons” (Savulescu and Kahane 2009) — to select the best of the embryos available to us.⁴ Arguing that parents should choose the “best embryo” available to them immediately opens the question of what counts as “best”. There are three plausible interpretations of this claim: advocates of enhancement might hold that parents should choose embryos with genes that would be best for the parents, best for society, or best for the child. Only the last of these is ultimately defensible in the context of contemporary debates about genetic selection.

The argument that parents should choose a child that is “best for them” is bedeviled by the same ambiguity that is responsible for the popularity of naive cultural relativism. Those who are uncomfortable with the thought that there might be inter-subjectively justifiable claims about ethics may want to insist that parents should do what “they think is best” because that is the only standard available. There is, of course, a trivial and solipsistic sense in which parents will inevitably do “what they think is best” because whatever they do they will have reasons for their actions. However, if we understand this version of the claim as holding that there are no reasons, other than the desires that

⁴ Both the original (Savulescu 2001) and the revised (Savulescu and Kahane 2009) statement of the principle of “procreative beneficence” also imply that parents are obligated to undertake PGD in order to allow such selection. For criticism of this claim see, de Melo-Martin 2004.

parents already have, for choosing amongst embryos then this denies the environmental analogy – and ultimately that parents are obligated to do anything in particular (Sparrow 2007).

A stronger version of the idea that parents should choose what is “best for them” holds that parents should choose the children that would best serve their own interests, for instance, by being best able to work in the family business, or support them in their retirement. While parents might have prudential reasons for choosing a child that would advance their own interests, it is difficult to see how they could have “moral reasons” to do so. Moreover, arguing that parents should have the children that would be “good for them” appears to instrumentalise children in a manner that is intuitively problematic, even if this intuition turns out to be difficult to cash out given that the decision to have children often refers to the interests of parents (for instance, in experiencing parenthood).

The idea that parents should choose the child with genes that would be “best for society” is, for all intents and purposes, irredeemably tarnished by the history of eugenics. The idea that parents of “good Aryan stock” should have more children for the sake of the German “nation” or “race” is one of the enduring tropes of fascist eugenics. The goal of breeding or designing human beings so that they would fit into their social roles in order to maximise social welfare was a central obsession of Fabian eugenics, so effectively satirised by Huxley (1991) in “Brave New World.” Moreover, the goal of maximising social welfare (“best for society”) quickly leads to the conclusion that at least some parents should sacrifice their own child’s welfare for the sake of the larger good, for instance, by choosing genes that would predispose them towards happiness in low status social roles, on the grounds that it would be better for everyone if those who occupied those roles were happy in them (Sparrow 2011d). This implication effectively functions as a *reductio* of this account of parental obligations, which subjugates individual to social interests in a manner that should be unacceptable to those with even a modicum of liberal intuitions and requires parents to be more concerned about the welfare of strangers than the well-being of their own children. For these reasons, advocates of human enhancement have, for the most part, been quick to distance themselves from the idea that the relevant standard of “best” involves any reference to social welfare (Agar 2004, 3-16; Glover 2006, 26-29; Green 2007, 216; Savulescu 2001, 424).⁵

Thus we are left with the idea that parents should choose the embryo with the genes that would be best for the child themselves. That is to say, that parents should choose the child with the best life prospects (Savulescu 2001; Savulescu and Kahane 2009). This formulation has two compelling advantages relative to its competitors. First, it accords with our existing understandings of the nature of parenthood and its obligations: good parents are concerned for the welfare of their children. Second, it puts the maximum possible intellectual distance between contemporary advocates of the use of PGD for human enhancement and the appalling history of eugenics practices oriented towards benefiting the race or nation (Wikler 1999).

