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To Be or not to Be? A Critical Appraisal of the Welfare of Children Conceived through New Reproductive Technologies*

***International Journal of Children's Rights* (2008) 16: 505–522**

Eric Blyth

**This paper is based on the opening address given by the author at Nobody's Child, Everybody's Children: An International Conference on New Reproductive and Genetic Technologies held at Malaspina University-College, Nanaimo British Columbia, Canada, 24 May 2007.*

Abstract

Over three million children are believed to have been born worldwide – and over 200,000 annually - as a result of "new reproductive technologies" (NRTs). Th is paper provides a critical review of the proposition that children are always best-served by being born. Drawing on the specific examples of intracytoplasmic sperm injection (ICSI); multiple births; pre-implantation genetic diagnosis (PGD) and selecting the characteristics of children, and donor conception it argues that there are defensible welfare arguments for curtailing unrestricted access to NRTs. Increased and wider dialogue is proposed to encourage the implementation of practices and policies that take account of the interests of all those aff ected by NRTs and which command public support.

Keywords: children's rights; new reproductive technologies; intracytoplasmic sperm injection; multiple births; pre-implantation genetic diagnosis; selecting the characteristics of children; donor conception

> *Since fertility rates are falling and the use of the new reproductive technologies is growing, [children conceived through reproductive technologies] will make up a significant client group as adults. If they have been exposed to undue risks as a result of their mode of conception, they will take a very different view of these risks in relation to those who helped in their conception* (Sutcliffe, 2003).

Introduction

Since the birth almost thirty years ago of Louise Brown, the fi rst person conceived through in vitro fertilization, it is estimated that, worldwide, a range of "New Reproductive Technologies" (and some not so new reproductive technologies) have contributed to more than three million births (Horsey, 2006) and are continuing to do so at a rate of around 200,000 each year (Adamson, 2006).

In many industrialized countries, approximately 1% of all live births result from reproductive technology. Some countries, however, have reported higher figures; for example, Slovenia and Sweden, 2.9% each, Finland, 3.2%, and Denmark, 3.9% (Andersen et al., 2007) and in the future, an increase in the proportion of births resulting from reproductive technologies relative to all births can be anticipated if current trends in declining global fertility rates and increasing recourse to reproductive technology continue.

In the context of extremely low and falling fertility rates, particularly affecting industrialized countries, where below-population replacement fertility levels are now the norm, the modest contribution of reproductive technology towards fertility levels (Grant et al., 2006; Nowak, 2007) might be perceived as unambiguously beneficial. Indeed, IVF, which has provided the building block for many subsequent technological developments, has been cited as one of the great inventions, not only of the 20 th century, but of all time (Encyclopœdia Britannica, 2003). Its advocates claim it has become a "very routine medical procedure" (McClure, 2004) – and some have argued for relaxing the regulatory regime to which it is subject in some countries. Contrariwise, Louise Brown's birth has been described as the "harbinger of an onslaught that would rip away the groundwork of civilized society" (Howley, 2006), while Thomas (2007), in a particularly vitriolic condemnation, compares the new - and the not-so-new - reproductive technologies to the "slave trade". For some (e.g. Institute for American Values, 2006; Thomas, 2007), this offence is aggravated insofar as the perpetrators are the children's own parents, who stand accused of promoting their own interests at the cost of those of their children – their alleged misuse of reproductive technology is projected as a modern form of child abuse.

What is it about reproductive technologies that provokes such divergent views? Can bringing children into the world ever be regarded as contrary to their interests? Are there occasions when restricting adults' access to services can be justified on child welfare grounds?

Even a cursory review of reproductive technologies suggests that there may be occasions when their impact on children is at least questionable. The UK's Medical Research Council (2004: 2) warns that:

> The evidence [that current reproductive technology procedures are generally safe], particularly in terms of long-term safety, is relatively weak when compared to other similarly well-established clinical techniques.

