UNIVERSITY OF KWAZULU-NATAL

SCHOOL OF LAW, HOWARD COLLEGE

An Afrocentric approach to CRISPR-Cas9: Analysing the use of genetic technologies in human reproduction through the lens of human rights and African values

Bonginkosi Shozi

214511633

This thesis is submitted in pursuance of the requirements for the degree of Doctor of Laws

Supervisor: Professor Donrich W Thaldar

2021

DECLARATION

I, Bonginkosi Shozi, hereby declare that except where specified otherwise this project is an original piece of work by me which is made available for photocopying and for inter-library loan.

Signed: 

ACKNOWLEDGEMENTS

First, I would like to express my gratitude to the School of Law, and the College of Law and Management Studies, for giving me the opportunity to do my PhD at the University of KwaZulu-Natal.

This work is based on the research supported by the National Research Foundation of South Africa (Grant Number 116275) and by the African Health Research Flagship of the University of KwaZulu-Natal, South Africa. My thanks go to both institutions for their support.

I wish to thank my supervisor, Professor Thaldar, for his mentorship and guidance during the research process. None of the research would have been possible without his brilliance and energy. I also owe much to the School of Law's Health Law and Ethics Research Interest Group. The staff and students — many of whom have also been collaborators — have been an invaluable resource to me while writing this thesis, and for this, I thank them.

Finally, to my friends and family: I appreciate your support, and patience. This has been a long and arduous journey that has demanded sacrifices from both me and all of you. I am grateful to have loved ones who have made these sacrifices so freely and willingly.

ABSTRACT

In the wake of the advent of genome editing technology CRISPR-Cas9, there has been global debate about the potential use of this technology on human gametes or embryos to create individuals with genetically modified genomes. This is a process commonly referred to as germline genome editing (GGE). Given that several countries, including South Africa (SA), have no regulation speaking to GGE, many proposals have been put forward regarding how this technology ought to be regulated in a way that attends to the ethical issues raised by the prospect of modifying the genomes of future generations.

Within this global discourse, however, there are several material gaps. Most notably, the proposals have primarily been framed through a Eurocentric paradigm that omits material contextual considerations relevant to SA and the African continent. Furthermore, the proposals tend to be based on value judgements on ethical issues — such as the moral significance of the human genome — rooted in the Western philosophical tradition. This thesis endeavours to respond to these gaps by providing a novel theoretical approach to the regulation of GGE in South Africa, termed an 'Afrocentric approach'. This approach entails responding to the legal, ethical and human rights issues related to GGE that is rooted in an African philosophical perspective on these issues, and that is sensitive to the realities of the South African context.

This thesis concludes that SA ought to be open to the prospect of parents modifying the genomes of future offspring but must also place reasonable and evidence-based constraints on GGE. This thesis finds that there is a tenable argument that prospective parents have a 'right to CRISPR', but this right may be limited. Such limitations must be rationally related to the goals of (1) protecting public interests, or (2) promoting the best interests of the prospective child.

LIST OF PUBLICATIONS

I have been fortunate to publish several publications based on the research done for this thesis prior to its final submission. Because of this, substantial parts of this thesis consist of and build upon material that has featured in the publications indicated below:

- **Shozi, B** 'A critical review of the ethical and legal issues in human germline gene editing: Considering human rights and a call for an African perspective' (2020) 13(1) *SAJBL* 62–67 (based on Chapter 1).
- **Shozi, B** 'Does Human germline genome editing violate human dignity? An African perspective' (2021) lsab002 *J Law Biosci* 1–24 (based on Chapters 2 and 3).
- **Shozi, B** 'Something old, something new: Applying reproductive rights to new reproductive technologies in South Africa' (2020) 36(1) *SAJHR* 1–24 (based on Chapter 4).
- **Shozi, B**; T Kamwendo; J Kinderlerer; D Thaldar; B Townsend & M Botes 'Future of global regulation of human genome editing: A South African perspective on the WHO Draft Governance Framework on Human Genome Editing' (2021) *JME* 1–4 (based on Chapters 3, 5 and 6).
- Thaldar, D & **B Shozi** 'Procreative non-maleficence: A South African human rights perspective on heritable human genome editing' (2020) 3(1) *CRISPR J* 32–36 (based on Chapter 6).
- Thaldar, D; M Botes; **B Shozi**; B Townsend & J Kinderlerer 'Human germline editing: Legal-ethical guidelines for South Africa' (2020) 116(9/10) *S Afr J Sci* 1–7 (based on Chapters 3, 5 and 6).
- Townsend, B & **B Shozi** 'Altering the human genome: Mapping the genome editing regulatory system in South Africa' (2021) 24(1) *PELJ* 1–28 (based on Chapters 2 and 3).

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

I BACKGROUND

In 2012, a group of scientists in the United States (US) published the first paper on a novel biotechnology, derived from bacteria, which could be used to make precise changes to specific locations in the genome.[1] This technology, called CRISPR-Cas9,[2] has since generated a significant amount of attention in the scientific community, academia, and the popular media alike, given its potential application in humans. This is because it provides a cheap, efficient, and relatively precise means of modifying the genome and could be used to remove certain genes or to insert new ones.[3] CRISPR-Cas9 brings with it much promise, as it provides a possible means to cure previously incurable, debilitating genetic diseases such as Huntington's chorea, Tay Sachs disease, and cancer.[4] While much of the attention this technology has garnered is due to the prospect of these unprecedented therapeutic gains becoming a reality in the foreseeable future, much of the discourse relating to CRISPR-Cas9 has been concerned with the similarly unprecedented risks this technology brings with it.[5]

To fully appreciate the concerns relating to CRISPR-Cas9, it is important to place this technology within a broader context. CRISPR-Cas9 is the latest innovation in what has come to be known as 'genetic technologies'.[6] The first major genetic technology, X-Ray diffraction, was used by Rosalind Franklin to produce the famed 'photograph 51' that led to the discovery of the structure of deoxyribonucleic acid (DNA) and spurred the beginning of the era of genomics.[7] In the years following this discovery, humanity made several great strides in understanding the human genome. With this newfound knowledge eventually came the means

---

[1] M Jinek, K Chylinski & I Fonfara et al 'A programmable dual-RNA-guided DNA endonuclease in adaptive bacterial immunity' (2012) 337(6096) *Science* 816.

[2] This is an abbreviation of Clustered Regularly-Interspaced Short Palindromic Repeats (CRISPR) and CRISPR-associated RNA-guided endonuclease, Cas9. See JA Doudna & E Charpentier 'The new frontier of genome engineering with CRISPR-Cas9' (2014) 346(6213) *Science* 1258096.

[3] Ibid.

[4] S Baliou, M Adamaki & AM Kyriakopoulos et al 'CRISPR therapeutic tools for complex genetic disorders and cancer (Review)' (2018) 53 *International Journal of Oncology* 443.

[5] G Cavaliere 'Genome editing and assisted reproduction: Curing embryos, society or prospective parents?' (2018) 21 *Med Health Care and Philos* 216.

[6] AM Ardekani 'Genetic technologies and ethics' (2009) 2 *J Med Ethics Hist Med* 11.

[7] K Nightingale 'Photo 51: The key discovery behind the structure of DNA' (2020) available at *https://www.sciencefocus.com/the-human-body/photo-51-the-key-discovery-behind-the-structure-of-dna/*, accessed on 23 April 2021.

to modify the genome in 1972. This was when Paul Berg refined his technique for using viruses to insert fragments of DNA from other organisms into the genome of bacteria to create recombinant DNA.[8] From the moment Berg's so-called 'gene-chimera' experiments became feasible, people's minds turned to the possibility of using similar genetic manipulation techniques in humans and questions were raised about the social, political and ethical implications of doing so.[9]

More recently, genetic technologies, such as those used for reproductive human cloning[10] and preimplantation genetic testing (PGT), have become prominent.[11] In each case, these genetic technologies have been treated circumspectly because of their potential to be used in human reproduction. This is because they open up the possibility of children being born whose genetic characteristics are not the product of nature but of human design.[12] While there are currently no reported cases of cloning in human reproduction, in 1990 the world saw the birth of the first 'designer babies'. These babies were the product of embryos selected using PGT.[13] Similarly, concern has emerged about the use of CRISPR-Cas9 to create individuals with genetically modified genomes — commonly referred to as germline genome editing (GGE).[14] GGE refers to 'the use of genome editing in human reproductive cells (ie gametes and cells that give rise to gametes) and early-stage human embryos'.[15] The effect of this is to make changes to the genome that will not only be present in the resultant child, but *may also be inherited by future descendants* of that child. This contrasts with somatic genome editing (or 'somatic cell gene therapy'). This refers to genome editing of the non-reproductive cells of a person who has already been born. In this case the genetic changes *will not be transmitted to*

[8] Recombinant DNA refers to the combination of DNA molecules from different organisms into a single host organism. See S Mukherjee *The Gene: An Intimate History* (2017) 203.
[9] Ibid at 226.
[10] Reproductive cloning is the deliberate production of genetically identical individuals, which can be done by using somatic cell nuclear transfer or embryo splitting. National Academy of Sciences, National Academy of Engineering, Institute of Medicine & National Research Council Committee on Science, Engineering, and Public Policy *Scientific and Medical Aspects of Human Reproductive Cloning* (2002) at 2–4.
[11] PGT is the testing of zygotes or embryos to identify and select for particular genetic traits. See Ardekani op cit note 6 at 12.
[12] To illustrate: In the wake of the announcement of the first successfully cloned mammal, Dolly the Sheep, a global media outcry against the potential application of this technology in humans led to widespread legal prohibition of reproductive human cloning. See PD Hopkins 'Bad copies: How popular media represent cloning as an ethical problem' (1998) 28(2) *Hastings Cent Rep* 6.
[13] LM Silver *Remaking Eden: How Genetic Engineering and Cloning Will Transform the American Family* (2007) 237.
[14] See ES Lander 'Brave new genome' (2015) 373 *N Engl J Med* 5.
[15] Cavaliere op cit note 5 at 2.

future generations. And it is this difference — the element of heritability — that has made GGE technologies like CRISPR-Cas9 so controversial.

In the wake of the advent of CRISPR-Cas9, there have been numerous calls for the use of the technology to be halted — either permanently or temporarily. The first such call for a moratorium on CRISPR-Cas9 came from the scientific community at the 2015 International Summit on Human Genome Editing.[16] This group of scientists, which included members of the team that developed CRISPR-Cas9, took the view that somatic cell gene therapy fell within existing laws on gene therapy; ergo it required no new regulations. GGE, on the other hand, was viewed as being more problematic because:

> 'Germline editing poses many important issues, including: (i) the risks of inaccurate editing (such as off-target mutations) and incomplete editing of the cells of early-stage embryos (mosaicism); (ii) the difficulty of predicting harmful effects that genetic changes may have under the wide range of circumstances experienced by the human population, including interactions with other genetic variants and with the environment; (iii) the obligation to consider implications for both the individual and the future generations who will carry the genetic alterations; (iv) the fact that, once introduced into the human population, genetic alterations would be difficult to remove and would not remain within any single community or country; (v) the possibility that permanent genetic 'enhancements' to subsets of the population could exacerbate social inequities or be used coercively; and (vi) the moral and ethical considerations in purposefully altering human evolution using this technology.'[17]

As such, the conclusion reached at the International Summit on Human Genome Editing was that a moratorium on both research and clinical application on GGE was necessary. This was because it would be irresponsible to proceed with using CRISPR-Cas9 until the aforementioned safety and efficacy issues had been resolved and a social consensus was achieved. Shortly after this call for a global moratorium, the National Institutes of Health (NIH) in the US declared that it, 'will not fund any use of gene-editing technologies in human embryos', citing reservations about the ethics of 'altering the germline in a way that affects the next generation without their consent', and a current lack of medical applications that justify GGE.[18] More recently, the World Health Organisation (WHO) issued a public statement that,

[16] National Academies of Science, Medicine and Engineering 'International summit on human genome editing' (2015) available at *https://www.nap.edu/catalog/21913/international-summit-on-human-gene-editing-a-global-discussion*, accessed on 24 August 2019.
[17] Ibid at 7.
[18] National Institutes of Health 'Statement on NIH funding of research using gene-editing technologies in human embryos' (2015) available at *https://www.nih.gov/about-nih/who-we-are/nih-director/statements/statement-nih-funding-research-using-gene-editing-technologies-human-embryos*, accessed on 24 September 2019.

'it would be irresponsible at this time for anyone to proceed with clinical applications of human germline editing'.[19]

Many countries such as Australia, Belgium, Brazil, Canada, France, Germany, Israel, the Netherlands and the United Kingdom (UK) have enacted legislation that either completely outlaws or limits germline interventions, often with criminal sanctions imposed as punishments.[20] In cases of restrictive regulation, Isasi et al observe that this is 'because of fears of commodification of potential human life' by genetically modifying the prospective child.[21]

All this elucidates an issue that commonly emerges in matters relating to the regulation of human reproduction, and that is evident in discourse concerning the use of GGE technology CRISPR-Cas9: when engaging with the legal issues relating the genetic technologies, confronting the underlying ethical questions is unavoidable. As such, any discussion on how GGE is and should be regulated must also attend to the underlying ethical issues that inform questions of if, when and how genetically modifying future generations is appropriate. That is what this thesis endeavours to do.

II STATEMENT OF PURPOSE

While there are several legal and ethical issues that emerge from the discourse concerning the use of genetic technologies, this thesis will focus solely on the issues relating to the use of these technologies (particularly GGE using CRISPR-Cas9) *in the context of human reproduction*.

Three prominent issues emerge from the use of genetic technologies in human reproduction:

- Whether manipulating the human genome is (ethically and legally) permissible.
- Whether prospective parents are entitled to make decisions regarding the genetic characteristics of their prospective children — including by genome editing.
- What the impact of GGE will be on a child born by using these technologies.

[19] WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing 'Report of the first meeting' (2019) available at *https://www.who.int/ethics/topics/human-genome-editing/GenomeEditing-FirstMeetingReport-FINAL.pdf?ua=1*, accessed on 24 September 2019.
[20] R Isasi, E Kleiderman & BM Knoppers 'Editing policy to fit the genome?' (2016) 351(6271) *Science* 337.
[21] Ibid. The term 'prospective child/person' as used in this thesis refers to the person who may come into a being as a result of the use of genetic technologies in human reproduction. This term is used in lieu of other similar terms such as the 'future child' or 'the child to be' because these terms, in my view, imply that the child who the prospective parents want to have will, in fact, come into being (along with the genetic characteristics the parents have selected). The reality is, however, that many parents who want to have children, either coitally or using reproductive technologies, do not succeed in doing so. For instance, one may genetically manipulate embryos that will never result in the birth of a person. The prospective child is simply a hypothetical mental construct that may, or may not, lead to the birth of an actual child. This concept will be discussed in more detail in Chapter 6 infra at 194.

The purpose of this thesis will be to consider each of these three issues, from a South African (SA) perspective.

III RATIONALE

(a) The ethics of germline genome editing and human rights

In the global discourse on the ethics of CRISPR-Cas9, certain key issues that are relevant to the SA context have largely been overlooked — the most significant being that of constitutionally enshrined human rights. This is apparent in the way in which public opinion approving of GGE has been portrayed as a prerequisite to the permissibility of genetically modifying prospective children.

Formulating policy on the use of controversial biotechnologies has always been an issue highly influenced by public sentiments. Consider the case of cloning, which has been widely prohibited due, in part, to media outcries about the idea of making 'copies' of people.[22] In recent years, there have been an increased number of studies on public opinions and genome editing.[23] Some of these results question the veracity of claims made by commentators regarding certain ethical aspects of CRISPR-Cas9. Despite claims that grave public concern about GGE justifies the need for a ban or moratorium, public opinion polls in the US show that the public is, generally, open to GGE — although there appears to be a greater acceptance of it being used for treating genetic disease.[24] Furthermore, while it is generally accepted among commentators that somatic cell gene therapy is less ethically concerning than GGE, in a 2017 study by the Royal Society, more participants responded positively to heritable genomic modification than to non-heritable genomic modification.[25]

Public opinion polls such as these have primarily focused on the US and the UK. No similar study has yet been done in SA. Were such a study done, public opinion may provide various insights into the ethical and societal implications of CRISPR-Cas9, making genome editing widely accessible. That said, it is essential to consider the role that public opinion

[22] Hopkins op cit note 12 at 6.

[23] Centre for Genetics and Society 'Summary of public opinion polls' (2018) available at *https://www.geneticsandsociety.org/internal-content/cgs-summary-public-opinion-polls#igmdata*, accessed on 12 September 2019.

[24] PEW Research Center 'Public views of gene editing for babies depend on how it would be used' (2018) available at *https://www.pewresearch.org/science/2018/07/26/public-views-of-gene-editing-for-babies-depend-on-how-it-would-be-used/ps_2018-07-26_gene-editing_0-01/*, accessed on 12 September 2019.

[25] See: A van Mil, H Hopkins & S Kinsella 'Findings report December 2017' (2017) available at *https://royalsociety.org/~/media/policy/projects/gene-tech/genetic-technologies-public-dialogue-hvm-full-report.pdf*, accessed on 12 September 2019.

should play in policy decisions in SA. It is here that the Constitution of the Republic of South Africa, 1996 (the Constitution) becomes particularly relevant.[26] Several activities related to GGE potentially fall within the constitutionally protected interests of several persons, including the scientists and medical researchers,[27] the patients,[28] and prospective parents.[29]

Human rights have been conspicuously absent in the global debate about CRISPR-Cas9. The most relevant international human rights document in this regard is the Universal Declaration on the Human Genome and Human Rights (UDHGHR) produced by the United Nations Educational, Scientific and Cultural Organisation's (UNESCO) International Bioethics Committee.[30] The UDHGHR does not directly address genome editing, but it does contain specific provisions related to the manipulation of the human genome.[31] Of particular relevance is article 11, which provides that 'Practices which are contrary to human dignity, such as reproductive cloning of human beings, shall not be permitted.'

While the UDHGHR appears to be open to somatic cell gene therapy,[32] whether GGE is contrary to human dignity, as conceived in the UDHGHR, is still unclear. Issues such as these will likely depend entirely on how the concept of human dignity is conceptualised in the law of each state, and whether GGE is seen as offending deeply held values of the communities of each state. Given the extent to which policy decisions relating to the ethical issues arising from genome editing will depend on the views and values of the community, there is a need for the public to be consulted on these issues.

That said, in liberal democracies like SA, public opinion may only guide legal and ethical frameworks relating to genome editing insofar as it does not infringe upon the fundamental rights of researchers, patients and prospective parents. This means that even if the public does not approve of genome editing this is not a reasonably justified basis for prohibiting activities related to human genome modification. While public opinion is an integral part of law-making

[26] Constitution of the Republic of South Africa, 1996.
[27] Section 16(1)(d), Constitution.
[28] Section 27(1)(a), Constitution.
[29] Section 12(2)(a), Constitution.
[30] UNESCO General Conference Resolution 29 C/17, UNESCO GC, 29th Sess (1997). UN General Assembly Resolution A/RES/53/152, UN GAOR, 53rd Sess (1998). Adopted on the report of Commission III at the 26th plenary meeting on 11 November 1997. UNESCO 'Universal Declaration on the Human Genome and Human Rights' available at *http://www.unesco.org/new/en/social-and-human-sciences/themes/bioethics/human-genome-and-human-rights/*, accessed on 10 September 2019.
[31] See, for example, article 4, which provides that '[t]he human genome in its natural state shall not give rise to financial gains'. In terms of this article, patents on the discovery of stretches of DNA and their functions shall not be patentable, but stretches of DNA modified by CRISPR-Cas9 may be, since the subsequent DNA sequence is no longer it its natural state.
[32] Article 17 supports research on genome editing for the treatment of genetic disease.

in SA, as in any constitutional democracy,[33] in *S v Makwanyane*[34] it was made clear that the rights enshrined in the Constitution are so enshrined to shield citizens from the tyranny of the will of the majority.[35] Accordingly, in cases where human rights are implicated (as with human genome editing), public opinion may, and should, influence policy decisions.[36] However, it is not the decisive consideration. In showing due regard to the supremacy of the Constitution and avoiding constitutional invalidity, any policy on GGE should be in line with the rights and values contained in the Constitution. Further investigation is thus necessary into both public opinion on genome editing in SA, and into the extent to which rights in the Bill of Rights are relevant to genome editing.

Of import in this regard are the reproductive rights of the prospective parents who would be choosing to have a genetically modified child. Of the various ethics statements on genome editing issued in relation to CRISPR-Cas9, the only one having significant regard to the potential role played by human rights is the report by the Nuffield Council on Bioethics.[37] This report departed from the widespread support for a moratorium on GGE research, concluding that there are circumstances within which GGE would be permissible, and that there are moral reasons to allow research to continue.[38] In reaching this conclusion, the Nuffield Council report notes that the use of CRISPR-Cas9 technology intersects with the high premium that modern liberal democracies place on the need to respect the reproductive goals of persons seeking to become parents.[39]

While some consider GGE an unprecedented intrusion into the destiny of future generations, others have argued that GGE editing is in no way meaningfully different from other ways in which parents can influence their children.[40] Underlying these arguments is the claim that genetic manipulation falls within the ambit of socially accepted and legally protected interests of parents making decisions relating to reproduction. Whether a claim based on such an interest could be found in SA will be discussed in this thesis, with a comparative analysis

[33] See HJ Steiner 'Political participation as a human right' (1988) 1 *Harvard Human Rights Yearbook* 77.
[34] [1995] ZACC 3, 1995 (3) SA 391.
[35] *Makwanyane* para 88.
[36] See the comments of Powell J in *Furman v State of Georgia* 408 US 238 290 (1972) at 433, cited in *Makwanyane* supra note 35 para 88.
[37] Nuffield Council on Bioethics 'Genome editing and human reproduction' (2018) available at *http://nuffieldbioethics.org/wp-content/uploads/Genome-editing-and-human-reproduction-FINAL-website.pdf*, accessed on 24 September 2019.
[38] Ibid at 155.
[39] Ibid at 59.
[40] Silver op cit note 13 at 151.

being conducted between SA and other jurisdictions where reproductive rights are constitutionally protected.

(b) Germline genome editing and the law

The legality of genome editing in SA has been described as 'ambiguous'.[41] This is because SA law has no provisions directly related to GGE. However, given that it entails the use of human gametes or embryos, the law relating to the general use of human reproductive material, including chapter 8 of the National Health Act (NHA)[42] and the Regulations Relating to the Artificial Reproduction of Persons,[43] may be applicable. Section 57(1) of the NHA provides that:

> 'A person may not –
>
> '(a) manipulate any genetic material, including genetic material of human gametes, zygotes or embryos; or
>
> '(b) engage in any activity, including nuclear transfer or embryo splitting, for the purpose of the reproductive cloning of a human being.'

On a plain reading of the words used here, section 57 prohibits genome editing because it would fall within the meaning of 'genetic manipulation'. Applying such an interpretation, section 57 would not only outlaw genome editing in humans, but all forms of genome editing — including in plants, embryos and microorganisms. That this section was intended to have such far-reaching consequences seems improbable, given that it is entitled 'Prohibition of Reproductive Cloning of Human Beings', and that subsection 1 prescribes genetic manipulation is only prohibited where it is done '…for the purpose of the reproductive cloning of a human being'.[44] It appears then that section 57 of the NHA was only intended to prohibit reproductive cloning in human beings. Viewed in this way, it follows that section 57(1) was not promulgated to outlaw GGE. Given that multiple interpretations can be given to this section, it is necessary to determine which of these ought to be given effect in determining whether GGE is legal in SA.

[41] M Araki & T Ishii 'International regulatory landscape and integration of corrective genome editing into in vitro fertilization' (2014) 12 *Reprod Biol Endocrinol* 108.
[42] Act 61 of 2003.
[43] GN 175 in *GG* 35099 of 2 March 2012.
[44] Section 57(1) of the NHA op cit note 42.

(c) Germline genome editing and the prospective child

Given that GGE may touch on the rights of several individuals, even if one does interpret section 57 of the NHA as a prohibition, such a prohibition could be challenged on the grounds that it infringes upon constitutionally entrenched rights. The question then becomes whether there are other rights or ethical considerations justifying the limitation of these rights, by prohibiting genetic manipulation for reproductive purposes. Book 2 of the South African Medical Research Council Guidelines is one of the few instruments in SA that speaks to genome editing, and it regards it as only being permissible if it does not pose a risk to the fetus.[45] It is unclear why the interests of the fetus should be the primary concern in determining the permissibility of genetic interventions. This is because even if genome editing of embryos poses risks for the fetus, we ought to be more concerned about the implications that these risks have for the person who is to be born from that genetically modified embryo. GGE has the potential to affect the kind of life that an individual, who is born genetically altered, will live.

Under the common law, the exact legal status of the unborn child remains unclear, but what is clear is that none of the rights in the Constitution apply to the fetus.[46] Once born, however, an individual is recognised as a legal person. This means the rights contained in the Constitution apply to them — and must be respected. Of these rights, perhaps the most relevant to GGE is section 28(2), which states: 'A child's best interests are of paramount importance in every matter concerning the child'. In recent years, this principle has been applied by both lawmakers and the courts in the context of new reproductive technologies (NRTs) to determine when and how parents may bring children into the world.[47] What this requires is determining whether it is in the best interests of the person to be born (ie the prospective child) into a particular set of circumstances. For instance, in reference to applications for the approval of in vitro fertilisation (IVF)-based-surrogacy applications, the Constitutional Court has stated that:

> 'The court must not confirm the agreement unless, putting the best interests of the prospective child at the centre of the inquiry, it is of the view that, "generally", the agreement should be confirmed. In other words, the court must…engage with the value judgement of whether it would be in the best interests of the prospective child to be born.'[48]

[45] Medical Research Council 'Guidelines on ethics in reproductive biology and genetic research' available at *http://www.mrc.ac.za/sites/default/files/attachments/2016-06-29/ethicsbook2.pdf*, accessed on 18 July 2019.
[46] *Christian Lawyers Association of SA v Minister of Health* 1998 (4) SA 1113 (T) 1122H–I.
[47] See *Ex parte WH* [2011] ZAGPPHC 185, 2011 (6) SA 514 (GNP).
[48] *AB v Minister of Social Development* [2016] ZACC 43, 2017 (3) SA 570 (CC) para 192. Quoted from the minority judgment. Underlining in original text.

GGE is similar to the use of NRTs such as IVF-based surrogacy, in that it presents a situation where the decision to use a particular technology may result in a person being born into an existence where they may experience hardships. Consequently, similar concerns about the welfare of the prospective child have emerged in the context of CRISPR-Cas9. Such concerns centre on the unforeseeable consequences of genetic manipulation, such as the argument that because CRISPR-Cas9 poses unforeseeable threats of a potentially devastating nature to future generations, we ought not interfere with the genome of the prospective child.[49] Since CRISPR-Cas9 may be viewed as a NRT, it follows that the law ought to respond to the use of CRISPR-Cas9 in the same way that it has other reproductive technologies in SA. The law must in each case determine whether it is in the best interest of the prospective child to be born with a manipulated genome.

(d) The South African perspective: Africanising the debate on germline genome editing

In addition to the human rights dimensions of GGE, another material oversight in the current debates about CRISPR-Cas9, which is relevant to SA, has been the Eurocentric paradigm within which these issues have been framed. The omission of the African perspective in debates about the ethics of GGE is an oversight that poses a challenge to the implementation of recommendations for regulating GGE. This is because they exclude highly relevant context-specific factors. For instance, while Western positions appear to be influenced by the implication that CRISPR-Cas9 is somehow akin to Nazi eugenic policies,[50] no similar historical considerations appear to have significant bearing outside of the US and Europe. Public opinion polls outside these areas suggest a greater public openness to GGE.[51] Moreover, the way in which the debate about GGE has been framed relies on certain normative assumptions. For example, the distinction between 'negative selection' for therapeutic purposes and 'positive selection' for purposes of enhancement, with the latter perceived as being more ethically dubious. This is because there is said to be no compelling reason for genetic enhancement. For this reason, statements on the ethics of GGE, such as the one issued by the Association for Responsible Research and Ethics in Genome Editing in 2018, claim that

[49] JJ Koplin, C Gyngell & J Savulescu 'Germline gene editing and the precautionary principle' (2020) 34(1) *Bioethics* 50.
[50] The relevance of the eugenics movement to the present discussion is discussed in more detail below.
[51] Centre for Genetics and Society op cit note 24.

genetic modification of the CCR5 gene to prevent children from contracting HIV is a genetic *enhancement*, and therefore is unnecessary and unethical.[52]

While there is clearly no immediate imperative for genetic enhancement in the West, in SA we face a high infectious disease burden and challenges with public healthcare, and socio-economic difficulties have meant that existing treatment has been ineffective and has led to deaths that could have been prevented.[53] In the face of several epidemics due to infectious diseases, such as HIV, there is arguably a strong imperative for exploring any course which could lead to the eradication of a disease that claims millions of lives in Africa — even if it amounts to genetic enhancement. There is thus a strong reason for African states to reconsider the extent to which this imperative should influence the determination of whether GGE is ethical.

Ethics in Africa, specifically in the domain of bioethics, has received very little attention relative to other areas of the world. SA is currently decolonising the dominant modes of thinking and its legal system. This process faces several challenges, such as the lack of a distinct, widely accepted doctrine of African ethics.[54] While African philosophical concepts indigenous to SA have received attention in constitutional jurisprudence,[55] there is still much debate about the role of African philosophical thought in policy decision-making. Thus, there is a need for greater exploration of African philosophical concepts that are relevant to ethics, and a need to promote and develop these ideas in African bioethical discourse.

The development of African bioethics in SA faces many challenges inherent to philosophy in Africa as a whole. In the absence of historical records of the philosophical principles that were central to indigenous sub-Saharan African peoples — due to the oral tradition of these cultures — modern literature on African philosophy has primarily sought to distill principles from the language and customs of African communities.[56] In SA, this has manifested in the primacy given to the concept of 'Ubuntu', which has been associated with a common expression amongst the Bantu peoples of Southern Africa: 'umuntu ngumuntu

[52] Association for Responsible Research and Ethics in Genome Editing 'Statement from ARRIGE Steering Committee on the possible first gene-edited babies' (2019) available at *http://arrige.org/ARRIGE_statement_geneeditedbabies.pdf*, accessed on 17 September 2019.
[53] UNAIDS 'South Africa' (2018) available at *https://www.unaids.org/en/regionscountries/countries/southafrica*, accessed on 25 September 2019.
[54] GM Ssebunnya 'Beyond the sterility of a distinct African bioethics: Addressing the conceptual bioethics lag in Africa' (2017) 17(1) *Dev World Bioeth* 22.
[55] See, for example, the central role the concept of *Ubuntu* played in the seminal case of *Makwanyane* supra note 35.
[56] GM Kayange *Meaning and Truth in African Philosophy: Doing African Philosophy with Language* (2018) 4.

ngabantu'. This literally means 'a person is a person through other people' and has featured prominently in South African constitutional jurisprudence.[57]

However, this approach to the identification and development of African philosophical concepts is limited by its reliance on observations of common verbal expressions or cultural practices. This makes discerning meanings of these philosophical concepts that are functionally useful challenging, given that interpretations may vary. Unsurprisingly, there is often debate about what these concepts mean. This is illustrated by the fact that despite the prominence of Ubuntu and how prominently this African philosophical concept has featured, as is often noted that there is no widely accepted definition of Ubuntu, nor is there universal agreement on how it applies as an ethical principle.[58] This has material consequences in the area of bioethics, which came to the forefront in 2018 with the publication of a study by the Academy of Science South Africa (ASSAf) on the ethical, legal and social implications of genomic research.[59] In this report, the authors argued for a 'communal approach' to genomic research on South African populations based on Ubuntu — an approach that demands that the interests of the community that the research participants are part of be treated as paramount. This approach has been criticised for failing to show due regard to relevant human rights of research participants and researchers, and for advocating a position that is contrary to the fundamental values of the Constitution.[60] Given that the Constitution is the supreme law of the country, it is important that any ethical guidance on the regulation of GGE be in line with the Bill of Rights and the values of the Constitution. Thus, it is necessary to investigate how human rights relate to GGE in SA.

Furthermore, despite the challenges faced by African philosophy and its application to bioethical issues, it is vital that there is critical engagement with African philosophy when researching human rights and GGE, because of the role they play in the new constitutional dispensation. Discussing the significance of Ubuntu in SA, Makgoro J in *Dikoko v Mokhatla*[61] remarks: 'Ubuntu - botho is more than a phrase to be invoked from time to time to add a gracious and affirmative gloss to a legal finding already arrived at. It is intrinsic to and

[57] MF Murove (ed) *African Ethics: An Anthology for Comparative and Applied Ethics* (2009) 3.
[58] T Metz 'Toward an African moral theory' (2007) 15(3) *Journal of Political Philosophy* 321.
[59] Academy of Science of South Africa 'Human genetics and genomics in South Africa: Ethical, legal and social implications' (2018) available at *http://research.assaf.org.za/handle/20.500.11911/106,* accessed on 20 September 2019.
[60] D Thaldar, J Kinderlerer & S Soni 'An optimistic vision for biosciences in South Africa: A response to the ASSAf report on human genetics and genomics' (2019) 115(7/8) *S Afr J Sci* 3.
[61] [2006] ZACC 10, 2006 (6) SA 235 (CC).

constitutive of our constitutional culture.'[62] Accordingly, it is crucial for any discussion in this area to be underpinned by serious consideration of African philosophical thought.

IV PROBLEM STATEMENT

There is currently uncertainty regarding the legality of GGE in the SA context. It is thus necessary to engage with the legal issues related to GGE, in order to obtain clarity. Furthermore, in responding to the gaps in the law relating to genome editing, it is necessary to consider the ethical questions that emanate from the use of genetic technologies from an African perspective. This is to ensure that any future policy developments respond to African problems and give due cognisance to the current realities of South Africans.

V RESEARCH QUESTIONS

The primary question this thesis seeks to answer is: Should the use of genome editing technology in human reproduction be legally permissible in SA?

In responding to the primary research question, the following sub-questions are relevant:

- What are the streams of African philosophical thought that are prominent in South Africa?
- How is African philosophical thought relevant to the regulation of genetic technologies?
- Do the reproductive rights of parents include the right to determine the genetic characteristics of their children?
- Is the manipulation of the human genome contrary to public policy/the public interest in the South African context?
- How are the best interests of the prospective child affected by genetic manipulation?

VI LITERATURE REVIEW

(a) Editing the human genome: A line not to be crossed?

The 'big question' at the centre of the global discourse on the ethics of using CRISPR-Cas9 in human reproduction, is whether this technology ought to be used to create so-called 'designer babies' with modified genomes, or if modifying the human genome is a line that ought not to be crossed. Those holding the latter view shrink away from the perspective of using genetic

[62] *Dikoko v Mokhatla* ibid para 113.

technologies in human reproduction. They equate it to Nazi Germany's eugenics regime, which endeavoured to eradicate those it considered unfit from the population, while encouraging the fit to reproduce.[63] These claims, labelling the increased scope of procreative choices that genetic technologies give parents, as the new, 'liberal' eugenics, evoke powerful imagery that invites repudiation of these innovations.[64] However, upon closer analysis, it is difficult to identify to what extent liberal eugenics warrants the same indignation that is reserved for Nazi eugenics. Proponents of liberal eugenics respond to this comparison to Nazi eugenics by pointing out that what was wrong with Nazi eugenics is unrelated to the aspiration of freeing future generations from genetic diseases and other genetic flaws we may possess; what was wrong with Nazi eugenics was that the *means* used to achieve its goals suppressed liberty by depriving individuals of reproductive choice.[65] This, it is argued, is dissimilar to the way in which it is expected that CRISPR-Cas9 will be used. Rather than suppressing liberty, GGE will enhance liberty by broadening the reproductive choices that parents can make.[66]

Despite this, many scholars believe that there is something morally objectionable about the concept of parents determining the genetic characteristics of their prospective children. For them, the most alarming feature of genetic modification is its potential to fundamentally alter human relationships by altering human nature.[67] One such scholar, Jürgen Habermas, argues that genome editing is objectionable because it entails a perversion of the parent–child dynamic, in that it amounts to the instrumentalisation of the prospective child:

> 'For as soon as adults treat the desirable genetic traits of their descendants as a product they can shape according to a design of their own liking, they are exercising a kind of control over their genetically manipulated offspring that intervenes in the somatic bases of another person's spontaneous relation-to-self and ethical freedom. This kind of intervention should only be exercised over a thing, not persons.'[68]

In a similar vein, Harold Baillie argues that genetic modification objectifies the prospective child and, in removing the element of wonder that comes with not being able to

[63] J Habermas *The Future of Human Nature* (2003) 49.
[64] This is what Harris describes as a 'yuck' reaction — a visceral reaction of aversion in response to ostensibly novel technologies, even if they are in no way meaningfully different from technologies already available to us. See J Harris *Enhancing Evolution: The Ethical Case for Making Better People* (2010) 4.
[65] R Bailey *Liberation Biology: The Scientific and Moral Case for the Biotech Revolution* (2005) 140–1.
[66] Ibid at 142.
[67] DB Paul 'Genetic Engineering and Eugenics: The Uses of History' in HW Baillie & TK Casey (eds) *Is Human Nature Obsolete? Genetics, Bioengineering, and the Future of the Human Condition* (2004) 125.
[68] Habermas op cit note 63 at 13.

determine who or what a child will be, one forgets the 'serendipity of life'.[69] Arguments of this kind tend to rely on the Kantian principle that individuals should be treated as ends, not merely as means. However, John Harris contends that the interpretation given to this principle is a blunt application thereof, which, if taken seriously, leads to absurd conclusions.[70] He contends that applying the Kantian principle in this way would require that we also prohibit blood transfusions — notwithstanding that it would cost millions of people their lives. Enunciating what he argues is a proper interpretation of the Kantian principle, Harris opines that one cannot equate deriving benefits from a person — such as receiving a blood transfusion — to treating him or her as a mere means to an end.[71] Similarly, a parent satisfying his or her desire to have a child with certain genetic characteristics does not treat that child as a mere means to an end, and thus it is not inherently morally wrong.