To this point, I have deliberately under described the notion of the child’s “life prospects” in the argument above. There are, as it turns out, two plausible competing accounts of what it is that parents should be seeking to maximize: their children’s well-being; or their children’s “openness of future.” Ordinarily, if we were concerned to promote someone’s interests we think about it in terms

⁵ An important recent exception here is Elster (2011) who claims that the arguments Savulescu uses to support maximising our children’s welfare also argue in favour of an obligation to maximise social welfare.

of a concern for their well-being — understood as whatever it is that makes a human life go well or badly — and this remains the most straightforward way to talk about the obligations of parents. There is a large and well-theorised literature on the nature and measurement of well-being, which I cannot go into here.⁶ In fact, as I have argued elsewhere, of the three leading accounts of well-being — hedonism, preference-satisfaction accounts, and objective list theories — only the latter does not generate absurd conclusions in the context of the debate about human enhancement (Sparrow 2007). However, objective list theories — that is, accounts that suggest that well-being consists in the enjoyment of various things held to be “objectively good”, such as love, friendship, aesthetic enjoyment, music, et cetera — appear to grant parents too much power over the shape of their children’s lives by rendering them hostage to the parents’ ideas about which things are objectively good. For this reason, some of those writing in the debate about human enhancement have suggested that parents should instead be concerned with the “openness of future” of their children (Agar 2004; Buchanan et al. 2000; Davis 2001; Green 2007) — that is to say, with increasing the range of options available to their children when they grow up, by improving their genetics. This has the advantage of leaving it up to our children themselves to decide what sort of things would make their lives go well. The idea that we should *maximise* the openness of our children’s future is not without its problems either (Mills 2003). Nevertheless, given the difficulties with the direct pursuit of increased welfare, a concern for the “openness of future” of future individuals represents an attractive alternative account of what it is that parents should be seeking to improve through enhancement.

The equivocation between a moral obligation to enhance and the weaker “some moral reasons to enhance” in the case for enhancement is a function of the non-person-affecting nature of decisions about embryo selection. If one models the ethics of non-person-affecting decisions on analogous person-affecting decisions, such as diet or education, so that we think of a failure to enhance as harming someone (or if one believes that parents are obligated to bring about the world with the best consequences) then it will follow that we are obligated to enhance. However, if one focuses instead on the fact that non-person-affecting decisions do not harm or benefit individuals *and* holds that our *obligations* are solely concerned with harming and benefiting others then such decisions will not generate obligations. The compelling arguments based on the environmental analogy, which suggest that we “should” enhance, must therefore be understood as providing us only with “strong moral reasons” to enhance.

Thus far, in this section, I have simply been elucidating the powerful arguments for enhancement made by authors such as Julian Savulescu (2001; 2005), John Harris (2007), Jonathan Glover (2006), Ronald Green (2007), Lee Silver (1999), Allen Buchanan (2011), and many others. However, what none of these authors appear to have recognised is that the argument for human enhancement has one very immediate and surprising conclusion. While most of the genetic choices that the enhancement debate discusses are — as yet — entirely hypothetical due to a lack of knowledge about the relevant genes, there is one genetic choice that we can make easily and about which we have a well established body of medical knowledge: we can choose the sex of our children (Gleicher and Karande 2002). If we are obligated/“have strong moral reasons” to choose children with the best genes then we should be prepared to say whether — all other things being equal — male or female children have better life prospects at birth (Sparrow 2011b).

⁶ For a useful introduction, see Griffin (1986) and Sumner (1996).

In another publication (Sparrow 2011a), I have pointed out that each of the possible responses to this question – affirming the superiority of male embryos over female embryos; affirming the superiority of female embryos over male embryos; or, resisting the choice – generates profound problems for the argument for human enhancement. In the current context, I want to proceed as *per* an earlier discussion (Sparrow 2010a) by arguing that female embryos have two clear advantages that make them *prima facie* superior to male embryos, once we consider the question of which sex is “best.” Once women have access to adequate care and hygiene during birth, they have an average life-expectancy that is roughly 3 to 7 years longer than men in the same societies (World Health Organisation 2009). A longer life-expectancy establishes a more “open” future because women can undertake — and are more likely to complete — more, and a larger range of, projects. A longer life-expectancy also creates a higher expected well-being for female children at birth on any of the plausible accounts of well-being. On average, they will have more days of pleasurable experiences, more chances to achieve their preferences, and more opportunities to enjoy various objective goods.⁷ Women also have another capacity that contributes to their having a more open future; the capacity to become pregnant. A significant number of people believe that this is an important and valuable life option and so the fact that it is available to women and not men contributes to female children having a more “open future” than male children at birth.