A detailed review of reproductive technologies would identify:

- The increased risk of preterm delivery, low birth weight and other adverse outcomes associated with conception resulting from assisted reproductive procedures (e.g. Hansen et al., 2005; Sutcliff e et al., 2006; Wright et al., 2007), adverse outcomes associated with clinical error (e.g. Leeds Teaching Hospitals NHS Trust v Mr. and Mrs. A and Others, 2003) and overt deception (e.g. Sforza, 2007);
- particular procedures, such as commercial surrogacy, reproductive cloning, "selecting in" or "selecting out" specific characteristics, conceiving a child as a "saviour sibling", conceiving a child using gametes or embryos from a deceased person, multiple embryo transfer and donor conception; and
- the provision of assisted conception services to particular individuals or groups, such as single people, people in same-sex partnerships, or post-menopausal women.

This is an illustrative rather than an exhaustive list and, given space constraints, I will limit a more detailed discussion to intracytoplasmic sperm injection (ICSI); multiple births; pre-implantation genetic diagnosis (PGD) and selecting the characteristics of children, and donor conception.

Intracytoplasmic Sperm Injection

ICSI, the injection of a single sperm into an egg to create an embryo, was developed to facilitate egg penetration and fertilization in cases of male fertility difficulties. The first human births following ICSI/IVF were reported in 1992 (Palermo et al., 1992). Although the ICSI pioneers embarked on long-term investigation of the possible hazards of the procedure and those arising from use of sperm from sub-fertile men (e.g. Ponjaert-Kristoff ersen et al., 2004; Sutcliff e, 2004; Bonduelle et al., 2005), clinicians elsewhere did not wait for the procedure to be evaluated before jumping onto the ICSI "bandwagon". Between 1993 and 1995, the number of centres worldwide providing ICSI increased nearly threefold, while the annual number of ICSI cycles increased nearly eightfold (Tarlatzis and Bili, 2000). ICSI now accounts for around half - and in some countries over 80% - of all IVF procedures (Adamson, 2006; Wang et al., 2006; Andersen et al., 2007; Centers for Disease Control and Protection, 2007). Increased recourse to ICSI does not indicate an increased rate of diagnosis of male factor infertility, but rather ICSI's emergence as the treatment of choice for NRT providers. For example, a diagnosis of male factor infertility was absent in 49.6% of all ICSI procedures performed in the United States during 2005 (Centers for Disease Control and Protection, 2007).

Follow up studies of ICSI-conceived children show that they have an increased risk of major congenital malformations and reduced future fertility (Hansen et al., 2002; Debaun et al., 2003; Maher et al., 2003; Bonduelle, 2004; Ponjaert- Kristoff ersen et al., 2004; Sutcliff e, 2004; Bonduelle et al., 2005; Belva et al., 2006; Sutcliff e et al., 2006), the most likely causes of which are thought to be sperm characteristics rather than the procedure itself.

Multiple Births

Over the last quarter of a century many industrialized countries have reported a substantial increase in the incidence of twin and higher order multiple births (e.g. American Society for Reproductive Medicine, 2004; Office for National Statistics, 2004). Th ese are due primarily to a variety of factors related to fertility treatment, the most significant of which is the practice of transferring more than one embryo during a single IVF cycle. Two recent international studies (Adamson, 2006; Andersen et al., 2007) indicate that around a quarter of all IVF deliveries are twins or higher order multiples. Although some European countries have introduced initiatives to drive down the prevalence of multiple embryo transfer (Andersen et al., 2007) this remains particularly high in the United States (Jones and Cohen, 2004; Centers for Disease Control and Protection, 2007) where NRTs accounted for 1% of the total births in 2004, but 18% of all multiple births -17% of twins and 40% of higher order births. The NRT rate for twins was 44% (compared to 3% for the general US population) and 6% for triplet and higher-order births (compared to 0.2% for the general US population) (Wright et al., 2007). In the UK, around half of all twins are conceived following IVF and other forms of fertility treatment (Human Fertilisation and Embryology Authority, 2007).

