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Law in Tension with Evolving Ethical Perception: Prenatal Genetic Testing for Sex and Disability

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Abstract

Legal prohibitions are often simple responses to highly complex ethical and social problems. Recommendations for legal prohibition of prenatal sex-selection distinguish between testing for sex and for disabling conditions. This distinction appears to be based on an objective difference between gender and disease or conditions that are themselves causes of suffering. But ethical analysis reveals symmetry between these two cases, challenging whether the law is responding to differences in the nature of the test, or to social pressures against discrimination that are better developed with respect to sexism than is the case for disability discrimination. This paper argues that the strongest position *against* sex-selection is based on a rejection of the parental assessment that a person's sex seriously compromises quality of life together with the dedication of social resources to minimize discrimination based on sex. Some genetic conditions produce disabilities that cannot be alleviated through improved social circumstances; the reasons for not restricting prenatal testing and termination as an option for parents for these conditions are distinguishable from those supporting prohibition of sex-selection. However, the severity and lack of predictability of disability associated with other genetic conditions are strongly contingent on social circumstances. Thus it may be reasonable to acknowledge that serious social reforms are required while at the same time supporting parental assessment of quality of life through testing and termination. But problems to do with the aggregate effects of individual parental choices, together with the need to work toward more supportive social circumstances, emphasize the importance of involving persons with disabilities and their spokespersons in evaluating social circumstances, disability discrimination, appropriate prenatal testing and related information to support parental decisions.

Keywords: sex-selection; disability; policy; ethics; genetics; social context

Introduction

Legal prohibitions are often responses to complex moral issues such as discrimination. Any proposed policy necessarily reflects a point in time related to a society's emergent discovery of how certain of its members are disadvantaged by attitudes and social structures. The history of legal protections against sexism and racism are evidence of this evolving moral perception, and this paper argues that restrictions on prenatal testing and termination also manifest evolving moral perception. But do legal prohibitions aid or inhibit the evolving moral discourse related to other areas of discrimination? On one hand, the entrenchment of moral progress in the form of prohibitions or legal rights might be seen as setting the stage for clarification (and perhaps precedent for further claims) of what constitutes discriminatory behaviour. On the other hand, prohibitions might serve primarily as symbolic condemnations of widely recognized discrimination that reflect and entrench moral sentiment at one point in time, impairing moral recognition of other areas of discrimination. In either case, good social policy analysis must consider the effects on evolving moral perceptions of enshrining contemporary views in legal prohibitions. Prohibiting prenatal testing and termination of fetuses of undesired sex, while permitting testing and termination for disabling conditions, is an example of this complex set of problems.

In Canada, the United States, the United Kingdom, and mainland Europe, sexselection for non-medical purposes¹ is widely considered wrong, and public policies have been implemented to restrict access (Knoppers and Isasi 2004). Arguments against sex-selection include: 1) that sex-selection violates duties to fetuses; 2) that sex-selection is discriminatory toward women and their current quality of life; 3) that sex-selection will reduce the opportunities for reproductive decisions; and 4) that being of a particular sex is not a disease or disabling condition.

Although there are several possible reasons to consider sex-selection unethical, most of them would also justify considerable restrictions on genetic testing for disabling conditions. Yet it is commonly argued that parental, and particularly

women's autonomy, are important grounds for permitting most types of prenatal genetic testing. There is some room for doubt about the soundness of prohibitions on sex-selection, and social policy analysis must evaluate the effect of such prohibitions on discrimination related to disabilities. This paper takes up the question of whether it is possible to substantiate a moral distinction between sex-selection and testing and termination for disabling conditions such as Down's Syndrome (DS),² in order to justify a restriction on the former while permitting the latter.

Prenatal Genetic Testing and Sex-selection

Prenatal genetic testing provides parents with information about the developing fetus, and in the case where a severe abnormality is detected, the opportunity to avoid their future child's suffering by terminating the pregnancy. More generally, the use of prenatal testing and termination may reduce the population incidence of suffering due to disabling conditions, and lead to savings of resources required to treat, compensate or support those who are born and live with disabilities. In contrast, sex-selection seems to be inappropriate for prenatal genetic testing because sexism is a morally irrelevant category for testing unless it is associated with a sex-linked condition.