Scholars that make arguments like Baillie ostensibly place significant stock in the idea that parent-child relationships are based on the genome of the child being a product of chance and not a choice. The reason for this, according to Habermas, is that parental discretion ought not intrude upon a child's 'ethical freedom'. That is, the right of a child to a sense of self-identity that is intimately connected to certain biological foundations, including the child possessing an unmanipulated genetic inheritance.[72]

There are two major criticisms of the argument that GGE is impermissible because prospective persons are entitled to unaltered genomes. Firstly, the argument assumes that using genetic technologies like CRISPR-Cas9 to modify the genome of a prospective child is meaningfully different from the other ways in which parents can influence the traits of their offspring — which are currently accepted as permissible. Paul Rabinow highlights the problem with this assumption: The capacity of prospective parents to make decisions concerning their child's genetic characteristics is not novel.[73] Even before the advent of genetic technologies, humans engaged in what is described as 'selectionist genetics' through the sexual section of partners based on them possessing desirable traits.[74] As with selection using genetic technologies, the goal of selectionist genetics is to pass desired traits to offspring. However,

[69] HW Baillie 'Aristotle and Genetic Engineering: The Uncertainty of Excellence' in Baillie & Casey op cit note 67 at 229–30.
[70] J Harris 'Clones, Genes, and Human Rights' in Justine Burley (ed) *The Genetic Revolution and Human Rights: The Oxford Amnesty Lectures 1998* (1999) 67.
[71] Ibid.
[72] Habermas op cit note 63 at 49–50.
[73] P Rabinow 'Life Sciences: Discontents and Consolations' in Baillie & Casey op cit note 67 at 123.
[74] Ibid.

unlike genetic technologies, the methods of selectionist genetics are slow and inefficient. By using genetic technologies, however, prospective parents are now able to select traits to pass on to offspring with greater precision, and can introduce traits absent in the genomes of either parent. It is this greater level of control that causes genetic selection to be perceived as being more problematic than sexual selection.[75]

To what extent this perception is justified goes to the second criticism of the aforementioned argument: It ascribes moral significance to the genome, based on the idea that because genes are foundational to our biology, they are foundational to our identity as humans. This assumption is representative of a trend that has emerged in the era of genomics. Much like the concept of the eternal soul was once seen as embodying the essence of what it means to be human, the genome has come to be seen as a secular equivalent of the soul.[76] The claim that genes are fundamental to human identity is problematic as it over-emphasises the extent to which genes influence who a person is. It is at this point trite that individuals are a product of not only their genes (ie nature) but also their environment (ie nurture).

Habermas tries to justify why he perceives genetic engineering as being more objectionable than other methods of genetic trait selection: He argues that in the case of genetic modification, there is a 'collision' between a prospective parent's interest in determining the nature of the prospective person and that prospective person's self-identity.[77] This, it is argued, is different from the way in which other exercises of parental choice, such as sexual selection, affect the prospective child's sense of identity. By using genetic technologies to choose the genetic characteristics of their prospective child, parents determine a fundamental aspect of the child's identity for them. Accordingly, the prospective child will never have the opportunity to undo the aspects of identity that his or her parents have chosen for them.[78] As such, '[i]n their role as programmers, the parents are barred from entering into the dimension of the life history where they might confront the child as the author of the demands they address to him'.[79]

It is not apparent that this explains why the act of choosing to use genetic technologies to influence a child's identity is different from using private schooling or drugs like Ritalin in any ethically relevant way. It might be true that genetically modified children could not (fully)

[75] DB Paul, ibid at 124.
[76] A Mauron 'Is the genome the secular equivalent of the soul?' (2001) 291(5505) *Science* 831.
[77] Habermas op cit note 63 at 50.
[78] Ibid.
[79] Ibid at 51.

undo their genetic endowments,[80] but these children could engage in revisionary reflection on what that genetic modification means to them and their self-perception.[81] It is not necessarily the case that, for genetically modified children, the fact that they are genetically modified will be central to their sense of who they are.

(b) Regulating genome editing: The bioconservative perspective

While there are many who share Habermas's apprehensions about genetic modification and its implications for what it means to be human, even those who are sceptical of genetic technologies concede that their use may be permissible in certain circumstances.[82] What conditions justify the use of genetic technologies is, however, a subject of debate, which often turns on the concept of human nature. Francis Fukuyama presents the view that modern biotechnology poses a threat because 'it will alter human nature and thereby move us into a "posthuman" stage of history'.[83] But what exactly is human nature, and why is it worth preserving?

Fukuyama defines human nature as 'the sum of the behaviour and characteristics that are typical of the human species, arising from genetic rather than environmental factors'.[84] By his account, this species-typical behaviour is worth preserving because our perspectives of right and wrong find their roots in human nature, and if we were to lose our human nature (or some critical part of it), we would lose the ability to make important value judgments.[85] Applying this conceptualisation of human nature can be challenging as it is difficult to ascertain what exactly typical human behaviour is.[86] As with Habermas, this argument relies on genetic determinism as a basis for attributing moral significance to the genome and the human behaviours that are a product of genes. The claim that human species-typical behaviour is deserving of some kind of special consideration for this reason, could be criticised as being nothing more than what Peter Singer describes as 'speciesism': an irrational bias in favour of

[80] They could potentially do this, to a limited extent, through somatic cell gene therapy to revert the relevant parts of the genome to the wild type.
[81] See A Sen *Identity and Violence: The Illusion of Destiny* (2007) 158.
[82] See KS Bosley, M Botchan & AL Bredenoord et al 'CRISPR germline engineering – The community speaks' (2015) 33(5) *Nat Biotechnol* 478.
[83] F Fukuyama *Our Posthuman Future: Consequences of the Biotechnology Revolution* (2003) 7.
[84] Ibid at 130.
[85] Ibid at 12.
[86] DW Jordaan 'Antipromethean fallacies: A critique of Fukuyama's bioethics' (2009) 28(5) *Biotechnol Law Rep* 577–8.

one's own species.[87] This is because there is nothing unique about the genes possessed by humans that would warrant such special moral significance.

Using the concept of human nature as a basis for ethical guidance is evidently difficult. Despite its rhetorical appeal, it is an ephemeral concept with no clear meaning, and this impairs its usefulness as an ethical standard.[88] Notwithstanding this, bioethics has seen the emergence of a school of thought centred on the concept of human nature, which Bailey describes as, 'bioconservative'.[89] He characterises bioconservatives as aiming to restrict the use of biotechnology, 'because biotech innovation threatens their devoutly held notions of human nature, their social and political views, and their ideas of proper community control'.[90]

A prominent feature of bioconservative arguments is the significant weight they place on the need to avoid these threats. This is sought to be achieved through regulation based on what is commonly referred to as the 'precautionary principle'.[91] There are several formulations of the precautionary principle, and no singular definition of it exists.[92] However, a feature common to many formulations is that they proceed from the premise that the kind of risks presented by the use of genetic technologies is unique. This warrants a departure from the usual mechanisms of how we determine whether a particular health intervention should be made available to the public — that is, weighing probable risks against probable gains.[93] This is necessary because, according to bioconservatives, determining if and when genetic manipulation is appropriate using conventional methods of risk assessment gives too little weight to the nature of the threat to human nature and future generations, as these risks are difficult to quantify or are statistically improbable.[94]

For proponents of the precautionary principle, even a very small risk that the threats they fear may come to pass if genetic technologies become widely used, is too much,[95] and they believe we ought to ban them or adopt a temporary moratorium until the associated risks are

[87] P Singer (ed) *Animal Liberation* (1977).
[88] See JS Mill *Three Essays on Religion: Nature, the Utility of Religion, Theism* (1998) 11.
[89] Bailey op cit note 65 at 11.
[90] Ibid.
[91] This approach first emerged in the context of bioethical debates on the safety of genetically modified organisms. See NN Taleb, R Read & R Douady et al 'The precautionary principle (with application to the genetic modification of organisms)' (2014) *Extreme Risk Initiative – NYU School of Engineering Working Paper Series* 1.
[92] Koplin et al op cit note 49 at 51.
[93] This is a mechanism which finds its origins in the works of philosopher Blaise Pascal and the development of probability theory. See D Cooper & B Grinder 'Probability, gambling and the origins of risk management' (2009) *Financial History* 10–1.
[94] Koplin et al op cit note 49 at 51.
[95] Taleb et al op cit note 91 at 2.

fully understood.[96] The challenge with the idea that we should stop and wait, however, is that it is unclear that we will ever be able to understand the risks of GGE in humans without first experimenting with GGE in humans.[97]

(c) Regulating genome editing: The bioliberal perspective

While bioconservatives consider human nature as a basis for limiting genetic modification, other scholars have responded to these arguments by also appealing to human nature and giving this concept a meaning which is more open to permitting the use of biotechnology (including genetic technologies). Bailey responds to Fukuyama's indictment of the 'posthuman' liberation of humanity from its genetic limitations by pointing out that:

> '[H]uman history has always been about liberating more and more people from their biological constraints. It's not as though most of us still live in our species' "natural state" as Pleistocene hunter-gatherers.'[98]

The crux of this criticism is that bioconservatives present human nature as a finite set of traits that humans currently display as something we ought to preserve, which is not representative of the fact that human beings have historically moved away from species-typical behaviour in order to achieve advancements like longer lives and better health. Those who reject the bioconservative account of human nature as something to be preserved argue that few traits are as synonymous with humans as pursuing gains by going against nature, because human nature as it exists leaves much to be desired and there is good reason to want to alter it.[99]

For these scholars — whom I term 'bioliberals' — this aspect of human nature is exemplified in the myth of the Greek titan Prometheus, who went against the will of the Olympian Gods to bring fire to humankind. This allegory is alluded to in the works of bioliberal authors like Ronald Dworkin[100] and Gregory Stock.[101] In contrast to the bioconservative approach, by the bioliberal account, acting in accordance with human nature necessitates that we pursue the use of genetic technologies because of their positive potential:

---

[96] See, for example, the framework for a moratorium described in: ES Lander, F Baylis & F Zhang et al 'Adopt a moratorium on heritable genome editing' (2019) 567 *Nature* 167.
[97] Bosley et al op cit note 82 at 480.
[98] Bailey op cit note 65 at 19.
[99] Paul op cit note 67 at 140.
[100] R Dworkin *Sovereign Virtue: The Theory and Practice of Equality* (2002) 446.
[101] G Stock *Redesigning Humans: Choosing Our Genes, Changing Our Future* (2003) 2.

> 'To forgo the powerful technologies that genomics and molecular biology are bringing would be as out of character for humanity as it would be to use them without concern for the dangers they pose. We will do neither. The question is no longer whether we will manipulate embryos, but when, where and how.'[102]

In response to the claims that using genetic technologies in reproduction may have deleterious consequences for the prospective child, Harris points out that at this point these concerns are mere speculation, and completely disregard the possibility of social learning allowing humanity to adapt to any changes that do, in fact, materialise.[103] Rather than seeking, in futility, to block or limit these technologies, Stock states that our energies should be directed at determining the best way to regulate genetic technologies so as to realise their benefits while minimising their risks and protecting our fundamental freedoms.[104]

The defining feature of bioliberal arguments is their regard for the libertarian principle that the freedom of individuals should not be limited without just cause.[105] As John Robertson observes, libertarianism in reproduction means that a person has the right to select for specific genes or do anything he or she chooses in the course of becoming a parent.[106] This approach applies the right to procreative liberty — which Robertson views as extending to NRTs[107] — to GGE. For Lee Silver, claims that GGE should be limited based on sentiments such as the sanctity of life are untenable because they are based on subjective value judgments, and these do not constitute valid reasons (or just cause) to limit liberty.[108]

The bioliberal approach to the use of genetic technologies is that the rights of parents in reproduction give them a prima facie entitlement to modify the genomes of their prospective children, and this right ought to be respected because the potential utility of using genetic technologies outweighs the potential risks. For some bioliberals, like Harris[109] and Savulescu,[110] not only is there no justifiable reason to limit parents' procreative liberty in the use of genetic technologies — there is also a moral duty to modify prospective persons genetically. From a legal perspective, bioliberal arguments based on procreative liberty only hold in jurisdictions

---

[102] Ibid at 2.
[103] Harris op cit note 70 at 70.
[104] Stock op cit note 101 at 10.
[105] A principle famously espoused by Mill in his works on political philosophy. See JS Mill *On Liberty and the Subjection of Women* (2007).
[106] JA Robertson 'Procreative liberty in the era of genomics' (2003) 29(4) *Am J Law Med* 439.
[107] JA Robertson *Children of Choice: Freedom and the New Reproductive Technologies* (1996) 16.
[108] Silver op cit note 13 at 257.
[109] Harris op cit note 64 at 45.
[110] J Savulescu, J Pugh & T Douglas et al 'The moral imperative to continue gene editing research on human embryos' (2015) 6(7) *Protein Cell* 476.

where procreative liberty is legally protected, and where this legal protection can be extended to the use of NRTs.

(d) Human dignity and the genome of the prospective person

The debate between bioconservatives and bioliberals concerning human nature is legally relevant because the concept of human nature is often depicted as being associated with, or protected by, the right to human dignity. In Fukuyama's arguments, he describes the genetic traits which constitute human nature as 'critical to any understanding of any question of human dignity'.[111] It is this shared human nature that entitles individuals to a right to human dignity — and this entails equal treatment for all humans despite the variability of human endowments.[112] Archeologist Paul Proctor calls into question the argument that human dignity can be viewed as emanating from our genes on the grounds that, while humans share genetic traits, there is no such thing as distinctly human genes.[113] On the other side of the debate, bioliberals take the view that the use of genetic technologies is not contrary to human dignity, but rather promotes it: 'The highest expression of human dignity and human nature is to overcome the limitations imposed on us by our genes, our evolution and our environment'.[114]

But can the right to human dignity be used as a basis for determining if, and when, GGE is permissible? It seems not, as it is not apparent how human dignity can ever be infringed (or promoted) by GGE, given that there is no person in existence at the time the genetic modification occurs whose dignity can be affected.[115] The only way human dignity could potentially function as a standard against which we could judge GGE, is in a legal system that recognises it as a derivative value that applies to the gamete or embryo that is to be genetically manipulated.[116] Accordingly, even if the use of genetic technologies is regarded as an expression of legally protected rights, this right may have to be balanced against other values.

In addition to dignity, another value that has been depicted as threatened by GGE is equality. This is because of concern that genetic technologies will exacerbate existing societal inequalities. This could lead to the emergence of a genetically engineered upper class, who

[111] Fukuyama op cit note 83 at 139.
[112] Ibid at 149.
[113] RN Proctor 'Human Recency and Race: Molecular Anthropology, the Refigured Acheulean, and the UNESCO Response to Auschwitz' in Baillie & Casey op cit note 67 at 248.
[114] Bailey op cit note 65 at 62.
[115] Harris op cit note 70 at 66.
[116] Derivative values derive their significance from certain qualities which are intrinsic to objects. See Dworkin op cit note 100 at 428.

would have an unfair advantage over the un-engineered who are too poor to access these technologies.

The danger of GGE exacerbating existing inequality is one which Manitza Kotze believes is particularly pronounced in South Africa, given the wide gap between the rich and poor and the lack of access to healthcare for the underprivileged.[117] Harris, on the other hand, questions whether this is a major issue, given that the use of genetic technologies may never become sufficiently widespread for this to occur. Furthermore, even if it did, the correct approach would be for us to take measures to make these technologies as widely available as possible — thereby remedying the inequality and promoting human flourishing.[118]

(e) The African perspective on bioethics

Given that critically engaging with complex bioethical issues such as those raised by genome editing requires some measure of identifiable common values and ethical principles in areas where there is significant dispute, some commentators have questioned whether there can even be such a thing as 'African Bioethics'.[119] Questions such as these emanate from a fundamental and divisive issue in bioethical discourse in the non-Western world. This is whether the cultural differences between the West and non-Western cultures means that ethical principles emanating from the Western world are not applicable in non-Western communities. As renowned African philosopher Segun Gbadegisin notes:

> 'There is…the perception that bioethics is dominated by the Western ethos of liberal individualism…So far as this focus is concerned, there seems to be a conflict between what is of concern to the West and its technological breakthroughs, and what is of interest to non-Western cultures. There is a need to resolve these apparent conflicts.'[120]

Some African scholars maintain that these conflicts must be resolved by rejecting Western bioethics. John Barugahare observes that the growing movement of African bioethics in academic literature has largely defined itself as an alternative to what it terms 'Western Principlism' — a departure from this school of thought being necessitated by the so-called ethical imperialism of global perspectives on bioethics.[121] Some have gone so far as to claim that the implementation of Western bioethics in Africa is an attempt to re-colonise and

[117] M Kotzé 'Human genetic engineering in the South African context with its inequalities: A discourse on human rights and human dignity' (2014) 113(1) *Scriptura* 1.
[118] Harris op cit note 64 at 12.
[119] Ssebunnya op cit note 54 at 22–3.
[120] S Gbadgesin 'Culture and Bioethics' in Helga Kuhse & Peter Singer *A Companion to Bioethics* (1998) 24.
[121] J Barugahare 'African bioethics: Methodological doubts and insights' (2018) 19 *BMC Medical Ethics* 98.

dominate Africa.[122] This stream of African philosophical thought, in its contempt for Western bioethics, advocates that ethics is relative to cultural contexts, and therefore African cultural groups should construct their own systems of ethics based on African philosophical concepts emanating from that cultural group. For instance, in SA, Thaddeus Metz has argued for an African moral theory based on the concept of Ubuntu.[123]

While decolonising the study and application of ethics in Africa is undoubtedly an important agenda, it is not apparent that regard for Western bioethics is necessarily opposed to the decolonisation process. Gerald Ssebunnya, a critic of relativist conceptions of Africa bioethics, points out that ethical frameworks based on African philosophical concepts are arguably purely academic constructs, rather than a reflection of the actual values held by African people.[124] This is because such works are produced by African philosophers driven by a motive of distinguishing African philosophy from established schools of Western philosophical thought, rather than enumerating the deeply held convictions of Africans.

Another similar criticism of relative approaches of African philosophical concepts is that these approaches presuppose that principles gleaned from expressions of African culture (in language and convention) are, in fact, novel and unique ethical principles, and not simply regional expressions of established, universal ethical principles.[125] Furthermore, it is assumed that these principles ought to be applied without critical analysis of to their validity as ethical principles. The lack of sound methodologies and in-depth critical analysis has been raised in recent discussions on African bioethics.[126] Barugahare opines: 'Generally, an overbearing methodological error that characterises some views "African bioethics" as a wide but uncritical sanctification of everything indigenous and traditional to Africa and an arbitrary censure of everything foreign and modern.'[127] This is clearly undesirable, as it does not foster the kind of deep, critical, intellectual discourse that was required to shape the development of now well-established schools of Western thought in bioethics.

[122] AK Fayemi & OC Macaulay-Adeyelure 'Decolonizing bioethics in Africa' (2016) 3(4) *BEOnline* 68–90.
[123] Metz op cit note 58 at 321–41.
[124] Ssebunnya op cit note 54 at 26.
[125] S Gbadgesin 'Culture and Bioethics' in Kuhse & Singer op cit note 121 at 25.
[126] SK Hellsten 'The role of philosophy in global bioethics: Introducing four trends' (2015) 24(2) *Camb Q Healthc Ethics* 185–94.
[127] Barugahare op cit note 121 at 100.

Accordingly, critically engaging with current applications of African philosophical concepts — such as Ubuntu — is necessary in order for African bioethics to become a source of sound ethical principles that can be applied in useful ways to complex bioethical issues.

VII CONCEPTUAL FRAMEWORK

The conceptual framework adopted in this thesis will be an ethico-legal analysis of the regulation of biotechnological innovation. This framework will entail not only engaging with the law and policy without any positivist assumption as to their neutrality and impartiality but will also explicitly engage with the underlying values such as human dignity. In so doing, this thesis will seek to construct a regulatory framework on the regulation of CRISPR-Cas9, based on values that are given primacy in the SA context.

VIII METHODOLOGY

The research that constitutes the body of this thesis will be conducted as desktop research involving both primary and secondary sources, as well as literature on ethics and the law. This information will be sourced from electronic and print literature.

IX CHAPTER OUTLINE

(a) Chapter 1: Introduction

This Chapter introduces genetic technologies and their application to human reproduction. It outlines the ethical questions raised by these technologies, particularly in the case of GGE, and outlines how this thesis will engage with these issues.

(b) Chapter 2: An Afrocentric approach to CRISPR: African philosophical thought applied to ethical questions raised by genome editing

This Chapter develops the value framework in terms of which the ethical issues relating to genetic technologies are analysed in this thesis. In doing so, it reviews African philosophical thought that relates to bioethics, with a particular focus on the SA context. It analyses the way in which African philosophical thought has been developed in constitutional adjudication in SA and proposes a framework for applying distinctly African concepts like Ubuntu to bioethical questions relevant to SA, in a way that shows respect for human rights.

(c) Chapter 3: Germline genome editing and the law

This Chapter discusses SA law relating to the human genome and considers to what extent manipulating the human genome is permissible. This discussion further engages with the underlying ethical issues that are commonly tied to the regulation of manipulating the human genome. This includes an analysis of whether regulation based on ideas such as the dignity and sanctity of the human genome are tenable in the South African context.

(d) Chapter 4: Reproductive rights and new reproductive technologies in South Africa

This Chapter investigates whether currently enumerated rights of prospective parents allow them to make decisions relating to their children's genetic characteristics. It analyses jurisprudence in SA relating to reproductive rights and compares it to other jurisdictions that recognise the freedom of parents to make positive reproductive decisions.

(e) Chapter 5: The right to CRISPR? Applying reproductive rights to the use of genetic technologies

Based on the findings of the previous Chapter, this Chapter considers whether prospective parents can be said to have a legally protected entitlement to using GGE technologies. It explores whether SA jurisprudence on reproductive rights can be extended to the use of CRISPR-Cas9, by considering critical issues such as if this technology can be considered to be a reproductive technology.

(f) Chapter 6: Determining limitations on the use of germline genome editing technology

This Chapter investigates legal justifications for limiting GGE, including whether it should only be permitted for therapeutic purposes. It considers (1) public opinion on GGE and arguments against genome editing based on the public interest, and (2) the child welfare principle — as possible limitations on the use of genetic technologies by prospective parents.

(g) Chapter 7: Conclusion

This Chapter summarises the core findings of this thesis and outlines considerations that should be taken into account if policy reform in this area is contemplated.

CHAPTER 2

AN AFROCENTRIC APPROACH TO CRISPR: AFRICAN PHILOSOPHICAL THOUGHT APPLIED TO ETHICAL QUESTIONS RAISED BY GENOME EDITING

I INTRODUCTION

In Chapter 1, I identified material gaps in the global discourse on the law and ethics relating to GGE, most notably that the proposals for the regulation of GGE have primarily been framed through a Eurocentric paradigm that omits material considerations relevant to SA,[1] and to the African context broadly.[2] I further observed that current positions on the legality of GGE in states that do have such laws are based on value judgments on issues such as the moral status of the human person and how this might be affected by them being born with a genetically modified genome.[3] Clearly, there are no easy answers when it comes to the regulation of technologies that raise complex bioethical issues like CRISPR-Cas9. Accordingly, any state that endeavours to regulate this area ought to engage in a critical engagement with the values which are at the centre of their society and with their role in informing the function of the law.

In this Chapter I argue that the mainstream global bioethics discourse relating to these issues has produced answers to questions regarding GGE in the form of proposals for regulation. These are in need of critical re-examination because they emanate from a Eurocentric paradigm which fails to account for critical contextual factors, and this raises concerns of ethical imperialism. As an alternative, I suggest an approach to responding to these ethical questions that is rooted in the African perspective on the values they touch upon, which will be better suited to guide the regulation of GGE in SA. This theoretical framework will draw upon African philosophical thought related to bioethics and how African philosophical concepts such as Ubuntu may be applied in this area. I will not suggest that this approach will describe *the* definitive 'African perspective' on these issues,[4] but would instead propose an

[1] Such as the relevance of human rights. See BM Knoppers & E Kleiderman 'Heritable genome editing: Who speaks for "future" children?' (2019) 2(5) *CRISPR J* 285.
[2] Such as the fact that there may be morally compelling reasons for GGE which are not applicable in the West.
[3] R Isasi, E Kleiderman & BM Knoppers 'Editing policy to fit the genome?' (2016) 351(6271) *Science* 337.
[4] For reasons beyond the scope of this Chapter, I believe it would be erroneous to make such a claim. Suffice to say, given the diverse views and perspectives in African philosophical thought, no written work can reasonably make such a claim.

approach that is grounded in the African context, which I will refer to as *an Afrocentric approach*.

This Chapter is divided into two Parts. In the first Part, I introduce African philosophy and engage with some critical preliminary questions regarding what exactly African philosophy is and the dominant values which emerge from African thought regarding moral philosophy. I then highlight how African philosophical thought may be applied in the SA context, with reference to the jurisprudence of the South African courts on the application of the African philosophical concept of Ubuntu. In the second Part of this Chapter, I engage with African philosophical thought related to the discipline of bioethics and explore its relevance to the regulation of biotechnology. I argue that African values and philosophical concepts are both relevant to regulating biotechnology in the African context in a decolonised way, and in a manner that is responsive to the needs of Africans. I provide a practical illustration to support this claim by showing how the African practice of 'imbizo', as a practical application of Ubuntu, provides a mechanism for responding to a pertinent issue in the global discourse on the ethics of GGE: *What role should public opinion play in the regulation of GGE?*

II PART 1: AN OVERVIEW OF AFRICAN PHILOSOPHY ON ETHICS

This Part of the Chapter outlines important preliminary issues that inform our discussion on the relevance of African philosophy to bioethical issues, such as those that arise in the case of GGE. The structure of this Chapter is arranged to coincide with the three main 'waves' in the historical development of African philosophy, with the first wave primarily concerned with the existence of African philosophy. This is addressed in section (a). Having settled on its existence, discourse then turns to the content of this philosophy. This second wave is reviewed under the various headings in section (b). Finally, once core features of this philosophy have been identified, the discourse shifts to how African philosophy can be practically applied. This third wave is discussed within the context of Southern Africa in sections (c) and (d).

This Part is arranged as follows: First and foremost being (a) what African philosophy is, and then (b) how the African worldview on ethics differs from the Eurocentric[5] perspective

[5] By the 'Eurocentric perspective' I refer to Serequebehran's definition of Eurocentricism which is: 'Broadly speaking, Eurocentrism is a pervasive bias located in modernity's self-conscious of itself. It is grounded at its core in the metaphysical belief…that European existence is qualitatively superior to other forms of human life' — which commonly presents itself in the assumption that European norms and lived realities are universal. T Serequeberhan 'The critique of Eurocentrism and the practice of African philosophy' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 64.

on issues such as: (i) cultural relativity and morality; (ii) what it means to be a human person and one's moral obligations to others; and (iii) how philosophical concepts grounded in old traditions apply to modern problems. Building from this, I explore (c) how these issues are reflected in the philosophy of Ubuntu and (d) how this concept has come to be applied in SA.

(a) What is African philosophy?

Discourse on philosophy in Africa may be described as a search for self-definition.[6] No single question has preoccupied literature on philosophy in post-colonial Africa more than the question of whether there is such a thing as African philosophy.[7] By extension, questions have also been raised in the domain of moral philosophy about whether one can speak of African ethics.[8] This line of inquiry is occasioned by the fact that pre-colonial Africa, for the most part, transmitted knowledge orally.[9] Therefore, there was no written record of philosophical thought prior to the arrival of Europeans on the continent that could be referenced to oppose claims made in anthropological studies of African communities during the colonial era. These studies suggested that an intellectual endeavour such as philosophy was beyond the ken of Africans, who had insufficient rationality to support philosophical thinking.[10]

The earliest prospects of there being a positive answer to the aforementioned question of African philosophy's existence arose through the work of Belgian missionary, Father Placide Tempels, who studied the communities of the Baluba people.[11] In *Bantu Philosophy*, he claimed that African communities had a coherent philosophy that the members of these communities lived by.[12] As evidence for this claim, Tempels' work relied on his findings resulting from observing and interacting with these communities.[13] This approach, however, limited African philosophy to being defined through the eyes of an outsider, calling into question the veracity of the observations of a Catholic missionary operating under the aegis of

[6] In fairness to African philosophy, it is important to note that this is a comment which could be extended to all philosophy.
[7] IP Laleye 'Is there an African philosophy in existence today?' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 88.
[8] TP Angier 'The Metz method and "African ethics"' in G Hull (ed) *Debating African Philosophy: Perspectives on Identity, Decolonial Ethics and Comparative Philosophy* (2018) 195.
[9] GM Kayange *Meaning and Truth in African Philosophy: Doing African Philosophy with Language* (2018) 4.
[10] See G Hull 'Introduction' in G Hull (ed) *Debating African Philosophy: Perspectives on Identity, Decolonial Ethics and Comparative Philosophy* (2018) 3.
[11] The Baluba inhabit the region of modern-day Democratic Republic of Congo.
[12] See P Tempels *Bantu Philosophy* (2010).
[13] K Wiredu 'Introduction: African philosophy in our time' in K Wiredu (ed) *A Companion to African Philosophy* (2004) 5.

colonial powers. This gave rise to the search for a definition of African philosophy not based on outsider observations of Africans.

The search for self-definition in the works of African scholars and scholars studying African thought has been described as a driving force in post-colonial African philosophy.[14] In responding to the lack of a foundation of ancient writings and seeking to transcend the limitations of reliance on subjective observations of traditional practices, post-colonial African scholars exhibited a new approach to the study of African philosophy. This focused on the study of language commonly used by African cultural groups.[15] The methodology of linguistic analysis finds its genesis in the work of Alexis Kagame, which was driven by the question: 'To what extent do the characteristics of natural language give any indication as to the philosophical thinking of the people who speak it?'[16] This question received significant attention in subsequent philosophy[17] and continues to be a subject of investigation to this day.[18]

The search for self-definition, while doing much to dispel the myth that Africans were incapable of thinking philosophically,[19] also led to what was in some cases an over-zealous pursuit for some distinct feature by which to distinguish African thought from philosophy in the West. As H Odera Oruka observes, one of the trends that emerged in early responses to the question 'what is African philosophy?' was works that advocated the idea that there is a *uniquely* African philosophy that is equal to, but distinct from, Western philosophy in some way.[20] Through this lens, African philosophy is seen as a departure from the Western moral tradition and its focus on critical analysis and logic. Instead, African philosophy is intuitive, mystical and counter/extra rationalistic.[21]

This resulted in a charge, led by Paulin Hountodji, to reject 'the myth of primitive unanimity',[22] and to cease any quest for 'an implicit, unexpressed, world-view [shared by all Africans], which never existed anywhere but in the anthropologist's imagination', which could be said to be a defining feature of African philosophical thought.[23] The contention here is that Africa is a large continent filled with a litany of diverse cultures. Therefore, to speak of a

[14] Ibid at 1.
[15] Ibid at 5.
[16] Ibid.
[17] Ibid at 6.
[18] See Kayange op cit note 9.
[19] Wiredu op cit note 13 at 1.
[20] H Odera Oruka 'Four trends in current African philosophy' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 120.
[21] Ibid.
[22] PJ Hountondji *African Philosophy: Myth and Reality* 2 ed (1996) 61.
[23] Ibid at 63.

singular 'African philosophy' or 'African ethics' is inaccurate and detracts from this diversity.[24] As Tom Angier points out, people often regard talk of African ethics with circumspection for valid reasons:

> 'For the same question raised in a European context – "is there a European ethics" – would raise more than a few eyebrows. The objections would be quick in coming: What historical period are you referring to? What part of Europe are you concerned with? Don't you know the immense variety of European ethical thought and practice?'[25]

That said, while concerns about promoting the idea of a 'unitary Africa' are well founded, it does not follow that to speak of African philosophy or ethics necessarily means to think of African people in homogenising terms. In my view, one can recognise that Africa is home to a plethora of unique cultures, communities and peoples but also acknowledge that the intertwined history and shared realities of indigenous African peoples is a rational basis for grouping research on their philosophical thought together. To return to the comparison to talk of European philosophy, while such talk may — as Angier predicts — raise both eyebrows and questions, European philosophy (and ethics) is widely recognised as a field of study on which extensive research has been conducted, and which philosophy departments in prestigious universities consider a legitimate research area.[26]

In conclusion, there is nothing necessarily wrong with categorising together works of a philosophical nature that emanate from a common geography, a shared history, and which exhibit concern with similar philosophical problems. Ergo, *there is nothing necessarily wrong with speaking of an African philosophy or ethics*. However, in so doing, one must be wary of the myth of primitive unanimity to which Houtmondji alludes. This is something which prominent African philosophers such as William Idowu, Segun Gbadegesin and Kwame Gyekye achieve by undertaking their enquiries into African philosophy by analysing specific linguistic groups of which the authors were members — thereby eschewing unrestrained generalisations about the continent as a whole.[27] I endeavour to do the same in this Chapter. In this sense, African thought relating to ethics is more than an enquiry into moral questions in a manner that is similar to, and yet distinct from, the Western moral tradition. Rather, African ethics reaffirms the African moral tradition and explores African philosophical thought in a

[24] Angier op cit note 8 at 196.
[25] Ibid.
[26] See, for instance, the book series 'Modern European Philosophy' published by Cambridge University Press, including titles on ethics such as: AM Baxley *Kant's Theory of Virtue: The Value of Autocracy* (2010); FA Olafson *Heidegger and the Ground of Ethics: A Study of Mitsein* (1998); and C Larmore *The Morals of Modernity* (1996).
[27] Wiredu op cit note 13 at 1.

way that is relevant to current problems. This is an effort which its defenders argue may rightly be called philosophy and has something of value to offer not only to Africans but to all of humankind.[28]

(b) Dominant streams of thought in African ethics

Having discussed and established the nature of African philosophy broadly, in the remainder of this Chapter I focus explicitly on African ethics, adopting the definition put forward by Martin Prozesky: '[T]he moral traditions embedded in the many and various cultures of sub-Saharan Africa, the moral tradition of black African cultures.'[29] The restriction to sub-Saharan Africa is appropriate because of a common history and enduring cultural similarities shared among the various Bantu tribes that primarily inhabit this region. I now discuss some of the core issues in African ethics.

(i) Ethnophilosophy versus particularism

A central idea in African ethics is the assertion that the content of morality is influenced by culture. The foremost ethical questions debated in a particular polity, and the approaches used in responding to them, are shaped by both the history and present circumstances of the people of that polity.[30] As such, it is a principal project of African ethics to seek to take a critical stance towards Eurocentric ethical norms which purport to be universal but are, in fact, a product of Western culture and history. African ethics, broadly, seeks to embrace ethical values that emanate from African culture and history, which are thereby more fitting to be applied in the African context. How to go about doing this, however, has been a major point of contention among African thinkers. This is because of disagreements about the extent to which morality is defined by culture.

As already alluded to above, the development of post-colonial African philosophy was, to an extent, motivated by the impetus of refuting the colonial-era assertion that nothing of

---

[28] Laleye op cit note 7 at 88. Laleye remarks that 'As the African who henceforth consents to fight for the re-appropriation of previously valid truths, or for present African thought dealing with present problems to discover truths which may be appropriated not only by Africans, but also by present-day humankind, all things which seem to us to comply with the aspiration of philosophy…[T]here will thus be no reason for the newly elaborated African philosophy to irremediably oppose existing philosophies; rather, experiencing neither a connection of essential dependence nor one of continuity of any filiation towards the latter, their relations will forcibly be envisaged without false rivalry or competition…'.