Multiple pregnancy and births result in health risks for both mothers and children, economic, psychological and social problems for families, and pressures on neonatal and other health services, education and social services. Here my main interest is, of course, the implications for children. Fetuses in a multiple pregnancy are at increased risk of prenatal death (American College of Obstetricians and Gynecologists, 1998). Survivors are at heightened risk of preterm delivery with associated low birth weight, which accounts for the majority of the subsequent difficulties experienced by these children, including increased risk of perinatal death (Human Fertilisation and Embryology Authority, 2006; Kurinczuk, 2006; Sebire, 2006), cerebral palsy, other neurological, respiratory and gastrointestinal problems, and visual impairments (Costeloe et al., 2000; Blickstein, 2006; Marlow, 2006; Wimalasundera, 2006). Th ese may require longterm medical and social care, rehabilitation and special education provision. Survivors of a multiple pregnancy face the loss of one or more siblings as a consequence of the "vanishing twin" phenomenon or of multifetal pregnancy reduction – the abortion of one or more fetuses to reduce the incidence of preterm delivery and increase the chances of survival of the remaining fetus(es) (Pinborg, 2005).

Multiple births in a family may cause considerable emotional, financial and physical stress, compromising the quality of life of all family members (e.g. Botting et al., 1990; Merenkov, 1995; Cook et al., 1998; Colpin et al., 1999; Ostfeld et al., 2000; Bryan, 2003; European Society for Human Reproduction and Embryology Task Force on Ethics and Law, 2003; Pinborg et al., 2003; Glazebrook et al., 2004; Klock, 2004; Ellison et al., 2005; Olivennes et al., 2005; Pinborg, 2005; Sen and Robson, 2006).

Pre-Implantation Genetic Diagnosis (PGD) and Selecting the Characteristics of Children

PGD involves the analysis of one or two cells from an embryo and can be used to identify its sex and – at the present time - over 1000 genetic conditions. Its application has given rise to the term "designer babies", a concept that currently - at least - more properly belongs in the realm of science fiction than that of science, although this is not to say that this will always be the case. PGD may be used to:

- Screen for aneuploidy, autosomal single gene disorders (such as cystic fibrosis, sickle cell disease, Tay-Sachs disease, or thalassaemia), or inherited chromosomal rearrangements;
- Conceive a child with a disability;
- Conceive either a boy or a girl. Th is may be for an X-linked health condition (such as Duchenne Muscular Dystrophy, Fragile X syndrome, or haemophilia) - or for personal, social or cultural reasons;
- (In conjunction with Human leukocyte antigen typing ["tissue typing"]) conceive a child who could be a matched tissue donor for an existing sibling affected by a life-threatening condition – a so-called "saviour" sibling - whose cord blood could provide stem cells to treat the sick sibling.

The major child welfare concerns relate to the safety of the technologies and their impact both on individual children - and more widely on children as a class - of being conceived with particular characteristics or with a particular "mission in life".

Relatively few children have been conceived following PGD. As a consequence, limited information about the implications of PGD is available. While no evidence has emerged to indicate that removal of either a single cell or two cells from an embryo for analysis poses risks for embryo development or to a future child (Björndahl and Barratt, 2002), and initial follow-up of infants conceived following PGD aged up to 12 months indicates that the prevalence of birth defects is similar to that among naturally-conceived babies (Verlinsky et al., 2004), further research is necessary to establish a more accurate assessment of risk.

Since the additional analysis required to identify a potential "saviour sibling" can be undertaken using the same biopsied cell(s), and the use of stem cells from cord blood is a non-invasive procedure, there seems no reason to suppose that potential "saviour siblings" are subjected to any additional physical health risks in relation to this procedure alone. However, a potential "saviour" sibling could be exposed to additional risks where the embryo is tested for tissue match purposes only rather than to test for an underlying physical condition. Given the ostensible purpose of technology to avoid disabilities and adverse health conditions, its use deliberately to conceive a disabled child would strike many as perverse.