Both a concern for the expected well-being of our future children and a concern for their openness of future therefore argue strongly in favour of selecting female embryos. Of course in any given choice between two embryos, one will have a “better” genetics and is there is no guarantee that this will always be a female embryo. Some male embryos will have better genomes than some female embryos. However, all other things being equal, parents should prefer female embryos. Moreover, unlike any of the other genetic enhancements that bioethicists have been concerned with, sex selection through PGD or through preconception sperm sorting is realistically available to large numbers of prospective parents now. This implication of the argument for enhancement is therefore directly relevant to the ethics of contemporary reproductive decision-making.

VI. CLARIFYING THE FORCE OF THE DIALECTIC

The suggestion that parents are morally obligated/“have strong moral reasons” to select female embryos is likely to be resisted both by disability activists — who are wont to deny that we have any obligations when it comes to genetic selection — and by those sympathetic to human enhancement, who will rightly perceive this as a difficult conclusion to defend to a broader public.⁸ In this section I want to briefly outline a number of lines of argument that attempt to avoid this uncomfortable conclusion and explain why they fail in the context of the larger philosophical literature that surrounds both human enhancement and the disability critique of PGD.

THERE IS NO SUCH THING AS A BETTER OR WORSE HUMAN LIFE

⁷ These claims are jarring because, of course, in sexist societies none of them are likely to be true. However, for reasons that will be provided below, parents’ reasoning about which embryo will have the best life prospects should arguably discount the impact of social injustice such as sexism.

⁸ At the risk of endorsing an *ad hominem* argument, I can’t help but feel that the hostility with which this argument has been received by advocates of human enhancement reflects, at least in part, the discomfort of this overwhelmingly male group of writers experiences at realising that they are by their own lights “suboptimal”.

It is hard not to feel that there is a certain arrogance involved in the confidence with which advocates of human enhancement speak about what sort of children we should aim to have. Many people react violently to the suggestion that it is possible to speak of “better” or “worse” human lives, as if there were some easily available objective metric for evaluating them that bioethicists possess. Queer theorists have been especially concerned to resist the idea that different forms of embodiment may be identified as better or worse (Butler 1993).

Sometimes, however, this claim is straightforwardly based upon a misconception about what advocates of human enhancement are arguing. The argument for enhancement does not rest on a claim about some lives being “worth” more than others in the sense that we have any reason to value or respect some people more than others. Indeed, as a result of the dubious reputation and shameful history of eugenic ideas, contemporary advocates of human enhancement are typically careful to insist that we must defend the equal human rights of all persons regardless of their capacities (Glover 2006, 35-6). Instead, the case for enhancement rests on the idea that we can judge what sorts of capacities are better or worse for *the person who has them*. To put this in another way, it rests on the idea that we can, for the most part, more-less-reliably distinguish between changes in individuals’ capacities that harm or benefit them. It is the impact of different genetics on the welfare of individuals that is at issue here, then, rather than their worth or moral standing.

That we can talk about human lives going better or worse is actually difficult to dispute. Note that if we could *never* do this then this would rule out the ethical use of embryo selection technologies to prevent the birth of children with severe medical conditions such as cystic fibrosis or Tay-Sachs disease. Perhaps this is the logical conclusion of the most radical assertion of disability activists that there is nothing wrong with having “different” genetics. Yet the environmental analogy outlined above suggests that this claim is implausible. If an accident, pollution or infection, were about to produce the same conditions in a child, the vast majority of people would hasten to intervene to try to prevent this. As Tom Shakespeare (2006) has argued forcefully, even those disability activists who deny that they would wish to be “cured” of their impairments typically desire to avoid any further loss of functioning. More generally, if we weren’t able to assess the impact on our own welfare of different alternatives, including changes in our capacities, then rational choice in the context of a human life would be impossible. If we can make these decisions about our own lives, however, then there is little reason to think that we cannot assess what sorts of capacities would make the lives of future individuals go better or worse.⁹