[29] MH Prozesky 'Cinderella, survivor and saviour: African ethics and the quest for a global ethic' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (2009) 4.

[30] M Deacon 'The status of Father Temples and ethnophilosophy in the discourse of African philosophy' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 102.

intellectual value could come from Africa.[31] From this emerged a school of thought that was ostensibly singularly focused on this mission, and which sought to do so by pointing to the cultural differences as a basis for entirely rejecting the tenets of the Western moral tradition. According to proponents of this view — commonly referred to as 'ethnophilosophy' or 'traditionalism' — morality is entirely culturally relative,[32] with two main points of distinction between African ethics and Western ethics: Firstly, the primacy given to the human capacity for logic and reason and secondly the value placed on individuality.[33] Proponents of ethnophilosophy assert that the central role played by the exercise of *logic* in finding answers to questions of morality in Western ethics is opposed to the African culture, which instead appeals to *emotion* in seeking answers to moral questions. Furthermore, the Western preoccupation with the significance of the *individual* is at odds with African culture's focus on the *community*.[34]

Ethnophilosophy, in its contempt for intellectual engagements such as logic and rationality (things it views as Western constructs, and are thus un-African) has been criticised — correctly in my view — for not being philosophy in the strict sense of the word. Oruka justifies this characterisation by pointing out that ethical values based on ethnophilosophy are derived not from critical engagement with the African tradition and way of life, but from an uncritical adoption of aspects thereof, and these aspects of African culture are depicted as exemplars of African ethics.[35] This makes ethics based on traditionalism undesirable for several reasons, not the least being that ethical relativism precludes cross-cultural evaluation of philosophical thought. On this issue, famed African philosopher Kwasi Wiredu remarks:

> 'The infelicities of normative relativism are legion – I have discussed them in detail [elsewhere] – but the fact alone that it is incompatible with multicultural dialogue in conditions of diversity is a sufficient reduction ad absurdum in theory.'[36]

The consequence of this incompatibility with cross-cultural analysis is to insulate the works of traditionalists from any critique based on concepts that can be labelled as ideas that are 'foreign' or 'unAfrican', and a sanctimonious embrace of all ideas which are framed as based on traditional African culture.

---

[31] Ibid at 97.
[32] Wiredu op cit note 13 at 11.
[33] Deacon op cit note 30 at 98.
[34] Oruka op cit note 20 at 121.
[35] Ibid.
[36] Wiredu op cit note 13 at 13.

In direct opposition to ethnophilosophy/traditionalism, is the school of thought which Oruka terms 'professional philosophy'.[37] This refers to the works of trained philosophers and healthcare professionals, which he observes as largely dismissing ethnophilosophy on the grounds that philosophy (and especially ethics) is more than a product of culture and tradition. While proponents of this view — such as the aforementioned Wiredu — maintain that there are some differences between African ethics and Western ethics, '[t]he difference it is believed, arises from cultural dissimilarities…[that] can cause disparity in philosophical priority and methodology *but not in the nature or meaning of philosophy as a discipline*' (emphasis added).[38] Put differently, the cultural context may account for *some* divergence between Western and African ethics, but it is implausible that these cultural particulars entail an abandonment of reason and a commitment to logic, which are foundational to all philosophy. To claim that this is the case is to seek to draw a dichotomy between Western and African thought on morality which is both exaggerated and unfounded.

Critiques of ethnophilosophy commonly touch on the tendency to draw false dichotomies between Western and African ethics based on idealist descriptions of traditional African culture, which — paradoxically — often reinforce colonial paradigms of Africa. For instance, Mogobe Ramose rejects the premise that the nature of African ethics is guided by emotion rather than logic, on the grounds that this view is a perpetuation of the philosophic racism of Western philosophy which presupposes that rationality is a distinctly Western invention.[39] So, when Aristotle spoke of man as a rational animal, he was not speaking of the African, or of any non-Western peoples. For Ramose, to presuppose that African ethics is inherently emotional is to attempt to impose a dichotomy that is opposed to the actual holistic worldview of African philosophy. This condemns African thought to what Amartya Sen refers to as a 'reactive self-identity', where a post-colonial society, in seeking to distance itself from its colonial identity, reactively defines itself in terms which are opposed to what it perceives as being characteristic of its oppressors. It thereby unwittingly embraces the limited aspects of itself which were regarded as 'other' to their oppressor's worldview and rejects aspects of its own heritage, which reflects what the colonisers claimed for themselves.[40] In this sense, the normative relativism

[37] Oruka op cit note 20 at 122.
[38] Ibid at 123.
[39] MB Ramose 'The philosophy of Ubuntu and Ubuntu as philosophy' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 234.
[40] A Sen *Identity and Violence: The Illusion of Destiny* (2007) 89–90. Sen observes that globally, there emerge post-colonial sentiments of the desirability of rejecting concepts which are perceived as Western, and that this is problematic for many reasons. This is not limited to the fact that it ignores the true global history. Many ideologies now seen as the hallmarks of Western civilisation once developed independently outside the West and may have

advocated by traditionalists, while perhaps well-intentioned, raises serious concerns about advancing a version of African ethics tainted by a colonised vision of African identity.

In response to the normative relativism propounded by traditionalists, the most prominent recent literature on African ethics has seen wide-scale adoption of what is termed 'particularism'. Particularism recognises there are aspects of life and reality that are relative to culture which ought to be noted but not canonised. This therefore leaves the door open for intercultural dialogue on those aspects of life, reality and morality that are universal.[41] That said, particularism must be distinguished from universalism. Particularism grounds morality in the concrete circumstances of moral agents; as such it considers factors such as race, ethnicity and gender.[42] Universalism, on the other hand, discounts the idea that there is anything 'particular' about morality. Rather, this approach observes the various cultural contexts in which one may express morality and 'abstracts from these circumstances in an attempt to find a universal stand point'.[43] Particularism is somewhere between relativism and universalism, as it advocates viewing any universal aspects of morality through a perspective shaped by factors relative to culture, such that the content of morality in a community is defined by the social goods or values prioritised by that particular community.

It is, in my view, clear that particularism provides a superior account for African ethics, for the reasons I elaborate on below. While the fact that we are all raised and live in various social circumstances and cultural backgrounds accounts for variability in how we understand concepts of right and wrong, one negates the extent to which we are also all similar as human beings insofar as one claims culture accounts for all of morality. This common humanity arguably provides for why we might share common ground on issues of morality across cultures. For instance, humans can (almost) all feel pain,[44] and are capable of suffering. Therefore it is not surprising that both African and Western morality would disapprove of

---

even begun there. He remarks that: 'Indeed, the colonized mind is parasitically obsessed with the extraneous relation with the colonial powers. While the impact of such an obsession can take many different forms, that general dependency can hardly be a good basis for self-understanding'. This phenomenon has resulted in the formation of 'reactive self-identities', in terms of which colonised groups have redefined the meaning of their identity (e.g. 'Indian', 'African') outside the intellectual domain that is seen as distinctly Western. In the South Indian context, in particular, this has led to the Indian reactive self-identity in the 'spiritual' (defined by their exclusion from the intellectual domain), notwithstanding South India's many contributions to scientific pursuits like astronomy and mathematics.

[41] Wiredu op cit note 13 at 13–4.

[42] PH Coetzee 'Particularity in morality and its relation to community' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 273–4.

[43] Ibid at 273.

[44] As with all categories, there are the exceptional few with congenital insensitivity to pain. But even such people are not immune to other forms of suffering. Indeed, some might even say the inability to feel pain is itself a source of suffering.

causing others to experience pain without just cause — although there may be differences in what constitutes just cause. Ergo, the study of normative philosophy should be 'ethnically specific' and through cross-cultural comparison we can discover those aspects of morality which are a product of what we have in common, and those aspects which are shaped by our lived realities.[45] As Munyaradzi Murove puts it in the introduction to *African Ethics*, 'ethics can only be effective when it is comparative and, at the same time, context specific'.[46]

(ii) Communitarianism and the nature of human personhood

In recent decades, the literature on African ethics has engaged in ethnically specific investigations. It has identified certain material respects in which African thought provides alternative viewpoints on issues of morality. One such respect is the extent to which morality in the African context is focused on the community rather than on individuals. The emphasis given to the bonds of community in African society proceeds from the premise that group solidarity is the defining feature of African traditional societies.[47] This has direct implications for how the metaphysical dimensions of human personhood are conceptualised in African philosophy, which in turn has an impact on ethics.

The dominant theory of human personhood in Western philosophy is that of Immanuel Kant, who posited that all persons, by virtue of their capacity for reason, possess an equal but incalculable moral worth that entitles them to equal treatment. This is because each human being should be treated as an end in themselves, and not as a means to an end.[48] Ergo, treating other persons or one's self in an instrumental way is immoral as it fails to show due regard for the moral worth inherent in the human person, which, in Kantian terms, is human dignity.[49] Put differently, in Kantian deontology human dignity emanates from the human capacity for reason, because this is the distinctive feature of human persons. In African philosophy, however, the capacity for reason is not viewed as the foundation for the moral status of human persons. Rather, the moral status of the person derives from their membership of a community, for reasons I expand upon presently.

[45] Coetzee op cit note 42 at 285.
[46] See MF Murove 'Introduction' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (2009).
[47] IA Menkiti 'On the normative conception of the person' in K Wiredu (ed) *A Companion to African Philosophy* (2004) 324.
[48] See I Kant *Groundwork of the Metaphysics of Morals: A German-English Edition* (2011).
[49] J Rachels *The Elements of Moral Philosophy* 4 ed (2003) 130. See, also, R Bayefsky 'Dignity, honour, and human rights: Kant's Perspective' (2013) 41(6) *Political Theory* 809.

Discourse on the significance of the community in African philosophy can be traced back to the works of Tempels.[50] In *Bantu Philosophy*, he provides the first written iteration of an African perspective on personhood being based on one's relations with the community:

> 'The concept of separate beings, of substance…which find themselves side by side, entirely independent one of another [sic], is foreign to Bantu thought. Bantu hold that created beings preserve a bond one with another, an intimate ontological relationship, comparable with the causal tie which binds creature to Creator. For Bantu there is interaction of being with being, that is to say, force with force.'[51]

This narrative of African philosophy emphasising the communal ties between individuals is referred to as 'communitarianism'. As stated by John Mbiti, the premise that 'the individual does not and cannot exist alone except corporately [because] [h]e owes his existence to other people' is a cardinal doctrine in African ethics.[52] An individual only acquires personhood by forming and maintaining positive human relationships. This is a lifelong process; personhood in African philosophy is not something that one acquires at birth. It is a continuous journey that requires an individual to act in accordance with how a human person is expected to act. All that one is born with is the *capacity* for personhood, which must be actualised throughout life. How exactly one does this is a process guided by the community, as a person cannot achieve personhood on their own. As Ifeanyi Menkiti puts it:

> 'In the stated journey of the individual toward personhood, let it therefore be noted that the community plays a vital role both as a catalyst and as a prescriber of norms. The idea is that in order to transform what was initially biologically given into full personhood, the community, of necessity, has to step in, since the individual, himself or herself, cannot carry through the transformation unassisted.'[53]

In the community, individuals share a dialogical relation, in the sense that they share reciprocal obligations to each other, and *chief amongst these is the duty to treat others in a way that promotes harmony in the community*.[54] It is for this reason that the African philosophical perspective on human personhood is considered a normative theory of human personhood: An individual is expected to act in a normatively correct way by maintaining harmony and

---

[50] DN Kaphagawani 'African conceptions of a person: A critical survey' in K Wiredu (ed) *A Companion to African Philosophy* (2004) 334.
[51] Tempels op cit note 12 at 58.
[52] JS Mbiti *African Religions & Philosophy* (1990) 141. For a further discussion of Mbiti's thoughts on this subject, see also: JS Mbiti 'Christianity and traditional religions in Africa' (1970) 59(236) *Int Rev Mission* 430.
[53] Menkiti op cit note 47 at 326.
[54] Coetzee op cit note 41 at 276.

solidarity with his community members, in order to progress on the ontological journey of human personhood. This, in African spirituality, is viewed as a journey that ends in one becoming a revered ancestor.[55]

But what are the consequences of communitarianism in respect of African ethics? For some, it means that the decisive consideration in all ethical questions is the interests of the community since communitarianism eschews any commitment to the normative significance of individual persons. All matters is the community. This position has been championed by traditionalists such as the socialist political philosopher, Leopold Senghor, who famously stated:

> 'Negro-African society puts more stress on the group than the individuals, more on solidarity than on the activity and needs of the individual, *more on the communion of persons than on their autonomy* (emphasis added).'[56]

This view of communitarianism with strong collectivist overtones is also reflected in the famous essay *Person and Community in African Traditional Thought* by Menkiti. Menkiti concluded that, for Africans, the community has ontological primacy and ontological independence, such that 'it is the community which defines the person as a person, not some isolated static quality of rationality, wills or memory'.[57] Menkiti's views build upon the work of Mbiti, whose core message is contained in the oft-quoted claim: 'I am, because we are; and since we are, and since we are, therefore I am'. This line is meant as a riposte to Descartes's 'I think therefore I am', which is viewed as embodying the Western obsession with logic and reason.[58]

This position has been challenged by scholars such as Didier Kaphagaweni, who asserts that to endorse communitarianism 'is not in any way to imply a denial of the recognition of the individual human being qua individual'.[59] For, to claim that 'I am because we are', requires

[55] While the relevance of spirituality and religion may be referred to in order to provide context, this thesis will not be engaging with these aspects of African thought.
[56] LS Senghor & M Cook *On African Socialism* (1964) 93–4.
[57] I Menkiti 'Person and community in African traditional thought' in RA Wright (ed) *African Philosophy: An Introduction* 3 ed (1984) 172.
[58] Mbiti op cit note 52 at 141. This phrase illustrates quite well the tendency of traditionalists to draw false dichotomies in seeking to substantiate the idea of a distinctly African philosophy entirely independent of the Western moral tradition. The meaning of Descartes' 'I think therefore I am' is sometimes misrepresented in African philosophy, as it is here. Descartes, in saying 'cognitio ergo sum' was not making a claim about the primacy of man's cognitive capacity, but rather he was paraphrasing his argument that given the fallibility of the human senses, the only thing one can know for certain about his or her self is that he or she is a being that is capable of thought.
[59] Kaphagawani op cit note 50 at 338.

that we recognise that 'I am' (ie recognise that an individual exists) before we can proclaim 'we are' (ie recognise that we are connected by communal bonds as a community). In other words, ontological individuality precedes community. Kaphagaweni argues that in traditional African communities it is recognised that life and reality are experienced communally but also individually. His assertion is that while the collective is viewed as being a priority in the African worldview, the individual is also recognised as having a distinct identity, and this individuality is morally relevant.[60] Furthermore, in terms of this school of thought, communitarianism and the recognition of (and regard for) the individual are not opposed but rather complementary. This is given that the existence and prosperity of the community depend on the existence and prosperity of individuals.[61]

For this reason that Gyekye finds notions of communitarianism that are radical — in the sense that they prioritise the interests of the community — unconvincing.[62] In his view, it is essential for communitarianism to be accompanied by an understanding that while human beings are social, and this accounts for the primacy to be given to the community, they are also other things.[63] Therefore, the communal relations one has do not account for the entirety of one's being. Gyekye warns that in advocating communitarianism, one should not emphasise this single facet of human personhood to the point of extremes, as this 'may result in pushing the significance and implications of a person's communal nature beyond their limits, an act that would, in turn, result in investing the community with an all-engulfing moral authority to determine all things about the life of the individual person. This is an exaggeration.'[64] Gyekye holds that, in practice, it is more accurate to say that communal values tend to only relate to certain aspects of human relationships (such as kinship relations), and even then these are not definitive; individuals may engage in critical re-evaluation of these values.[65] He advocates a moderate communitarianism that recognises an individual as such, capable of exercising autonomous, moral choices while also being an inherently communal being. The consequence of this is that, in terms of moderate communitarianism, the interests of the individual will only

[60] A similar argument is advanced by several African scholars: See Kayange op cit note 9 at 131–4; M Munyuka & M Mothlabi 'Ubuntu and its socio-moral significance' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (2009) 66.
[61] Kaphagawani op cit note 50 at 338.
[62] K Gyekye 'Person and community in African thought' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 299.
[63] Ibid. This conceptualisation is essential in avoiding the singular affiliation that reactive self-identities tend to produce.
[64] Ibid at 301.
[65] Ibid at 306.

be deprived of being prioritised, 'if doing so will stand in the way of attaining a more highly ranked or preferable goal of the community'.[66]

In conclusion, it is a gross oversimplification to say that '[i]n African culture the community always comes first'.[67] While communitarianism is undoubtedly a hallmark of African ethics, there is a dichotomy in how radical communitarians and moderate communitarians conceptualise the relationship between the human person and the community. In the view of radical communitarians, the individual exists to serve the communal good, and thus all that is ethically permissible is that which serves the interests of the community. By contrast, in moderate communitarianism, the community is the context for the manifestation of personhood and exists to serve the individual on the journey of ontological progression. Therefore, the interests of the individual are not necessarily subjugated to those of the community, except where individual moral choices endanger highly ranked communal goals. In contentious areas such as these, it would be unwise to seek to make broad generalisations about whether communitarianism should be construed in the radical sense or moderate sense. This is exactly the type of issue that will turn on the values of the particular community. In the next section I consider the African philosophy of Ubuntu, which is prevalent in sub-Saharan Africa, and how the relationship between the individual and the community plays out.

(iii) Excursus on African ethics and modern technology

Before discussing African ethics in the South African context, I need to confront one final issue that has a direct bearing on this Chapter's endeavour to make a case for regulating modern biotechnology in accordance with values rooted in African philosophy. This is whether African thought, rooted in old African traditions and ways of viewing the world, can have any relevance to modern ethical challenges. The contemporary relevance of African ethics is an enduring talking point among scholars, especially for those opposed to traditionalism. For instance, Wiredu criticises ethnophilosophy because of its preoccupation with questions that have some connection with African tradition; the crux of this criticism being that this preoccupation has led to ethnophilosophers producing philosophy unsuited to responding to challenges facing modern Africans.[68] This raises the question of whether African ethics can be applied to issues

[66] Ibid at 308.
[67] E Venter 'The notion of ubuntu and communalism in African educational discourse' (2004) 23(2-3) *Studies in Philosophy and Education* 151.
[68] Wiredu op cit note 13 at 4.

not relating to African traditions — such as GGE. In my view, it can, and it must, for the reasons set out below.

The idea that African philosophy cannot relate to modern problems related to scientific pursuits perpetuates the colonial view of African societies as being 'primitive' and 'backward'.[69] Rather than cast away this obviously limiting categorisation, the unfortunate tendency of post-colonial discourse on identity and morality in Africa has been to reaffirm it, by formulating African-ness as an antithesis to the intellectual, technological and scientific.[70] Murove traces the conceptualisation of African-ness as opposed to modernity back to the debate between Thomas Hobbes and Jean-Jacques Rousseau, as well as their successors in thought, who viewed African ideas on morality as evidence of man in his 'savage' state.[71] The communitarianism of Africans was seen as an artefact of the savage state, whereas individualism was a hallmark of modernity.[72]

Among the many deficiencies with the theory of the savage evidence ethic, the most prominent flaw is the assumption that the African mode of living was not 'civilised', or that it lacked an appreciation for technology simply because African civilisations often did not display the usual face of modernity and industry. There was (and continues to be) a great under-appreciation of the richness and complexity of pre-colonial African communities and societies, notwithstanding extensive anthropological research on classical African civilisations revealing pre-colonial Africa as a site of scientific and technological innovation.[73] Pre-colonial African civilisations are credited for making significant advances in the fields of mathematics, astronomy and architecture, amongst others.[74] Such innovations clearly suggest societies that were open to and welcoming of science and technology, but as Edward Shizha points out, this aspect of pre-colonial Africa has been deliberately obfuscated:

> 'There is a tendency to look at Africa as if it never possessed any science and technology before Europeans set foot on the continent. Colonial thought on indigenous African communities and

[69] See: A Kuper *The Invention of Primitive Society: Transformations of an Illusion* (1988) 2–3; *City of Tshwane v Afriforum* [2016] ZACC 19, 2016 (6) SA 279 (CC) para 2.
[70] TW Bennett, AR Munro & PJ Jacobs *Ubuntu: An African Jurisprudence* (2018) 3.
[71] MF Murove 'Beyond the savage evidence ethic: A vindication of African ethics' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (2009) 20.
[72] Ibid.
[73] See D Serlin 'Confronting African histories of technology: A conversation with Keith Breckenridge and Gabrielle Hecht' (2017) 127 *Radical History Review* 87.
[74] S Blatch 'Great achievements in science and technology in ancient Africa' *ASBMB Today* 1 February 2013 available at *https://www.asbmb.org/asbmb-today/science/020113/great-achievements-in-stem-in-ancient-africa*, accessed on 12 March 2020.

societies were eminently used to reconstruct indigenous people as homogenous and unchanging'.[75]

The key point here is that this was a reconstruction of the history of pre-colonial Africa — not an accurate depiction of it. Shizha elucidates that African societies crafted technology to meet their needs, from innovations with social value like arts and crafts to more industrious ones like metallurgy.[76]

In Greek mythology, Prometheus is said to have brought fire to man against the will of the gods, and is thus depicted as a symbol of modernity and development.[77] In reality, archaeological evidence suggests that the gift of fire first entered man's hands in Africa.[78] Africans have embraced this gift, developing themselves and forging advanced societies in Nigeria known for textile weaving, spinning, and dyeing, and also in Zimbabwe where architectural ingenuity in stonework crafted the city of Great Zimbabwe without access to concrete.[79] As scholars have shown, there is no evidence to support the assertion that pre-colonial Africa was home to an 'unscientific culture' — such suggestions are iterations of colonial narratives not grounded in fact.[80]

Unfortunately, this colonised view of technology as un-African, lives on through African thinkers who celebrate 'the wisdom of being non-technical', which is defended as being wise because it allows one to live close to nature.[81] In my view, it is more appropriate to view African-ness as being *synonymous* with technological development, as Cheikh Anta Diop did. Diop substantiates his vision with reference to the fact that the area around the Nile was one of the birthplaces of civilisation.[82] This was not a phenomenon unique to the Egyptians, but was characteristic of a progressive attitude towards technology which may be observed on the continent as a whole:

---

[75] E Shizha 'African indigenous perspectives on technology' in G Emeagwali & E Shizha (eds) *African Indigenous Knowledge and the Sciences: Journeys into the Past and Present* (2016) 47.
[76] Ibid.
[77] C Marie 'How myth still makes us: Prometheus' *Medium* 12 October 2018 available at *https://medium.com/@thesmalldeath/how-myth-still-makes-us-prometheus-b3d9efe3c8ca*, accessed on 12 March 2020.
[78] JAJ Gowlett 'The discovery of fire by humans: A long and convoluted process' (2016) 371(1696) *Phil Trans R Soc B* 20150164; JAJ Gowlett & RW Wrangham 'Earliest fire in Africa: Towards the convergence of archaeological evidence and the cooking hypothesis' (2013) 48(1) *Azania: Archaeological Research in Africa* 5.
[79] Shizha op cit note 75 at 50.
[80] FK Teng-Zeng 'Science, technology and institutional co-operation in Africa: From pre-colonial to colonial science' (2006) 22(1) *EASSRR* 3.
[81] AA Mazrui 'Africa's wisdom has two parents and one guardian: Africanism, Islam and the West' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (2009) 53.
[82] Ibid at 53.

> 'Traditional indigenous societies were not as conservative and inhibitive to development as generally assumed. The truth about pre-colonial African societies is that they had indigenous knowledges that were not only "known for their resilience, ability to describe, explain, predict and negotiate nature" but they were also acclaimed for their "trajectory of a movement from an abject past to a liberating present". Indigenous people had agency, voice and the power to decide their destiny without outside interference. Their lives were interdependent and embedded in their sovereignty and autonomy.'[83]

The need to revive old African ideas in the modern age, to once again help Africans navigate the implications of technological development, was perhaps best explained by Mazrui who said:

> '...Africa can never go back completely to its pre-colonial starting point but there may be a case for re-establishing contacts with familiar landmarks of modernisation under indigenous impetus.'[84]

Furthermore, I suggest it is essential that we progress African thought beyond a preoccupation with life as it was in pre-colonial Africa, and towards issues relating to technological innovation. Such a progression in African thought would have undoubtedly occurred, in time, had the development of Africa not been stunted by colonisation.[85] That said, work needs to be done to transform ideas grounded in very old traditions and ways of living into something useful to the present age. Still, one must also recognise that this is a worthwhile endeavour to give life to policy that speaks to an African understanding of morality, and that fits into the African context.[86]

(c) The philosophy of 'Ubuntu' and ethics in Southern Africa

(i) Defining and describing Ubuntu

In many ways, academic debate on the philosophical concept of Ubuntu is a microcosm of the broader issues pertaining to African philosophy. One respect in which this is especially apparent, is how scholarly writings on Ubuntu are preoccupied with the question: 'What is Ubuntu?' Renowned Ubuntu philosopher Thaddeus Metz observes that one of the most

[83] Shizha op cit note 75 at 51–2.
[84] L Mbigi & J Maree *Ubuntu: The Spirit of African Transformation Management* (2005) 5.
[85] See W Rodney *How Europe Underdeveloped Africa* (1982).
[86] A Shutte 'Ubuntu as the African ethical vision' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (2009) 98.

common criticisms of any endeavour which seeks to invoke Ubuntu, is that the concept has no coherent definition.[87]

Interestingly, advocates of Ubuntu often concede that it has no clear meaning and is incapable of definition.[88] But for them this is a strength rather than a weakness. Several authors have argued that the indeterminate nature of Ubuntu is a benefit, primarily because it does not exist in a written, defined form, which allows it to resist a technical and strict formulation.[89] Bennett is one such author, who maintains that the difficulty in establishing a meaning of Ubuntu is due to its foreign nature as a borrowed word being used in English settings. This is exacerbated by the fact that many have taken advantage of its ephemeral status to mould it in ways that further their own political, ideological or other agenda.[90] But despite this, with reference to the function of Ubuntu in our legal system, Bennett argues that it is best off without a singular definition:

> '[A]lthough the law rarely tolerates technical terms with open-ended meanings, certain words are deliberately allowed to remain ambiguous so as to permit judges discretion in applying them to diverse factual situations. Words such as "wrongful" and "reasonable" are typical examples. Ubuntu falls into this category. While judges and academics have filled many pages with debate about definition, its meaning in law will persist in remaining fluid.'[91]

While Bennett may count the fluidity of Ubuntu as a strength, others have objected to it, unable to ignore how its inexact nature has allowed it to be construed as accommodating an excessively wide range of positions. Some of these are even contradictory, including collectivist political philosophies like African socialism and liberal egalitarian policies like human rights.[92]

It has been said that while Ubuntu cannot be accurately defined, it is something you would 'know if you saw it'.[93] But if Ubuntu is in the eyes of the beholder, how are we to discern between legitimate reliance on the concept and those who would appropriate it for their own selfish ends? How does one respond to, for example, the slave owner who legitimises his

[87] T Metz 'Ubuntu as a moral theory and human rights in South Africa' (2011) 11(2) *Afr Hum Rights Law J* 533.
[88] MB Ramose 'The ethics of Ubuntu' in P H Coetzee & A P J Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 326. Ramose frames Ubuntu as follows: 'It is flexibility oriented towards balance and harmony between human beings and…nature…the ethics of ubuntu cannot be reduced to one essence'.
[89] C Himonga, M Taylor & A Pope 'Reflections on judicial views of ubuntu' (2013) 16(5) *PER/PELJ* 376.
[90] Bennett et al op cit note 70 at 30.
[91] Ibid.
[92] B Matolino & W Kwindingwi 'The end of ubuntu' (2013) 32(2) *S Afr J Philos* 197.
[93] JY Mokgoro 'Ubuntu and the law in South Africa' (1998) 1 *PER/PELJ* 2.

actions by claiming that slave ownership illustrates Ubuntu as it reflects the traditional, African communal structure of a chief who controlled the lands that the subjects lived on?

Despite the difficulty in finding a definition for Ubuntu in concrete terms, one can at least describe it with reference to the way the word is used. Ubuntu commonly finds expression in two distinct senses:

1) In the ideological sense: Ubuntu is used as descriptive of an underlying ethos of sub-Saharan African cultures, which holds that all human beings, being inherently social creatures, require other human beings in order to live a good life. Therefore, individuals in a community owe reciprocal obligations to each other aimed at achieving harmonious relations within society.[94] This ideology is associated with the Nguni expression 'umuntu ngumuntu ngabantu', which may be translated as 'persons depend on persons to be persons'.[95]
2) In the virtue-istic sense: Ubuntu is referred to as a quality individuals can have when they act in accordance with or live in a way that exhibits values associated with the ideology of Ubuntu.[96] Put differently, Ubuntu is a moral virtue.[97] It is in this sense that Africans often remark of one another 'unoBuntu', which may be translated as 'that person has Ubuntu'.

For the purposes of this Chapter, I focus on Ubuntu in the second sense, in terms of which it is perceived as setting a standard for the behaviour of human persons — which human beings ought to endeavour to conform to in order to actualise their personhood. In this sense, Ubuntu is a virtue ethic, insofar as the basic thesis of virtue ethics is: 'An action is right if and only if it is what an agent with a virtuous character would do'.[98]

In the Ubuntu ethic, the impetus for acting with such a virtuous character is founded on the normative theory of personhood.[99] As alluded to above, the normative theory of personhood prescribes that what it means to be a human person is defined by one's capacity for community, and that personhood is a journey one advances on insofar as one functions as a member of the

[94] Munyuka & Mothlabi op cit note 60 at 65.
[95] A Shutte *Ubuntu: A New Ethic for a New South Africa* (2001); Mokgoro op cit note 93 at 2; Metz op cit note 87 at 537.
[96] Bennett et al op cit note 70 at 32; MB Ramose *African Philosophy Through Ubuntu* (1999) 43.
[97] For reference to Ubuntu as a virtue ethic, see D Cornell *Law and Revolution in South Africa: Ubuntu, Dignity, and the Struggle for Constitutional Transformation* (2014) 40.
[98] J Oakley 'A virtue ethics approach' in H Kuhse & P Singer (eds) *A Companion to Bioethics* 2 ed (2009) 93.
[99] Munyuka & Mothlabi op cit note 60 at 64–5.

community. In terms of this view, one progresses on the ontological journey of personhood when one acts with, and treat others with, Ubuntu.

(ii) Questioning the primacy of Ubuntu

Despite its definitional challenges, reference to Ubuntu is prominent in ethics literature in southern Africa. The primacy given to Ubuntu in African ethics is routinely justified on the grounds that it embodies the various areas of commonality in the value systems, beliefs and practices of African cultures.[100] Mluleki Munyaka and Mokgethi Motlhabi argue that this is evidenced in how variations of the word 'Ubuntu' feature in most African languages, and even in those languages where it does not appear, the concept exists under a different name.[101] Bennett illustrates this where he remarks:

> 'Ubuntu is a word occurring in the everyday vocabulary of most, if not all, South Africans. Although it derives from the Nguni family of languages…it has equivalents in seSotho and sePedi (*botho*), xiTsong (*bunhu*) and tshiVenda (*uthu*). Variants of ubuntu are also found in other African languages, for example, *unhu* (Shona), *utu* (Swahili) and *umundu* (Kikuya).'[102]

Some have used this as a basis to frame Ubuntu as a 'distinctively African' moral theory, the cardinal value of which is communitarianism aimed at preserving social harmony. Attempts to frame Ubuntu as distinctively African have been met with strong resistance. The first reason for the resistance relates to the lack of empirical evidence to support this claim. The second reason relates to how the values which are referenced as defining features of the distinct African moral theory are not exclusive to African morality. The first reason can be explained as follows:

> '[T]he premise that sub-Saharan African societies maintain values of Ubuntu, values that are different to those maintained by Western societies…is an empirical claim that requires justification. However, there is very little, if any, empirical evidence provided in the literature to support this claim. Instead, it is simply assumed, or categorically stated, that Africans do in fact maintain the values of Ubuntu and that their values differ from those in the West.'[103]

While there has been little research on how Ubuntu is generally perceived by South Africans, in recent years there has been a growing interest in applications of Ubuntu in the context of business ethics.[104] In his review of empirical cross-cultural research in business

[100] Ibid at 63; Ramose op cit note 39 at 230.
[101] Ibid.
[102] Bennett et al op cit note 70 at 10.
[103] A West 'Ubuntu and business ethics: Problems, perspectives and prospects' (2014) 121 *J Bus Ethics* 49.
[104] Ibid at 47.

management, Andrew West observes that the data indicate that study participants who may generally be described as 'African' did not, as expected, routinely identify less strongly with individualism than non-Africans.[105] In one study of 586 middle managers in post-apartheid SA, which examined the extent to which the participants identified with individualism or collectivism, the results suggested no difference between Afrikaans White South Africans and Black South Africans, and no substantial difference between Black South Africans and English White South Africans.[106]

Empirical research on Ubuntu and its use throughout history[107] gives credence to criticism that, in its present form, Ubuntu is largely an academic construction and its claims to embodying a pre-colonial ethic or an embodiment of the African way of living are flawed idealism.[108] West acknowledges that these criticisms may be valid, but — like those viewpoints they criticise, these critics make claims that can only be assessed through thorough research and the door remains open for the historical legitimacy of Ubuntu to be reaffirmed.[109] Even if it never is, however, this does not eliminate the prospect that we may yet derive something useful from the concept. This is as long as we are willing to resist making unrestrained generalisations about Ubuntu as being distinctly African, or that it derives its legitimacy from the fact that it embodies the ethic of pre-colonial or modern Africans. At best, one can say that *Ubuntu is a philosophical ideal with roots in Africa that potentially provides useful ways of approaching ethical problems*.

The second reason for the resistance to attempts to frame Ubuntu as distinctively African, is that it promotes values and ideas which are, at the core, not exclusive to Africa — but universal:

> 'This philosophy is encapsulated in all the philosophies of the world, *though it might be articulated and actualised differently*. Effectively, therefore, it would be ethnocentric and, indeed, silly to suggest that the Botho ethic is uniquely African. The mere fact that the tenets that

[105] Ibid at 52.
[106] See A Thomas & M Bendixen 'The management implications of ethnicity in South Africa' (2000) 31 *J Int Bus Stud* 507.
[107] West op cit note 103 at 54–5. See, also, CBN Gade 'The historical development of the written discourses on *Ubuntu*' (2011) 30(3) *S Afr J Philos* 303; CBN Gade 'What is Ubuntu,? Different interpretations among South Africans of African descent' (2012) 31(3) *S Afr J Philos* 484.
[108] See: PL Berger & SP Huntington (eds) *Many Globalizations: Cultural Diversity in the Contemporary World* (2002). See, also, WM van Binsbergen 'Ubuntu and the globalisation of Southern African thought and society' (2001) 15(1/2) *Quest* 37.
[109] West op cit note 103 at 54.

> underpin this philosophy are intensely expressed by Africans do not make those values exclusively African (emphasis added).'[110]

One cannot escape the fact that those things which Ubuntu prizes, such as social solidarity, are not unique to African communities.[111] However, what is unique to Africa is the way in which ideas like communitarianism are articulated and actualised, and by critically examining the African version of these values we gain an understanding of them as *particular* to the African context. This is the approach favoured by proponents of particularism, who argue that the study of morality should be ethnically specific. Particularism is exhibited in the Ubuntu context through the endeavour by African legal scholars and courts to glean those parts of the Ubuntu virtue ethic which are unique, and which can also add value to legal analysis:

> 'It is however, in respect of methods, approaches, emphasis, attitude etc. of those and other uncommon aspects and values of ubuntu that the concept is unique to African culture. It is thus in respect of those unique aspects that there has now arisen a need to harness them carefully, consciously, creatively, strategically and with ingenuity so that age-old African social innovations and historical cultural experiences are aligned with present day legal notions and techniques if the intention is to create a legitimate system of law for all South Africans.'[112]

Another claim made in defence of the prominence given to Ubuntu in African ethics, is that it embodies the actual moral views of most, or all, peoples of sub-Saharan Africa. This claim has rightly been criticised for being an oft-repeated empirical claim that has thus far not been substantiated.[113] In my view, not only are claims of this nature unwise, but they are also unnecessary. One need not claim that Ubuntu defines the moral thinking of all Africans in order to give the theory a sense of legitimacy as an African moral theory. All one need acknowledge is that Ubuntu is founded on Bantu traditional culture and thought, and that it is a concept familiar to those raised in this tradition.