However, this assertion requires further clarification. For instance, in agricultural practices, and livestock breeding in particular, sex is routinely considered an appropriate category for selection. There is little concern about the termination of particular pregnancies, the negative social aspects of selecting for a particular sex of animal, or its impact on the sex ratio of that breed in general. Aside from arguments for vegetarianism or issues of animal welfare, is it commonly held (although still problematic for some people) that agricultural animals do not have sufficient moral status to prevent their being killed (be it *in utero*, as an infant, or as an adult) for the purpose of sex-selection (or food production).

¹ Sex-selection can include a variety of new reproductive technologies, such as sperm sorting and pre-implantation diagnosis, in addition to prenatal testing and abortion.

² The choice of DS as a primary example may complicate issues somewhat, but a less complex example might bias the analysis towards thinking that evaluation of a condition's severity is a simple task. Another reason to choose DS is that the frequency for testing and surveillance is very high, e.g., pregnant women over 35 years of age will routinely be offered triple screen testing to detect (Bassett *et al.* 2000; Mennuti 1996).

By analogy, to support the claim that sex-selection of human fetuses is unjustified, one must first determine the moral status of fetuses as meriting protection in general, and from sexism in particular. If fetuses are ascribed strong moral rights, e.g., equivalent to those given to children, then it is simply wrong to terminate the fetus, regardless of whether it is for reasons of sex-selection or prevention of disability. However, if the fetus does not have sufficient moral status to justify a strong protection from termination, then either there is no justification to limit parents' decisions to test and terminate the pregnancy, or the justification will depend on some assessment of social harm of permitting sex-selection.

As a matter of social policy, abortions are available in Canada without evaluation of the woman's reasons as long as gestational age is below 20-24 weeks, although some programs require specific reasons after 16 weeks. This "right to make fundamental personal decisions without interference from the state" is reflected in the 1988 *R. v Morgentaler* decision by the Supreme Court of Canada (R. v. Morgentaler 1988). The 1989 Report of the Law Reform Commission of Canada recommended that crimes against the fetus not apply to acts done before the twenty-second week of pregnancy (Law Reform Commission of Canada 1989). Further, the 1997 case of *Winnipeg Child and Family Services (Northwest Area) v. G.*, the Supreme Court of Canada held that

The law of Canada does not recognize the unborn child as a legal person possessing rights. This is a general proposition applicable to all aspects of the law. Once a child is born, alive and viable, the law may recognize that its existence began before birth for certain limited purposes. But the only right recognized is that of the born person. Any right or interest the fetus may have remains inchoate and incomplete until the child's birth (Winnipeg Child and Family Services 1997).

Given the state of the law, the protection of fetuses from discrimination on the basis of sex is either unjustified, requires expansion of fetuses' moral and legal status, or is in need of other justification. It will not be possible to sustain an argument against termination decisions if the only justification is harm done to the individual child as assessed after birth, unless based on harms incurred by the prenatal test procedure that manifest after birth when termination was not selected.

There have been proposals in Canada and elsewhere to prohibit prenatal testing for the purpose of sex-selection.³ These recommendations reflect the belief that discrimination on the basis of sex is ethically objectionable even in the case of prenatal testing and termination.

Public Perceptions

Early debates about the ethics of sex-selection occurred primarily in the U.S. and reflected wide controversy in moral and philosophical arguments, as well as the beliefs of clinicians and the general population. One prominent ethics commentator, John Fletcher, twice reversed his position in print (Fletcher 1980; Wertz and Fletcher 1989). A study by Wertz and Fletcher found that 62% of U.S. physicians surveyed in 1985 would either perform sex-selection or refer the patient, an increase from only 1% in 1972 (Wertz and Fletcher 1989); a more recent international study of 37 countries seems to confirm their earlier findings (Wertz and Fletcher 1998). In another American study, pre-conceptual sex-selection was acceptable to between 25% and 33% of respondents, but this acceptance decreased to 11-13% when the method of sex-selection was abortion following prenatal testing (Dixon and Levy 1985). Recent studies in the UK and Germany showed similarly low rates of acceptance in the general public (Dahl *et al.* 2003; Dahl *et al.* 2004).