WE MIGHT ABORT “BEETHOVEN”

Decisions about the future are decisions under conditions of uncertainty. This is especially true when we are trying to decide which of a number of embryos has the best chance of the best future. The genetics of desirable human traits are extremely complex, as is the interaction between genes and environment. In choosing which embryo to bring into the world we will inevitably be making

⁹ This is not to deny that people are notoriously bad at evaluating the well-being of other individuals, for instance when they try to predict the impact of a disability on someone's well-being. My point is only that it is wildly implausible to insist that we can have *no* idea about what would improve or reduce the well-being of future individuals considered in the abstract.

decisions on the basis of whatever limited information about their genetics and life prospects we can ascertain and “all other things being equal” (Savulescu 2001).

However there is one uncertainty that often serves as the basis for a misguided complaint about the idea of choosing which embryos to bring into the world. Individuals affected by disease and suffering may have flourishing human lives and produce creative, or other, works of great value. If we choose to reject a particular embryo because it has genes that we judge to be deleterious — or simply not as good as the genes of another embryo — how do we know, then, that we will not be rejecting a “future Beethoven”?

The short answer to this question is “we don’t.” Yet, properly understood, the nature of decisions about embryo selection means that nothing follows from this. The risk of “aborting Beethoven” exists no matter which embryo we select, as any choice means that other embryos that might equally well have become future geniuses will not be implanted. Unless there is reason to suspect that the genes that we are selecting against are also associated with desirable phenotypes, concerns about the impact of other genes, the function of which we don’t currently understand, or of unexpected environments provide no grounds for rejecting technologies of genetic selection (Savulescu 2001, 418).

SEXISM MEANS THAT MEN HAVE BETTER LIVES

The thought that parents have reason to choose female children, rather than male children, out of a concern for their expected welfare at birth may seem preposterous given the many social advantages that accrue to men simply by virtue of being men born into patriarchal societies. If we take the impact of sexism into account, a concern to maximise the welfare of one’s child may well require choosing a male child.

This is true, as far as it goes. However, the larger argument about the ethics of genetic selection suggests that we should be cautious in allowing that social circumstances should play a role in parents’ reasoning about what sort of children they should have. The same logic that dictates selection in favour of male children also argues in favour of mixed-race couples selecting lighter-skinned children in societies — such as the US today — where racism negatively impacts on the life prospects of children with dark skin; in homophobic societies, it dictates that parents should choose children without (hypothetical) genes for same-sex attractedness. This is, politically if for no other reason, a difficult implication for advocates of human enhancement. It now looks as though their philosophy, which they pretend is radical and libertarian, generates the same conclusion as to the proper ends of eugenic policy — if not the means — as the historical eugenics of the Fabians and the National Socialists: parents are morally obligated to have white, heterosexual, male children (Sparrow 2011d). Moreover, it effectively requires parents to become complicit with the regimes of oppression that currently shape the life prospects of children.

In order to avoid this politically untenable and morally repugnant conclusion one must insist that where the environmental conditions that, in conjunction with a particular genetics, reduce welfare consist in systematic injustice (such as patriarchy, homophobia, or racism), parents are under no obligation to take the impact on their child’s life prospects into consideration when thinking about embryo selection (Agar 2004, 151–152; Buchanan et al. 2000, 283–284; Kitcher 1996, 217–218).

Indeed, we may even want to postulate an obligation to *ignore* the impact of injustice when making choices about what sort of children to bring into the world. Instead, parents should confine their deliberations to considering the implications of having different genetics in the environments their children are likely to grow up in were these environments *not* to be marked by systematic injustice.