Nevertheless, recent research has shown that some clinics in the United States would be willing to "select in" a disability (Baruch et al., 2006). Although there is little evidence of reproductive technology being used for such purposes, there has been considerable debate about the deliberate conception of a deaf child and whether deafness is more appropriately perceived as a distinctive cultural identity and linguistic minority rather than as a disability (e.g. Savulescu, 2002; Doyal and McLean, 2005).

The absence of empirical evidence has allowed both advocates and opponents of the technology to engage in extensive speculation concerning the potential impact of PGD on children. In the case of sex selection, this has included the risks of the child being subject to high expectations and/or expectations to conform to sex-specific stereotypes, as well as possible implications of incorrect diagnosis and the birth of a child of the "wrong" sex (Savulescu, 1999; Robertson, 2001). An intriguing contribution to this discussion has been made by Jenny Dai (2001: 38), based on her deeply negative experiences of being brought up in a culture of "son preference" in Taiwan:

> …. from the standpoint of the child of the undesirable gender, [preconception sex selection] appears to be a rather appealing option if gender discrimination towards women persists.

In the case of "saviour siblings", protagonists have speculated on the fate and welfare of the intended saviour who proves not to be a suitable match after all, is subject to pressure to donate bone marrow as well as stem cells, or fails to save the sick child's life.

More generally, concerns have been expressed regarding the commodifi cation or instrumentalization of children conceived with "made-to-order" characteristics or to perform a particular role, rather than for their own intrinsic worth (e.g. Centre for Bioethics and Public Policy, 2004; Human Genetics Alert, 2004). The use of PGD to exclude "undesirable" characteristics is criticized for legitimating sex discrimination, eugenic practices, and undermining the dignity of existing sick and disabled individuals as having a life that is "not worth living" (Croll, 2000; Human Genetics Alert, 2004; American College of Obstetricians and Gynecologists, 2007). Critics further warn of "slippery slope" perils, highlighting examples such as the 2007 approval in the UK of PGD to screen out low penetrance/late onset conditions such as breast cancer, and for non-life threatening conditions such as congenital fi brosis of the extraocular muscles (King, 2007).

Donor Conception

Donor insemination (DI) is one of the earliest forms of assisted conception, and one that is far from being either new or technologically sophisticated. From the outset, the dubious acceptability, morality and legality of DI determined its provision as a clandestine rather than as a merely confi dential medical service (Novaes, 1998). Physicians ensured that a recipient never knew the donor's identity and often advised recipients and their partner not to tell anyone – including their child(ren) – of their recourse to DI (Royal College of Obstetricians and Gynaecologists, 1987). Needless to say, no provisions were made for donor-conceived people to learn anything about their donor.

Secrecy, anonymity and donor recruitment practices promoted the use of sperm from a single donor on multiple occasions, and it is known that some donors helped to conceive many dozens of off spring (Festing, 1999/2000). As demand for DI increased, physicians looked beyond their immediate personal and professional circles to recruit new donors, off ering fi nancial reward - usually at a modest level - as an incentive. Subsequent technological developments enabled egg and embryo donation to become widely available.

A major consequence of the way in which donor conception has been provided is that, despite the application of DI as a medical procedure for more than acentury, we still know comparatively little about it. In the United States, for example, claims of the annual number of children born as the result of donor conception range between 30,000 and 75,000 (Institute for American Values, 2006). Much of the available information about donor conception is limited to DI itself and is based either on small-scale empirical studies that are inherently biased because many children in study families are unaware of the nature of their conception, or on anecdotal accounts from a comparatively small group of donor-conceived individuals who have learned about their conception in a variety of ways – not all of which have either been planned or positive experiences – and most of whom have little, if any, information about their donor or other genetic relatives – or indeed, whether they have any other genetic relatives at all.