It is important to note that this is not to claim that Ubuntu is exhibited with uniformity in the practices of past or present Africans. While we can see some aspects of African culture as exhibiting Ubuntu, there are others we may point to as not doing so. For some, this casts doubt on whether Ubuntu is something which is 'alive' or merely a hollow academic contrivance,

---

[110] JL Teffo 'Botho/Ubuntu as a way forward for contemporary South Africa' (1998) 38(365) *Word and Action* 4. See, also, West op cit note 103 at 50–1.

[111] For example, solidarity — an oft cited feature of communitarianism — is also prized in contemporary European ethics. See Y Borgmann-Prebil & A Obermaier-Muresan 'Solidarity in Europe – Alive and active' (2018) *European Union* 18.

[112] Mokgoro op cit note 93 at 4.

[113] West op cit note 103 at 49.

used as a vehicle for political agendas.[114] Such questions are undoubtedly worth investigating, especially because of the mercurial nature of the concept which, as discussed above, lends itself to being manipulated to advance almost any ideology. However, ultimately, such criticisms are misdirected. Why this is the case is explicated by Cameron J writing for the Constitutional Court in *The Citizen v McBride*,[115] where the Court remarked that:

> 'We live in an African country which is rapidly being denuded of the values and moral standards which once characterised and defined the very nature of who a substantial majority of its citizens were and what they stood for. Botho or ubuntu is the embodiment of a set of values and moral principles which informed the peaceful coexistence of the African people in this country who espoused ubuntu based on, among other things, mutual respect. Language was used in moderation and foul language was frowned upon by the overwhelming majority. A forgiving and generous spirit, the readiness to embrace and apply restorative justice, as well as a courteous interaction with others, were instilled even in the young ones in the ordinary course of daily discourse. The unforgiving, the arrogant and the unduly abusive were described by the Batswana, and presumably other African communities, as those who are bereft of botho.'[116]

In this statement, Cameron J admits that Ubuntu is both an iteration of an African ethical standard recognised in SA, as well as something which is sorely lacking in our current society. To say that Ubuntu provides an African perspective on morality is not to say that everything Africans do is tantamount to Ubuntu, nor that it ought to be. Indeed, some aspects of traditional African culture may be in conflict with the values associated with Ubuntu. However, to claim that this calls into question the legitimacy of Ubuntu as an ethical theory is, in my view, absurd, and is to hold Ubuntu to an unreasonable standard. That a society does not perfectly embody the values it identifies with does not change the fact that these are, in fact, the values that the society seeks to live by. Nor does it change the fact that this aspiration has at least some influence on that society's thoughts and customs. I suggest that it would not be fair to say that no society or people live perfectly in adherence to their moral convictions. However, what makes these moral convictions worthy of the name is that they legitimately are things that people feel are qualities worth aspiring to and, conversely, they inform what qualities they view as immoral.

In conclusion, the reliance placed on Ubuntu is, at least in principle, justified. However, it is evident that many of the objections to Ubuntu may be a product of it being made to carry

[114] Matolino & Kwindingwi op cit note 92 at 201.
[115] [2011] ZACC 11, 2011 (4) SA 191 (CC).
[116] Ibid para 217.

the weight of personifying the entirety of African intellectual thought. While Ubuntu clearly has relevance to some issues such as matters of community, to claim that it accounts for African views on all issues relating to morality, metaphysics, theology and spirituality seems to be to overreaching or, at the very least, not sufficiently substantiated. Thus, Ubuntu being the basis of an entire moral theory may be to require too much of it. This perhaps accounts for why scholars such as Metz who seek to do this,[117] have had some of their applications of this moral theory criticised for being out of touch with the culture and traditions it is inspired by.[118] Given that Ubuntu derives its legitimacy partially from it reflecting the world view of Africans, it is undesirable to construct a theory of Ubuntu that would be so abstract as to be unrecognisable to African people. As such, *rather than try to construct an entire moral theory based on Ubuntu, in this Chapter I seek to identify its aspects which are demonstrably linked to a common understanding of it that may be applied to bioethical questions*.

(iii) Communitarianism and Ubuntu

Another parallel between debates on Ubuntu and the broader debates relating to African philosophy is the interrelationship between the interests of the community and that of the individual in relation to moral decision-making. Grivas Kayange criticises ardent proponents of African ethics based on Ubuntu for often making too much of the emphasis given to communal relations in the African worldview, and for under-playing evidence of recognition of the value of the individual and individuality.[119] This phenomenon resembles ethnophilosophy and its concomitant tendency to exaggerate differences in order to make distinctions. In his analysis of this stream of thought, which Kayange terms 'ubuntu idealism', he observes it as placing reliance on 'ideological interpretations of African people' in framing Ubuntu as demanding dogmatic communitarianism.[120]

This ideological approach to African ethics is flawed because it supports constructions of Ubuntu based on abstractions, the content of which are out of step with the actual views held by African persons. This can be observed through the ordinary language approach that Kayange champions (which resembles Kaphagaweni's methodology). This approach reveals that African thought is more open to recognising individuality than some would have us believe. To illustrate this, Kayange lists 11 common Chewa proverbs which one can point to as evidence

[117] Metz op cit note 87 at 534.
[118] Ibid at 536.
[119] Kayange op cit note 9 at 119–21.
[120] Ibid at 128.

that African traditional culture is not singularly focused on the community as a whole. Rather, it recognises individuality and its importance, including 'kanthu n'kako, waona adakhuta thope', which literally means 'what you have is yours, and whoever saw it got satisfied with mud', and suggests 'what you have is yours and no one can interfere'.[121] It is hard to see how one can reconcile such an expression that one is free to enjoy something to the exclusion of other fellow community members, in a society that supposedly *always* puts the community first. Another example in isiZulu is the expression 'akukho nkwali yaphendela enye', which means 'no partridge ever scratched for food for another', suggesting that each person ought to do things for themself and no one is entitled to the gains of others' hard work. This expression is at odds with the sentiment that traditional African societies prized community over all else. If this were the case it would be expected that people routinely share the spoils of their labour.

These examples show how, in framing Ubuntu in radically communitarian terms, Ubuntu idealists construct versions of it that are far removed from how the concept is (and has been) commonly understood. Ubuntu idealists thereby abdicate any claim to a moral ethic that derives its legitimacy from the actual moral convictions of African people. This is an undesirable outcome if one views African ethics as a means for decolonising discourse on morality.

The shortcomings of radical communitarianism explain why advocates of the Ubuntu ethic have routinely associated the idea with moderate communitarianism.[122] In this stream of thought, while the relational nature of human persons is acknowledged, there is also an acknowledgement that a fundamental dimension of Ubuntu is showing respect for the individuality of other persons because this is a necessary precondition for having the kinds of relationships within which individuals and communities prosper.[123] This entails, inter alia, exhibiting a deep appreciation for the moral worth of others qua individuals. Munyuka and Mothlabi even go as far as asserting that Ubuntu places the individual at the centre.[124] Viewed in this way, African ethics, as based on Ubuntu, may be expressed thus:

> 'Individuals are neither to be lumped together in a mass nor separated into discrete units, but rather to be located in a web of living relationships. This does not mean that individual interests

[121] Ibid at 144.
[122] See T Metz 'African values and human rights as two sides of the same coin: A reply to Oyowe' (2014) 14(2) *Afr Hum Rights Law J* 307; Himonga et al op cit note 89.
[123] Prozesky op cit note 29 at 9.
[124] Munyuka & Mothlabi op cit note 60 at 66. These authors remark that: 'A person in the Ubuntu world view is the basis, centre and end of everything; izinto (all other things) only make sense in relation to persons'.

> are to be sacrificed in favour of the group; just as others within the group deserve our respect and care, so does the individual giving respect and care.'[125]

In other words, in the Ubuntu worldview — at least as these scholars see it — the individual is given primacy, and not (only) the community, which is the manifestation of the collective of individuals whose coming together is directed at mutual benefit through the actualisation of personhood. This entails recognising and seeking to balance the interests of the community and the individual, rather than either one being deemed as most important. Indeed, in the Ubuntu worldview, it is inconceivable that something could be regarded as truly good for the individual while jeopardising the good of the community and vice versa. This conceptualisation of Ubuntu is useful in illustrating an important point about this philosophy — that being the extent to which regard for the community is inextricably bound to regard for the individual. For Ubuntu as an ideology to exist in a community, it requires individuals to regard Ubuntu as a virtue, and to act in accordance with it. This is why acknowledging and respecting the individuality of others is so important. Relating this to the iteration of Ubuntu in the expression 'umuntu ngumuntu ngabantu', Ramose puts it thus:

> '[T]o be a human be-ing [sic] is to affirm one's humanity by recognizing the humanity of others and, on that basis, establish human relations with them. Ubuntu, understood as be-ing human (human-ness); a humane, respectful and polite attitude towards others constitute the core meaning of this aphorism.'[126]

Accordingly, that Ubuntu might be aligned with radical communitarianism seems inappropriate, given that this at times would entail not recognising the moral worth of the individual or treating them with respect where the interests of the community demand it. It seems, then, that moderate communitarianism, which accommodates the normative theory of personhood while also having regard for the moral relevance of the individual, is better aligned with the values at the heart of Ubuntu.

In conclusion, it is apparent that in a community committed to Ubuntu, each individual and the community as a whole has a duty to show Ubuntu to the individual. The impact of the interdependent relationship between the individual and the community, and the reciprocal duties between individuals, is such that:

[125] Bennett et al op cit note 70 at 36.
[126] Ramose op cit note 39 at 231.

> 'Anything which may undermine, hurt, threaten or destroy human beings is not accommodated in this way of life but frowned upon as it effects the very foundation of society: the human person.'[127]

The sentiment that Ubuntu places the individual at the centre is echoed by struggle icon Steve Biko, who argued that man is the cornerstone of society and has value beyond his value to others.[128] For these reasons, I suggest, the communitarian thesis, which is at the core of Ubuntu, prioritises the community only as far as doing so is aligned with showing regard for the interests of the individual. Similarly, the interests of the individual must be contextualised within the broader values, goals and interests of the community, and are thus opposed to hard-line individualism.

(d) The role of Ubuntu in South African jurisprudence

(i) The Africanisation of the South African legal system

South African case law on Ubuntu provides a practical context within which we can consider the application of the philosophy of Ubuntu. Ubuntu first finds mention in the new constitutional dispensation in the post-amble to the Interim Constitution of the Republic of South Africa (Interim Constitution).[129] Under the heading 'National Unity and Reconciliation', it states:

> 'These can now be addressed on the basis that there is a need for understanding but not for vengeance, a need for reparation but not for retaliation, a need for ubuntu but not for victimisation.'[130]

No definition of the concept is proffered in the Interim Constitution itself, nor is there any authoritative source on what the drafters had in mind. One can only infer from its use that they perceived Ubuntu as integral to national unity and reconciliation, because it is opposed to victimisation. The communitarian focus of the Ubuntu ethic arguably makes it well suited to promoting unity, and it would be prima facie contrary to the respect for persons, which Ubuntu demands, to victimise them. This reference has been described as the genesis of the Africanisation of our legal system.[131] What is meant by Africanisation, is the ongoing process of transformation in our legal system aimed at integrating principles and ideologies that are of

[127] Munyuka & Mothlabi op cit note 60 at 66.
[128] See: S Biko *I Write What I Like: Selected Writings* (2002).
[129] Constitution of the Republic of South Act 200 of 1993.
[130] Ibid.
[131] Bennett et al op cit note 70 at 2.

African origin. It is a departure from our laws' reliance on Western legal canons, looking instead to African sources for guidance on legal issues. This process imbues our law with a 'long overdue sense of cultural legitimacy'.[132]

Since the Interim Constitution, at least 40 cases have come before the SA courts where Ubuntu was referred to in the judgments.[133] Analysing each of these references, Bennett observes that Ubuntu is rarely applied as a legal principle. Instead, it is more commonly mentioned obiter dicta as a rationale for a judgment, with varying degrees of weight.[134] In these cases, Ubuntu functions as a value that guides the application and interpretation of human rights. Through these cases, we may observe the role that Ubuntu can play.

The Constitutional Court's judgment in *S v Makwanyane*[135] marked the first judicial application of Ubuntu. This judgment related to the constitutionality of capital punishment, and so provided a useful example of how Ubuntu may be applied to legal issues that turn on moral questions. The question in this case was whether in a constitutional democracy, like SA, which protects human rights (including the right to life), capital punishment is permissible. The Court ruled that capital punishment was unconstitutional, and throughout the numerous judgments penned by the Constitutional Court's bench in this case, one observes how judicial perspectives on Ubuntu played a role.

Ubuntu, as per the Interim Constitution, was described as embodying the aspirations of the new post-apartheid society. An important dimension of this new society was showing respect for human life in a way that was not observed in the old society from which SA was emerging.[136] As Langa J observes:

> 'It was against a background of the loss of respect for human life and the inherent dignity which attaches to every person that a spontaneous call has arisen among sections of the community for a return to ubuntu. A number of references to ubuntu have already been made in various texts but largely without explanation of the concept. It has however always been mentioned in the context of it being something to be desired, a commendable attribute which the nation should strive for.'[137]

---

[132] Ibid at 1.
[133] Ibid at 60 reports that as of 2018, the cases number 39. I am aware of at least one case since then: *Golden Fried Chicken (Pty) Ltd v Oh My Soul (Pty) Ltd t/a Oh My Soul Café* (D1739/2019) [2019] ZAKZDHC 30 (25 March 2019).
[134] Bennett et al op cit note 70 at 37.
[135] [1995] ZACC 3, 1995 (3) SA 391.
[136] Ibid para 131.
[137] Ibid para 227.

As the Court saw it, Ubuntu, expresses, 'the ethos of the new culture', inspired by the old.[138] Despite the central role Ubuntu plays in this and subsequent judgments, nothing approaching a clear definition of Ubuntu emerged from early judgments which invoke Ubuntu.[139] The best attempt made at outlining what Ubuntu means was made by Mokgoro J:

> 'Generally, ubuntu translates as humaneness. In its most fundamental sense, it translates as personhood and morality. Metaphorically, it expresses itself in umuntu ngumuntu ngabantu, describing the significance of group solidarity on survival issues so central to the survival of communities. While it envelops the key values of group solidarity, compassion, respect, human dignity, conformity to basic norms and collective unity, in its fundamental sense it denotes humanity and morality. Its spirit emphasises respect for human dignity, marking a shift from confrontation to conciliation. In South Africa ubuntu has become a notion with particular resonance in the building of a democracy.'[140]

Here Mokgoro J outlines certain 'key values' that are distinctive of Ubuntu, which are repeated throughout the judgment. However, other features of Ubuntu may be observed elsewhere in the judgment. One such feature that is recognised repeatedly in the judgment is the reciprocal nature of human relations in the society defined by Ubuntu.[141] Subsequent to *Makwanyane*, reference to Ubuntu became more infrequent, and even where it was referenced the court has rarely engaged with the nature of the concept in any significant depth.[142] To illustrate this, in the *Makwanyane* judgment itself, only Mokgoro J substantiates her arguments by citing scholarship on Ubuntu, referencing (arguably outdated) anthropology texts on the law of indigenous African persons.[143]

Despite the vagueness of the concept in legal terms, the sentiment of the aspiration towards the society defined by Ubuntu in our legal system has been carried through to subsequent judgments that have invoked Ubuntu. The influence of Ubuntu as a value on constitutional adjudication was concisely stated in *Port Elizabeth Municipality v Various Occupiers*,[144] where the Court stated:

---

[138] Ibid para 223.
[139] F Mnyongani 'De-linking ubuntu: Towards a unique South African jurisprudence' (2010) 31 *Obiter* 136.
[140] *Makwanyane* supra note 135 para 308.
[141] Ibid paras 224, 226, and 263.
[142] Mnyongani op cit note 139 at 136.
[143] *Makwanyane* supra note 135 para 376.
[144] [2004] ZACC 7, 2005 (1) SA 217 (CC).

> 'The spirit of ubuntu, part of the deep cultural heritage of the majority of the population, suffuses the whole constitutional order. It combines individual rights with a communitarian philosophy.'[145]

Further developing on the communitarian nature of Ubuntu, the Court in *Dikoko v Mokhatla*[146] notes:

> 'Ubuntu-botho is more than a phrase to be invoked from time to time to add a gracious and affirmative gloss to a legal finding already arrived at. It is intrinsic to and constitutive of our constitutional culture. Historically it was foundational to the spirit of reconciliation and bridge-building that enabled our deeply traumatised society to overcome and transcend the divisions of the past. In present-day terms it has an enduring and creative character, representing the element of human solidarity that binds together liberty and equality to create an affirmative and mutually supportive triad of central constitutional values. It feeds pervasively into and enriches the fundamental rights enshrined in the Constitution.'[147]

The effect of the integration of communitarianism as a feature of the Ubuntu ideology has been to alter our laws' perspective on issues of morality and public policy under the new dispensation. Public policy is now 'informed by the concept of ubuntu', which in *Barkhuizen v Napier*[148] guided the Court's determinations that a time limit that does not afford a person an adequate opportunity to seek judicial redress was unconstitutional.[149] It is worth noting in cases such as these that it is not the case that Ubuntu will, when applied, reach a conclusion which is different from the conclusion that might have been reached applying Western values. What the project of decolonising the law through applying African philosophical concepts such as Ubuntu entails, is not uprooting the tenets of the law and transforming it into something different per se. Rather it is critically re-evaluating the moral underpinnings of the law and questioning the extent to which they fit the vision of a society aspiring towards living by Ubuntu. Indeed, that Ubuntu may call for the same action as other moral theories is something which our courts have made clear in their comparisons of Ubuntu to other moral principles.[150]

The impetus for this critical re-evaluation was alluded to in *McBride*.[151] In this case, the Court noted that our unique moral conceptions are embodied in the value of Ubuntu, and on

[145] Ibid para 37.
[146] [2006] ZACC 10, 2006 (6) SA 235 (CC).
[147] Ibid para 113.
[148] [2007] ZACC 5, 2007 (5) SA 323 (CC).
[149] Ibid para 51.
[150] *Makwanyane* supra note 135 para 308.
[151] *McBride* supra note 115.

this basis Mogoeng J warned that we should be wary of seeking to apply legal concepts that emanate from other legal systems that may not share our moral convictions.[152] The extent of the re-evaluation occasioned by the new ethos of our legal system has had its effects felt not only in how we view foreign law but also how we interpret certain areas of our own law, including the common law[153] and the law of contract.[154]

In conclusion, the application of Ubuntu by our courts shows its power of Africanising our legal system. However, I suggest that our courts' approach to doing this thus far leaves something to be desired. This is because of the extent to which these analyses have been superficial in their discussion of Ubuntu. Scholars note that the application of Ubuntu by our courts is marked by a distinct lack of engagement with the literature on this concept. [155] There is a richness and complexity to African philosophical concepts that merits thorough exploration. As Africans seeking to emerge from the legacy of colonisation and apartheid, we arguably have a duty to pursue the development of modes of thinking which are rooted in our own history and can add value. That the Constitutional Court took some early positive steps in this direction is commendable, but the Court's treatment of African philosophical concepts at a simplistic level in *Makwanyane* and subsequent judgments has not benefitted jurisprudence on Ubuntu. The absence of critical engagement with scholarship on African philosophy may have hampered the development of a clear and coherent concept of Ubuntu from existing in our law, more than any other factor. I agree with Freddy Mnyongani, where he remarks that:

> 'It is [my] view that any attempt that wants to understand ubuntu but does not take African philosophy into account will certainly not succeed. Equally important is the fact that any attempt to want to understand African traditional thought must not do so by comparing it with Western thought but must understand it for what it is.'[156]

Nevertheless, through judgments on Ubuntu we can observe the endeavour by our courts to infuse our legal system with the values that embody the aspirations of the Ubuntu ethic. In the next section I consider the implications of this on human rights.

---

[152] Ibid para 243.
[153] *JT v Road Accident Fund* 2015 (1) SA 609 (GJ) para 29–31.
[154] *Everfresh Market Virginia (Pty) Ltd v Shoprite Checkers (Pty) Ltd* [2011] ZACC 30, 2012 (1) SA 256 (CC) paras 23 & 71.
[155] Himonga et al op cit note 89 at 378.
[156] Mnyongani op cit note 139 at 142.

(ii) Ubuntu and human rights

Arguments that Ubuntu, being a *communitarian* moral theory, is in conflict with the Bill of Rights and its protection of *individual* liberties abound in the literature on Ubuntu.[157] Former Justice of the Constitutional Court Yvonne Mokgoro encapsulates this concern where she writes:

> 'Many a time when crime and criminal activity are rife, sceptics would lament the absence of ubuntu in society and attribute this absence to what they view as the permissiveness which is said to have been brought about by the Constitution with its entrenched Bill of Rights.'[158]

However, as she observes, claims of a disjunction between human rights as they exist in the Constitution of the Republic of South Africa, 1996 (the Constitution)[159] and Ubuntu are a product of a misrepresentation of rights as being exclusively a feature of individualism and a manifestation of the atomistic view of the human person in Western philosophy.[160] Contrary to these claims, Ubuntu is often invoked by our courts to endorse the protection of the rights in our Bill of Rights. This is evidenced in the words of Sachs J in *Port Elizabeth Municipality v Various Occupiers*[161] that Ubuntu 'combines individual rights with a communitarian philosophy'.[162] This statement is a reference to the fact that the effect of the application of Ubuntu has not been to depart from human rights — but rather to depart from a Eurocentric view of them.

This may be observed in how our courts have conceptualised the content of certain rights in the SA context. In *Hoffmann v South African Airways*,[163] the Court considered the right not to be discriminated against through the lens of Ubuntu in reaching its conclusion that the dismissal of an individual, because of their HIV status, was a contravention of his right to equality.[164] The reasoning of the Court was that the right to equality protected individuals belonging to vulnerable groups from being discriminated against, because such treatment would be contrary to treating them with Ubuntu.

---

[157] See AO Oyowe 'Strange bedfellows: Rethinking ubuntu and human rights in South Africa' (2013) 13(1) *Afr Hum Rights Law J* 1.
[158] Mokgoro op cit note 93 at 1.
[159] Act 108 of 1996.
[160] Mokgoro op cit note 93 at 4.
[161] [2004] ZACC 7, 2005 (1) SA 217 (CC).
[162] *Port Elizabeth Municipality* supra note 144 para 37.
[163] [2000] ZACC 17, 2000 (1) SA 1 (CC).
[164] Ibid para 38.

A trend that has emerged from the interpretation of rights through the lens of Ubuntu is an acknowledgement of the need for individual autonomy to not be framed in an atomistic and overtly individualistic way. This was expressed by the Court in *South African Police Service v Solidarity obo Barnard* as follows:

> 'An atomistic approach to individuals, self-worth and identity is not appropriate. This Court has recognised that we are not islands unto ourselves. The individual, as the bearer of the right to dignity, should not be understood as an isolated and unencumbered being. Dignity contains individualistic as well as collective impulses. Its collectivist attributes, including that we are "social beings whose humanity is expressed through...relationships with others" find resonance in the South African idea of Ubuntu…'[165]

Here, the Court speaks of the right to human dignity in a way that departs from the traditional Kantian deontological formulation of dignity as the moral worth of individuals as a result of their capacity for reason. Instead, the Court alludes to the emphasis Ubuntu places on communal relations, which are the grounding of human personality and dignity. Furthermore, the Court makes clear that while Ubuntu may be viewed as having collectivist leanings, the version of this does not preclude the existence and protection of individual human rights. This moderate formulation of communitarianism under Ubuntu has been endorsed by the Constitutional Court since *Makwanyane*,[166] in recognition of the extent to which Ubuntu demands exhibiting concern and respect for others.[167]

In cases dealing with conflict between the interests of individuals and communities, what Ubuntu calls for is not a dominance by community or individual, but a recognition of their interrelated relationship,[168] which, as Langa J puts it, 'calls for a balancing of the interest of society against those of the individual, for the maintenance of law and order, but not for dehumanising and degrading the individual'.[169] As such, implications that Ubuntu is opposed to the recognition of individual rights as expressed in judgments such as the recent *Golden Fried Chicken v Oh My Soul*[170] should not be interpreted in this way, but rather as stating that

[165] [2014] ZACC 23, 2014 (6) SA 123 (CC) para 174.
[166] *Makwanyane* supra note 135 para 224. For further references to cases that illustrate Ubuntu and its respect for persons, see Himonga et al op cit note 89 at 412.
[167] *Makwanyane* supra note 135 para 225, 241, 308. See, also, *Hoffman* supra note 163 footnote 31.
[168] Makwanyane supra note 135 para 263; *Port Elizabeth Municipality* supra note 144 para 37.
[169] *Makwanyane* supra note 135 para 250.
[170] *Golden Fried Chicken* supra note 133.

Ubuntu provides a justification for reasonable and justifiable limitations of rights in accordance with the Constitution.[171]

From these judgments we can observe how human rights, understood through the lens of Ubuntu, emanate from the invocation that we ought to treat others with respect, because such respect is foundational to harmonious human relations. This is a departure from prominent human rights theories such as the interest theory of rights[172] or the aforementioned Kantian deontology, insofar as the *grounding* of human rights — but not their existence or significance. The argument that communitarianism is opposed to human rights is prefaced on the assumption that communitarianism is opposed to acknowledging individuals and their moral worth.[173] As illustrated above, this is not necessarily the case. Indeed, the protection of human rights fits in the Ubuntu worldview because of its recognition of the nature of reciprocal obligations in relationships between individuals, and between individuals and the community. Munyaka and Mothlabi posit that one's expectation that the community will honour its duty to exhibit Ubuntu towards one may loosely be termed human rights in that they are 'rights for which one qualifies merely and precisely because one is a human person'.[174]

(e) Conclusion

In the preceding discussion I broadly outlined the main issues in African philosophy and showed how Ubuntu, as an ethical theory, fits within the broader discourse on African ethics. I have argued for Ubuntu conceived as a virtue ethic, which aspires to achieve harmonious relations between community members, of which the core value is moderate communitarianism which places the individual at the centre. I have discussed judicial interpretations and applications of Ubuntu, primarily in the Constitutional Court, to show how the aspirational elements of the Ubuntu qua legal value coincides with the Ubuntu virtue ethic for which I argue, and how the balancing of individual interests against communal goals in interpreting

[171] Ibid para 13. The Court seems to imply that there should be a recognition of intellectual property rights that relate to concepts that convey 'Africanness': 'And if, indeed, the applicant's "SOUL" brand has the remarkable capacity to communicate to its consumers "African cool, a pride in an Afrocentric heritage typified by success against adversity, a rising above racial prejudice and stereotypes where "blackness" is not a shortcoming but a positive advantage" then in the spirit of ubuntu, which is the South African conception of humanity and Africanism, the applicant should, in the national interest, encourage rather than restrain the use of "SOUL" to mend our social fractures and fissures. 'Success against adversity' also means allowing small businesses to survive onslaughts by large, economically powerful corporates like the applicant.'

[172] The interest theory of rights, as initiated by Bentham and propounded Raz, reasons that a legal right comes into existence where an individual holds a sufficiently strong or important interest that it is justifiable that the said interest imposes a duty on another person. See M Holmgren 'Raz on rights' (1985) 94(376) *Mind* 591.

[173] See Oyowe op cit note 157.

[174] Munyuka & Mothlabi op cit note 60 at 82.

human rights coincides with moderate communitarianism. As such, Ubuntu as a virtue ethic guided by moderate communitarianism not only provides a plausible basis for giving life to the African worldview in ethics but can also provide guidance in the context of legal regulation, which is in line with the Constitution and the Bill of Rights. With all this in mind, I now consider how the Ubuntu ethic may be applied in the context of regulating novel biotechnological innovations which raise equally novel bioethical issues.

III PART 2: AFRICAN PHILOSOPHY APPLIED TO BIOETHICS

Developing on the preceding discussion, in this Part 1 outline, in broad terms, an approach to policy decision-making on complex bioethical issues based on African philosophy. The past decade has seen a steady and encouraging growth in the literature on African philosophy relating to bioethics, which has primarily focused on healthcare ethics.[175] Much less attention has been paid to the potential relevance of African philosophical thought in more controversial subjects in global bioethics — most prominently in the area of artificial reproduction (also referred to as assisted human reproduction). This is a gap in the literature which Godfrey Tangwa first sought to address in his paper 'Bioethics: African Perspective',[176] which was followed by two decades of relative silence that has only recently been broken.[177] Ademola Fayemi provides a probing critique of Tangwa's ideas and, in so doing, questions the very legitimacy of the project of 'African bioethics'.[178] Angier, on the other hand, recently sought to revive and advance Tangwa's outlook on African bioethics.[179] In so doing, however, Angier does not respond to Fayemi's challenge of whether seeking to integrate African philosophical thought on ethics to bioethical problems that arise in the context of artificial reproduction is a worthwhile endeavour — and seemingly proceeds on the assumption that this is self-evident.

While I do not agree with Tangwa's (and, by extension, Angier's) approach to African bioethics in relation to artificial reproduction, I believe that African bioethics has a role to play

[175] See KG Behrens 'Towards an indigenous African bioethics' (2013) 6(1) *SAJBL* 32; KG Behrens 'A critique of the principle of "respect for autonomy", grounded in African thought' (2017) 17(2) *Dev World Bioeth* 126; FCL Rakotsoane & AA van Niekerk 'Human life invaluableness: An emerging African bioethical principle' (2017) 36(2) *S Afr J Philos* 252; T Metz 'African and Western moral theories in a bioethical context' (2010) 10(1) *Dev World Bioeth* 49.

[176] G Tangwa 'Some reflections on biomedical and environmental ethics' in K Wiredu (ed) *A Companion to African Philosophy* (2004) 387.

[177] AK Fayemi 'African bioethics vs. healthcare ethics in Africa: A critique of Godfrey Tangwa' (2016) 16(2) *Dev World Bioeth* 98.

[178] Ibid. See, also, AK Fayemi & OC Macaulay-Adeyelure 'Decolonizing bioethics in Africa' (2016) 3(4) *BEOnline* 68.

[179] Angier op cit note 8 at 195.

in policy decision-making in this area and, as such, seek to defend the project of African bioethics and the urgency of this enquiry in SA. In this Part, I critically analyse the approaches to African bioethics in relation to artificial reproduction advanced by Angier and Tangwa and argue that they are deficient in several respects — most notably in their framing of African bioethics as ethnophilosophy. In the course of this critical analysis, I outline an Afrocentric approach that seeks to decolonise the way we think about global bioethical issues and promote the application of African values in responding to bioethical questions. I illustrate the application of this approach with reference to the question described at the outset of this Chapter: *What role should public opinion play in the regulation of GGE?*

It is important to note that the discussion in this Part is intended to be a general discussion on streams of thought relating to African approaches to bioethics, accompanied by a preliminary exploration of the application of African thought to the specific question of how to regulate GGE. This initial exploration will be further developed throughout this thesis.

(a) African bioethics: Why does it matter?

The urgency of serious consideration of African bioethics emanates from the understanding that inherited systems of Western healthcare systems fail to provide an adequate understanding of healthcare issues in the African context.[180] What this means is that bioethics and, by extension, bio-law, is rooted in the Western experience of the world; an experience that does not always square with the lived realities of Africans. Fayemi and Mcaulay-Adeylure provide a practical illustration of this:

> 'In bio-law regulations in many African states, it could be argued that there is the dominance of "Western philosophical framework developed within institutional contexts of the West especially in relation to European and North American legal and policy frameworks". For instance, the Kenyan biosafety law, which is an offshoot of the provisions of the Cartagena Protocol on biosafety, has some regulatory components that are premised on and indebted to principilism. The Kenyan Biosafety (Labeling) regulations seek to ensure that "information regarding genetically modified food, feed, or any other product is disseminated to the public so that consumers are able to make informed decisions". In framing regulations as such, it is questionable if the West should be accountable for a rarely censored policy framework on bio-regulations in many African states. The logic of "bate-passing" of research ethics regulations in

[180] MF Murove 'African bioethics: An exploratory discourse' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (2009) 158.

> the West, especially as premised on principilism, with little or no modification in many regulations in African states may defy rational cogency.'[181]

Hence the need for African bioethics in the regulation of biotechnology on the continent is as a means of responding to the historical dominance of Western philosophy.

There are, however, some stumbling blocks that need to be overcome before one can meaningfully apply African bioethics. In many ways, the core obstacles of African bioethics illustrate how the discipline is a microcosm of African philosophy as a whole — especially in regard to how its development has been shaped by the search for a 'unique' self-identity. Commenting on the propensity of sub-Saharan authors to speak of an 'African Bioethics' entirely removed and distinct from Western bioethics, which is defined by James Childress and Thomas Beauchamp's Principilism, Albert Coleman asks a pertinent question at the centre of the discourse on bioethics in Africa:

> 'Considering though the notion of African bioethics is supposedly drawn from African tradition and culture, and African tradition and culture is diverse and heterogeneous; one is then tempted to ask what actually is African bioethics.'[182]

Coleman conducts a probing analysis on the subject. Investigating literature on African bioethics, he identifies four consistent themes in this area:

1) Scholars recognise that global bioethics is dominated by Western perspectives and rooted in the Western experience.

2) Scholars lament the side-tracking of African values and ideas in bioethics in sub-Saharan Africa.

3) Arguments are focused on a rebuttal of principilism, based on its incongruence with these African values and ideas.

4) A call for a reconceptualising bioethics based on African concepts, primarily the communal and relational nature of morality in African cultures.[183] Several authors assert that in the African cultural tradition 'communalism trumps the individual'.[184]

While some of these claims will be repeated here, I do not try to define African bioethics through a comparison with Western bioethics, nor do I defend an account of African bioethics

[181] Fayemi & Macaulay-Adeyelure op cit note 178 at 73.
[182] AME Coleman 'What is "African bioethics" as used by Sub-Saharan African authors: An argumentative literature review of articles on African bioethics' (2017) 7(1) *Open Journal of Philosophy* 31.
[183] Ibid at 33.
[184] Ibid at 44.

that endorses radical communitarianism for reasons already discussed in Part 1.[185] Instead, I suggest that African bioethics (as with African ethics generally)[186] consists of viewing bioethical questions through a lens that is shaped by the values that emerge from African philosophical thought rooted in tradition and entails critically considering bioethical questions in a way that is sensitive to the lived reality of Africans today. This, I suggest, provides the means for taking *an Afrocentric approach to the regulation of biotechnology*. This entails responding to the complex bioethical questions such technologies raise — which ultimately turn on value judgements[187] — with answers that are based on African values rather than allowing the health policy in Africa to continue to be defined by the values of the West.[188] The purpose of engaging in the process of viewing bioethical questions through the lens of African philosophy, is to achieve what Wiredu terms a 'conceptual decolonization':

> 'It consists in an African's divesting of his thought of all modes of conceptualization emanating from the colonial past that cannot stand the test of due reflection. This divesture does not mean automatically repudiating every mode of thought having a colonial providence. That would be absurd beyond description.'[189]

The decolonisation of moral philosophy is a mission that is of paramount importance in modern debates due to the prevalence of moral neo-colonialism. Unlike the unabashed superiority complex of Western morality under colonialism, moral neo-colonialism is defined by the persistent presentation of a Western value system not, 'as superior, but as universal, requiring not conversion to an alternative (presumably better) value system, but a recognition of a universal value system'.[190]

It is important to note that it is not the proposal that morality may contain elements that are universal that is problematic, but rather that Western perspectives on morality are routinely put forward as embodying these universal elements, without the necessary extrication from these concepts of those assumptions about the world which are relative to the Western experience. As such, taking an Afrocentric approach entails taking a critical eye to the values underlying extant or proposed regulation of technologies which raise complex bioethical

[185] See Chapter 2 supra at 35.
[186] See Chapter 2 supra at 28.
[187] For example, see the discussion on the meaning of human dignity in Chapter 3 infra at 88.
[188] For a discussion on the need for the Africanisation of the legal system, see Chapter 2 supra at 52.
[189] Wiredu op cit note 13 at 15.
[190] H Widdows 'Is global ethics moral neo-colonialism? An investigation of the issue in the context of bioethics' (2007) 21(6) *Bioethics* 305.

questions. It also entails considering the extent to which such regulations are shaped by Western values, as well as investigating whether such values fit in the African context.

An essential aspect of this Afrocentric approach is meaningful engagement with African bioethics, because thought in this area may help identify how African perspectives on questions of morality may necessitate departures from established positions in global bioethics. As Fayemi and Macaulay-Adeyelure observe, the decolonisation of bioethics in Africa 'involves continuous vigilance, conceptual self-awareness, critical self-questioning of goals, scope and strategies, in the African context, [and] attention needs to be paid to the construction of bioethics that is contextually relevant and abreast of the processes of globalization'.[191]

Heather Widdows suggests that the outcomes of moral neo-colonialism in global bioethics may be recognised in two ways:[192]

1) Directly — where those who fail to accept the dominant values as universal or challenge their universality, run a risk of censure by the international global ethics community.
2) Indirectly — through implementing ad hoc solutions to practical issues in global ethics without engagement from non-Western perspectives.