This is not, it must be observed, a particularly satisfying solution to the problem of the implications of injustice for the welfare of children. It makes little difference to the life prospects of the child, for instance, whether their dark skin (for example) contributes to poor health-care outcomes in the context of racism in the medical profession or of low levels of UV sunlight in a country at a high latitude.¹⁰ Moreover, because – as disability and queer theorists have long argued – the implications for welfare of a given set of bodily capacities are always a product of social context, the alternative to taking unjust social relations into account can't be selection on the basis of "pure" biology but must instead make reference to what the child's life prospects would be like in a *just* society. Given that a just society would minimise the impact of different bodily constitutions on welfare, this caveat introduces significant uncertainty into the argument about enhancement.¹¹ Finally, arguing that the duty to discount injustice arises out of a concern for the social impacts of admitting an obligation to choose children with the markers of privilege is perilously close to suggesting that parents should sacrifice the welfare of their children for the good of society, a line of argument I criticised above as opening the door to repugnant versions of eugenics. On the other hand, unless advocates of enhancement are willing to make this concession their argument is politically unsellable. It is also worth noting that disability theorists have themselves been vehement that we should not confuse the handicaps that people with impairments suffer as a result of living in societies that do not provide justice for people with disabilities with the significance of the impairment itself. That is to say, they *also* insist that we should discount the impact of injustice on the welfare of children when making decisions about embryo selection.

LIVING LONGER IS NOT BETTER/BEING ABLE TO BECOME PREGNANT IS NOT IMPORTANT

Another common response to the alleged superiority of female over male biology is to allow that, while we can evaluate the relative merits of different biologies, the particular advantages that my argument attributes to women are not valuable. That is to say, some people deny that it is desirable to live longer or to be able to become pregnant.

It does, of course, matter where extra years go in a human life: years in good health are clearly better than years added to a painful decline. Nevertheless, the idea that we don't think that it is, in general, better to live longer is vitiated by imagining how we would feel if someone told us that they had cut five years off of our life expectancy. The loss of these years might equally well prevent us from experiencing a painful decline in old age, but few people would view the prospect of having their life shortened in this way with equanimity. Nor do we tend to rue the improvements in healthcare that have increased average life-expectancy over past decades.

¹⁰ At high latitudes, higher levels of melatonin (dark skin) increase the risk of vitamin D deficiency and its associated health impacts (Ponsonby, McMichael, and Van der Mei 2002; Yuen and Jablonski 2010).

¹¹ Yet whether social justice would require that men could become pregnant (Sparrow 2008b) or would be capable of extending male life expectancy to that of women is unclear to say the least.

Similarly, while some women (and many men) have no desire to become pregnant, the capacity to become pregnant does make available an option that many women value greatly. That the capacity to become pregnant is valuable is also attested to by the amount of resources both individuals and societies are prepared to dedicate to medical procedures and research intended to allow women to become pregnant. Indeed, except for the fact that we think that the capacity to become pregnant is valuable, we would have no reason to treat diseases or repair injuries that might lead to an inability to become pregnant.

Given the emphasis we place on increasing life expectancy and preserving the capacity to become pregnant in other circumstances, then, the objection that these benefits of being female are not valuable at all can only be *ad hoc* and unconvincing.

THERE ARE OTHER BENEFITS OF BEING MALE AND/OR DISADVANTAGES OF BEING FEMALE

In concentrating on life expectancy and the capacity to become pregnant, my argument risks treating maleness solely as a deficit in comparison to being female. In fact it is likely that there are some advantages associated with male biology that need to be weighed alongside the advantages associated with being female. For that matter, there may be disadvantages associated with being female that outweigh the advantages I have emphasised.

It is possible that adequately acknowledging the benefits of being male or the disadvantages of being female will unsettle my conclusion that parents should choose female children. However, I must admit that, personally, I think this is unlikely. The main “benefit” of male biology, greater (average) physical strength, seems utterly trivial to me and is almost entirely irrelevant in any society with a modicum of technology. It is true that men can more easily become the genetic parent of more children than can women and that this might be thought to be an advantage of being male — although it is worth noting that women who are prepared to conceive via IVF and employ contract/surrogate mothers may now also become the genetic parents of multiple children conceived with different partners near-simultaneously. Critics who are sufficiently committed to controversial empirical claims about “brain sex” (Cahill 2005; Hoag 2008) may be able to assert more significant benefits associated with being male but only by drawing upon a literature with a long history of sexism and poorly justified claims (Fine 2010) and at the risk of allowing that there may be other advantages associated with being a woman than those I have considered here.