In terms of more general preferences for children of a particular sex, an early study of Florida college students found a 6 to 5 ratio of preference for male over female children (Markle and Nam 1971). Kolker and Burke's review of the literature concluded that preference for sons over daughters was stronger among blacks than whites (Kolker and Burke 1994); among Catholics and Jews than Protestants; and with women sharing the same preference as men, and no difference based on feminist convictions (Coombs 1977; Gilroy and Steinbacher 1983). However, there is some evidence that this traditional sex preference may be reversing. One study of the sex preferences of pregnant women with one or more child (n=88), found a preference for a child of the opposite sex from existing children, with 68% of those having their first baby wanting a daughter (Walker 1992). Even though it may be the

³ In Canada, see (Canadian College of Medical Geneticists and the Society of Obstetricians and

Gynaecologists of Canada 1993; Royal Commission on New Reproductive Technologies 1993), while

case that neither sex is preferred, some commentators are nonetheless concerned about the effects of a preference for a son to precede a daughter (Clark 1985; Rothman 1986).

Interestingly, the desire for a small family may outweigh the desire for a child of a specific sex. A sociological meta-analysis by Kolker and Burke suggests that sex-selection to produce sons is influenced by cultural background. "In Western societies, most couples who seek abortion for sex selection are immigrants or temporary residents from Third World societies with a paramount emphasis on sons" (Kolker and Burke 1994, 147). They cite a Johns Hopkins University Hospital pediatrician, Haig Kazazian, Jr., as observing that amniocentesis for sex-selection was sought primarily by Asian and East Indian-born parents who were "desperate for a son after several daughters" (Kazazian 1980). Studies of developing countries describe neglect of female children and sex ratios favouring boys that are widening as a result of the introduction of amniocentesis, ultrasound and chorionic villus sampling (CVS) (Gargan 1991; Kristoff 1993; Kumm, Laland, and Feldman 1994; Patel 1991).

Why Restrict Sex-Selection?

Some commentators have used justice as a basis for their arguments that sexselection reflects a systematic bias against women and that for this reason choices preferring male offspring are unjustified. However, they claim that avoiding children with disabilities does not similarly take advantage of, or enforce discriminatory practices on people with disabilities (Buchanan *et al.* 2000). According to Buchanan et al.:

We devalue disabilities because we value the opportunities and welfare of the people who have them. And it is because we value people, all people, that we care about limitations on their welfare and opportunities. We also know that disabilities as such diminish opportunities and welfare, even when they are not so severe that the lives of those who have them are not worth living, and even if those individuals do not literally suffer as a result of their disabilities (Buchanan *et al.* 2000, 278).

in India, policies have been implemented, however unsuccessfully, to prohibit sex-selection (Mudur 1999).

This of course, could be claimed as a justification for sex-selection in societies where being female is a severe burden. Consider, for example, the kind of oppression Afghan women lived with under rule by the Taliban. In such circumstances, very specific concerns about the welfare of children, and specifically female children, may well justify sex-selection independent of dedication to changing the socially oppressive regime. The point here is that it is the social circumstances that merit assessment in determining whether sex or disability are characteristics worthy of consideration by parents or women for the purposes of termination.

Buchanan et al. have argued that prohibition of sex-selection is justified because it undermines the public good – the natural balance represented by the biologically determined sex ratio (Buchanan *et al.* 2000, 183). But is the "natural balance" they refer to an important public good? While it may be true that a change in the male to female ratio in a population might reduce the choice for reproductive partners, any type of reduction in the general population may reduce the absolute choice for partners; and in the Western world it is unclear that something close to a 1:1 ratio is necessary given patterns of reproductive and social choices.

Perhaps it is because so much of our social resources over the last several decades have been visibly dedicated to making women equal in all dimensions of life, that we viscerally react to sex-selection as abhorrent. Even though some reasons that parents and professional cite to support sex-selection do not necessarily support sexism against women or explicitly oppose social reforms, the use of sex in determining quality of life or well-being is experienced as repugnant in this social context. But how can this description of ethical sentiment help us with the normative task of deciding what social policy is actually justified?

The most promising basis for restricting sex-selection is that unjust oppressive social circumstances are required to make sex a liability, and that such circumstances do not exist in the Western world due to significant commitment of public resources to the reduction of such discrimination. For this public policy reason, it is justified to prohibit sex selection with confidence that we are not restricting parents' exercise of their responsibilities related to their children's future well-being. But does this genuinely make a defensible distinction between sex and disabling conditions?

Some disability activists and ethics commentators are concerned that the narrow prohibition on sex-selection implies an endorsement of all other prenatal testing and terminations (Kaplan 1993).