While published research indicates that donor-conceived children appear to be developing and growing up within the bounds of "normality", a number of child welfare concerns have been identified including:

- Access to information;
- Commercialization of gamete procurement;
- Deliberate separation of children from their genetic parent(s);
- Recourse to donor conception by single women and lesbian couples, and recourse to egg donation by older, post-menopausal women.

Access to Information

Anonymity continues to receive significant endorsement by the medical profession in many countries, primarily on the utilitarian ground that its removal would adversely impact donor supply (House of Commons Science and Technology Committee, 2005: 69-72; British Fertility Society, 2007: 6). Anonymity has increasingly been challenged by other professional groups and individuals, children's rights organizations, some parents of donor-conceived children and donor-conceived people themselves, believing that information relating to an individual's personal identity should not be withheld from them. While rare, some contrary views from donor-conceived people have been expressed. For example, Karen Clarkson (2005: 29) has written:

> There is a comforting finality to knowing you can never discover the identity of one of your biological parents. You accept it and move on,

while Kramer (2006: 41) indicates how he has accommodated limited knowledge of his genetic and biographical background:

> [N]ot knowing my donor is not something I think about on a day-to-day basis. It's not that I ignore it, but having known it since I was only two years of age has made it a part of my life that I embrace and accept.

The UN Convention on the Rights of the Child and, in Europe, the European Convention on Human Rights and Fundamental Freedoms have been drawn on in this debate, resulting in modest successes for proponents of the abolition of donor anonymity, while the UN Committee on the Rights of the Child has specifically highlighted the "potential conflict" between donor anonymity and the provisions of the Convention (Blyth and Farrand, 2004).

In response to changing perceptions of donor-conceived people's needs for and rights to information, some jurisdictions have established statutory and/or "voluntary" registries that enable donor-conceived people to access information about their donor. This, of course, assumes that they are aware of the nature of their conception in the first place. Although recipients of donated gametes or embryos are now less likely to be overtly advised not to tell their children about the nature of their conception, the extent to which they may be actively encouraged to tell – and the likelihood of their doing so – remain variable. Some registries permit access to non-identifying information only, while others permit access to the donor's identity - and some facilitate access to information about half-siblings sharing the same donor (Blyth and Speirs, 2004). The most successful registry, the Donor Sibling Registry, established independently of any government by Wendy and Ryan Kramer in 2000, has facilitated more than 12,000 matches between nearly 5,000 half-siblings and/or donors as at April 2008 (http://www .donorsiblingregistry.com).

Commercialization of Gamete Procurement

While some jurisdictions prohibit donor remuneration in any form, others allow the market free rein. In the United States some women with particularly "desirable" and marketable attributes are able to command fees running into many thousands of dollars for their eggs (Spar, 2006). Some donor-conceived people have criticized commercial gamete procurement as "degrading and cheapen[ing] the essence of what it means to be human" and for compromising their integrity (Pratten, 2004 - see also Rubin, 1983).

Deliberate Separation of Children from their Genetic Parent(s)

The most fundamental criticism of donor conception, endorsed by some donor-conceived people and others, is that in any form it is damaging and inherently unethical because it subjects donor-conceived people to "genetic …. alienation" (Rose, 2004) and "severed kinship" (Rose, nd) and disregards their right to be raised by their genetic parents (Tangled Webs, nd; Rose, 2001a, 2001b, 2004; Institute for American Values, 2006; Walker, 2006). These concerns are compounded by the use of donor conception by single women and lesbian couples, by depriving the child of the opportunity of being reared by both a mother and father (Somerville, 2005, 2007; Institute for American Values, 2006), and by the use of egg donation by older, post-menopausal women, whose parenting capacities may be compromised by advanced age and/ or ill health and who may not survive their child's early years (Freeman, 1997).