In any case, the conclusion that male children have better life prospects at birth does not change the underlying dialectic that is my focus here (Sparrow 2011a). Neither advocates for human enhancement nor disability activists and queer theorists should be comforted by the thought that, if we give up on the moral significance of what is normal, parents are morally obligated to have male children. The implications for diversity are equally dire no matter which sex we believe has superior prospects at birth.

THE AGGREGATE CONSEQUENCES OF PARENTAL SELECTION NEGATE ANY REASON TO CHOOSE EITHER SEX

If parents are obligated to have girl children – and meet their obligations – the ratio of the sexes would very quickly shift towards a majority of women. This might be held to be bad for “the species” or “society” or for individual women who desire male partners (Harris 2011). Perhaps the “aggregate

consequences” of individual parental decisions mean that we should reject the idea that parents have reasons to choose children of a particular type?

Let me begin by noting that references to what is good for society or “the species” suggest a very different account of the obligations of parents than that which advocates of human enhancement usually advertise (Sparrow 2011c). As I noted above, there are good reasons to resist the suggestion that parents should be concerned with social welfare rather than the welfare of their child. Arguments about the future of “the species” are doubly specious because *homo sapiens* is not the sort of thing that can suffer or experience benefits (a species can’t experience anything at all except metaphorically) and is therefore not deserving of our moral concern.

It is, however, true that the aggregate consequences constitute a powerful argument against any *policy* of selecting in favour of one sex rather than the other and perhaps even in favour of a law forbidding any such selection. However, short of postulating an (implausible) obligation to choose the child that would be good for society, concerns about aggregate consequences do not alter the obligations or the strong moral reasons bearing on parents out of a concern for the welfare of their child. Individual parental decisions don’t make the difference between good and bad aggregate consequences and so parents have no reason to allow the aggregate consequences that might flow if everyone made the same choice that they are making to determine their decisions. At least until sex ratios are badly skewed, it will still be better for the child to be born whichever sex is judged to have superior life prospects (Sparrow 2011c).

CRITICAL THEORISTS SHOULDN’T ARGUE ABOUT WHAT SORT OF PEOPLE SHOULD BE BORN

No doubt, some will object to my willingness to engage in an argument about the ethics of genetic selection at all, on the grounds that any attempt to determine what people should or should not do can only reflect the cultural and historical perspective of the critic.

The debate about the status and usefulness of normative argument is one of the thorniest issues raised by post-structuralism and its philosophical descendants, including queer theory, and for reasons of space I am unable to engage in it at length in this context. The obvious general point to make here is that critics who argue that it is wrong for philosophers to write in normative terms are of course doing so themselves. Normative argument is an inescapable fact of social life.

In the context of the debate about genetic selection, this thought has especial force. An important truth about decisions about embryo selection is that some embryo or other will be chosen, no matter what decision is made. Indeed, once the technology to select embryos exists, even the decision not to use this technology renders parents responsible for the genetics of their offspring. Given that a child’s genes will exercise some influence over the options that are realistically available to them in their adult life, whether these genes have been consciously chosen for them or left to chance as a result of a decision not to participate in genetic selection, the child’s freedom will be constrained by their genetics either way. Refusing to address the question of the ethics of genetic selection therefore fails to make future individuals any more free and leaves parents to grapple with these difficult issues without access to whatever insights progressive critiques might provide.

Moreover, because of the political sensitivity of genetics and of procedures involving human embryos, the operations of PGD clinics are typically already deeply structured by ethics guidelines

and legislative regimes, as well as by other forms of “soft” regulation. As I argued above, claiming that parents should be free to make these decisions however they like is implausible given the implications for the child’s welfare. Even if the regulation of PGD clinics *does* leave parents free to select whichever embryos they like, these choices will occur in the context of powerful social and institutional pressures to use these technologies to have a “normal” — or perhaps even an “enhanced” — child.