Disability and Quality of Life

Genetic testing and termination for Down syndrome is available and rather aggressively promoted in Canada and the U.S. (Bassett *et al.* 2000; Mennuti 1996). This situation is usually justified on the basis that the condition itself constitutes a severe limitation on the quality of life of the future child, the parents' lives, and perhaps a drain on social resources. In order to avoid the eugenic implications of the concern about social resources (Nelkin and Lindee 1997), decisions about testing and termination are left to parental choice (Drake, Reid, and Marteau 1996). Activists, caregivers and some persons with DS argue that the social circumstances for persons with DS are oppressive, and that it is inappropriate to test and terminate for a condition where the poor quality of life is due to social circumstances, as in the case of sex-selection (Glover and Glover 1996).

DS is a condition with a wide range of phenotypic expression. At one end, it can result in short lives with extremely limited quality; at the other end, it may present a very minor disability (Elkins and Brown 1995; Saenz 1999). However, with current testing methods it is impossible to determine prenatally the degree of expression that will be present in a child born with DS. Further, caregivers, activists and clinicians disagree when considering the quality of life of less extreme expressions of DS within current social conditions.

Reasons to test and terminate for DS may therefore be based on the extreme symptoms being seen as incompatible with an acceptable quality of life, because the social circumstances of living with DS are assessed as intolerable, or both. Note that neither judgment implies a rejection of the quality of life of those living with DS under moderate symptoms or less oppressive social circumstances. Rather, both the ambiguity of the actual condition and the influence of social circumstances on the quality of life suggest that assessments of two kinds of threat to quality of life are

required.⁴ Thus under current circumstances, it will be permissible or at least nondiscriminatory to others with DS, to offer prenatal testing and termination. However, policy in this area will need to be based on evaluations of current and developing technologies, as the assessment may change if new technologies permit accurate prediction of the severity of the related trisomy, or there are improvements in the social circumstances for persons with DS and their caregivers.

Recognizing the sufficient, although not necessary, role of social circumstances in the projected value of life lived with a particular condition has implications for the restriction of prenatal testing. There is a spectrum of conditions in which DS represents a sub-spectrum. Towards one end, there are conditions such as Lesch-Nyhan syndrome,⁵ which is so debilitating that it can be considered negative independent of social issues. There are no social circumstances – short of cure or significant palliation – in which living with this condition would be tolerable, and it is therefore appropriate to offer testing and termination. Nevertheless, such decisions should be left to the autonomy of women or parents because testing and termination remain morally controversial as personal choices due to widely divergent views of the fetus' moral status.⁶ At the other end of the spectrum would be conditions such as minor birth defects or carrier status for recessive traits, that would rarely if ever predict a quality of life of questionable value (due either to the condition or to social circumstances). Similarly, susceptibility for late adult onset conditions such as breast cancer or Huntington disease will, prior to onset of the conditions, constitute lives whose quality – as worth living – is uncontroversial. The task of evaluating which conditions are insufficient insults to quality of life to merit termination is unavoidably and inextricably tied to evaluating life within existing social circumstances. While it

⁴ Buchanan et al. distinguish between impairments and disabilities, where impairments are variations from species norms, but are disabling only "in one sort of social environment but not others" (Buchanan *et al.* 2000, 287). They then explain that the dominant cooperative framework of societies and economies define what is or is not disabled, and that those who are advantaged have a vested interest in preserving their advantage; choosing the cooperative framework is a matter for justice theory that precedes working out distributive justice (Buchanan *et al.* 2000, 294).

⁵ Lesch-Nyhan syndrome is a rare and usually fatal X-linked genetic disorder of male children. The condition results from a complete deficiency of HPRT enzyme and the overproduction of uric acid throughout the body, and is characterized by spasticity, mental retardation, gout, and compulsive self-mutilation (Thompson, McInnes, and Willard 1991).

⁶ Issues of wrongful life are beyond the scope of this paper. We only mean to indicate that it is acceptable to test and terminate for Lesch-Nyhan syndrome. If an argument establishes that it is obligatory, it is of no relevance to the argument here, since Lesch-Nyhan is only an illustration of suffering that is least dependent on social circumstances.

may not be justified to restrict prenatal testing in order to force social change, the permissibility of prenatal testing for many conditions marks wide support for the assessment that the current social circumstances are discriminatory and significantly compromise the quality of life of those with the disabilities related to the condition. The negative evaluation of sex is solely dependent on social circumstances, so while testing and termination for the purposes of sex-selection is obviously not acceptable in many societies, it may be controversial elsewhere (House of Commons Science and Technology Committee (UK) 2005; Savulescu 1999; Savulescu and Dahl 2000).