Approaches to Children's Welfare

One view of children's welfare in respect of reproductive technologies is that the concerns highlighted here – and others that have not been considered because of space limitations - are insuffi ciently serious to warrant

interference in freely consenting adults' reproductive autonomy. In this regard, it is almost always in the child's best interests to be born, save for exceptionally rare instances when he or she would be exposed to a life that is "not worth living" (Harris, 2004; Savulescu, 2002, 2004a, b). Even if children conceived as a result of NRTs " …. have worse lives than average, that is not a reason to restrict the technology since they would not have otherwise have existed (sic)" (Savulescu, 2004b: 359).

This perspective led a UK Parliamentary Committee to recommend the abolition of the existing legal requirement to take account of the welfare of the child before providing fertility treatment. Where a clinic had any concerns about the welfare of any child who might be conceived as a result of the treatment, the Committee advised referral to a statutory child welfare agency to undertake an assessment following the child's birth and take any necessary safeguarding action under child protection legislation (House of Commons Science and Technology Select Committee, 2005: 103).

In respect of some of the examples cited above, advocates of this approach have offered the following comments:

> Although I believe the …. use [of] technology to deliberately choose to have a child with disability is wrong, I believe that if we are serious about respecting people's procreating autonomy, we should respect those decisions (Savulescu, 2004a: 104).
>
> I do not believe there is any such thing [need to know one's genetic origin] but if there is, it is doubtful that the arguments which might sustain it are such as to outweigh the rights of privacy of sperm donors still less the rights to protection of the privacy of family life (Harris, 2004: 25).

Harris also made a remarkable observation concerning a widely-reported clinic error in the UK, which resulted in a white woman, Mrs. A, who was undergoing ICSI treatment with her husband, giving birth to mixed-race twins (Leeds Teaching Hospitals NHS Trust v Mr. and Mrs. A and Others, 2003). This occurred after the clinic inadvertently fertilized her eggs with sperm from an Asian man, Mr. B (who with his wife was also undergoing ICSI at the clinic at the same time), although the error was not apparent until after the twins' birth. Harris (2003: 206) commented:

> The mix up, while disturbing, is not disastrous. We have one set of happy parents and hopefully a set of happy children.

Neither Mr. nor Mrs. B have spoken publicly about their experiences, although Mr. B unsuccessfully contested the As' application to adopt the twins. However, in a national newspaper, Mr. and Mrs. A subsequently described their ordeal as a "nightmare" (Lazzeri and Kay, 2006a, b).

Many would accept the "better off dead" judgment as one that may be made by a competent adult, although this is troubling enough. Extending this to an infant or to an individual yet to be born requires a considerable credibility jump. Furthermore, when applied to the deliberate conception of a child, such stark choice is invidious:

Preferring a disadvantaged life as the only alternative to non-existence may be a rational choice for him to make, and yet ……. the reason why there should be no person who has to face these alternatives is precisely that, once brought into existence facing them, he will find that his own individual non-existence is the only alternative to his disadvantages (Velleman, 2005: 372-373).

A contrary proposition asserts that children should not knowingly or intentionally be brought into the world unless they will not be affected negatively in any foreseeable way. For some, this means that some procedures should be prohibited altogether, such as all forms of third party assisted conception (Velleman, 2005; Institute for American Values, 2006; Somerville, 2007; Tangled Webs, n.d.) and the conception of saviour siblings (Campbell, 2004; Comment on Reproductive Ethics, 2004), and that some groups, such as single people, people in same-sex partnerships, and post-menopausal women should be prevented from accessing those assisted reproduction services that are permitted (Somerville, 2005, 2007; Institute for American Values, 2006).

Self-evidently, such an approach necessarily defines children's rights in terms of a conflict with the rights of other groups and legitimates the application of discriminatory practices (e.g. de Lacey, 1997; Jackson, 2001; Saffron, 2004; Victorian Law Reform Commission, 2007). Since from the moment of birth, we are all subject to various hazards that life will put in our way, the aspiration never to cause any harm means that it must always be wrong to bring about the existence of another person. As Wilkinson (2003) observes, taken to its logical conclusion, this is essentially an argument for discontinuation of the species.