These consequences may result in undesirable outcomes for those affected by the imposition of these purportedly universal norms — most notably the inadvertent conversion of people's values to those of a dominant ethical system and the concomitant erosion of culturally specific viewpoints of morality. The harm here, as Rebecca Bamford puts it, 'lies in part in the loss of insight that could develop and refine existing problem-solving resources'.[193] These consequences may be observed in the context of the debate on GGE. The direct consequences of moral neo-colonialism are evident in what is often claimed as the 'global consensus' that genome editing for non-therapeutic purposes is morally reprehensible because it constitutes 'genetic enhancement'.[194] One need not probe very deep into these arguments to see that such attitudes are driven by the narrative of eugenics.[195] Critical engagement with the idea of genetic enhancement has, however, illustrated that there is great difficulty in substantiating claims that non-therapeutic GGE is necessarily unethical.[196] And yet, if anyone ventures in the direction

[191] Fayemi & Macaulay-Adeyelure op cit note 178 at 2.
[192] Widdows op cit note 190 at 307.
[193] R Bamford 'Decolonizing bioethics via African philosophy: Moral necolonialism as a bioethical problem' in G Hill (ed) *Debating African Philosophy: Perspectives on Identity, Decolonial Ethics and Comparative Philosophy* (2018) 48.
[194] See the discussion on genetic enhancement in Chapter 1 supra at 9.
[195] Ibid.
[196] See Chapter 6 infra at 184.

of permitting research on, or clinical application of, what some regard as genetic enhancement, they face censure by the global community, which regards such applications unnecessary and unethical[197] — notwithstanding that there are, arguably, defensible reasons for non-therapeutic applications of GGE.[198]

More generally, the indirect consequence of moral neo-colonialism in the global debate on GGE is evidenced by the distinct absence of discussion of African thought on questions of morality that emerge from the use of CRISPR-Cas9. Clearly, then, it is incumbent on African states contemplating regulation in this area to consider the extent to which African bioethical perspectives diverge from Western ones, and how this may influence policy decision-making in this area.

However, is this a worthwhile endeavour at present? Some African scholars have argued that it is not. Fayemi and Macaulay-Adeyelure have serious misgivings about the project of African bioethics, primarily for two reasons: (1) the propensity of culturally specific explorations of philosophy to devolve into moral relativism;[199] and (2) that prominent issues in global bioethics (such as those surrounding genetic technologies) are not relevant to the African context. Therefore priority should be given to healthcare ethics which is a more immediate problem given socio-economic factors that have an adverse impact on healthcare in Africa.[200]

The concerns raised by these authors are well founded given the aforementioned tendency of scholars in African philosophical thought to make claims such as that in African bioethics 'communalism trumps the individual'.[201] With that said, while Fayemi and Macaulay-Adeyelure view this as a reason for dismissing the idea of decolonising bioethics through African bioethics, in my view this instead reminds us why engagement with African philosophical concepts needs to be more than a superficial endorsement of all things depicted as 'African'. Thorough engagement with the question of cultural relativism in African philosophy has shown that such accounts cannot be substantiated.[202]

---

[197] Association for Responsible Research and Ethics in Genome Editing 'Statement from ARRIGE Steering Committee on the possible first gene-edited babies' (2019) available at *http://arrige.org/ARRIGE_statement_geneeditedbabies.pdf*, accessed on 17 September 2019.
[198] See D Thaldar, M Botes & B Shozi et al 'Human germline editing: Legal-ethical guidelines for South Africa' (2020) 116(9/10) *S Afr J Sci* 1.
[199] Fayemi & Macaulay-Adeyelure op cit note 178 at 8.
[200] Ibid at 11.
[201] Coleman op cit note 182 at 44.
[202] See Chapter 2 supra at 31.

In regard to the claim that issues such as artificial reproduction are not priority issues in sub-Saharan Africa, we should instead focus on healthcare ethics given the socio-economic challenges faced in this area. Fayemi substantiates this viewpoint elsewhere as follows:

> 'Though many of today's biomedical ethical concerns such as genomics and third generation sequencing, transhumanism and human enhancement, cloning and new reproductive technologies, obesity, among others are global in nature, there [sic] impacts and dominance in sub-Saharan African societies are marginally low compared to healthcare ethics concerns such as medical paternalism, pandemics, organ trade, participants' exploitation in multicenter-clinical trials, injustice in access to healthcare, poor resource allocation to health sector made worsen with its mismanagement, palliative care and end-of-life issues, to name [a] few.'[203]

Again, important points are made here. However, I and other commentators would beg to differ with Fayemi's conclusions regarding the relevance of these issues to African societies.[204] These are not abstract issues or hypothetical futures — the technologies which occasion discussion on these issues in global bioethics are either already a matter of the present or foreseeable future in SA and Africa as a whole. Thus, neglecting them would only further the likelihood that regulation in these areas will fail to attend to important considerations that are relevant in the African context.

(b) In the age of artificial reproduction, what does African bioethics really mean? A critique of Tangwa and Angier

If we accept that one may validly speak of African bioethics, and that speaking of it is a matter of the present because of the role that it can play in the Afrocentric approach to regulating GGE, the question then arises of what African bioethics requires of us. While it is simple to speak of African philosophical concepts at an abstract, theoretical level, if African bioethics is to be useful in the legal context, it must exhibit an ability to respond to present issues faced, such as the ethical questions raised by NRTs and their use in artificial reproduction.

Angier recently addressed the scarcely explored domain of African bioethics in relation to artificial reproduction. In so doing, Angier gives voice to an important line of enquiry, and he is to be commended for bringing to life several important issues relating to the concept of Ubuntu and its relevance to contemporary bioethical issues. He outlines an African bioethical approach to modern technological advancements, including NRTs, which builds on the work

[203] Fayemi op cit note 177 at 102.
[204] For a detailed account of the flaws in this argument, see Coleman op cit note 182 at 43.

of Tangwa. As such, it is instructive to first engage with Tangwa's thoughts in this area before critically engaging with Angier's African bioethical approach.

(i) Applying African philosophical thought to bioethics

Tangwa tries to outline what he views as the African outlook on bioethics, which he does primarily by describing how it differs from the Western outlook — both in general and in relation to specific topics like human reproduction.[205] In his view, the chief distinction lies in the holistic view of the natural world, which is not anthropocentric like its Western counterpart. Like most modern African philosophers, Tangwa seeks to provide an ethnically specific account for morality with reference to his own ethno-linguistic group, as he is a member of the Nso' people of Cameroon. He describes the 'African outlook' on bioethics as exhibited by the Nso' people as follows:

> 'Because the Nso' attitude toward nature and the rest of creation is that of respectful coexistence, conciliation and containment, there are frequent offerings to God, to the divine spirits, both benevolent and malevolent, to the departed and to the sundry invisible and visible forces of nature.'[206]

Tangwa's arguments, in defining the African outlook, primarily in opposition to the Western outlook, display a disconcerting resemblance to ethnophilosophy in at least two respects. Firstly, as Fayemi illustrates, in its uncritical adoption of an African outlook as African bioethics:

> 'Tangwa's understanding of African bioethics is fraught with many conceptual problems. To start with, Tangwa does not indicate a clear awareness of the distinction between the sources of African bioethics and the elements of African bioethics; nor is he explicit about how they relate to each other, if any. Given the indisputable fact that bioethics is a contemporary creation, even in the North-American birth of its origin, how can the sources as well as the elements of African bioethics predate the contemporaneous factors that led to its emergence? *In his definition of African bioethics, Tangwa appeared to have prioritized the beliefs, attitudes, dispositions, etc. of peoples and cultures of Africa as the constituents of African bioethics rather than as the raw material for bioethical reflections* (emphasis added).'[207]

Secondly, Tangwa's arguments typify the tendency of traditionalist arguments to lean into the Eurocentric paradigm of 'othering' African thought, and in so doing over-emphasise

[205] Tangwa op cit note 176 at 388–9.
[206] Ibid at 389–90.
[207] Fayemi op cit note 177 at 100.

differences for the sake of justifying a distinction. Because of this tendency, arguments which seek to define African thought tend to display a methodological and conceptual weakness in seeking to support said over-inflated points of distinction. One may observe deficiencies of this nature in Tangwa's claims regarding the relationship between humans and non-human animals in the African outlook. Given that the sacrifices to God and the divine spirits to which he refers often entail the killing of animals, it is difficult to reconcile how these display an African outlook which, unlike the Western outlook, 'does not suppose that human beings have any mandate or privilege…to subdue, dominate and exploit the rest of creation'.[208] One might then wonder on what grounds do those who make these sacrifices have the authority to bring about death in order to pursue their own ends — such as appeasing malevolent spirits or the subduing of nature for the purpose of agriculture, which was a common aspect of life in pre-colonial Africa.

The further claim is made that the Nso' attitude of appeasement and containment towards nature is reflected in the treatment of illness:

> 'The aim is never to eradicate, eliminate or exterminate illness, but rather to coax and plead with it to leave its innocent victim alone. Otherwise there is no insistence that illness, in itself, should not exist.'[209]

This claim presents a conundrum. Is it not the case that traditional African healers — who, amongst the Nso', are called 'agashiv' and embody 'the functions of medical doctor, priest, psychiatrist, counsellor and exorcist' — should help alleviate illness and suffering where this is possible? To be sure, he or she may use various methods to provide such assistance which differ from, say, a medical doctor. However, the aim of these methods is the same: To free the patient from illness by manipulating natural forces. If an agashiv used a pill to accomplish this, the outcome he or she would be aspiring to would be the same as a medical doctor. Not the 'eradication of illness' because it is inherently bad, but freeing a patient from a condition adversely affecting their health. As such, the purported difference in the African outlook on medical treatment fails to convince, insofar as it relies on the claim that the Western medical treatment is aimed at something different to the African outlook. To use terms such as 'plead' or 'coax' does not detract from the fact that an agashiv is, ultimately, aspiring to achieve

[208] Tangwa op cit note 176 at 389.
[209] Ibid at 390.

the same goal as a medical doctor. The difference lies in the methods they might use to achieve that goal.

It seems that the crux of Tangwa's discontentment with the Western outlook on bioethics is the issue of methods, as he ostensibly views modern methods of medical treatment and Western bioethics' endorsement thereof, as diametrically opposed to African bioethics. As such, when Tangwa makes his general point that the African outlook 'is only consistent with the cautious and piecemeal use of technology', not only do his premises not justify such a conclusion, his whole portrayal of the African outlook is defined by a limiting depiction of African identity as non-technical and closer to the 'natural' mode of living. Tangwa (presumably) unwittingly, perpetuates the Eurocentric characterisation of African perspectives of the world as unscientific and averse to technological progress and innovation This is because intellectual endeavours such as these are in the colonial worldview, characteristic of the Western world — and beyond the ken of the African mind.

This characterisation of the African outlook on technological advancements is problematic for several reasons, most notably that it is based on observations of pre-colonial Africans which are patently false. The first great technological innovations in human history can be found in Africa and, since then, Africa has continued to be a site of intellectual exploration and innovation — which progress was stalled only by the interjection of colonisation.[210] It seems unwise that we should resign ourselves to playing the role of strangers to technology simply because our technology fails to conform to the vision constructed by industrial Europe. In my view, African philosophy has a role to play in helping us overcome this limiting perception rooted in colonial thought,[211] by critically engaging with the underlying fallacies in the depiction of African thought one often finds in ethnophilosophy. Having established that African outlooks are not necessarily opposed to the use of novel healthcare technologies, in the following sections, I consider Angier's arguments in relation to a particular application of such technologies: Artificial reproduction.

(ii) African bioethics and artificial reproduction

Tangwa's portrayal of African bioethics as being defined by anti-technological sentiments is driven by his misgivings about the potentially deleterious outcomes of the use of modern

[210] Ibid. Consider, for instance, how technological advancements in military warfare shaped the history of the Nguni tribes during the era of Zulu expansionism.
[211] See Chapter 2 supra at 39.

medical technology that inform his views on artificial reproduction.[212] He claims that the 'mechanization of life and natural processes' threatens to 'turn human reproduction as we know it, into mere production'.[213] Building on this, Angier founds his own arguments on the claim that the general bioethical approach which pervades African thought is that 'there is a duty to care for people when they are suffering, rather than eradicate suffering at all costs, and there is a duty to safeguard life, rather than bring it into or out of being'.[214] This, according to Angier, leads to a general aversion amongst African peoples to use modern technologies, including reproductive technologies, which is in contrast to attitudes towards these technologies as evident in Western bioethics.[215]

This aversion to NRTs, which is allegedly characteristic of African bioethics, is one Angier supports, as he laments the 'commodification and commercialisation of life' through the advent of: (1) surrogate motherhood; (2) embryo and gamete banking; and (3) the harvesting and sale of organs without consent — all of which he claims abound as a consequence of Western bioethics. Angier's core assertion that there can be an African bioethical approach to such questions is, in my view, justified. African thought has something to offer in respect of providing novel ways of thinking about complex bioethical issues that are rooted in traditional African culture. However, I disagree with the notion that an African bioethical approach displays the contempt towards novel applications of medical technologies that Angier claims. To illustrate why the argument made by Angier is an inaccurate representation of African bioethics, in this section I critically discuss some of the claims he makes regarding African perspectives on artificial reproduction.

Leaving aside the litany of unsubstantiated empirical claims regarding African attitudes towards applications of modern technology made in the course of these arguments (which in themselves cast a shadow of doubt over their veracity) there are serious issues with Angier's arguments at a conceptual level that need to be addressed — that speak to Angier's perception of what African bioethics is. The third of his charges — the objection to the sale of harvested organs without consent — is beyond the scope of the present discussion. However, it is worth questioning why Angier claims that this is something 'we see' in Western bioethics, when

[212] Tangwa op cit note 176 at 391.
[213] Ibid.
[214] Angier op cit note 8 at 205.
[215] Ibid at 206.

mainstream Western bioethics largely frowns upon organ trade, primarily because of arguments about the commodification of human life.[216]

In relation to Angier's first charge — against surrogate motherhood — it is also unclear how this indicates the trend of human commercialisation that Angier observes in Western bioethics. Like organ trade, commercial surrogacy is widely prohibited,[217] with payment generally being allowed only for the expenses associated with carrying the child in many countries, including SA.[218] Interestingly, the idea of compensation associated with the costs of carrying and rearing a child who is later raised by others, is not a foreign concept to African culture. This is evidenced by South African jurisprudence on customary law adoptions. For example, when a women marries into the husband's household, the husband's household can pay the women's household livestock in order to 'adopt' a child the women had with another man.[219] The underlying rationale here is that the wife's former household is compensated for their expenses incurred in rearing the child who will then become the child of another household.

In relation to the second charge — against the banking of gametes and embryos — one is again wanting for clarity on why this practice is deemed by Angier to be a commodification of human life. This is especially because banking need not be for the purpose of donation to others, as one can bank gametes and embryos for one's own use. Are we to understand that in doing so — for instance where a woman banks her eggs when she is young for use later in her life —is out of step with the African bioethical approach? That this could be the case is questionable given the significance associated with kinship relations in sub-Saharan African traditional cultures. For example, the inability to have children has been shown to have a distinctly harsh impact on African women, who may even be ridiculed because of their infertility.[220] That gamete and embryo banking may be welcomed by African people who continue to prize kinship relations and the significance of relatedness, is a point that Tangwa acknowledges. Tangwa remarks that there is potential for great interest in NRTs given the high value placed on procreation by African cultural communities — where procreation may

[216] See SWilkinson 'Commodification arguments for the legal prohibition of organ sale' (2000) 8(2) *Health Care Anal* 189.
[217] C Luckey 'Commercial surrogacy: Is regulation necessary to manage the industry?' (2011) 26 *Wis J L Gender & Soc* 225.
[218] See *Ex Parte WH* [2011] ZAGPPHC 185, 2011 (6) SA 514 (GNP).
[219] *Thibela v Minister van Wet & Orde* 1995 (3) SA 147 (T); *Hlophe v Mahlalela* 1998 (1) SA 449 (T); *Metiso v Padongelukfonds* 2001 (3) SA 1142 (T).
[220] LF Mabasa *The Psychological Impact of Infertility on African Women and their Families* (unpublished doctoral thesis, University of South Africa, 2009).

sometimes even be seen as a moral imperative.[221] As such, claims that an African bioethical approach would oppose this because of an alleged attitude of aversion to such technologies, requires stronger justification than is given by Angier.

Even where banking of gametes and embryos occurs for the purpose of donation (or even IVF-based surrogacy), it is unclear whether Angier should be understood as saying the 'wisdom' of 'respectful coexistence, conciliation and containment' means we ought to placate men and women who suffer from infertility and might benefit from NRTs with sentiments of caring rather than allow them to access reproductive healthcare. One cannot be sure, but what is certain is that such treatment of individuals would be contrary to the compassion and respect for individuals which is central to African moral theories like Ubuntu. Overall, Angier's arguments regarding the African approach to bioethics and the way in which they engage with Tangwa's description of the Nso' culture's attitudes towards modern healthcare technologies, exemplify Oruka's description of ethnophilosophy as derived not from a critical engagement with the African tradition, but an uncritical adoption of parts thereof.[222]

In conclusion, the claim that the African bioethical approach should exhibit an aversion to the commodification of the human person may be true. However, it does not follow that African bioethics is averse to artificial reproduction and the associated practices of IVF-based surrogacy and gamete and embryo banking.

(iii) Is genetic selection un-African?

To conclude his discussion on the African bioethical approach to artificial reproduction, Angier comments on what he calls the trend of 'new eugenics', in the sanctioning of the abortion of embryos with genetic disorders. He states that:

> 'In France, for instance, almost no children with Down's [syndrome] are born today, their lives being deemed simply not worth living. What a contrast to the Nso attitude to such children, which counsels care and respect.'[223]

Put differently, the claim made here is that the absence of an attitude of care and respect towards children with Down's syndrome in places such as France is the driving force of the new eugenics via selective abortion. As I alluded to in Chapter 1, a comparison to eugenics is often made in bioethical debates regarding technologies that give prospective parents the ability

[221] Tangwa op cit note 176 at 391.
[222] Oruka op cit note 20 at 121.
[223] Angier op cit note 8 at 206.

to make decisions that will determine the genetic composition of their prospective child. I refer to this as 'genetic selection'.[224] In making the argument against genetic selection against persons with autism, Angier does not reveal how, as he claims, preventing the birth of a child with a genetic disorder such as trisomy: (1) equates to deeming that their lives are not worth living; and (2) is opposed to having an attitude of care and respect towards children with genetic disorders.

In relation to the first issue, it has been stated on several occasions that avoiding the birth of a child is different from saying the child's life is not worth living. As Harris puts it:

> 'We are here being offered the famous "aborting Beethoven" fallacy. To choose not to have a child with inherited syphilis is not to decide that the world would be better off without Beethoven.'[225]

The point here is that selecting against having a child with a particular trait *is not to say that one considers life with that trait not worth living*. All it entails is recognising that there are states of being which present difficulties that one may wish to avoid knowingly and intentionally causing their child to experience. This is a widely accepted point. It has even been recognised by the Constitutional Court in response to claims similar to (1) above, that allowing a child to claim for negligent actions that cause them to be born and to live with disabilities, is not to say their lives are not worth living:

> 'Lastly, for present purposes, is the argument that recognition of the child's claim would somehow infringe upon his dignity because recognising a claim for damages would imply that life with a disability is worth less than [a] life without one. This is not necessarily the case. Allowing this claim might be conceived of as simply helping a child to cope with a condition of life she was born with and making it possible for that child to live as comfortably as possible in the circumstances.'[226]

This leads us to the second issue. This is the claim that allowing individuals to choose not to have children with genetic disorders such as trisomy 21 through the use of NRTs, suggests a lack of care and respect for people with autism. This is a serious allegation, since in a society such as our own which aspires to living with Ubuntu, it would be contrary to the Ubuntu ethic to fail to exhibit an attitude of care and respect towards people with disabilities. In relation to (2), however, as with (1), the argument fails to convince, as it is based on a logical

[224] See Chapter 1 supra at 16.
[225] J Harris *Enhancing Evolution: The Ethical Case for Making Better People* (2010) 115.
[226] *H v Fetal Assessment Centre* [2014] ZACC 34, 2015 (2) SA 193 (CC).

fallacy. One may riposte Angier's claim with the reductio ad absurdum that he believes giving a child a vaccination against flu means that one does not have an attitude of care and respect towards children with flu. As with (1), unpacking this argument requires that we acknowledge that *there are reasons for not wanting a child with autism that are entirely unrelated to one not having an attitude of care and respect towards people living with autism*. Interestingly, although Angier in arguing that avoiding having children with disabilities is unethical in terms of the African bioethical approach, relies on Tangwa's statement that in Nso' culture children with disabilities are treated as gifts from God and are also treated with great care and respect. Tangwa himself acknowledges that this general attitude towards 'handicapped' children:

> '[B]y no means implies that anybody would pray to have a handicapped child. On the contrary, the prayer is always that all children should be healthy and elegant like the palm tree and robust and strong like the ikoro. *If there were a means of selecting the child before birth, surely no one would select a handicapped one* (emphasis added).'[227]

The means of making such choices are exactly what NRTs give prospective parents, and it seems to me insufficient to reference eugenics to add credence to the claim that making such choices would be unethical. In my view, an African perspective on bioethics should not allow issues such as these, which are so ingrained in Western history and which have influenced Western attitudes, to unduly influence our own thoughts on such issues. To do so would be to stray from our commitment to the decolonisation of African thought. We should learn from these tragedies as lessons about human nature. However, in terms of engaging in a decolonised discourse on bioethical issues we should critically question whether the aversion to anything which may be labelled eugenics is because there is something inherently and fundamentally wrong with genetic selection, or whether this is something which is frowned upon because of historical reasons in the Western context. If the latter is the case (and there is evidence that it is)[228] then we do not benefit from incorporating such an aversion into the regulation of artificial reproduction. Instead we become voluntary perpetrators of moral neo-colonialism to the detriment of the African people who might benefit from access to NRTs.

In conclusion, Tangwa and Angier both make important strides in the direction of illustrating the contemporary relevance of African philosophy. However, more work needs to be done in order for bioethics, at a global level and in Africa, to benefit from African streams of thought on major bioethical issues. Given that African thought can provide novel ways of

[227] Tangwa op cit note 176 at 392.
[228] See Chapter 1 supra at 13.

looking at these issues, which are based on norms and values rooted in African traditional culture, it is important that we critically engage with African philosophical thought in this area. In the following section, I discuss an approach to achieving this based on the Ubuntu ethic, as outlined in Part 1.

(c) Adopting an Afrocentric approach to ethical questions relating to CRISPR-Cas9: A proposal for African deliberative public engagement as a tool for obtaining broad societal consensus on applications of germline genome editing

It has been claimed on several occasions that before clinical applications of GGE can proceed there needs to be 'broad societal consensus' because the public interests in technologies such as these touch on highly emotive ethical issues.[229] Formulating policy on the use of controversial biotechnologies has always been an issue highly influenced by public sentiments. However, to give effect to public views when regulating genome editing, may infringe upon the fundamental rights of researchers, patients, and prospective parents.[230] So how, then, should one integrate the voice of the community in matters where the desires of the individual may conflict with the interests of the community?

This question leads us to the vital role played by the African traditional customs of communal engagement regarding matters that effect the entire community — alternatively known as imbizo, indaba, lekgotla or other variations. Collectively, all these names refer to the same thing: The process of communal decision-making through deliberative public engagement, which is an expression of the African value of communitarianism.[231] Such processes are important to African communities because the duties on individuals are not static or non-negotiable. What is expected of the individual (and conversely, what the individual may expect from others) is continually informed through engagement with the community, and the community as a whole uses mechanisms of deliberative engagement to reach consensus on what constitutes the right action (ie acting with Ubuntu) where conflicts between persons arise. As Pieter Coetzee puts it, communal consensus is the mechanism by which convictions are reached on what kind of expectations attain the status of duties and rights.[232] The imbizo is described as 'a social institution, the gathering of a group of people to deliberate and decide

[229] See National Academies of Science Medicine and Engineering 'International summit on human genome editing' (2015) available at *https://www.nap.edu/catalog/21913/international-summit-on-human-gene-editing-a-global-discussion*, accessed on 24 August 2019.
[230] See Chapter 1 supra at 5.
[231] WHJ de Liefde *Lekgotla: The Art of Leadership Through Dialogue* (2005) 13.
[232] Coetzee op cit note 42 at 278.

issues of common concern'.[233] This meeting is called by a traditional leader, and all participants present (whose numbers may range from 10s to 100s) have an opportunity to be heard.[234] The discussions may span several days, during which time the topics of discussion are subjected to critical scrutiny.[235]

This approach to public engagement allows for decisions to be made on issues in a way that ensures issues are widely discussed and that decisions are widely supported. As Willem de Liefde observes, the imbizo is an expression of the Ubuntu ethic, has regard for the communal nature of man that makes social harmony and solidarity important values, '[a]nd it is this solidarity that has allowed the development of communal gatherings to deliberate on issues that affect the community at a wider level'.[236] The general nature of African deliberative public engagement meetings is described by de Liefde:

> 'During the *lekgotla* meetings differences of opinion are discussed on the basis of equality. The "elders" or "wise people" (bakgodi – members of the group whose contribution could tip the scales because of their wisdom or experience) play a prominent role.'[237]

The elders function not in their ordinary role as community leaders in such meetings, but rather they guide the meetings by providing expert input, stemming from their wealth of life experience. It is important to note that the purpose of the communal discussion is to discover the 'common mind' and 'common heart' of the community in relation to the specific issue being debated.[238] Thus, it is not a vehicle for giving effect to unanimous decisions nor a simple majority. Effective group consensus requires that a common position be reached as far as possible — something that is only possible if individuals are willing to suspend disagreement in order to facilitate collective decision-making. The final decision should reflect the considered judgement of the collective, be in step with the prescripts of the communal good, and the community members must affirm that this reflects the morality of the community.[239]

In cases where an individual's interests potentially conflict with those of the community, the individuals may engage in consensus bargaining, meaning that one may seek to convince the community of his or her side, and the community may attempt to persuade the individual

[233] Bennett et al op cit note 70 at 1.
[234] Ibid at 124–25.
[235] de Liefde op cit note 244 at 58.
[236] Ibid at 54.
[237] Ibid at 55.
[238] Shutte op cit note 86 at 93.
[239] Coetzee op cit note 42 at 278.

of theirs, or both sides may establish a common position.[240] In those cases where none of these outcomes materialise, it falls on the traditional leader who convened and presides over the imbizo to reach a decision, as the arbiter of the core values of the community, and guided by the discussion that has just taken place.[241]

The steps of the African deliberative public engagement process, are outlined as follows:

1) Both antagonists outline the problem or opportunity and give their viewpoint. They take no part in the subsequent dialogue of those present at the meeting. In this way, they distance themselves emotionally from the problem or opportunity.

2) The persons present form their own opinions based on these viewpoints and have the right to have their voices heard.

3) The problem or opportunity is discussed in an open dialogue facilitated by the traditional leader who convened the meeting.

4) The traditional leader listens closely and attentively to the discussion and may ask questions.

5) At the end of the meeting, the traditional leader announces the decision that is accepted by the community.[242]

The imbizo is a practical embodiment of Ubuntu as a philosophical concept which illustrates how African philosophy can be used in real-life scenarios to respond to bioethical questions that are relevant to the community at large, as some have argued that the use of GGE technologies are. Meetings of this nature have a track record of success in sub-Saharan Africa, where they have been used in exceptional circumstances for engaging on complex issues.[243] In the SA context, Bennett observes that imbizo is an aspect of African customary law that has been integrated into our legal system in the new constitutional dispensation, which is ordinarily invoked in relation to the state's duty to ensure public participation in government.[244] In this sense, beyond its practical value, imbizo resonates with our constitutional culture and has been endorsed as such by the courts.[245]

[240] Ibid at 279.
[241] de Liefde op cit note 244 at 58.
[242] Ibid at 68.
[243] Ibid at 13.
[244] Bennett et al op cit note 70 at 125. This is in terms of sections 1(d) and 125 of the Constitution.
[245] As evidenced by the remark by Sachs J that the 'culture of imbizo, lekgotla, bosberaad and indaba…has become a distinctive part of our national ethos' in *Minister of Health v New Clicks* [2005] ZACC 14, 2006 (2) SA 311 (CC) para 625.

I suggest that African deliberative public engagement can serve as a useful tool for measuring public openness to issues relating to genome editing, and for reaching broad consensus on applications of CRISPR-Cas9. If used in the context of GGE, the antagonists ought to each argue for and against a particular genetic modification and an objective moderator ought to play the role of the traditional leader, whose primary roles will be to facilitate the discussion and declare the consensus position. For an imbizo on a complex GGE to be effective, it should be in small enough groups to allow meaningful discussion and also be facilitated in a way that ensures that information regarding the issue is disseminated and communicated in an understandable way to the general public.[246] The understanding necessary for such an arrangement will be aided by the participation of experts who, as elders traditionally would, guide the discussion by providing expert input. However, the moderator of the engagement must ensure that they do not dominate the discourse. Furthermore, each individual must have an opportunity to ask questions, and the moderator of the discussion must ensure that individuals understand — which can be done by asking questions of the participants. Records should be kept of all proceedings and the group should attempt to reach a consensus position as far as possible. Objections should be noted, as well as whether participants would be willing to suspend their objections and allow these hypothetical applications of GGE technology to proceed even if they disagree with them. And, at the conclusion, the moderator should declare the consensus position (if one has been reached) and ensure that it has been accurately recorded. In so doing, in my view, one may get something that can justifiably be called 'communal consensus' on the use of genome editing technology.

IV CONCLUSION

In conclusion, the Afrocentric approach which I have described above entails: (1) a conceptual decolonisation of bioethics — which includes critically re-examining purportedly universal principles or policies and their underlying values; and (2) giving serious consideration to African philosophical concepts as mechanisms for responding to bioethical challenges — in other words, 'Africanising' bioethical discourse.

In this Chapter, I have argued that SA ought to adopt an Afrocentric approach to GGE using CRISPR. This is because doing so allows us to obtain answers to these questions which are rooted in the African experience, and are thus not unduly influenced by Western perspectives and are tailored to the practical realities of the South African context. I further

[246] Ibid para 143.

argued that this can be achieved through critical engagement with African philosophical thought relating to morality in the context of complex bioethical issues. I illustrated how this can yield useful answers to the questions raised by GGE with reference to a pertinent issue in the current debate on GGE: What role should public opinion play in the regulation of genome editing?

I have shown that the proposition that African ethics qua Ubuntu ought to guide the regulation of genome editing in SA warrants serious consideration. It provides approaches to ethical questions in this area that are both practically useful and that resonate with our cultural heritage and culture of human rights. Murove remarks that 'African ethics arises from an understanding of the world as an interconnected whole whereby what it means to be ethical is inseparable from all spheres of existence'.[247] This thesis will endeavour to exhibit this understanding of the interconnectedness of human life by engaging in a considered approach to the legal and ethical issues relating to GGE, which seeks to balance the interests of the community with the interests of current and future persons.

[247] Murove op cit note 71 at 28.

CHAPTER 3

GERMLINE GENOME EDITING AND THE LAW

I INTRODUCTION

In Chapter 2, I outlined the Afrocentric approach to GGE, which I suggest provides a mechanism for framing policy on this novel biotechnology that is rooted in African perspectives of morality, and which is sensitive to factors particularly relevant to the African context. With this approach in mind, we can now consider what the current state of the regulation on GGE is in SA and analyse this law through the lens of the Afrocentric approach.

In this Chapter, I first engage with the provisions of the National Health Act[1] (NHA) that relate to genome editing. In seeking to clarify these provisions, I analyse the key subsections based on the principles of SA statutory interpretation, which leads to the conclusion that the provisions of the NHA do not prohibit GGE. That said, I acknowledge that this interpretation does not make the legality of GGE in SA clear, as there still remains the potential that genetic selection is — as some international human rights documents suggest — contrary to human dignity. This merits serious consideration, given the central role played by human dignity in our law. As such, I further critically engage with the concept of human dignity as it is conceptualised in these documents, in international law, and in South African constitutional jurisprudence. Viewing the question of dignity from the Afrocentric perspective, I conclude that the conceptualisation of human dignity, as necessarily opposed to genetic selection, cannot stand in the South African context as it relies on a view of human dignity that fails to conform to the prescripts of the Ubuntu ethic.

II THE LAW ON GERMLINE GENOME EDITING IN SOUTH AFRICA

In determining the status of the law relating to GGE in SA, it is necessary to engage with the meaning to be given to section 57 of the NHA. This is the only provision that directly references manipulation of the human genome. Section 57(1)(a) provides that no person may 'manipulate any genetic material, including genetic material of human gametes, zygotes or embryos'. The ambiguity of the law relating to genome editing in SA emanates from the imprecise wording in this section.

[1] Act 61 of 2003.

On a plain reading of the words used here, section 57 prohibits genome editing because it would (presumably) fall within the meaning of 'genetic manipulation'. Applying such an interpretation, section 57 would not only outlaw genome editing in humans, but in all forms of life, including in plants, embryos and microorganisms.

That this section was intended to have such far-reaching consequences seems improbable, given that section 57 is entitled 'Prohibition of Reproductive Cloning of Human Beings', and that subsection 1 prescribes genetic manipulation as only prohibited where it is done '…for the purpose of the reproductive cloning of a human being'. Ostensibly, section 57 was designed to prohibit reproductive cloning only in human beings, and as such non-reproductive cloning in human beings is permitted.[2] Such an interpretation accords with the common law principle that 'the law giver must not be imputed with the intention to enact irrational, arbitrary or unjust consequences'.[3] Viewed in this way, it follows that section 57(1) was not promulgated to outlaw GGE.

Despite this being the apparent purpose of section 57, the wording of section 57(6) defining the reproductive cloning of a human being as 'the manipulation of genetic material in order to achieve the reproduction of a human being', arguably brings GGE within the scope of activities prohibited by section 57(1). This is because, if one gives a strict, literal interpretation to section 57(1) — read together with section 57(6) — this provision prohibits any person manipulating genetic material 'for the purpose of achieving the reproduction of a human being'. In terms of this literal interpretation, because of the way in which reproductive human cloning is described in section 57(6) of the NHA, 'cloning' refers to all forms of manipulation of genetic material. Thus, if one follows a strict, literal interpretation of section 57, section 57(1) prohibits GGE, notwithstanding that genome editing is not regarded as 'cloning', and cloning is what section 57 ostensibly was designed to regulate. That said, the strict, literal interpretation approach is not the way in which statutes are to be interpreted under South African law in the new constitutional dispensation. Instead, we apply a purposive approach.[4] As the Constitutional Court stated in *Bato Star Fishing (Pty) Ltd v Minister of Environmental*

[2] This is specifically provided for in section 57(2) which permits 'therapeutic cloning'.
[3] *S v Mhlungu* [1995] ZACC 4, 1995 (3) SA 867 (CC) para 36.
[4] For examples of a purposive approach to statutory interpretation, see *African Christian Democratic Party v Electoral Commission* [2006] ZACC 1, 2006 (3) SA 305 (CC) paras 21, 25, 28 & 31; *Daniels v Campbell NO* [2004] ZACC 14, 2004 (5) SA 331 (CC) paras 22–3; *Stopforth v Minister of Justice; Veenendaal v Minister of Justice* [1999] ZACC 72, 2000 (1) SA 113 (SCA) para 21, referred to in *Bertie Van Zyl (Pty) Ltd v Minister for Safety and Security* [2009] ZACC 11, 2010 (2) SA 181 (CC).

Affairs and Tourism,[5] 'the emerging trend in statutory construction is to have regard to the context within which the words occur, *even where the words to be construed are clear and unambiguous*'.[6] This is an emphatic statement by our highest court that even where the wording of a provision is abundantly clear — which section 57 is far from being — our law gives effect not to the plain meaning but to the purpose of the provision, by viewing it in context.