The alternative to radical critics arguing in moral terms is therefore not a social terrain devoid of moralised language but rather a world in which a logic of normalisation operates through the mechanisms of the “free” market or through state regulation — or both. Unless advocates sympathetic to disability and queer critiques contest the content of these regimes, PGD will continue to be regulated in such a manner as to constitute a potent threat to diversity.

IT IS EQUALLY GOOD TO BE BORN MALE OR FEMALE

This last “objection” is, without further elucidation, not so much an argument as a restatement of a powerful intuition. Surely it can’t be better to be either male or female? Both are “equally good” — or perhaps just “good enough”. Either way surely we have no good reasons to prefer male or female children? I am sympathetic to this thought. However, unless further reasons can be provided for thinking that (what we currently think of as) normal male or normal female capacities have some special significance, this thought is fatal both to the argument for human enhancement and also to the argument for therapeutic uses of PGD. It is fatal to the argument for enhancement because if we have no reasons to improve upon normal male biology (for instance, by selecting female children) then we have no reasons for enhancement. It is fatal to the argument for therapy because if we are willing to accept that the difference between male and female biology is insignificant, what reason can we have for thinking that (for instance) we have any reason to prefer a female embryo with normal life expectancy and the genes that would make it possible for the future individual to become pregnant over a female embryo with genetics that contribute to a five-year shorter life expectancy and no possibility of becoming pregnant? (Sparrow 2010a). Indeed, what reason could we have for insisting that those born with *any* of the conditions currently targeted by therapeutic uses of PGD were not “equally good” or “good enough”, especially in the light of the arguments by disability theorists making precisely this claim? Insisting that (normal) female biology and (normal) male biology are uniquely in need of neither therapy nor enhancement requires further argument — and it is difficult to see what could serve as an argument to this conclusion except the fact that both are “normal.”

VII. CONCLUSION: A NEW, QUEERER, NORMAL?

Consequently, in my previous investigations of the logic of enhancement — and therapy — I have argued that the only way to avoid the implication that we have strong reasons to prefer children of one sex or the other, without abandoning the therapeutic use of PGD, is to affirm that our moral reasons to prefer one embryo over another lapse once the embryo we might select against has genes for normal human capacities *for its sex*. Any embryo that has at least average genetics is “good enough”. However, the reference class for calculating the average must be different for each sex. In short, we must affirm the normative significance of a sexually dimorphic account of normal

human capacities (Sparrow 2010a). The challenge of explaining precisely *why* what is normal is morally significant and the relation between the “natural”, the “normal” and the “average” remains to be met: my point is simply that if we don’t privilege some description of a set of capacities for each sex as marking the distinction between therapy and enhancement we cannot avoid the conclusion that one or the other sex is better.

In asserting the need for biological norms in the context of PGD, this conclusion is obviously problematic for all the reasons surveyed in Section II above. However, equally well, as I have argued here, giving up such norms either requires abandoning therapeutic uses of PGD, which is implausible in light of the “environmental analogy”, or concedes too much to an argument for enhancement that is likely to have devastating implications for the future of diversity. I have concentrated on philosophical logic of the argument for enhancement, but the tension I have identified between the critique of biological norms and the defence of diversity in the context of the desire for enhancement, also exists at the level of (a more mundane) politics. While PGD was only being advocated for therapeutic use, resisting the value of the normal often had a progressive politics. However, now that bioethics and medicine have begun to openly embrace the pursuit of enhancement, abandoning the normal risks contributing to the limitless reconfiguring of human bodies for the sake of “the better”. This fact has, I think, been under-acknowledged within the literature on disability (and queerness), which, for the most part, has developed with little reference to the literature on human enhancement. Recently, however, some authors (Hughes 2004b) have argued that advocates of enhancement are the natural allies of people with disabilities in so far as both groups are typically willing to deny the priority of biological norms and to insist that human bodies are always/already technologically mediated. Yet, even if advocates of enhancement are interested in cultivating the support of people with disabilities, the real focus of their attention is those who are currently (held to be) normal. The potential market for enhancements to normal function is much larger — and more profitable — than the market for therapies or enhancements for disabled persons. One obvious response to the argument that I have made here, which is to insist that the notion of the “normal” must be deployed and defended “strategically”, is therefore less promising than might first appear. Not only is it difficult to imagine what principles might underpin any claim to such strategy but there is little ground for confidence that any attacks on the relevance of the notion of normal human capacities would not be seized upon by advocates of enhancement to advance their own goal of the pursuit of the “better”.