An alternative to the "anything goes" or "nothing goes" positions, the "reasonable welfare" approach, defines the world as more grey than unequivocally black or white. Accepting that existence necessarily poses some risks, advocates aspire to the modest objective that the individual conceived as a result of reproductive technologies will have a "reasonably happy life" (Pennings, 1999: 1148). The "reasonable" welfare approach acknowledges service providers' duty of care to parties other than to those seeking treatment (Ethics Committee of the American Society for Reproductive Medicine, 2004; Nathanson, 2004; Human Fertilisation and Embryology Authority, 2005) and legitimates some curtailment of the reproductive autonomy of adults. A parallel argument has been advanced by those seeking to limit the expansion of PGD, that living with disabilities or with treatable, non-fatal conditions is not inconsistent with having a "worthwhile" life (King, 2007).

This approach underlies legislation in various jurisdictions governing assisted conception services that requires account to be taken of children's "welfare" (Human Reproductive Technology Act 1991: Western Australia; Human Fertilisation and Embryology Act, 1990: United Kingdom); "interests" (Assisted Reproductive Techno logy Bill 2007: New South Wales); "welfare and interests" (Infertility Treatment Act 1995: Victoria); "best interests", (Assisted Human Reproduction Act 2004: Canada, or "health and well-being" (Human Assisted Reproductive Technology Act 2004: New Zealand).

However, operationalizing such principles – and defining what makes for a "reasonably" happy or "worthwhile" life - has proved problematic. The fact that legislation in different jurisdictions ostensibly promoting children's welfare or interests both secures and prohibits the legal protection of donor anonymity illustrates clearly the contested nature of these concepts.

A Way Forward: Giving Stakeholders a Voice

There is little doubt that professional groups and the fertility industry more widely have been the main drivers of developments in reproductive technology. There has been relatively limited opportunity for the views of those most directly affected to be heard. This needs to change. Significantly, those who are brought into being as a result of reproductive technologies are the one group of stakeholders with "no voice and no choice" (Walker, 2006).

Challengingly, John Eekelaar, a noted authority on children's rights, has claimed that:

> The only way [children's] rights can be addressed is by asking whether a person would choose to be born into a context and in the circumstances contemplated (1992: 230).

However, as with "maximum welfare" arguments, the practical application of this approach might embrace more circumstances than intended. What, logically, would limit its application to conception resulting from reproductive technology? Given the choice, we might all be able to think of preferable circumstances for our own conception.

Taking constructive action, therefore, is not straightforward, even though promotion of children's rights to be heard and to participate in decision-making concerning their own lives is not only legitimate, but is integral to contemporary orthodoxy in many jurisdictions.

Children clearly cannot give or withhold consent to their own conception; they may be too young to express a view and their dependency may preclude truly independent views even when these are articulated (Eekelaar, 1992; Vanfraussen et al., 2003; Rose, 2004); and their views are almost certainly bound to change as they mature (Eekelaar, 1992). Of the three million people born as a result of reproductive technologies worldwide, we know about the experiences of a few dozen only, and – as noted previously - these are almost exclusively children and adults conceived as a result of anonymous DI, who do not all "speak with one voice".

There are also other stakeholders whose interests have been promoted through anti-discrimination and equal opportunities legislation who have a right to be heard, especially where – in the views of some people at least – their interests may be regarded as conflicting with those of children.

Conclusions

It goes without saying that if there was a quick fi x to satisfy all interests, it would have been identified by now and there would be little need for discussions such as those raised in this paper. Th e only constructive way forward seems to be a willingness of all protagonists to give serious consideration to the views of all other stakeholders, especially if our instinctive inclination is to disagree with them, and be willing to review our own

views. In so doing we may be able to edge somewhere nearer towards resolutions that are fair, just and which may command broad community support.

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