Even before the advent of the Constitution of the Republic of South Africa, 1996 (the Constitution),[7] our courts have taken the position that, while the apparent meaning of statutes based on a plain reading of the words should generally be given effect to, the strict literal meaning of a provision is not always the true one:

> 'The cardinal rule of construction of a statute is to endeavour to arrive at the intention of the lawgiver from the language employed in the enactment...in construing a provision of an Act of Parliament the plain meaning of its language must be adopted *unless it leads to some absurdity, inconsistency, hardship or anomaly which from a consideration of the enactment as a whole a court of law is satisfied the Legislature could not have intended.*'[8]

This is not to say that the actual words used in a statute are irrelevant. In *Bertie Van Zyl (Pty) Ltd v Minister for Safety and Security*,[9] after endorsing the rationale in *Bato Star*, Mokgoro J remarks that:

> 'A contextual or purposive reading of a statute must of course remain faithful to the actual wording of the statute. When confronted with legislation which includes wording not capable of sustaining an interpretation that would render it constitutionally compliant, courts are required, as discussed above, to declare the legislation unconstitutional and invalid.'[10]

This statement requires careful reading, as it could be taken to contradict the position taken in *Bato Star* that a purposive interpretation takes precedent over the plain meaning of the actual words used. This is not the case, as is apparent from viewing the words by Mokgoro J in the broader context of the judgment. The Court here set out that where the wording of a provision violates a constitutionally entrenched right, courts may not — in an attempt to remedy the unconstitutionality of the provision — interpret the wording in a way that shows a complete and/or blatant disregard for the actual words used, and thereby subvert the purpose of the

[5] [2004] ZACC 15, 2004 (4) SA 490 (CC).
[6] Ibid para 91. Emphasis added.
[7] Act 108 of 1996.
[8] Per Stratford JA in *Bhyat v Commissioner for Immigration* 1932 AD 125 at 129. Emphasis is as quoted in *Poswa v MEC for Economic Affairs, Environment and Tourism, Eastern Cape* 2001 (3) SA 582 (SCA) para 10.
[9] *Bertie Van Zyl* supra note 4.
[10] Ibid para 21.

provision. This is based on the rationale that, while it is an established principle of our law that courts ought to prefer a construction of a statute that is constitutional over one which is not, the construction of a statute given by a court must be reasonable, in that it must not distort the meaning of the provision read in context.[11]

Put differently, if reading a provision using a purposive interpretation leads to the conclusion that a section in a statute is unconstitutional, a court may not simply disregard that interpretation and prefer one which is constitutional instead — if it is not faithful to the words used and the context within which they are used. The danger of a court taking such an approach was highlighted by the Constitutional Court in *Bato Star*. It can lead to the provision in question, or the statute as a whole, becoming undesirably vague or incoherent.[12] This might also raise concerns regarding separation of powers, as the court would be reading into the provision the meaning it decides upon, rather than applying the meaning derived from the words used by the legislature as purposively interpreted. Accordingly, to avoid undue judicial interference into the form and function of a statute where multiple interpretations of a statutory provision are possible, a court may prefer an interpretation of a provision which is constitutional, but only provided that: 'A contextual interpretation of a statute…[is] sufficiently clear to accord with the rule of law'.[13]

The correct approach, therefore, is for the court to first interpret a provision purposively by reading the provision in context, and if the conclusion is that the provision is unconstitutional, the court is enjoined, as Mokgoro J describes, to declare the provision invalid. This approach was encapsulated by Wallis J in *Natal Joint Municipal Pension Fund v Endumeni Municipality,*[14] which has been endorsed as representing the current approach to statutory interpretation in SA on several occasions by our higher courts, including the recent Constitutional Court judgement of *Cloete v S; Sekgala v Nedbank Limited*:[15]

> 'The present state of the law can be expressed as follows: Interpretation is the process of attributing meaning to the words used in a document, be it legislation, some other statutory instrument, or contract, having regard to the context provided by reading the particular provision or provisions in the light of the document as a whole and the circumstances attendant upon its

[11] *National Coalition for Gay and Lesbian Equality v Minister of Justice* [1998] ZACC 15, 1999 (1) SA 6 (CC) para 23.
[12] In reference to *Case v Minister of Safety and Security; Curtis v Minister of Safety and Security* [1996] ZACC 7, 1996 (3) SA 617 (CC) para 79, where the minority remarked that 'There is a real danger that, in [reading down] an overbroad statute, we will simply substitute for the vice of overbreadth the equally fatal infirmity of vagueness'.
[13] *Bertie Van Zyl* supra note 3 para 22.
[14] [2012] ZASCA 13, 12012 (4) SA 593 (SCA).
[15] [2019] ZACC 6, 2019 (4) SA 268 (CC) para 28.

> coming into existence....Whatever the nature of the document, consideration must be given to the language used in the light of the ordinary rules of grammar and syntax; the context in which the provision appears; the apparent purpose to which it is directed and the material known to those responsible for its production. Where more than one meaning is possible each possibility must be weighed in the light of all these factors. The process is objective, not subjective. A sensible meaning is to be preferred to one that leads to insensible or unbusinesslike results *or undermines the apparent purpose of the document*...The inevitable point of departure is the language of the provision itself, *read in context and having regard to the purpose, of the provision and the background to the preparation and production of the document* (emphasis added).'[16]

With this in mind, I now consider the question: Does section 57(1), read together with the definition of reproductive human cloning in section 57(6), prohibit GGE? It is suggested that, notwithstanding the plain meaning of the words used, a purposive interpretation leads to the answer that it does not. As stated at the outset, it is clear that section 57 was not intended to relate to genetic manipulation generally, but to cloning. This is evidenced by the heading of section 57, which refers to cloning, and by the fact that the word cloning is mentioned *six* times in section 57.

Furthermore, section 57(1) is clearly not intended to outlaw all manner of genetic manipulation which is done for the purposes of reproduction, but only where it is done for the purposes of 'reproductive human cloning'. This is borne out by the fact that in 57(1)(*b*), it is stated that not only is genetic manipulation prohibited, but also 'any activity, including nuclear transfer or embryo splitting' that is done for the purpose of reproductive human cloning. That these technologies are given as instances of what is prohibited in section 57(1), should not be ignored. As the Court stated in *Minister of Safety and Security v Xaba*,[17] when certain words are included after the word 'include', it indicates one of three possible functions that those words were intended to perform: (1) enlarging the meaning of a word or phrase used in order to apply it to circumstances or classes of things to which it does not usually apply; (2) to indicate that the words given as examples define the class of things to which the provision applies; or (3) to designate the general class of things or circumstances being referred to when used after phrasing which is apposite or imprecise.[18] In current circumstances, the third function of words used after 'include' is relevant — the words 'manipulation of genetic material' and 'any activities' used in section 57(1) are very general, and because they are not

[16] *Natal Joint Municipal Pension Fund v Endumeni Municipality* supra note 13 para 18.
[17] 2003 (2) SA 703 (D).
[18] Ibid at 713GE–714B.

defined in the NHA it is difficult to ascertain what exactly they mean. For instance, because the word 'manipulate' may be defined as 'to control',[19] it could be argued that any exercise of control over genetic material — such as by IVF — falls within the scope of section 57(1). But by explicitly referring to scientific techniques *for cloning*, the legislature makes apparent the general nature of activities to which section 57(1) applies.

The effect of this wording for the purposive meaning of this provision is clear: section 57(1) was not aimed at prohibiting genetic manipulation in general, but rather any actions done for the purpose of reproductive human cloning. The fact that the meaning given to reproductive human cloning in 57(6) is so broad as to potentially expand the applicability of 57(1) beyond cloning does not remove the fact that the wording of section 57, 'read in context and having regard to the purpose, of the provision' leads to the conclusion that it was only intended to apply to cloning.[20] Such a restrictive interpretation of the scope of section 57 is to be preferred for several reasons, including the long-standing common law principle that: 'If a statute is couched in ambiguous language, the court will give it the meaning which least interferes with the liberty of the individual'.[21] The prohibition of GGE would infringe upon (inter alia) the right of scientists to 'freedom of scientific research' and the right of parents to make 'decisions concerning reproduction' — as an interpretation that does not interfere with these constitutionally entrenched liberties is the one which the principles of law enjoin us to give effect to. In conclusion, applying the principles of statutory interpretation to section 57 of the NHA does not prohibit GGE.

This is not, however, the end of the enquiry as to the lawfulness of GGE in SA. For, while the principles of statutory interpretation point us one way, there is yet another authority that may decisively influence the interpretation of section 57 of the NHA: International law. It is at this point well established in our law that provisions in statutes should, as far as possible, be interpreted in accordance with the Bill of Rights and based on the sentiments expressed in various international law documents — including UNESCO's International Bioethics Committee's UDHGHR — genetic selection may be contrary to the right human dignity.[22] That

[19] Merriam-Webster 'Manipulate' available at *https://www.merriam-webster.com/dictionary/manipulation*, accessed on 10 September 2019.
[20] *Natal Joint Municipal Pension Fund v Endumeni Municipality* supra note 13 para 18.
[21] *Rossouw v Sachs* 1964 (2) SA 551 (A).
[22] Universal Declaration on the Human Genome and Human Rights. UNESCO General Conference Resolution 29 C/17, UNESCO GC, 29th Sess (1997). UN General Assembly Resolution A/RES/53/152, UN GAOR, 53rd Sess (1998). Adopted on the report of Commission III at the 26th plenary meeting on 11 November 1997. UNESCO 'Universal Declaration on the Human Genome and Human Rights' available at

said, human dignity is a famously controversial concept in global bioethics, and thus a determination of whether human genome editing actually violates the right to human dignity requires careful consideration.

III HUMAN DIGNITY AND THE HUMAN GENOME

While currently, no statute speaks to the permissibility of GGE in domestic legislation — some international human rights documents do. The most prominent one is the Council of Europe's Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine.[23] This agreement, commonly known as the Oviedo Convention, provides in article 13 that:

> 'An intervention seeking to modify the human genome may only be undertaken for preventative, diagnostic or therapeutic purposes and *only if its aim is not to introduce any modification in the genome of any descendants* (emphasis added).'[24]

While not explicitly stated in this article, a reading of the Oviedo Convention as a whole suggests that the various offences prohibited therein are deemed unlawful because they are contrary to human dignity as it is understood in the European Union (EU).[25] This is supported by the statement made by the European Parliament in the wake of the birth of the first cloned mammal, Dolly the Sheep. Amid discussions about the prospects of using cloning technology on humans, it was stated that the use of genetic technologies in humans 'permits a eugenic and racist selection of the human race, it offends human dignity', and that it must be prohibited in order to protect the rights of each individual to 'his or her own genetic identity'.[26] This is similar to the view taken on interventions affecting the human germline taken in the UDHGHR, and seems to indicate a generally bioconservative view towards genetic selection (whether by reproductive cloning or GGE) held by law-makers in the West. Assertions such as these about genetic selection being a violation of human dignity, have been met with scepticism because

http://www.unesco.org/new/en/social-and-human-sciences/themes/bioethics/human-genome-and-human-rights/, accessed on 10 September 2019.

[23] (Opened 4 April 1997, entered into force 1 December 1999) ETS 164; J Taupitz (ed) *Die Bedeutung der Philosophie für die Rechtswissenschaft: Dargestellt am Beispiel der Menschenrechtskonvention zur Biomedizin* (2001) 67–80.

[24] Ibid article 13.

[25] D Beyleveld & R Brownsword *Human Dignity in Bioethics and Biolaw* (2001) 30. See, also, S Segers & H Mertes 'Does human genome editing reinforce or violate human dignity?' (2020) 34(1) *Bioethics* 35.

[26] European Parliament 'Resolution on cloning' (European Parliament Strasbourg 1997) OJ C 115, 14.4.1997, 92 para B & clause 1, as cited in J Harris 'Germline modification and the burden of human existence' (2016) 25(1) *Camb Q Healthc Ethics* 8.

of the absence of a coherent account of what human dignity is, and why an act such as genetic selection would infringe upon it.[27]

For instance, the claim that persons have a right to be born with a 'unique genetic identity' has been criticised on the grounds that it is unclear how a parent determining the genetic composition of the prospective child can violate the so-called right to a unique genetic identity of a person who does not exist, and which thus is not a bearer of rights. [28] It may be responded that this is because a child born with a modified genome will suffer harm by virtue of knowing they were born with a modified genome. However, as Timothy Caulfield observes:

> '[I]t is the pressure or social expectations (expectations that are necessarily informed by an inaccurate view of the role of genes) placed on the individual clone that challenge the clone's human dignity, not the process of reproductive cloning.'[29]

Similarly, in relation to GGE, Kerry Macintosh recently outlined how an unduly strict regulation of genetic selection propagates social and legal stigma, which may be more harmful towards children born with modified genomes than the knowledge of being born with a modified genome is likely to be.[30]

It has also been claimed that genetic selection instrumentalises the prospective child, and in this way fails to show respect for their dignity. Such claims rely on Kant's concept of the Categorical Imperative as being constitutive of human dignity.[31] Therefore, to treat an individual (ie the prospective child) as a means to an end, is to fail to show respect for their human dignity. This argument assumes that the act of genetic selection necessarily entails viewing a child as a mere end. This is a presumption that seems particularly inappropriate in relation to genetic interventions made for the well-being of the prospective child, such as to prevent the child from being born with a serious genetic disorder. In addition, this claim entails a presumption that the use of genetic technologies emanates from the desire of parents to tailor the genes of their prospective children. Whether this is the case in reality, however, is disputable. Deryck Beyleveld and Roger Brownsword argue that the desire of most parents to use genetic technologies is not because they have an interest in determining their children's

[27] D Beyleveld & R Brownsword 'Human dignity, human rights, and human genetics' (1998) 61(5) *Modern Law Review* 661.
[28] Beyleveld & Brownsword op cit note 25 at 161.
[29] T Caulfield 'Human cloning laws, human dignity and the poverty of the policy making dialogue' (2003) 4(3) *BMC Med Ethics* 4. The potential psychological implications of a child knowing they were genetically modified are discussed in more detail in Chapter 6.
[30] KL Macintosh 'Heritable genome editing and the downsides of a global moratorium' (2019) 2(5) *CRISPR J* 276.
[31] Beyleveld & Brownsword op cit note 26 at 664.

genes per se, but rather in determining certain phenotypical features which they believe to be controlled by genes. Therefore, 'they view genetic selection not as an end itself, but merely as a means towards the selection of phenotypic characteristics'.[32] From this perspective, genetic selection is no different to using preimplantation genetic diagnosis (PGD), donor gametes, or having a child with someone one views as having 'good genes'. These are all different paths that lead to the same destination. Therefore, if it offends human dignity to use one of these paths, it raises the question why they are not all prohibited, or why any of them should be prohibited at all.

The number of questions about dignity and how it might apply to genetic technologies has led some to dismiss the concept as entirely useless, or to label allusions to dignity as little more than a guise to promote conformity with traditional morality.[33] These criticisms are not without foundation. It seems that at the core of the references to human dignity in the UDHGHR and the Oviedo Convention are value judgements about genetic selection, which do not carry much weight for those who do not share a commitment to these same values. The question then becomes whether such value judgements are applicable in the South African context. In order to determine this, the following discussion will seek to elucidate the meaning of human dignity at international level, and then in South African law in particular.

IV HUMAN DIGNITY IN INTERNATIONAL LAW

(a) Human dignity in the international bill of rights

The need to refer to international law in the present discussion is that when interpreting human rights such as dignity, our courts must consider international law.[34] It is important to note that for these purposes, neither the Oviedo Convention nor the UDHGHR constitute 'international law', as neither of these agreements has been signed by representatives of government, approved by parliament, or enacted — as required for international agreements to be binding on SA.[35]

Human dignity is one of the most central concepts in international human rights, as indicated by its foundational role in the texts of the so-called 'international bill of rights'.[36] The

[32] Ibid at 147.
[33] RE Ashcroft 'Making sense of dignity' (2005) 31(11) *J Med Ethics* 680.
[34] Section 39(1)(b), Constitution.
[35] Section 231(1)–(5), Constitution.
[36] This is the term used to refer to the three main international treaties on human rights: The Universal Declaration on Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR), and the

Universal Declaration of Human Rights (UDHR),[37] the International Covenant on Civil and Political Rights (ICCPR),[38] and the International Covenant on Economic, Social and Cultural Rights (ICESCR)[39] all contain in their preambles a declaration that human rights emanate from a recognition of the 'inherent dignity and of the equal and inalienable rights of all members of the human family'.[40] But what exactly is human dignity? Dignity enjoys a long and complex history as a concept in legal and philosophical thought. Its genesis is often traced to the Roman idea of *dignitas hominis*, which, roughly translated, means 'status' or 'reputation'.[41] Unlike the now commonplace view of human dignity as being universally possessed by all persons simply by virtue of being born, dignitas was only possessed by persons of distinguished social status, by virtue of which they were entitled to be treated with respect. Dignitas is still a legal concept in countries with legal systems influenced by Roman law, including SA,[42] and denotes the legal protection given to personality interests. Human dignity has since evolved into a distinct legal concept, apart from dignitas, influenced by early classical Roman writings on the concept of human beings having unique moral standing.[43]

No definition of dignity emerges from the UDHR, ICCPR or the ICESCR, and several scholars are concerned there might not be one.[44] These reservations are justifiable, given that it appears that the use of the term in the UDHR is nothing more than shorthand for the 'sanctity and ultimate value of human personality', which is the statement that appeared in the original draft before it was abridged by the editors.[45] Furthermore, it seems that the indistinct nature of the term was both deliberate and an important factor in its inclusion. Its ephemeral nature allowed for a rhetorically compelling statement that is open to interpretation, and to ensure it remained that way several parties involved in the drafting process insisted it remain uninterpreted.[46]

International Covenant on Economic, Social and Cultural Rights (ICESCR). See Beyleveld & Brownsword op cit note 25 at 13.

[37] UNGA Res 217A(III), UN GAOR, 3d Sess, 67th Plen Mtg, UN Doc A/811 (1948).

[38] UNGA Res 2200, UN GAOR, 21st Sess, Supp No 16, UN Doc A/6316 (1966), 993 UNTS 171.

[39] UNGA Res 2200, UN GAOR, 21st Sess, Supp No 16, UN Doc A/6316 (1966), 993 UNTS 3.

[40] Preamble of the UDHR op cit note 36. See, also, the preamble of the ICCPR op cit note 37, and the preamble of the ICESCR ibid.

[41] C McCrudden 'Human dignity and judicial interpretation of human rights' (2008) 19(4) *EJIL* 656.

[42] For a comprehensive discussion on the history of the common law concept of dignitas and human dignity in South Africa, see AC Steinmann *The Legal Significance of Human Dignity* (unpublished doctoral thesis, North-West University, 2016); R Steinmann 'The core meaning of human dignity' (2016) 19(1) *PER/PELJ* 1.

[43] McCrudden op cit note 40 at 657.

[44] Beyleveld & Brownsword op cit note 27 at 661.

[45] P Łuków 'A difficult legacy: Human dignity as the founding value of human rights' (2018) 19 *Hum Rights Rev* 319.

[46] Ibid at 321.

Despite this, certain core elements have been observed by scholars which elucidate, at least to some extent, what the drafters intended its inclusion to convey:

> 'These provisions are firmly tied to an important cluster of preambular ideas: namely, that each and every human being has inherent *dignity*; that it is this *inherent* dignity that grounds (or accounts for) the possession of human rights…; that these are *inalienable* rights; and that because all humans have dignity, they hold these rights equally.'[47]

Clearly, then, the possession of human dignity entitles human beings to special moral and legal privileges in the form of human rights. However, this naturally raises questions: What is the claim that human beings possess 'inherent dignity' based on? What is it that qualifies us for this special moral status? Is this claim not mere speciesism?[48]

(b) Questioning the basis of human moral worth

The answer most commonly given to the above-mentioned question is that human beings possess some unique characteristic or trait which ascribes unique moral significance to them.[49] The exact nature that this characteristic has, however, is heavily contested — and has been for a long time. To illustrate, Daniel Doyle uses the example of debates that emerged after the arrival of Westerners in North America regarding whether the natives they found there could be classified as 'humans'.[50] This was a point of contention among Western scholars during the Enlightenment, and while views diverged significantly, these scholars generally prescribe criteria such as self-awareness, or a sense of self that is maintained through time, as what made humans uniquely, morally 'special'.[51] This trend persisted beyond the end of the Enlightenment. At the birth of our modern epoch, Giovanni Pico della Mirandola wrote his *Oration on the Dignity of Man*, which became the manifesto of the Renaissance.[52] Mirandola argued that man has no archetype and could thus determine his own nature through his own free will. It is this self-transformative power of man that he perceived as the basis for man's

[47] Beyleveld & Brownsword op cit note 25 at 13. Emphasis in original text.
[48] The concept of speciesism was discussed in Chapter 1 supra at 17. In brief, it is an irrational bias in favor of one's own species. See P Singer (ed) *Animal Liberation* (1977).
[49] Beyleveld & Brownsword op cit note 24 at 23.
[50] DJ Doyle 'What does it mean to be human? Humanness, personhood and the transhumanist movement' (2010) 1(2) *EBEM* 107.
[51] J Doyle *What Does it Mean to be Human? Life, Death, Personhood and the Transhumanist Movement* (unpublished doctoral thesis, University of Pretoria, 2017).
[52] GP della Mirandola *Oration on the Dignity of Man* (1996).

dignity, as evident in his remark: 'Oh wondrous and unsurpassable felicity of man, to whom it is granted to have what he chooses, to be what he wills to be!'[53]

These kinds of arguments regarding the particular quality that makes humans worthy of special moral status, continue to be prominent in the domain of bioethics. A well-known example of this kind of argument is the work of Francis Fukuyama in his book *Our Posthuman Future*. Despite recognising the potential for new technologies to enhance reproductive autonomy, Fukuyama believes that genetic engineering is ethically dubious because it has a 'dehumanizing potential'.[54] In defence of this assertion, he claims the aspect of GGE that is most concerning is the prospect of losing some characteristic of what makes us fundamentally human, which is so ephemeral that we might not even realise it if it was lost.[55] This elusive characteristic he later terms 'Factor X'.[56] But what exactly is this Factor X? After dismissing several traits such as consciousness as being able to conclusively account for Factor X, Fukuyama concludes that Factor X is not a singular characteristic, but the composition of various behaviours which are typical of the human species.[57]

Fukuyama's arguments, at their core, exemplify the appeal-to-nature fallacy. He perceives the emergence of modern biotechnology as a threat to the moral worth of human beings,[58] for seemingly no other reason than that it endangers what he views as the natural state of humans (ie 'human nature') without providing a convincing argument for why the present state of humans is itself good and worth preserving. In outlining his view on human nature, Fukuyama focuses entirely on biological characteristics that are exclusive to humans, which he regards as 'critical to any understanding to any question of human dignity'.[59] Put differently, his argument here is that human nature (and by extension, human dignity) consists of species-typical traits that are exclusive to humans. As other scholars have argued, whether any such traits exist is doubtful.[60]

In international human rights, the characteristic most often described (or implied) to be the nexus of human beings' moral worth is their unique capacity for autonomous choice. This is a concept that first gained popularity in Christian theological spheres. They advocated the

[53] Ibid at 8.
[54] F Fukuyama *Our Posthuman Future: Consequences of the Biotechnology Revolution* (2003) 88.
[55] Ibid at 101.
[56] Ibid at 149.
[57] Ibid at 171.
[58] Ibid at 130.
[59] Ibid at 139.
[60] DW Jordaan 'Antipromethean fallacies: A critique of Fukuyama's bioethics' (2009) 28(5) *Biotechnol Law Rep* 577.

idea that man alone had the capacity for free will, and it is this 'gift from God' which justifies why man must be treated as having unique moral status (ie dignity).[61] The development of this line of thought during the Enlightenment — most famously by Kant — led to the now common idea of the moral significance of man (and accordingly, his dignity) being founded on his capacity for reason.[62] Thus, to treat individuals with dignity has come to be commonly understood as showing respect for their capacity for autonomous choice and, by extension, the choices they make.

This vision of human dignity was highly influential in the early 20th century when the first international human rights instruments were drafted, and when several prominent national constitutions were crafted in the wake of World War II.[63] As Christopher McCrudden observes, there is an unquestionable correlation between the events of World War II and dignity taking centre stage — as reference to it prior to this point was 'marginal'.[64] This is because the concept of human dignity in post-war constitutionalism was viewed as expressing the global response of repulsion to the horrific treatment of human beings during the war. This accounts for the rhetorical weight behind human dignity, which the drafters of the UDHR sought to draw upon, while at the same time not committing the various member states to any well-defined obligations. The status of human dignity as foundational to human rights is however heavily disputed,[65] and yet this formulation of human dignity has become quite prominent in constitutions around the world, particularly in Europe. This has been attributed to the far-reaching influence of Roman-Catholic thought, and the popularity of the German Basic Law, which has been highly influential in post-war constitutionalism.[66]

(c) Two concepts of human dignity

In light of this history, what are we to make of the meaning of human dignity as the foundational value which grounds human rights? In 'Human Dignity in Bioethics and Biolaw', Beyleveld and Brownsword seek to respond to this very question. They observe that human dignity as a concept in international human rights has two core conceptualisations: Human dignity as *empowerment*, and human dignity as *constraint*.[67] The former is observed in several

[61] McCrudden op cit note 41 at 659.
[62] Ibid.
[63] Ibid at 664.
[64] Ibid.
[65] Łuków op cit note 45 at 314.
[66] Ibid.
[67] Beyleveld & Brownsword op cit note 25 at 1.

human rights documents that recognise the individual as having some manner of inherent moral worth by virtue of being human. It is this moral worth — termed 'human dignity' — which is the basis of all human rights and liberties.[68] The latter conception of human dignity is observed in provisions in international human rights documents where human dignity is referred to not as a quality possessed by a singular person, but rather by humanity as a whole.[69] This collective human dignity is something which, as members of the 'human family', we all have a duty to uphold. Thus it is often used as a justification for prohibiting what is deemed not to be dignified conduct. As Beyleveld and Brownsword put it:

> '[I]f we think of respect for human dignity as one of the constitutive values of our society…then those individual preferences and choices that are out of line with respect for human dignity are simply off limits.'[70]

There is undeniably a potential for conflict here. This becomes evident in cases where an individual's human dignity empowers him or her to choose a course of action which the state or the general public believe offends human dignity. For example, while most perceive freedom of sexual expression as a fundamental ingredient of human dignity, prohibition of sodomy has been justified on the grounds that it 'degrades human dignity'.[71]

Conflicts of this nature often arise in the biosciences as controversial technologies present possibilities that some perceive to be unpalatable, while others view the use of these technologies to be an expression of their human rights.[72] This is what occurred in the debates about genetic selection. While some — such as the European Parliament — have used dignity as a *constraint* to justify prohibitions of genetic technologies such as GGE, their opponents have also argued for a right to use these technologies with reference to human dignity as *empowerment*.[73] This speaks to what has been described as the 'fragility' of human dignity, which refers to the fact that the indistinct nature of the concept permits it to be formulated both for and against the same proposition.[74]

In conclusion, the use of the concept of human dignity in international law is sufficiently open to interpretation that it cannot be definitively said that human dignity is either opposed to

---

[68] Ibid.
[69] Ibid.
[70] Ibid at 23.
[71] Living Zimbabwe 'Gays and lesbians in Zimbabwe and their rights' 16 September 2009 available at *http://www.livingzimbabwe.com/gays-and-lesbians-in-zimbabwe-and-their-rights/*, accessed on 20 July 2020.
[72] See Chapter 1 supra at 20. For a further discussion of this argument, see also, Chapter 5 infra at 159.
[73] M Kotzé 'Human genetic engineering in the South African context with its inequalities: A discourse on human rights and human dignity' (2014) 113(1) *Scriptura* 7; Segers & Mertes op cit note 25 at 38.
[74] Beyleveld & Brownsword op cit note 26 at 661.

or in support of genetic selection. This, as alluded to above, appears to have been an integral element of its design rather than a singular meaning to human dignity, and individual states are left free by the international bill of rights to give this concept their own interpretations. Ergo, the position on this issue turns on the conceptualisation of human dignity within that particular state. With this in mind, I now consider how the concept of human dignity has been conceptualised in SA.

V HUMAN DIGNITY IN SOUTH AFRICAN LAW

Human dignity appears as one of the founding provisions of the Constitution:

> 'The Republic of South Africa is one, sovereign, democratic state founded on the following values:
>
> (a) Human dignity, the achievement of equality and the advancement of human rights and freedoms.'[75]

What's more, human dignity is also one of the rights contained in the Bill of Rights:

> 'Everyone has inherent dignity and the right to have their dignity respected and protected.'[76]

Human dignity plays a central role in SA's new constitutional dispensation. It is often referred to as the 'touchstone of the new political order'.[77] As a right, human dignity is said to denote the equal status of all persons before the law that must be respected, and this right underscores several other rights.[78] As a value, the function of human dignity is to inform the interpretation of several other rights and is of 'central significance to the limitations enquiry'.[79]

Johan De Waal et al remark that the central role played by dignity in both the drafting and development of the Constitution was strongly influenced by post-war European constitutionalism.[80] This legacy is credited for the conceptualisation of human dignity as broader than placing a negative duty on the state to protect individual liberty, as it is also understood to place a positive duty on the state to use its power to realise a dignified life for its citizens, by ensuring that they are treated equally and that their socio-economic needs are met.[81]

---

[75] Section 1 of the Constitution.
[76] Section 10 of the Constitution.
[77] *S v Makwanyane* [1995] ZACC 3, 1995 (3) SA 391 (CC) para 329.
[78] J De Waal, Ian Currie & Gerhard Erasmus *The Bill of Rights Handbook* 3 ed (2000) 253. See, also, the Court's remarks in *Makwanyane* supra note 77 para 328.
[79] Ibid.
[80] Ibid at 250.
[81] Ibid at 251.

The courts have yet to provide a concrete meaning for human dignity[82] but have acknowledged that at its most basic level it connects to the concept of inherent moral worth, as evident by the Constitutional Court's comments in *National Coalition for Gay and Lesbian Equality v Minister of Justice*,[83] that it 'requires us to acknowledge the value of and worth of all individuals as members of society'.[84] SA case law on human dignity further indicates a clear link between the recognition of the inherent moral worth of human persons and the freedom of the individual to conduct themselves as they wish, which goes as far back as the interim Constitution. In *Ferreira v Levin*[85] the Court held that:

> 'Human dignity has little value without freedom; for without freedom personal development and fulfilment are not possible. Without freedom, human dignity is little more than an abstraction. Freedom and dignity are inseparably linked. To deny people their freedom is to deny them their dignity.'[86]

Since then, the value of human dignity has been held by our courts to be the foundation of freedom to exercise a wide array of individual rights, including: the right to vote,[87] the right participate in the legislative process,[88] the right to choose a vocation,[89] and the right to security of tenure,[90] to name a few. The connection between enjoying human rights and the value of freedom made in these cases illustrates what Beyleveld and Brownsword term *human dignity as empowerment*, and highlights how this view of human dignity is central to SA's human rights jurisprudence. This is further evidenced by the fact that human dignity as empowerment is not only limited to rights contained in the Bill of Rights. This may also be observed by the number of cases relating to freedoms that are not strictly speaking provided for in the Constitution, including the freedom to own property,[91] freedom of testation,[92] and freedom of contract.[93] The jurisprudence surrounding freedom of contract, in particular, speaks to how

---

[82] Ibid at 251.
[83] [1998] ZACC 15, 1999 (1) SA 6 (CC).
[84] Ibid para 29.
[85] [1995] ZACC 13, 1996 (1) SA 984 (CC).
[86] Ibid para 40. Cited with approval in *MEC for Education: KwaZulu-Natal v Pillay* [2007] ZACC 21, 2008 (1) SA 474 (CC) para 63.
[87] *August v Electoral Commission* [1999] ZACC 3, 1999 (3) SA 1 (CC) para 17.
[88] *Doctors for Life International v Speaker of the National Assembly* [2006] ZACC 11, 2006 (6) SA 416 (CC) para 115; *Matatiele Municipality v President of the Republic of South Africa* [2006] ZACC 2, 2006 (5) SA 47 (CC) para 234, cited with approval in *Land Access Movement of South Africa v Chairperson, National Council of Provinces* [2016] ZACC 22, 2016 (5) SA 635 (CC) para 58.
[89] *Affordable Medicines Trust v Minister of Health* [2005] ZACC 3, 2006 (3) SA 247 (CC) para 59.
[90] *Daniels v Scribante* [2017] ZACC 13, 2017 (4) SA 341 (CC) para 1–3, 7.
[91] *Shoprite Checkers (Pty) Ltd v MEC for Economic Development, Environmental Affairs and Tourism: Eastern Cape* [2015] ZACC 23, 2015 (6) SA 125 (CC) para 50.
[92] *BoE Trust Ltd NO* [2012] ZASCA 147, 2013 (3) SA 236 (SCA) para 27.
[93] *Barkhuizen v Napier* [2007] ZACC 5, 2007 (5) SA 323 (CC) para 57.

human dignity in SA exemplifies dignity as empowerment, in how the court depicts human dignity as closely tied to autonomy and self-determination. Relying on the oft-quoted dictum by Ngcobo J in *Barkhuizen v Napier*[94] that '[s]elf-autonomy, or the ability to regulate one's own affairs, even to one's own detriment, is the very essence of freedom and a vital part of dignity',[95] the Court in *Paulsen v Slip Knot Investments*[96] held that:

> 'There is a countervailing policy consideration, also founded on constitutional values, which comes into play here. That is the respect for freedom of contract which, as this court has noted, "gives effect to the central constitutional values of freedom and dignity". Holding a debtor bound to the interest obligation contained in an agreement regardless of the double having been reached may be seen to accord with freedom of contract; and *thus with the rights to freedom and dignity* (emphasis added).'[97]

However, despite the clearly strong bond between the founding values of freedom and human dignity which is evident here, human dignity has also occasionally been used as a justification to limit individual freedoms. This may be observed in the judgment of *De Reuck v Director of Public Prosecutions*[98] in which the Constitutional Court upheld the constitutionality of the criminalisation of the possession of child pornography. The Court here acknowledged that legislation providing for this limit the rights to freedom of expression and privacy. However, it was held that the limitation was legitimate insofar as it served to protect the 'dignity of children':

> 'Children's dignity rights are of special importance. The degradation of children through child pornography is a serious harm which impairs their dignity and contributes to a culture which devalues their worth. Society has recognised that childhood is a special stage in life which is to be both treasured and guarded. The State must ensure that the lives of children are not disrupted by adults who objectify and sexualise them through the production and possession of child pornography. There is obvious physical harm suffered by the victims of sexual abuse and by those children forced to yield to the demands of the paedophile and pornographer, but there is also harm to the dignity and perception of all children when a society allows sexualised images of children to be available. The chief purpose of the statutory prohibitions against child pornography is to protect the dignity, humanity and integrity of children.'[99]

[94] Ibid.
[95] Ibid.
[96] [2015] ZACC 5, 2015 (3) SA 479 (CC).
[97] Ibid para 70.
[98] [2003] ZACC 19, 2004 (1) SA 406 (CC).
[99] Ibid para 63.

Note that Langa DCJ here mentions two separate 'harms' to dignity: (a) the physical and psychological harms to the dignity caused to children who are made to patriciate in child pornography; and (b) the harm to the collective 'dignity…of children'.[100] What may seem at first to be an inconspicuous exposition on the foulness of child sexual exploitation and the devastating impact this has on all children, closer inspection raises pressing legal questions. Most significantly, is whether Langa DCJ is here to be understood as asserting that dignity, in addition to being a right held by individual children (as bearers of human rights), is also a right that is held collectively by all children.