However, it is not that sex-selection and disability discrimination through prenatal testing and termination are problematic because social circumstances justify assessments of poor quality of life; but that in societies that have dedicated resources to addressing the injustices of sexism, it is problematic to permit termination. Discriminatory social circumstances for persons with disabilities similarly justify parental concern about quality of life, and social investment in changing discriminatory circumstances would justify prohibition on testing once they are evaluated as having had considerable success. Prenatal tests for late onset disorders similarly identify conditions whose quality of life is not controversial, either due to the condition or discriminatory social circumstances. While these genetic conditions may be trivial in relation to quality of life prior to onset, neither fetal rights nor social sanction due to investment in changing socially unjust circumstances, may be sufficient grounds to warrant the restriction of parental autonomy. A more substantive argument – which is beyond the scope of this paper – about testing and termination for 'trivial' reasons may be required.

The Aggregation Problem

The social effects of individual prenatal decisions calculated as an aggregate may be considerable, and quite unintended by everyone involved in the individual decisions. What are the aggregate effects of individual decisions on the socially oppressive circumstances for those individuals living with disabilities?

Deciding to terminate may undermine political pressure to oppose discriminatory structures or institutions by reducing the proportion of persons with disabilities and their caregivers who would advocate for change, and lead to increased pressure to

spend public resources on other social concerns that do not address the difficulties of those living with disabilities. Buchanan et al. argue that this claim is a sweeping generalization without empirical support (Buchanan *et al.* 2000, 267). Citing Kitcher, they suggest that one counter-example is the reduction in the incidence of Thalassemia in Greece (through carrier testing), which resulted in more resources being available to support the decreasing numbers of persons living with the disease (Kitcher 1996). Thus the view that reduced numbers of effected persons necessarily leads to diminished support is less plausible today than it may have been historically, although it is unclear how confidently we can generalize from this one example. Buchanan et al. also argue that people can have legitimate interests in not having disabilities, accepting that this argument only works when the intervention is termination and prevents the future person altogether. Moreover, those not disabled also have a legitimate interest in reducing the incidence of disability.

Accepting individual responsibility for decisions to have children with disabling conditions may support the interpretation that responsibility for the support of disabled children is less a public responsibility and more personal. In the case of parents who decide to carry through with a pregnancy where the fetus has been determined to have DS, the parents may be seen as having accepted total responsibility for the costs of providing special education, medical care, and support for their child. Further, the aggregate effect of individuals succumbing to socially discriminatory pressures to terminate for negatively valued conditions may reinforce oppressive attitudes, structures and policies. Decisions to terminate may, for example, unintentionally imply a negative evaluation of the condition (and not the social circumstances), and thus encourage others to make similar decisions (Lippman 1989).

The concerns about aggregation of individual decisions to test and terminate are serious. It is moreover imperative to consider how to take advantage of individual assessments that social circumstances are oppressive and in need of change. But we must also accept that while individual decisions in the biomedical context have political effects, this domain is nevertheless the wrong venue for fighting these political battles. The fact that social oppression occurs and is wrong does not mean that people do not have a right to try to protect those for whom they have direct

responsibility for quality of life. To preference the political mission, we would also have to accept that individual caregivers should not act heroically to help their family members, because in so doing they undermine the opportunity for political pressure. It is therefore unjustifiable to argue that the duty to work against oppressive social circumstances provides sufficient grounds for restricting opportunities to reduce suffering in particular cases.

Conclusion

To summarize, this paper dealt with four main questions: 1) Why does such a large proportion of our society react against sex-selection but not prenatal testing for conditions associated with minor disability? 2) Is it possible, without attributing moral status to fetuses, to justify prohibitions on sex-selection, including those for family completion or order of birth; 3) Is it possible that the justification can distinguish between sex-selection and disability testing? And 4) Can the result of distinguishing between sex-selection and disability testing lend moral force to the opposition of discrimination against persons with disabilities, and move toward justifying prohibitions on prenatal testing for disabilities?