In this final section, then, I want to draw attention to some ways in which my discussion might open up some progressive possibilities by highlighting the value judgments involved in any defence of biological norms at the same time as it affirms the need for them.

First, while my response to this dilemma does involve insisting on the importance of norms — and, moreover, of norms that are in part justified with reference to certain plausible generalisations about human biology — it simultaneously foregrounds the bivalent (and therefore potentially multi-valent), contested, and value-laden nature of those norms. Indeed, it dramatically illustrates a point already made by disability activists and queer theorists that notions of the normal are socially constructed and both express and reflect value judgments. A *purely* biological conception of the normal is impossible because the choice of reference classes is a political one. Thus, even the resolutely “scientific” defense of the distinction between therapy and enhancement involves the

recognition of (sexual) difference.¹² In emphasising the need for an account of both normal male and normal female bodies, my argument invites the question as to whether our notions of the normal might acknowledge other forms of difference.

Second, thinking through the implications of the argument for human enhancement highlights the radical and destructive consequences of Enlightenment rationality when applied to the human genome. Giving up on the normal for the sake of the better threatens not just disability but sexual difference itself. Thus, in order to be plausible today, any attempt to abandon ideas of about the significance of the “normal” must also deny that it is better to be born with some capacities rather than others.

Third, the intuition that normal men and normal women have life prospects that are “good enough” suggests that what is required to resist the drive to enhancement is a threshold beyond which we have no reason to pursue enhancement or therapy. Human variation within this range should be thought of as mere variation rather than disorder or excellence. There is room, then, to “queer” our ideas about what is normal so as to embrace a wider range of forms of embodiment. However, the force of the “environmental analogy” in motivating therapy does, I suspect place significant limits on just how large a range of variation can plausibly be defended as being above any such threshold. If we would be inclined to regret and try to treat a change in a child’s capacities within this range as a result of an environmental influence then this suggests that we can in fact distinguish better from worse variations within the range. Moreover, any attempt to specify such a threshold will inevitably imply that conditions below this threshold are indeed the appropriate targets of therapeutic interventions. Unless we are prepared to give up therapeutic uses of PGD altogether, this seems both inevitable and defensible.

The implications of PGD for the future of queerness are therefore mixed. As a result of thinking through the ethics of this technology we may come to acknowledge the value-laden nature of the normal and accept a wider range of bodies as requiring neither therapy nor enhancement. Yet any new, more inclusive, conception of the normal will still exclude some forms of embodiment, which may then eventually be eliminated from societies in which PGD is available.¹³ Of course, queer theory has always resisted the idea that we should allow the possibilities for human freedom to be constrained by normative arguments of the sort I have developed here. I must admit that I struggle to see how we can carve out a space between the compelling case for therapy and the seductive lure of enhancement other than by defending – however tentatively and contingently – a new, queerer, normal. I can only hope, then, that my outlining of the dialectic in this context will allow others to explore — and perhaps to queer — the argument further.

¹² It arguably also requires an account of the normal trajectory of the ageing process, given that what might be therapy for someone in their 20s may be enhancement for someone in their 70s.

¹³ Importantly, PGD can only affect the rate at which individuals with particular conditions are born into a community. Diverse forms of embodiment as a result of trauma, disease, or elective surgery, will always continue to exist.

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