Such an assertion would contradict the well-established legal principle that rights in the Bill of Rights are only afforded to those legally recognised as persons (ie a bearer of rights), and so one cannot claim for a breach of rights unless one's rights have been violated. In addition, if we accept that human dignity is a right that belongs to an entire group, then we must accept that an act may violate that dignity, even if not one individual's rights were directly affected. In such cases, we not only see dignity being used as a constraint, but also how that constraint is justified (much like in the UDHGHR and the Oviedo Convention) on what has been termed an 'extra-personal' account of human dignity.[101] While speaking of dignity in this way is not necessarily bad, and is convenient in expressing disapproval of heinous acts, the inherently vague nature of human dignity makes it difficult to ascertain exactly which acts are contrary to human dignity and which are not, because of the absence of a person who is harmed by the act in question.[102]

To illustrate the dangers of dignity as a constraint being relied upon as an extra-personal account of human dignity, reference to the infamous judgment of *S v Jordan* is necessary.[103] In this case, the Sexual Offences Act[104] was subject to a constitutional challenge on the grounds that section 20(1)(aA), which criminalised prostitution, was a violation of several rights of sex workers, including the right to dignity.[105] From the perspective of dignity as empowerment, it is easy to see how the criminalisation of sex work limits the autonomy of sex workers, and thus infringes upon their dignity. But Ngcobo J, writing for the majority, did not agree with this

[100] Ibid para 63.
[101] D Jordaan 'Stem cell research, morality, and law: An analysis of *Brüstle v Greenpeace* from a South African perspective' (2017) 33(3) *SAJHR* 441.
[102] It is worth noting that venturing into this problematic territory may not be necessary, as reliance on dignity as a constraint was not essential to Langa DCJ's conclusion regarding the unconstitutionality of child pornography.
[103] [2002] ZACC 22, 2002 (6) SA 642 (CC).
[104] Act 23 of 1957.
[105] *Jordan* supra note 103 para 27.

view, stating that 'This case is concerned with the commercial exploitation of sex, which as I have found, involves neither an infringement of dignity nor unfair discrimination.'[106] This finding was not preceded by any critical engagement with the concept of human dignity and its link with autonomy in our jurisprudence. Ngcobo J merely expressed his agreement with the conclusion reached by the minority on the question of dignity,[107] which was:

> 'Our Constitution values human dignity which inheres in various aspects of what it means to be a human being. One of these aspects is the fundamental dignity of the human body which is not simply organic. Neither is it something to be commodified. Our Constitution requires that it be respected. We do not believe that section 20(1)(aA) can be said to be the cause of any limitation on the dignity of the prostitute. To the extent that the dignity of prostitutes is diminished, the diminution arises from the character of prostitution itself. The very nature of prostitution is the commodification of one's body. Even though we accept that prostitutes may have few alternatives to prostitution, the dignity of prostitutes is diminished not by section 20(1)(aA) but by their engaging in commercial sex work. The very character of the work they undertake devalues the respect that the Constitution regards as inherent in the human body.'[108]

The Court's approach to the question of dignity in this case has been variously criticised for its lack of depth and flawed logic, and justifiably so.[109] This statement by our highest court is replete with confounding claims and non-sequiturs and falls well short of the kind of thorough engagement that this complex case called for. This discussion will touch on but a few of the problems in respect of how the Court dealt with the application of human dignity in this case.

Firstly, the Court was called upon to consider the question of whether the criminalisation of prostitution was a violation of the prostitute's right to dignity, which (as discussed above) encompasses their freedom to exercise autonomy and self-determination. The Court entirely side-stepped this issue, instead focusing on the so-called 'dignity of the human body', so leaving a critical legal issue unresolved. This leads to the second major issue with the Court's statement quoted above: are we to understand the Court as saying that the human *body* is a bearer of human rights? While there are provisions in the Constitution that refer to the human body, such as the right to bodily integrity,[110] it is apparent from the wording that these rights

[106] Ibid para 28.
[107] Ibid para 1.
[108] Ibid para 74.
[109] See MK Radebe *The Unconstitutional Criminalisation of Adult Sex Work* (unpublished LLM thesis, University of Pretoria, 2013) 18–9.
[110] Section 12(2) of the Constitution.

exist to protect the person, who is the bearer of rights, and not the body per se. This is made abundantly clear in section 12(2)(b) of the Constitution, which provides that everyone has a right, 'to security in and control over their body'. And yet, perplexingly, the Court in *Jordan* took the view that human dignity favoured not the prostitutes' right to control over their body, nor their entitlement to autonomy and self-determination, but the so-called dignity of the human body.

Given that not a single provision in the Constitution suggests that the right to human dignity is 'inherent to the human body', one can only postulate that the language of the Court was intended to communicate the view that the act of prostitution was contrary to the Court's and the state's view of dignified conduct. This is reminiscent of the European Court of Justice's embrace of the extra-personal account of human dignity in order to legitimise the prohibition of activities it viewed as morally repugnant. Such activities range from the controversial topic of patenting human pre-embryos, to more mundane pastimes like playing laser-tag — an activity many would regard as harmless fun.[111] Herein lies the fundamental problem with the extra-personal account of human dignity. It permits the framing of what constitutes dignified conduct to be based on popular sentiment or state agendas. This can lead to absurd and far-reaching consequences when we move beyond conduct that is widely accepted to be undesirable, such as the sexualisation of children and bestiality,[112] to less clear cases where reasonable men and women may differ on whether a particular act is undignified. Take for instance the famous French case in which the courts held that it was contrary to human dignity for women to wear burqas or other full-face coverings, even where women themselves wanted to wear them.[113] While one might retort that such a judgment could never be sustained in SA given our jurisprudence on freedom of religious expression,[114] it is not apparent why this limitation could not be justified using the same reasoning as the Court in *De Reuck* and *Jordan* above. This is that it was contrary to human dignity that a religion require women to cover their bodies, and that the dignity of the women's bodies was demeaned by this practice. Even if the women involved engaged in it freely and of their own volition, and thus none of their right to dignity can be said to be infringed, the court may declare that the practice of head and face covering for religious reasons is contrary to the dignity of women. That this line of thinking, if

[111] Jordaan op cit note 101 at 441.
[112] See *S v M* 2004 1 BCLR 97 (O) paras 15 & 24.
[113] Conseil constitutionnel decision No 2010–613 DC of 7 October 2010, J.O. 18345 (Fr).
[114] *MEC for Education v Pillay* supra note 86.

employed by our courts, would be hostile to South African jurisprudence on the integral link between individual freedom and human dignity, is patent.

Neomi Rao opines that the ability to use dignity to justify whatever position the judges prefer is part of the reason the concept has become popular with constitutional courts around the world:

> 'Dignity may be appealing as a legal concept precisely because it obscures difficult choices about what we value and the type of freedom and rights we wish to protect. The obfuscation may allow judges to use dignity with the hope that it can mean a number of different things and that perhaps there need not be a tradeoff between the dignity of individual liberty and autonomy and the dignity of social belonging and equality. But the choices and tradeoffs between values are part of the human condition.'[115]

Dignity is thus called upon to avoid critical engagement about the nature of the balance between individual freedom and popular sentiment on the exercise of freedom. If '[s]elf-autonomy, or the ability to regulate one's own affairs, even to one's own detriment, is the very essence of freedom and a vital part of dignity'[116] and '[t]o deny people their freedom is to deny them their dignity',[117] then it follows that a law which limits individual freedom violates human dignity, and as such may only stand if it meets the requirements prescribed in section 36 of the Constitution.[118] But, by relying on an extra-personal account of human dignity, courts have justified constraints on individual freedom without meaningfully engaging in the limitations enquiry. This exists precisely for the purpose of resolving conflicts in the Constitution.[119] Put differently, a limitation on autonomy does not need to meet the standards of being 'reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom', as long as the judges deem the act in question to not be dignified conduct (ie contrary

[115] N Rao 'Three concepts of dignity in constitutional law' (2011) 86(1) *Notre Dame L Rev* 190.
[116] *Barkhuizen v Napier* supra note 93 para 57.
[117] *Ferreira* supra note 84 para 40.
[118] Section 36 of the Constitution provides:
'(1) The rights in the Bill of Rights may be limited only in terms of law of general application to the extent that the limitation is reasonable and justifiable in an open and democratic society based on human dignity, equality and freedom, taking into account all relevant factors, including-
(a) the nature of the right;
(b) the importance of the purpose of the limitation;
(c) the nature and extent of the limitation;
(d) the relation between the limitation and its purpose; and
(e) less restrictive means to achieve the purpose.
(2) Except as provided in subsection (1) or in any other provision of the Constitution, no law may limit any right entrenched in the Bill of Rights.'
[119] *De Lange v Methodist Church* [2015] ZACC 35, 2016 (2) SA 1 (CC) para 77.

to an extra-personal account of human dignity). In my view, that this can be the case undermines the rule of law.

The *De Reuck* and *Jordan* cases paint a picture of the danger of extra-personal accounts of human dignity being used to frame dignity as a constraint: it paves the way for arbitrary enforcements of pure morality dressed in human rights 'talk'. And so, when judges and law-makers may speak of certain conduct as violating human dignity, such limitations may themselves be violating human dignity by failing to meet constitutional muster as limitations that are reasonable and justifiable in an open and democratic society. Our courts have thus far only alluded to the existence of an extra-personal human dignity in very few cases. There has yet to be a critical assessment of this concept and, in my view, the way it has been applied thus far would not survive proper judicial inspection.

This not to say that an extra-personal account of human dignity is impossible to justify in terms of SA human rights law. It can be, if our law is forthright in acknowledging that 'human dignity', when used as a constraint, is nothing more than a placeholder for some state or communal interest. This communal interest must also be recognised as capable of being legally protected through policies that prohibit or constrain certain conduct. However, a violation of these limitations is not an infringement of the right to human dignity (as there is no person to whom it belongs). Furthermore, where human dignity is used as a constraint, it must pass the muster of the limitation analysis. This would permit human dignity to be used as a constraint in a legally coherent way and ensure that our law-makers and courts do not mask communitarianism in human rights language.

I suggest that part of the reason for this is that that the extra-personal account of human dignity — as used by our courts thus far — is heavily steeped in Eurocentric ideologies about inherent moral worth, autonomy, and the limitation thereof. Therefore, I suggest that we ought to adopt an approach to using dignity as a constraint in a way that recognises our commitment to treating individuals with Ubuntu. In the following section, I expand on each of these arguments.

VI AN AFROCENTRIC PERSPECTIVE ON HUMAN DIGNITY

(a) The conflict between genetic determinism and African communitarianism

As outlined above, the view of dignity as contrary to genetic selection espoused in the UDHGHR and the Oviedo Convention is contingent upon human personhood being linked to

the idea of a 'unique human genome'. This view of human dignity leans heavily on genetic determinism, as it presupposes that the moral significance of the human person (ie their dignity) is intrinsically linked to their genetic composition.[120] The normative significance of the human person is viewed quite differently when viewed through the lens of the Ubuntu philosophy.

Ubuntu is a virtue ethic, in that it enjoins its adherents to 'become a human being' by embodying the qualities which exemplify Ubuntu.[121] Central to this is the idea of personhood, not as a static property one possesses at birth (whether by virtue of a gift from God or by having unique genetic composition), but rather as an ontological journey which one goes on as a member of a community.[122] Thus, the moral status of personhood is something which is achieved by behaving in a manner fitting of a human person in a community.[123] Michael Eze delineates this view of personhood from the Western perspective:

> 'The term "person" must be understood differently from the enlightenment codification of a person as essentially rational, where 'rationalism' remains a sole criterion for subjectivity. While we presuppose rationality to all persons, rationality need not be the only criterion to determine who is a human being. More critical for the current purposes is the understanding of a person as located in a community where being a person is to be in a dialogical relationship in this community. Accordingly, a person's humanity is dependent on the appreciation, preservation and affirmation of other persons' humanity.'[124]

In this sub-section, I argue that the African communitarian theory on the basis of human moral worth requires that we interpret human dignity differently from how it has been used in particular international human rights documents, and that such an interpretation does not permit a categorical rejection of GGE.

To make this argument in a cogent manner, it is necessary to reprise some of the cases that I made in Chapter 2.[125] There are, broadly speaking, two tenets of moderate communitarianism which I have argued are central to the Ubuntu ethic: (1) personhood is essentially a journey of self-realisation, and one progresses along this journey by acting in a

---

[120] See the discussion on genetic determinism in Chapter 1 supra at 17.
[121] MB Ramose 'The philosophy of Ubuntu and Ubuntu as philosophy' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 232.
[122] IA Menkiti 'On the normative conception of the person' in K Wiredu (ed) *A Companion to African Philosophy* (2004) 49.
[123] PH Coetzee 'Particularity in morality and its relation to community' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 276.
[124] MO Eze 'What is African communitarianism? Against consensus as a regulative ideal' (2008) 27(3) *S Afr J Philos* 387.
[125] For an extended discussion of communitarianism in African philosophy, see Chapter 2 supra at 35.

morally upright or virtue-istic way; and (2) the attainment of said self-realisation can only occur in communion with others (ie a community) because of the fundamentally social nature of the human being.[126] The point of the community, in terms of the communitarian view of personhood, is to be the prescriber of norms and values. Through communion with one's community members, the community imparts upon the individual the virtues which ought to guide their journey of personhood, and these virtues are themselves developed and shaped through communal discourse.[127]

Ramose, demonstrating the linguistic analytical methodology of African philosophy, cites metaphorical expressions used by sub-Saharan African communities as illustrating the African view of personhood. For example, the Sotho expressions 'ke motho' or 'gase motho' — words of affirmation said to a person that literally means 'he/she is a human person'.[128] This affirmation is not a literal recognition of a person as a member of the human species. It is a recognition that they have acted as a person ought to act towards other humans.

This view of personhood may also be observed in the impact of this philosophy on our legal system. As evident from the words of Sachs J in *Port Elizabeth Municipality v Various Occupiers*,[129] the effect of Ubuntu has not been to depart from recognising the value of the individual, but to redefine it.[130] Understood through the lens of Ubuntu, the moral worth of the individual, and legal rights, emanate from the deep desire to treat others with respect because such respect is essential to communal harmony — and not because of some ineffable quality shared by all humans by virtue of being human.

How does this relate to how we should view human dignity? This view of personhood as an ontological journey, made through dialogical relations with one's community, provides yet another reason to depart from the genetic determinism ingrained in the view of human dignity as espoused in the UDHGHR and the Oviedo Convention. From the communitarian perspective, all biology provides is the *capacity* for acquiring moral virtue by giving persons the means to enter into dialogical relations with their fellow humans and to form a community.[131] But, it is only by engaging in dialogical relations with their fellow man that persons can actualise personhood and fully become bearers of rights and duties. Accordingly,

[126] M Molefe 'Personhood and rights in an African tradition' (2018) 45(2) *Politikon* 225.
[127] Such as through the traditional African practice of imbizo, described in Chapter 2 supra at 75.
[128] Ramose op cit note 121 at 232.
[129] [2004] ZACC 7, 2005 (1) SA 217 (CC).
[130] Ibid para 37.
[131] K Gyekye 'Person and community in African thought' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (2002) 304.

the composition of one's genome is of little consequence, provided no alteration of the genome interferes with the capacity to — once born — become part of the community.[132]

Indeed, unlike bioconservative scholars who suggest that particular physical or cognitive traits, which are genetically determined, form the basis of what it is to be human, African scholars like Menkiti maintain that 'the African view of man denies that the person can be defined by focusing on this or that physical or psychological characteristic of the individual'.[133] In a similar vein, the lack of emphasis on the physical capacities of humans to establish moral worth in communitarianism was expressed by Mbiti — one of its more radical proponents — where he remarked that the process of birth is inconsequential to the attainment of personhood: 'Physical birth is not enough: the child must go through rites of incorporation so it becomes fully integrated into the entire society'.[134] This statement by Mbiti is useful in conveying the relationship between the physical body and the metaphysical person in communitarianism: Personhood is not commensurate with conception; a particular stage of embryonic or foetal development; nor with birth, per se .[135] This is because a child born without the capacity to commune (for instance, because they were genetically engineered to lack some feature fundamental to human connection such as empathy or emotion) would not be regarded as a person proper.[136] This is not to say that the human body/human genome is bereft of moral significance in African philosophy. To be sure, because of the importance given to hereditary in African cultures, the genome as the unit of hereditary commands respect. But this respect does not entail co-opting the Western approach of tying the moral significance of human beings to their genomes, and thus equating genetic selection to human selection.

What this view means in practical terms for the ethical implications of genetic selection, is that if an individual used CRISPR-Cas9 to prevent their child from being born with Down's Syndrome, this is not something which — in the Afrocentric view — would constitute undignified conduct. This is because of how viewing of personhood as determined by the

---

[132] For a similar argument regarding genetic enhancements, see T Metz 'A bioethic of communion: Beyond care and the four principles with regard to reproduction' in M Soniewicka (ed) *The Ethics of Reproductive Genetics: Between Utility, Principles, and Virtues* (2018) 62.

[133] IA Menkiti 'Person and community in African traditional thought' in RA Wright (ed) *African Philosophy: An Introduction* 3 ed (1984) 171.

[134] JS Mbiti *African Religions & Philosophy* 2 ed (1990) 141.

[135] Interestingly, Metz uses this reasoning to argue that abortion and PGT are not necessarily unethical, even for the purpose of genetic testing, since the embryo lacks moral standing as a person. However, he does make the important qualification that this does not mean they do not have any moral worth *at all*. See Metz op cit note 132 at 55–9.

[136] Note that this does not mean that such a person would have no moral status whatsoever. They simply could not be regarded as person and as a bearer of rights and duties as other persons are.

'capacity to commune'[137] does not link the inherent moral worth of the human person to the human genome. That said, if a potential application of CRISPR-Cas9 caused a child to be born with no capacity for autonomy, this would render that child unable to engage with his/her community in the manner needed to develop his or her personhood and become a fully actualised person. This kind of genetic modification would be viewed as being unacceptable, and (if we accept an extra-personal account of human dignity) undignified conduct.[138] It is thus evident that, from an Afrocentric perspective, we cannot justify a categorical prohibition of GGE by citing human dignity — but there may be grounds for limiting it.

(b) Viewing human dignity through the lens of the African ethic of Ubuntu

The inherently relational nature of human personhood in the Ubuntu ethic, requires a departure from the adversarial conceptions of human dignity as being both empowerment and a constraint. Instead, this view of personhood motivates moving towards an integrated view of person and community, in terms of which both the individual and the community are empowered and constrained by Ubuntu. In terms of this view, human dignity can be both empowerment and constraint, but there are boundaries regarding when the community's interests should win out over individual freedoms. As I indicated above, it is only through such clear boundaries that a coherent formulation of human dignity as a constraint can exist.

The communitarianism of Ubuntu is prefaced on the recognition that culture is a central resource from which all members of the community draw their way of life, world view and, to a large extent, their moral values. The corollary of this is that the community defines the outer limits of ethically permissible behaviour. As Coetzee puts it, 'an individual's way of life is a choice constrained by the community's pursuit of shared ends'.[139] In other words, communitarianism, properly construed, dictates that individuals are free to pursue their own ends in life, but within the parameters set by the core tenets of their community. In the Ubuntu ethic, these parameters are defined determinations of what conduct shows due respect for the humanness of others — something which is shaped by communal consensus.[140] It is important, however, to be mindful of the fact that the communal nature of the Ubuntu ethic does not accommodate majoritarian determinations of right and wrong. As Gyekye describes, while the cultural community has ontological primacy as the origin of values, and the originator of the

[137] I borrow this terminology from Metz, see Metz op cit note 132 at 50.
[138] This may also be an infringement of the right to human dignity of the prospective child. This issue is explored further in Chapter 6 infra at 195.
[139] Coetzee op cit note 123 at 275.
[140] Ibid at 278.

range of life goals individuals may pursue — it is not the case that the community has 'an all-engulfing moral authority to determine all things about the life of the individual'.[141] To reiterate, in cases dealing with the conflict between the interests of individuals and communities, what Ubuntu calls for is not a dominance by community or individual but a recognition of their interrelated relationship and a balancing of the interests of society against those of individuals.[142]

Indeed, the dynamic between the individual and the community in African philosophy is designed to serve the 'basic interests of all the members of the community',[143] which are *all identical*, in that they consist of those interests that are common to all members of the community. This is to be differentiated from the Utilitarian aggregation of the interests of the members of the community — that which does the greatest good for the greatest number — as well as the determination of what is in the public interest based on majoritarian consensus.[144] Rather, as Molefe puts it, the common good consists of the basic needs which all humans share.[145] It is for this reason that the 'common good' cannot be construed as demanding a course of action that is contrary to the interests of several members in the community, while simultaneously not evidently setting back the interests of any other individual in a substantial way, as is often the case with controversial biotechnology.

It is for these reasons that an extra-personal account of human dignity which permits arbitrary limitations on individual autonomy and human rights, is unacceptable. It treats the individual in a paternalistic way. These kinds of limitations fail to show respect for the freedom of the individual, and thus fail to treat him or her *with Ubuntu*. Those who defend these limitations also attempt to justify this with a construction of communal interests/good which is out of step with the view of the common good that communitarianism demands. Accordingly, with regard to SA's commitment to the value of Ubuntu, the country cannot accommodate an account of human dignity which constrains individual autonomy and human rights without meaningful engagement with whether there are legitimate justifications for this limitation. It is not enough that some, or even most, of the community view an act as inappropriate, for all this does is provide an occasion for communal discussion.[146] The prohibition of GGE on the

[141] Gyekye op cit note 131 at 301.
[142] *Makwanyane* supra note 77 para 250.
[143] K Gyekye 'African ethics' *Stanford Encyclopedia of Philosophy* 9 September 2010 available at *https://plato.stanford.edu/entries/african-ethics/*, accessed on 15 July 2020.
[144] Eze op cit note 124 at 386.
[145] Molefe op cit note 126 at 10.
[146] See Chapter 2 supra at 75.

grounds that it is contrary to human dignity calls upon an unrestrained version of the extra-personal account of human dignity, and seems founded on little more than the EU's commitment to the view of genetic selection as undignified conduct. Accordingly, the communitarian view of human dignity cannot accommodate the conceptualisation of human dignity contained in the UDHGHR and the Oviedo Convention because of its reliance on this version of an extra-personal account of dignity. This is insofar as it is seeks to elevate to the status of law a particular value judgement, even though it shares broad communal support. This approach is deficient in that it fails to account for the interests of individuals who may have need and moral justification for genetic selection, and in so doing fails to treat these individuals with Ubuntu.

VII CONCLUSION

In this Chapter, I engaged with the extant law on GGE in SA. I have shown that there are, in principle, two potential barriers to the permissibility of using CRISPR for reproductive purposes: (1) the provision in section 57 of the NHA relating to genetic manipulation, and (2) the provisions in international human rights documents relating to genetic selection asserting that the practice is contrary to human dignity. I have shown that, in both cases, while a reading of them as prohibiting GGE is *possible*, the strictures of SA law mandate taking a different view.

In the case of the NHA, the statutory principle of purposive interpretation — the core principle of interpretation in our law today — and several common law presumptions, require that section 57 of the NHA be read as applying to reproductive human cloning only, and not to GGE.

In the case of the international human rights documents in question, a critical examination of the conceptualisation of human dignity as used in these documents reveals that they rely on an extra-personal account of human dignity to rationalise its use as a constraint. In SA law, however, human dignity is mainly viewed as empowerment. Where it has been applied as a constraint, I have argued that the court failed to meaningfully engage with this issue, as this view of human dignity may conflict with the core values of the Constitution insofar as it permits state or communal interests to completely overshadow those of the individual. I have further argued that, from an Afrocentric perspective, the conception of human dignity found in the UDHGHR and the Oviedo Convention is unconvincing, as its attribution of moral significance to a 'unique genome', and its framing of dignified conduct based on little more than popular

sentiment, are both contrary to African views on the moral significance the person and contrary to the Ubuntu ethic.

To conclude, the extant law provides no legal barrier to GGE, and as such, it is my view that GGE is legal in SA. That said, the fact that it is in principle legal appears to be due largely to the legislature never having engaged with the question of whether GGE ought to be allowed, and if so, under what circumstances. In the following chapters I seek to engage with this question from the perspective of human rights, particularly the rights of prospective parents.

CHAPTER 4

REPRODUCTIVE RIGHTS AND NEW REPRODUCTIVE TECHNOLOGIES IN SOUTH AFRICA

I INTRODUCTION

This Chapter confronts a highly emotive and controversial topic: human rights and their relevance to the question of whether the use of CRISPR-Cas9 for germline genome editing should be permitted. This is a complex question that goes to the core of what human rights are and how they apply to novel reproductive technologies that shape decisions concerning reproduction. These novel technologies have shaped the development of reproductive rights, and in this Chapter I argue that this development is brought to its logical next-step by being applied to GGE using CRISPR-Cas9. But, in order to successfully make this argument (which I try to do in Chapter 5), it is necessary to first reflect on the history of human rights relating to reproduction, tracing their development from inception to present day South Africa. This Chapter does this, and thus sets the stage for arguments that will be made throughout the remainder of this thesis.

Reproduction has, for most of human history, been an act that required the direct use of our bodies. However, because of the advent of technologies that allow for conception to occur outside of the body (in vitro), and for gametes and embryos to be frozen and stored, this is no longer the case.[1] South Africa, like many other states, has introduced legal regulations on the use of new reproductive technologies (NRTs) — primarily through the Regulations Relating to Artificial Fertilisation of Persons.[2] While these regulations respond to some of the pertinent issues, NRTs still raise several questions that our law needs to address.[3]

One such issue is the nature of the protection given to the interests of individuals in choosing to engage in reproduction under SA law, that are routinely protected in the form of

[1] A Trounson & L Mohr 'Human pregnancy following cryopreservation, thawing and transfer of an eight-cell embryo' (1983) 305 *Nature* 707 at 709.
[2] Regulations Relating to Artificial Fertilisation of Persons in GN R175 in *GG* 35099 of 2 March 2012.
[3] The term 'new reproductive technologies' in this thesis is used to refer to modern advancements in reproductive technologies that allow human reproduction to occur outside of the body, primarily based on in vitro fertilisation such as IVF-based surrogacy. See JA Robertson *Children of Choice: Freedom and the New Reproductive Technologies* (1994).

the so-called 'reproductive rights'.[4] This is an issue that is pertinent to the present discussion given the heightened prominence of NRTs, including gamete cryopreservation and potentially CRISPR-Cas9,[5] which are opening up new reproductive possibilities that our law now has to deal with.

The interests of individuals in reproduction are protected in the form of reproductive rights, which have been widely acknowledged as fundamental human rights. Although reproductive rights are protected in SA's Constitution, as Van Niekerk observes, discourse on the scope of these rights has primarily focused on abortion.[6] This Chapter will not endeavour to further the abortion debate, as this is an issue which has been discussed at great length elsewhere.[7] Instead, this Chapter focuses on an issue that underlies all of the regulation of NRTs: How should reproductive rights apply to the use of NRTs? For the purpose of this Chapter this question is necessary to confront, for one must first understand the nature of one's rights in the context of artificial reproduction before considering whether these rights extend to technologies used for genetic selection like CRISPR-Cas9.

In responding to this question, it is necessary to consider what reproductive rights are as well as where they come from. Accordingly, I first discuss the history and origin of reproductive rights in international human rights documents, and trace how the scope and meaning of these rights influenced the inclusion of reproductive rights in the Constitution. Next, I analyse the application of reproductive rights in SA courts, and discuss the implications for NRTs. In particular, I argue that the way in which our courts have interpreted reproductive rights in relation to NRTs has been unduly restrictive and has failed to give effect to the fundamental freedoms of those who desire to form families using NRTs. I present arguments in favour of a broader interpretation of reproductive rights which gives effect to the freedom to form a family regardless of whether such a family is formed through natural reproduction or artificial reproduction.

---

[4] The terminology of reproductive rights refers, broadly, to the various rights which have been associated with human reproduction. In the South African context these are 1) the right to reproductive autonomy, and 2) the right to access reproductive healthcare. See section 12 of the Constitution of the Republic of South Africa, 1996.

[5] The categorisation of CRISPR-Cas9 as a reproductive technology is currently controversial, given that some view its use in human reproduction as either unnecessary and/or ethically unjustifiable. In this thesis I take the view that there are both practical and ethical reasons for using CRISPR as a reproductive technology for reasons I expand upon in Chapter 5 infra at 146.

[6] C Van Niekerk 'Assisted reproductive technologies and the right to reproduce under South African law' (2017) 20 *PELJ* 1 at 2.

[7] For a comprehensive discussion of reproductive rights in the context of abortion in South Africa, see M O'Sullivan 'Reproductive rights' in S Woolman & M Bishop (eds) *Constitutional Law of South Africa* (2013) 37-1–28.

II THE HISTORY OF REPRODUCTIVE RIGHTS IN INTERNATIONAL HUMAN RIGHTS JURISPRUDENCE

The early development of rights relating to reproduction in human rights documents focused on the limits of state control over reproductive choices. While more recently the scope of state power in restricting individuals' rights in reproduction has been considered in relation to access to abortion,[8] the concept of reproductive rights has its genesis in another conflict between state interests and individual liberties: The perceived threat posed by rapidly growing population numbers in relation to socio-economic development. While the various international human rights documents emanating from this period may not have the status of binding instruments in SA, their undeniable influence on the development of reproductive rights and how they were eventually defined as human rights, make them relevant to consider.

(a) Population, development, and state control of reproductive autonomy

The Universal Declaration of Human Rights (UDHR),[9] the first international instrument to codify the fundamental and inalienable rights of all humans, makes no direct reference to reproductive rights. The UDHR does, however, give legal protection to the freedom of individuals to *found a family* with a partner of their choice in article 16:

> 'Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to *found a family*… (emphasis added).'[10]

The right to found a family, as contained in article 16 of the UDHR, was developed in recognition of the role that families play as a 'natural and fundamental unit of society…entitled to protection by society and the State', and the UDHR sought to protect this social unit by entrenching the freedom of individuals to form families.[11] Since its inclusion in the UDHR, the right to found a family has received protection in multiple human rights instruments, and has been applied to guaranteeing the right to found a family by procreating[12] — and by adoption.[13] Article 16 of the UDHR also alludes to the fact that while the state has an interest in protecting

[8] The most famous example of this is the landmark US Supreme Court case of *Roe v Wade* 410 US 113 (1973).
[9] Universal Declaration Of Human Rights, UN General Assembly (10 December 1948) 217 A (III).
[10] Ibid, art 16(1).
[11] Ibid, art 16(3).
[12] P Sieghart *The International Law of Human Rights* (1983) 201–202.
[13] *Van Oosterwijck v Belgium* [1980] ECHR 7, cited in Sieghart ibid at 203.

the family unit, the choice to found a family is one enjoyed by the men and women exercising that choice.[14]

In the years following the UDHR, an accelerated growth in population due to high fertility rates in developing countries increasingly became a cause for concern.[15] This led to some states taking measures to control population numbers. These measures, which included national policies seeking to limit the number of children people could have (such as those in China),[16] were viewed by the international community as a violation of the fundamental human rights contained in the UDHR — in particular, article 16.[17] These issues were a core discussion point at the second World Population Conference (WPC) in 1965.[18] At the 1965 WPC, population experts generally agreed that higher rates of fertility in developing countries were a significant contributor to the 'population problem', and that state-driven family planning programmes — which some countries had already begun employing with reported positive results — provided a mechanism to respond to this phenomenon.[19]

While there was a consensus that states ought to undertake measures to stem the high fertility rates among populations, certain state measures (such as limiting the number of children that people could have) were perceived as unduly intrusive and unethical, and population experts agreed that states ought to be discouraged from taking such measures. As such, there was a need to balance the duties of United Nations (UN) member states to respect human rights, as per the UDHR, against the interests of these states in giving effect to population control policies. The first indication as to how this could be achieved came from a Resolution by the UN General Assembly in 1966.[20] The UN General Assembly resolved that

---

[14] See, International Covenant on Civil and Political Rights (adopted 16 December 1966, entered into force 23 March 1976) 999 UNTS 171 (ICCPR), art 23; International Covenant on Economic, Social and Cultural Rights (adopted 16 December 1966, entered into force 3 January 1976) 993 UNTS 3 (ICESCR), art 10.

[15] This led to an inquiry by the UN Secretary General on the impact of economic growth and population development among UN member states. See UN Secretary General 'Inquiry Among Governments on Problems Resulting from the Interaction of Economic Development and Population Changes' (24 November 1964) UN Doc E/3895/Rev 1.

[16] S G 'As China ends the one-child policy, what is its legacy?' available at *http://theconversation.com/as-china-ends-the-one-child-policy-what-is-its-legacy-49975*, accessed on 6 May 2021.

[17] T Ayala & L Caradon 'Declaration on population: The world leaders' statement' (1968) 1(26) *Studies in Family Planning* 1 at 2.

[18] United Nations 'Proceedings of the World Population Conference' UN Department of Economic and Social Affairs World Population Conference, 1965 (Belgrade, 30 August–10 September 1965) UN Doc E/CONF.41/2. Interestingly, the issue of family planning was not raised at the first World Population Conference in 1954. See PR Cox, J Peel & CJ Thomas 'The world population conference, Belgrade, 1965' (1966) 58 *The Eugenics Review* 7 at 7–14. Cox et al observe that this was because representatives from the 'Catholic countries' opposed discussions on family planning.

[19] Cox, Peel & Thomas op cit note 19 at 8.

[20] UN General Assembly Res 2211 'Population growth and economic development' (17 December 1966) UN Doc A/RES/2211(XXI).

population policies should be guided by the principle that 'the size of the family should be the free choice of each individual family' — a position ostensibly motivated by article 16 of the UDHR.[21]

A year later, UN stakeholders issued the Declaration of Population to affirm the 1966 Declaration and further address the emergent tension between the interests of states in protecting their development by controlling populations, and the freedom of individuals in determining the size of their families.[22] The Declaration of Population was originally signed by 12 heads of state,[23] and had the aim of both recognising the population problem as well as calling for population control measures that did not infringe on the rights of citizens. As such, the Declaration of Population concludes that the appropriate way to respond to this issue is by ensuring that individuals have the necessary access to information and resources in order to control their reproduction through family planning services. This is on the premise that 'a great majority of parents desire to have the knowledge and the means to plan their families; [and] that the opportunity to decide the number and spacing of children is a basic human right'.[24] In the Declaration of Population, we see the aegis of rights in reproduction develop beyond the right to have children, which is evident from a plain reading of article 16 of the UDHR. We now see reference being made to a right to decide the number and spacing of children. These two interrelated rights (to have children and to decide on their number and spacing), I refer to henceforth as 'the freedom to form a family'. The family planning approach to the population problem taken in the Declaration of Population had the view of developing the freedom to form a family, as opposed to limiting it.[25]

In 1967, the UN issued a statement relating to the population problem: the World Leader's Statement on the Declaration on Population (1967 Statement).[26] The 1967 Statement was an acknowledgement of the Population Council's efforts in promoting the Declaration on Population, leading to its acceptance by an additional 18 states — bringing the total to 30 states

[21] Ibid.
[22] UN Population Council 'Declaration of Population' (1967) 1(16) *Studies in Family Planning* 1.
[23] These states are Colombia, Finland, India, Malaysia, Korea, Morocco, Nepal, Singapore, Sweden, Tunisia, the (erstwhile) United Arab Republic, and Yugoslavia.
[24] Ibid.
[25] The emphasis on progressing individual autonomy in family planning is highlighted in the following conclusion from the UN Declaration of Population: 'We believe the objective of family planning is the enrichment of human life, not its restriction; that family planning, by assuring greater opportunity to each person, frees man to attain his individual dignity and reach his full potential.'
[26] Ayala & Caradon op cit note 17 at 1–3.

supporting the Declaration on Population.[27] In his speech at the presentation of the 1967 Statement, erstwhile Secretary-General of the UN, U Thant, referred to the recognition of the significance of the family unit in art 16 of the UDHR, and remarked that:

> 'The Universal Declaration of Human Rights describes the family as the natural and fundamental unit of society. It follows that any choice and decision with regard to the size of the family must irrevocably rest with the family itself, and cannot be made by anyone else. But this right of parents to free choice will remain illusory unless they are aware of the alternatives open to them. Hence, the right of every family to information and to the availability of services in this field is increasingly considered as a basic human right and as an indispensable ingredient of human dignity.'[28]

The 1967 Statement further embodies the emerging view of autonomy in relation to procreation as an integral part of the freedom to form a family, and that the exercising of this right is predicated upon access to resources.[29] At the first International Conference on Human Rights in 1968 (ICHR),[30] where UN member states met to review the progress made since the UDHR, the protection given to the autonomy of parents under this instrument was recognised as extending to determining the number and spacing of children.[31] Thus, the freedom to form a family was acknowledged as 'a basic human right' in the Proclamation of Tehran — the key outcome the ICHR.[32]

The WPC in 1974, while being the third of that name, was the first conference which was attended not by experts on population and development, but by representatives from 135 countries.[33] At this conference (as with the 1965 WPC), issues concerning the impact of socio-economic development and population were the focal points of discussion. From this conference emerged the World Population Plan of Action (WPPA), which intended to provide

---

[27] Ibid, 1. These states were Australia, Barbados, Denmark, the Dominican Republic, Ghana, Indonesia, Iran, Japan, Jordan, the Netherlands, New Zealand, Norway, Pakistan, the Philippines, Thailand, Trinidad and Tobago, the United Kingdom, and the United States.

[28] Ibid, 2.

[29] In these circumstances, the resources in question are 'information and services'. The services referred to here would ostensibly be whatever family planning services are made available to the state, including contraceptives, which played an integral part in family planning programmes. See, for example, the central role played by the provision and distribution of contraceptives in Pakistan's Family Planning Program in E Adil, JG Hardee & N Sadik 'Pakistan: The Family Planning Program, 1965–1967' (1968) 1 *Studies in Family Planning* 4 at 11.

[30] UN General Assembly 'International Conference on Human Rights' (Tehran 22 April–13 May 1968) (19 December 1968) UN Doc A/CONF.32/41 A/RES/2442.