It is because so much of our social resources over the last several decades have been visibly dedicated to making women equal in all dimensions of life (recognizing that women have been, and still are systematically discriminated against), and that we believe we have sufficiently achieved this goal, that restricting parental choice for sex-selection is justified and is not deemed to prevent parents from making appropriate decisions related to the protection of their children's future welfare. However, if we do not also prohibit prenatal testing and termination for conditions that severely disable, it is because these two factors are less influential when evaluating the social contributions to how a genetic condition might be disabling. The lack of social commitment to remedy the social circumstances that discriminate against persons with disabilities (and prevent them from having optimal lives), combines with the fact that parents reasonably anticipate that the disability will compromise their children's welfare. It is therefore not justified to restrict prenatal testing and termination. Exceptions to this socially-contingent assessment are extreme conditions that are not amenable to improvements through social circumstances, such as Lesch-Nyhans disease, in which the lack of excellent

medical treatment is sufficient to provide a strong defence of parental decisionmaking in the context of prenatal testing.

These are a time and social-reform limited assessments that might change with society's commitments and progress related to particular disabilities. Consider the implications that this may have for deafness. Commitment of social resources to assure an optimal life and relative success in improving the social circumstances of the lives of people who cannot hear (in part thanks to the politics of the deaf community) means that it is reasonable to claim that deafness is more similar to sex-selection than DS, and thus we do not unreasonably restrict parent's decisions on behalf of their children's future welfare by denying testing and termination for deafness. This would also mean that people in the deaf community would not be permitted to test prenatally and terminate to assure that their children are not born hearing.

With respect to DS, activists argue that social conditions have a devastating effect on the quality of life for some persons with DS, providing prima facie evidence that society has not committed sufficient resources and therefore not made enough progress for there to be symmetry with sex-selection. We have neither the social commitment to making life with DS as optimal as possible, nor sufficient success in ameliorating the discriminatory social circumstances, to justify the claim that a prohibition on prenatal testing would not restrict parents exercise of their responsibility to seek their children's best interests. Even if we did commit social resources and make considerable progress, the inability of current tests to distinguish between mild and extreme forms of disability might prevent us from justifying the prohibition.

In order to challenge socially oppressive environments while also respecting individual autonomy and responsibilities, concentration of effort will need to be at the broader institutional and political levels. Specifically, it is critical that we engage stakeholders (i.e., persons with disabilities and caregivers) in the process of assessing the influence of social conditions on quality of life for genetic and other health conditions. This falls under a broader program of the morality of inclusion discussed by Buchanan et al (Buchanan *et al.* 2000, 260-264).

Collaboration between persons with disabilities, their supporters and the professional community might result in better information about the realities of living with prenatally detectable conditions (Kaplan 1993). This approach explicitly accepts that there is a struggle to appropriately recognize persons with disabilities. But most importantly, it emphasizes that lack of institutional and social support for persons with disabilities is a significant influence on persons with disabilities and their caregivers as well as those contemplating the use of prenatal testing for disability. It is unrealistic to expect geneticists and counsellors to become disabilities activists, but their engagement with the disabilities "community" can enrich the support they provide to parents (Dunne and Warren 1998). The trust of persons with disabilities and their supporters' in health care institutions and professionals has been eroded by this dispute. Collaboration on how to respond is one way of rebuilding that trust.

Further, an open discussion between the various stakeholders can help determine for which conditions parents should have access to prenatal testing and which social circumstances would or would not support a good quality of life. But this evaluation should not be static or lead progressively to the inclusion of more conditions. Rather, improved ethical perception and progress in social reform will be marked by the extent to which prenatal testing and termination for disabling conditions, like sexselection, become less common or are even prohibited because they are better supported by reduction in discrimination. Prohibiting sex-selection is justifiable in the majority of societies that have made significant investments of public resources to reduce or eliminate discrimination, and where it is reasonable to claim that being female does not severely compromise parents' responsibilities related to their children's quality of life. Permitting prenatal testing for DS is less discriminatory because it seems reasonable for parents to assess whether life with the condition in their society is a significant compromise. It is vital that the growing acceptance of a prohibition on sex-selection not impair recognition of other areas of discrimination, but rather serve as the basis for progressive moral perception and for extending social change and evaluation of genetic policy related to disabilities.

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