[31] United Nations 'Final Act of the International Conference on Human Rights' UN International Conference on Human Rights (Tehran 22 April–13 May 1968) published on 19 December 1968 A/CONF.32/41.

[32] Article 16 of the Proclamation of Tehran. Proclaimed by the UN International Conference on Human Rights (13 May 1968) UN Doc A/7433.

[33] UN General Assembly 'Outcomes on Population' available at *https://www.un.org/en/development/devagenda/population.shtml*, accessed on 6 May 2021.

a framework for the implementation of domestic law among individual states, which would respond to various population issues — including family and reproduction.[34] The WPPA recognised the freedom to form a family, as well as the right to information and education necessary to exercise this right.[35] It further included recommendations for states to give effect to these rights.[36]

What is evident from the preceding discussion is that while the family unit is something that is significant to the state because of its role in society, it only comes into being as a result of the 'free choice' of individuals.[37] Thus, the freedom to form a family protects the rights of individuals to make this choice which, in the case of reproduction, entails the decision to have a child — or to abstain from doing so. This is the rationale behind the concept of reproductive autonomy which would be further developed in the coming years.

(b) Reproductive rights as women's rights

In 1975, which had been declared 'International Women's Year', the UN held the first World Conference on Women (Women's Conference).[38] The Women's Conference was a landmark event in the women's rights movement. One hundred and thirty three states gathered in Mexico City to discuss issues relating to gender inequality and recognising the contributions of women to society.[39] The Women's Conference marked the beginning of a new phase in the evolution of reproductive rights as human rights. The way in which rights relating to reproduction were conceived would henceforth no longer be limited to the protection of the freedom to form a family by ensuring individuals were informed and educated regarding their reproductive choices. Instead it would be used as a tool in the women's rights movement to respond to issues faced by women in relation to reproductive healthcare.

While the South African government was excluded from participation in the Women's Conference because of its apartheid policies of the time, representatives of the African National Congress attended as observers.[40] The key outcome of the Women's Conference was the Declaration of Mexico on the Equality of Women and Their Contribution to Development and

[34] United Nations 'World Population Plan of Action' UN World Population Conference (Bucharest 19–30 August 1974) UN Doc E/CONF.60/19 ('WPPA').
[35] Ibid, Principles and Objectives (f).
[36] Ibid, Recommendations 39–43.
[37] See UN General Assembly Res 2211 (1966) UN Doc A/RES/2211(XXI); Ayala & Caradon op cit note 18 at 2.
[38] United Nations 'Report of the World Conference of the International Women's Year' UN (Mexico City 19 June–2 July 1975) UN Doc E/CONF.66/34 ('Report on the Women's Conference').
[39] Ibid at 1.
[40] Ibid at 122.

Peace (Declaration of Mexico).[41] Principle 12 of the Declaration of Mexico states: 'Every couple and every individual has the right to decide freely and responsibly whether or not to have children as well as to determine their number and spacing, and to have information, education *and means to do so.*'[42]

This was the first explicit recognition, in an international human rights document, of the right to decide not to have children (ie the right to abstain from reproduction).[43] Moreover, it also refers to the right of women to the *means* necessary to exercise their reproductive choices, over and above the already recognised rights to information and education on family planning. And where women did choose to have children, article 113 of the World Plan of Action for the Implementation of the Objectives of the Conference of the International Women's Year,[44] described the means which states were required to provide in terms of principle 12 of the Declaration of Mexico. These included: healthcare in the form of 'pre-natal and post-natal and delivery services; gynaecological and family planning services…'.[45]

The Women's Conference also marks the first enunciation of the right of individuals to access healthcare services related to reproduction.[46] In acknowledging why promoting the right of access to healthcare was important for women, specific reference is made to SA in an expression of concern regarding the status of women under apartheid, who have been denied the possibility 'of having access to adequate medical care, even within the context of maternal and child welfare'.[47] Governments were called upon to take legislative and other measures to promote the provision of healthcare related to reproduction in a Plan of Action produced at the Women's Conference, to guide states in giving effect to their international commitments.[48]

At the 1984 International Conference on Population (ICP), efforts to stem the population challenge through family planning programmes were reported as having shown a measure of success, with evidence of fertility rates declining and of improvements in the socio-economic

[41] Ibid at 2–7.
[42] Ibid at 5. Emphasis added.
[43] This was not a novel idea, however the right to abstain from reproduction was implicit in the freedom of individuals to decide on the 'number and spacing of children'.
[44] UN General Assembly 'Implementation of the World Plan of Action adopted by the World Conference of the International Women's Year' (12 December 1975) A/RES/3490.
[45] Report on the Women's Conference op cit note 40 at 25.
[46] This recognition is expressed prominently in the Resolutions and Decisions Adopted by the Women's Conference. See, ibid at 71.
[47] Ibid at 74.
[48] See paras 109, 113, 114, and 116 of the Plan of Action in Report on the Women's Conference 8–51. This call was reiterated by the UN General Assembly a few months later. See UN General Assembly Res 3520 'World Conference of the International Women's Year' (15 December 1975) UN Doc A/RES/3520.

conditions of developing states.[49] In the aftermath of the Women's Conference, the ICP focused on ensuring that individuals have an effective realisation of their right to the means necessary for forming a family. In the Recommendations for the Further Implementation of the World Population Plan of Action coming from the ICP, the fact that states needed to do more to ensure the realisation of the freedom to form a family, and the role of family planning and reproductive healthcare services in giving effect to the autonomy of prospective parents, was emphasised:

> 'Governments should, as a matter of urgency, make universally available information, education and the means to assist couples and individuals to achieve their desired number of children…to ensure a voluntary and free choice in accordance with changing individual and cultural values.'[50]

The growing recognition of reproductive autonomy and reproductive healthcare as fundamental human rights came to a head in 1994 at the International Conference on Population and Development (ICPD),[51] where SA was in attendance.[52] In the Plan of Action adopted by this conference,[53] 'Reproductive Rights and Reproductive Health' were one of the primary areas of focus, and from this emerged the first formal definition of reproductive rights in international law:

> 'Reproductive rights embrace certain human rights that are already recognized in national laws, international human rights documents and other consensus documents. These rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. It also includes their right *to make decisions concerning reproduction* free of discrimination, coercion and violence, as expressed in human rights documents (emphasis added).'[54]

The ICPD also gives meaning to reproductive healthcare as a separate, but interrelated, right:

---

[49] UN Population Information Network 'Recommendations for the Further Implementation of the World Population Plan of Action' available at *https://www.un.org/popin/icpd/conference/bkg/mexrecs.html*, accessed on 25 April 2021.
[50] Ibid, Recommendation 25.
[51] International Covenant on Civil and Political Rights (adopted 16 December 1966, entered into force 23 March 1976) 999 UNTS 171. For further insight into the significance of the 1994 ICPD, see S Heidari 'Sexual rights and bodily integrity as human rights' (2015) 23 (46) *Reproductive Health Matters* 1.
[52] United Nations 'Report of the International Conference on Population and Development' UN Population Fund (Cairo 5–13 September 1994) 1995 UN Doc (A/CONF.171/13/Rev.1) at 117.
[53] UN Population Fund 'Programme of Action' adopted at the ICPD (Cairo 5–13 September 1994).
[54] Ibid at 46.

'*Reproductive health* is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes (emphasis added).'[55]

(c) Reproductive rights in the Constitution

Unlike its predecessor, the Interim Constitution,[56] the Constitution makes explicit reference to reproductive rights in section 12 of the Bill of Rights[57] which deals with the freedom and security of the person, and in section 27 which relates to socio-economic rights. The conceptualisation of reproductive rights put forward in the ICPD Plan of Action was influential, not only in subsequent human rights documents,[58] but also in the way in which reproductive rights were formulated in SA — as evidenced by the fact that the wording of these rights draws directly from this document:

'(2) Everyone has the right to bodily and psychological integrity, which includes the right-

'(a) to *make decisions concerning reproduction* (emphasis added).'

Reproductive rights are also found in section 27 of the Bill of Rights, which is the right to healthcare, food, water and social security. This provision specifically refers to reproductive healthcare in section 27(1)(a), which states:

'(1) Everyone has the right to have access to-

'(a) health care services, including *reproductive health* care (emphasis added).'

This provision places a duty on the state to, 'take reasonable legislative and other measures' to ensure the realisation of the right to reproductive healthcare. This is in the same way that reproductive healthcare, as per the ICPD, enjoins states to safeguard the realisation of reproductive rights through ensuring access to reproductive healthcare services.[59] Clearly, then, the inclusion of reproductive rights in the Constitution, and this wording, was done while being mindful of the international developments regarding reproductive rights and with the purpose

[55] Ibid, 45.
[56] Constitution of the Republic of South Africa Act 200 of 1993 (Interim Constitution).
[57] Reproductive Rights receive no mention in the Interim Constitution. This is likely because much of the content of the Bill of Rights was a product of political activism, and women's rights activists in South Africa were unable to complete the Women's Charter in time for it to be used as a platform for advocating the inclusion of reproductive rights. See C Albertyn 'Women and the transition to democracy in South Africa' (1994) *Acta Juridica* 57.
[58] The ICPD definition of reproductive rights was supported in the 1995 World Conference on Women in Beijing established in its Platform of Action. See United Nations 'Report of the Fourth World Conference on Women' UN (Beijing, 4–15 September 1995) UN Doc A/CONF.177/20/Rev.1.
[59] ICPD at 57.

of incorporating the full gamut of legal protections afforded to decisions concerning reproduction and access to reproductive healthcare in international human rights documents.

III REPRODUCTIVE RIGHTS JURISPRUDENCE IN SOUTH AFRICA: AN OVERVIEW

As with the advancements of the rights relating to reproduction in international human rights documents, the early development of reproductive rights in SA was shaped by historical context. Abortion was highly topical at the time the Constitution was drafted.[60] This was partly because the current statute on abortion — The Choice on Termination of Pregnancy Act 92 of 1996 (Choice Act) — was under development during that same period.[61] After reproductive rights were included in the draft for the Constitution and its text was made available for public commentary, objections were raised to s 12(2)(a) on the basis that it potentially permitted abortion.[62] In considering whether this objection was a ground for a right to reproductive autonomy not to be included in the final version of the Constitution, the Constitutional Court in *Certification of the Constitution of the Republic of South Africa, 1996* found that it was not.[63] The Constitutional Court stated that its duty in the certification process was not to make a ruling on abortion but to adjudicate the Constitution's consistency with the Constitutional Principles — and the applicable principle, in this case, was that the final Constitution must include 'all universally accepted fundamental rights' — which reproductive rights clearly were.[64]

(a) Reproductive rights and natural reproduction

In light of how prominent the abortion issue was, it is unsurprising that the first case to engage with s 12(2)(*a*) came shortly after the Constitution came into effect, and related to the constitutionality of the Choice Act — *Christian Lawyers Association of South Africa v Minister of Health.*[65] In *Christian Lawyers*, the Constitutional Court implicitly recognised a constitutionally protected right to abortion based on reproductive autonomy, when it remarked

[60] The issue of a 'right to abortion' had been discussed during the development of the Interim Constitution, but the controversial and polarising nature of this debate saw a general consensus against its specific inclusion in the Bill of Rights. See LM Du Plessis & JR De Ville 'Personal rights: life, freedom and security of the person, privacy, and freedom of movement' in D Van Wyk, J Dugard, B de Villiers & D Davis (eds) *Rights and Constitutionalism: The New South African Legal Order* (1994) at 231.
[61] Both the Choice Act and the Constitution were finalised in the same year — 1996.
[62] *Certification of the Constitution of the Republic of South Africa* 1996 [1996] ZACC 26, 1996 (4) SA 744 (CC), para 59.
[63] Ibid, para 60.
[64] Ibid.
[65] *Christian Lawyers Association of South Africa v Minister of Health* (1998) 4 SA 1113 (T) ('*Christian Lawyers*').

that '[s]ection 12(2) provides that everyone has the right to make decisions concerning reproduction and to security in and control over their body' and concluded that this right underscored the constitutionality of abortion.[66] This implicit recognition was made explicit in *Christian Lawyers Association v Minister of Health (II),*[67] where Mojapelo J describes section 12(2)(a) as existing to protect a woman's 'right to self-determination',[68] and held that: 'The right of every woman to choose to terminate her pregnancy or not, is enshrined in sections 12(2)(a) and (b), 27(1)(a), 10 and 14 of the Constitution'.[69] Both these judgments considered section 12(2)(a) in the context of natural reproduction, and so refer to reproductive autonomy as underscored by both bodily integrity and security in, and control over, the body. This is a consequence of the fact that, with natural reproduction, all decisions concerning reproduction will relate to the body.

H v Fetal Assessment Centre[70] marks the first instance of the Constitutional Court considering the application of reproductive autonomy outside the context of abortion, but still in relation to natural reproduction. This case related to whether SA's legal position that a child cannot bring an action against a medical practitioner for a negligent act or omission that resulted in the child being born with a disability, was unconstitutional.[71] While the focus of this case was elsewhere, the Constitutional Court made certain remarks, obiter dictum, that section 12(2)(a) would be infringed by the negligent conduct of a medical practitioner which interfered with the parents' reproductive plans.[72] Commenting on the nature of the legally recognised harm caused to parents by medical negligence resulting in an unwanted pregnancy, Ackerman J remarks:

> '[H]aving regard to the fundamental right of everyone to make decisions concerning reproduction and to security in and control over one's body, the harm may simply be seen as an infringement of the right of the parents to exercise a free and informed choice in relation to these interests.'[73]

[66] Ibid para 1441J-1442A.
[67] *Christian Lawyers Association v Minister of Health* 2005 (1) SA 509 (T) ('*Christian Lawyers (II)*').
[68] Ibid para 524H.
[69] Ibid para 528D.
[70] 2015 (2) SA 193 (CC).
[71] *H v Fetal Assessment Centre* [2014] ZACC 34, 2015 (2) SA 193 (CC).
[72] Ibid para 59.
[73] Ibid.

The comments by Ackerman J in this regard could open the door to claims against medical practitioners, by parents, for the negligent frustration of reproductive plans. However, no such claim has yet been brought.[74]

(b) Reproductive rights and artificial reproduction

The only occasion that the Constitutional Court has had to consider the application of reproductive rights in the context of artificial reproduction was in *AB v Minister of Social Development.*[75] The first applicant in this case was a woman referred to as AB. AB wanted to have a child, but had difficulty doing so and required medical assistance. Despite several attempts to fall pregnant via IVF, she was unsuccessful. Her doctor informed her that she was 'conception infertile'.[76] This was because she was unable to produce viable eggs for the purpose of artificial reproduction. AB thereafter began using both donor sperm and eggs, but, after several unsuccessful attempts at pregnancy, she was diagnosed as being 'pregnancy infertile'[77] — she was incapable of carrying a fetus to term. She then considered using surrogacy to become a mother and was put in contact with a prospective surrogate mother through an agency, but learned that the law prohibited her from proceeding with the surrogate motherhood agreement. Section 294 of the Children's Act,[78] provides that:

> 'No surrogate motherhood agreement is valid unless the conception of the child contemplated in the agreement is to be effected by the use of the gametes of both commissioning parents or, if that is not possible due to biological, medical or other valid reasons, the gamete of at least one of the commissioning parents or, where the commissioning parent is a single person, the gamete of that person.'

This provision excluded AB from using surrogacy since she was unable to carry a child or contribute a gamete for the conception of a child. In order to have a child, AB would have to use gametes from a male and female donor, fertilised in vitro, to be transferred to the womb

[74] I suggest that such a claim would be appropriate where medical negligence results in harm in the form of interference with the prospective parents' autonomy that falls outside of the legal harms currently recognised in our law. Such a claim may be for constitutional damages in terms of s 38 of the Constitution, on the grounds that there is an apparent violation of s 12(2)(a) and no other suitable legal remedy is available. See *Modderfontein Squatters, Greater Benoni City Council v Modderklip Boerdery (Pty)* Ltd [2004] ZASCA 47, 2004 (6) SA 40 (SCA) para 43-45. This issue is discussed in more detail in Chapter 5 infra at 160.

[75] *AB v Minister of Social Development* [2016] ZACC 43, 2017 (3) SA 570 (CC). For a detailed discussion of the legal proceedings in *AB*, see DW Thaldar 'Post-truth jurisprudence: The case of AB v Minister of Social Development' (2018) 34 *SAJHR* 231.

[76] This is the terminology employed by the court in the *AB* judgment, and will be used in this thesis for that reason. See *AB v Minister of Social Development* supra note 75 para 8(d).

[77] Ibid.

[78] Children's Act 38 of 2005.

of a surrogate.[79] AB sought to have section 294 of the Children's Act declared unconstitutional. Her claim was that section 294 violated her rights to privacy, reproductive autonomy, dignity, equality and non-discrimination, and access to healthcare.[80] The High Court found in AB's favour,[81] and the constitutional challenge proceeded to the Constitutional Court[82] where the judgment was divided.[83] Regarding reproductive autonomy, the High Court found that AB's decision to choose to use donor gametes fell within the ambit of section 12(2)(a),[84] and that the so-called 'genetic link requirement' in section 294 of the Children's Act was unconstitutional because it infringed upon AB's reproductive autonomy.

In the Constitutional Court, Nkabinde J, writing for the majority,[85] disagreed with the High Court's conclusion, reasoning that section 12(2)(a) of the Constitution pertains only to an individual's own body and does not extend to the body of another.[86] The majority found that a limitation on the use of surrogacy by infertile persons was not an infringement of section 12(2)(a). In reaching this conclusion, the majority notes that section 12(2)(a) has primarily been interpreted to relate to peoples' ability to make decisions about their own bodies.[87] On this basis Nkabinde J states that:

> 'I acknowledge the need to respect the autonomy of commissioning parents in relation to the choices they make, for purposes of concluding surrogacy agreements. However, section 12(2)(*a*) does not give anyone the right to bodily integrity in respect of someone else's body.'[88]

Nkabinde J's reasoning was that section 12(2) of the Constitution refers to individuals as having a right to both bodily and psychological integrity and views the fact that these two concepts have historically been applied together as evidence for interpreting section 12(2)(a) as being inextricably linked to both bodily *and* psychological integrity. As such, any limitation of autonomy relating to reproduction is only an infringement of section 12(2)(a) if it invokes both psychological integrity and bodily integrity, and not if it only affects psychological

[79] A procedure commonly referred to as IVF-based surrogacy.
[80] *AB* supra note 75 para 12.
[81] *AB v Minister of Social Development As Amicus Curiae: Centre for Child Law* [2015] ZAGPPHC 580, 2016 (2) SA 27 (GP) ('*AB (High Court)*').
[82] *AB* supra note 75 para 16.
[83] Of the 11 justices who heard this case, a minority of four supported Khampepe J's judgment, while the remaining seven supported Nkabinde J's judgment.
[84] *AB (High Court)* supra note 81 para 922.
[85] *AB* supra note 75 para 236.
[86] Ibid para 313.
[87] Ibid para 312. Nkabinde J refers to *Christian Lawyers (II)* supra note 67, and *Certification Judgement* supra note 62.
[88] Ibid para 315.

integrity. Thus, AB's decision to choose donor gametes does not fall within the ambit of section 12(2)(a), because her bodily integrity is not implicated.

On the other hand, Khampepe J, writing for the minority, agreed with the High Court's conclusion.[89] Khampepe J describes surrogacy through the use of NRTs[90] as one of the 'wonders of modern medical technology', and interpreted section 12(2)(a) as protecting the right of individuals to make decisions concerning reproduction *even where they do not invoke bodily integrity by limiting the use of one's own body*.[91] In reaching this conclusion, the minority noted that while there are many individuals who use artificial reproduction and surrogacy as a matter of choice, these technologies are particularly important to people who cannot physically be involved in reproduction due to their infertility. And for these people, artificial reproduction is the only way to experience parenthood (as fertile parents do) from before the stage of conception, through pregnancy, and up to the moment of birth and beyond.[92] This allows for the development of a strong psychological bond between the parent and the child-to-be in a way not otherwise possible.[93] Ergo, the minority's analysis of section 12(2)(a) concluded that, for section 12(2)(a) reproductive autonomy to be infringed, an individual need only show an inability to make a decision resulting from some law or state conduct, and that this caused at least psychological harm.[94]

The minority and majority judgments in *AB* each offer distinct ways in which to view the scope of reproductive autonomy. Nkabinde J interpreted section 12(2)(a) as an instance of bodily integrity, thus necessitating that use of the body is limited for an infringement to occur. In this sense, the majority viewed reproductive autonomy as protecting one's right to control how one uses one's own body in reproduction. This I will refer to as the 'narrow interpretation of reproductive autonomy'.[95] The minority interpreted reproductive autonomy more broadly, viewing this right through the lens of one of the core values of the Constitution — freedom, as enshrined in section 1.[96] Khampepe J holds that this value is one of great significance to our society because of SA's history as a country where many people were deprived of their

[89] Ibid para 236.
[90] Surrogacy can occur via artificial fertilisation through embryo transfer after IVF, or through artificial insemination, which is 'the placing of male gametes (sperm) into the female reproductive tract by means other than copulation'. See reg 1, Regulations Relating to Artificial Fertilisation of Persons.
[91] *AB* supra note 75 para 70.
[92] Ibid paras 181–185.
[93] Ibid para 74.
[94] Ibid.
[95] So described because it construes reproductive autonomy more narrowly than the minority judgment.
[96] *AB* supra note 75 para 55.

freedom.[97] Thus, interpreting section 12 as a whole under the aegis of the value of freedom, Khampepe J finds that this provision 'vivifies the rights protected by section 12 of the Constitution' — especially in the case of section 12(2)(a) that guards an individual's freedom in making decisions related to reproduction.[98] This I term the 'broad interpretation of reproductive autonomy', which differs from the narrow interpretation in that it does not limit the scope of reproductive autonomy to the use of one's own body. Rather, it conceives section 12(2)(a) as protecting the freedom of individuals to make any decision relating to reproduction — even if these choices do not entail the use of one's own body. This would include the choice to use a surrogate mother to carry donor gametes in order to have a child.

IV ANALYSIS OF THE *AB* JUDGMENT

The conclusion derived from the majority judgment in *AB* is that reproductive autonomy applies to the use of NRTs only where these technologies involve the use of one's own body, and this right fails to apply where assistance requires the use of another person's body. This conceptualisation of reproductive autonomy is problematic for at least two reasons that arise in relation to NRTs: First, it is based on a linking of reproductive autonomy to bodily integrity, for which I suggest there is no rational justification. Second, it precludes the choice to have a child as being constitutionally protected under section 12(2)(a) if such a decision relates to in vitro gametes, even though the choice to use NRTs is, in my view, is a decision concerning reproduction in terms of section 12(2)(a). I analyse each of these issues in more detail below.

(a) Interpreting reproductive autonomy as bound to bodily integrity

(i) Textual analysis

At the core of the narrow interpretation of reproductive autonomy is the premise that the use of the word 'and' in section 12(2) of the Constitution indicates that this provision can only be seen as meaning that both bodily integrity *and* psychological integrity must be implicated for section 12(2)(a) to be infringed. A plain reading of the text of this provision suggests otherwise. At several points in our Constitution, the word 'and' is used — in those instances, it often denotes two (or more) separate concepts, which are mentioned together, but each must be viewed independently. For instance: section 24 — the right to have the environment protected — provides that the state must take reasonable measures to 'prevent pollution and ecological

[97] Ibid paras 50–51.
[98] Ibid para 70.

degradation'.[99] Does it follow from this that the state is bound to only enact laws that both prevent pollution *and* ecological degradation? Would a law which prevented only pollution and not ecological degradation be unconstitutional? Clearly not. Similarly, a plain reading of the text of section 12(2) necessitates that we view bodily and psychological integrity as two separate concepts, each applicable to subsections (a), (b), and (c) in their own right. Courts, prior to *AB*, viewed section 12(2) in this way.[100]

But could there be a reason to interpret bodily and psychological integrity together, specifically in the context of s 12(2)(a)? The majority in *AB* seemed to think so. As the minority judgement points out:

> 'The [majority] judgment does not find that s 12(2) as a whole is limited to instances where there has been harm to a person's bodily integrity. A person may still, for instance, have the right in terms of s 12(2)(c) not to be subjected, without consent, to a scientific experiment composed only of psychological harm. Instead, the judgment concludes that s 12(2)(a) in particular is limited to cases where the person's body is affected.'[101]

There is nothing in the text of section 12(2) to support the conclusion that bodily integrity must be implicated for infringements of section 12(2)(a), but not 12(2)(c). Neither subsection features the word 'body'. Moreover, the body finds specific protection elsewhere — section 12(2)(b). If any of the subsections to section 12(2) were a candidate for having their scope limited to harms which impinge upon bodily integrity, it would be 12(2)(b), not s 12(2)(a). Accordingly, *there is nothing in the text of section 12(2) that points to why reproductive autonomy ought to be bound to bodily integrity*.

(ii) Historical analysis

In reaching its conclusion on the narrow interpretation of reproductive autonomy, the majority cites as justification the history of this provision in the Interim Constitution and in case law.[102] However, it is not apparent how a narrow interpretation of reproductive autonomy flows logically from this history, which I will show by briefly reflecting on the cases preceding *AB*.

Regarding the case law on abortion, as the minority judgement correctly points out, section 12(2)(a) has not been applied as protecting a woman's choice to terminate her

[99] Section 24 (b)(i), Constitution.
[100] See *Minister of Safety and Security v Gaqa* [2002] ZAWCHC 9.
[101] *AB* supra note 75 para 53. Whether the minority's observation is correct is unclear, as no similar statement appears in the majority judgment.
[102] Ibid paras 312–313.

pregnancy *only* because abortion affects the woman's body, but also because of the impact that it has on the woman's freedom of choice.[103] In light of this, one must question why the fact that section 12(2)(a) has *so far* been interpreted in conjunction with bodily integrity should be taken as indicating that this is how it must be interpreted in perpetuity. As outlined above, that reproductive autonomy has been interpreted as relating to the body is a consequence of past cases on section 12(2)(a), all relating to natural reproduction. And with natural reproduction, bodily and psychological integrity will both be impacted by limitations to decisions concerning reproduction. *Prior courts never considered reproductive autonomy as separate from bodily integrity, simply because they never had occasion to do so*. As such, there is nothing in the case law that necessitates the conclusion that section 12(2)(a) is bound to bodily integrity, nor does such a conclusion emerge from the predecessor of section 12 — section 11 of the Interim Constitution. The wording of section 11 is:

> '(1) Every person shall have the right to freedom and security of the person, which shall include the right not to be detained without trial.
>
> '(2) No person shall be subject to torture of any kind, whether *physical, mental or emotional*, nor shall any person be subject to cruel, inhuman or degrading treatment or punishment (emphasis added).'

The majority refers to section 11 as having been interpreted as primarily protecting physical integrity,[104] referring to *Ferreira v Levin*.[105] It must be noted that in *Ferreira* it was explicitly stated that section 11 was not exclusively concerned with protecting physical integrity. Chaskalson P states 'this is, not necessarily the only, purpose of s 11(1)'.[106]

What is more, section 12 of the Constitution is substantially different from section 11 of the Interim Constitution. The chief difference is that the decision in *Ferreira* related to the interpretation of the phrase 'security and freedom of the person' — which is now enshrined in section 12(1) of the Constitution — not section 12(2).[107] No reference is made in section 11 to

[103] Ibid para 78.
[104] Ibid para 309.
[105] *Ferreira v Levin* [1995] ZACC 13, 1996 (1) SA 984 (CC).
[106] Ibid para 170.
[107] This is an issue that is raised by the minority judgment to which the majority does not respond. See *AB* supra note 75 para 77.

bodily or psychological integrity.[108] As such, section 12(2) and its subsections stand to be interpreted in their own right.

Clearly, then, a narrow interpretation of section 12(2) does not follow from the history of this right in our courts. Nor could it. As I have already stated, the fact that reproductive autonomy has been interpreted together with bodily integrity is not in itself evidence that it must be interpreted that way now. This is especially in relation to in vitro gametes and embryos where the body is no longer necessarily involved in conception. There are, in fact, several reasons why it should not be.

As Van Niekerk observes, our law has, for a long time, recognised the psychological and physical dimensions of harms as separately actionable in delict, and she believes that the same approach should be taken with section 12(2)(*a*).[109] Van Niekerk suggests there is a reason to interpret psychological integrity as a self-standing right and not as being dependent on bodily integrity. She argues that to say that psychological harm is not, on its own, actionable would render these cases redundant.[110] While it is true that the *AB* majority judgment's failure to give legal recognition to the psychological harm to AB is problematic, it should be noted that the majority's findings relate to the scope of an enshrined right and ought not to be applied to the law of delict generally. The point made here that our law already acknowledges psychological integrity as worthy of protection independently is, however, an important one.

(iii) Comparative analysis

As evident from the preceding discussion, the argument for conceptualising reproductive autonomy as disentangled from bodily integrity turns on the claim that bodily integrity and psychological integrity are capable of being viewed as separate, self-standing, rights which may each be infringed by limitations of reproductive autonomy. That section 12 can, and should, be interpreted as in this way may be illustrated with reference to how other jurisdictions have responded to the question of how reproductive autonomy relates to psychological integrity.

The application of reproductive rights to NRTs is an issue that turns, in large, on the way in which the rights relating to reproduction have been conceptualised in a particular

[108] Although it does acknowledge the psychological dimensions of the person as worthy of protection as indicated in the underlined words. Du Plessis and De Ville posit that these words indicated s 11 also protected the psychological and mental attributes of the person. See Du Plessis & De Ville op cit note 60 at 235.
[109] Van Niekerk op cit note 6 at 16.
[110] Ibid.

jurisdiction. In the United States (US), for example, there has been extensive debate about whether there can even be said to be a positive right to reproduce (or a negative right not to procreate) which extends to artificial reproduction given that, historically, the freedom to make decisions related to reproduction has been protected under the aegis of the right to privacy.[111] This emanates, in part, from the fact that the US Constitution does not directly refer to reproductive autonomy, nor has US law in this area seemingly been influenced by progressions at international level. It is, however, worth noting that several US cases have spoken to the significance of the legal entrenchment of reproductive autonomy for reasons not limited to the fact that it is an activity which involves the use of one's own body.

Through decisions such as *Griswold v Connecticut*[112] and *Roe v Wade*,[113] US courts have conceptualised reproductive autonomy as worthy of legal protection because the decision to have a child (or not to) relates to a private aspect of an individual's life, and the freedom of an individual to make such a private choice is an integral dimension of their right to equality.[114] NeJaimie posits that viewing reproduction in this way requires only that we remind ourselves that choosing to have children is more than just the act of procreation — it is also a deeply personal decision that shapes the life narrative of many people.[115] As such, all those who choose to exercise their freedom to form a family should have their decision to do so equally respected — be they single, same-sex couples, gender non-conforming persons, or any other individuals who do not fit within the heteronormative paradigms that tend to dominate the regulation of reproduction. Put differently, the lesson that can be learned from US jurisprudence on decisions concerning reproduction, is that the scope of reproductive autonomy is not only limited to barring state intrusion into how one may use one's body. It also extends to what the court in *Eisenstadt v Baird*[116] referred to as 'the right of the individual, married or single, to be free from unwarranted governmental intrusion into matters so fundamentally affecting a person as the decision to bear or beget a child'.[117]

[111] R Rao 'Equal liberty: Assisted reproductive technology and reproductive equality' (2008) 76 *The George Washington Law Review* 1457 at 1470. See, also, IG Cohen 'The Constitution and the rights not to procreate' (2008) 60 *Stanford Law Review* 1138.
[112] *Griswold v Connecticut* 381 US 479 (1965).
[113] *Roe v Wade* 410 US 113 (1973).
[114] D NeJamie 'Griswold's Progeny: Assisted Reproduction, Procreative liberty, and sexual orientation equality' (2015) *The Yale Law Journal Forum* 340.
[115] Ibid at 343.
[116] *Eisenstadt v Baird* 405 US 438 (1972).
[117] Ibid para 453.

All that said, the differences in the constitutional structure of the US and our Constitution may be argued to be a reason for limiting the scope of section 12(2)(a) to the use of one's own body. Unlike in the US, our Constitution makes explicit reference to 'bodily integrity' as one of the rights protected under section 12, as part of this provision's aim to entrench 'Freedom and Security of the Person'. To this end, a comparison with section 7 of the Canadian Charter of Rights and Freedoms is opportune, given that it protects 'Life, liberty and security of the person'[118] in words very similar to section 12. It is worth noting that in Canadian law, bodily integrity and psychological integrity are both — *separately* — viewed as elements of the right to life, liberty and security of the person.[119] Accordingly, an individual's rights under section 7 may be infringed based solely on violations of their psychological integrity[120] — such as where a women suffers psychological distress due to a law which prohibits her from making a decision concerning reproduction.[121] For section 7 to be impugned by violations of psychological integrity, one must show that a particular occurrence had 1) a profound impact psychologically; and 2) it resulted from state action.[122] Given the similarity to section 12, there is no reason why a similar approach cannot be taken in SA, in terms of which an individual's rights under section 12 may be infringed based solely on violations of their psychological integrity.

The above comparison illustrates that in matters of reproduction, there is no reason in law why bodily integrity must be viewed as the sole foundation of reproductive rights, to which psychological integrity is subordinate. Rather, *reproductive rights ought to be viewed more broadly, by recognising that both the psychological and bodily well-being of individuals are deserving of legal protection*. And while bodily integrity may be (justifiably) emphasised in most cases, there may be cases where we need to give greater weight to the psychological implications of a decision concerning reproduction, because of the extent to which such a decision is of a deeply personal nature, and something which the state ought not to intrude upon.

[118] The Constitution Act, 1867.
[119] *R v Morgentaler,* [1988] 1 SCR 30.
[120] See New Brunswick (Minister of Health and Community Services) v G (J), [1999] 3 SCR 46.
[121] *R v Morgentaler* supra note 119 paras 60–61.
[122] See *Blencoe v British Columbia (Human Rights Commission)*, [2000] 2 SCR 307 paras 60–61; *Winnipeg Child and Family Services v KLW*, [2000] 2 SCR 519 para 59.

(a) Reproductive autonomy and decisions relating to in vitro gametes: The 'out-of-body still in mind' problem

The majority held that AB's decision to choose donor gametes was not protected by section 12(2)(a), because reproductive autonomy must 'entail a decision regarding the [prospective] parent's bodily integrity'.[123] Notably, the majority did not take issue with the fact that the decision in question related to gametes that were not her own. What disqualified AB's choice to have a child via surrogacy from constitutional protection as a 'decision concerning reproduction', as per section 12(2)(a), is that it would require the use of another person's body. The challenge with the view that the phrase 'decisions concerning reproduction' only relates to your own body is that, because of NRTs, individuals are able to make decisions that ostensibly relate to reproduction, but do not directly involve the use of their bodies. An example of this would be the use of in vitro gametes to have a child.

There is no clear definition of what a 'decision concerning reproduction' is in our law. Birenbaum opines that this phrase entails more than just the decision to terminate a pregnancy, and that it encompasses a wide array of decisions that persons may make in the course of exercising their reproductive autonomy, including accessing contraceptives or assistance in childbirth.[124] Adopting a similarly broad definition, I suggest that the decision to have a child would clearly be a decision concerning reproduction.[125]

The law currently permits persons to store their gametes with authorised institutions (such as sperm banks or fertility clinics),[126] but, once they have been removed, they are no longer considered part of the person's body by the law.[127] The inference one may draw from the narrow interpretation is that reproductive autonomy does not apply to choices relating to stored gametes because they are no longer part of a person's body and, as such, are not 'a decision regarding the [prospective] parent's bodily integrity'.[128]

The anomalous effect of this legal position can be illustrated by the following hypothetical scenario: Suppose that a man, before he leaves SA to fight in a war, decides to

[123] *AB* supra note 75 para 315.
[124] See J Birenbaum 'Contextualising choice: Abortion, equality and the right to make decisions concerning reproduction' (1996) 12(3) *South African Journal on Human Rights* 485.
[125] This is the sense in which the phrase was used in the ICPD Programme of Action, from which section 12(2)(a) derived.
[126] Regulation 2, Regulations Relating to Artificial Fertilisation of Persons.
[127] See, for example, section 55 of the National Health Act which describes the process of obtaining gametes from an individual as 'removing them from the body'. It stands to reason that something removed from the body cannot simultaneously still be considered to be part of the body.
[128] *AB* supra note 75 para 315.

store his sperm at a sperm bank. He does this under the (erroneous) belief that his sperm could be used to create stem cells for therapy at some point in the near future, and that this might help him recover from injuries that he incurs while away. Three years later, the man returns from war uninjured and decides that he wants to have a child. He now has two methods which he can make his desire a reality, including: (i) he can find a female partner and have a child via natural reproduction; or (ii) he may find a female partner and then use his stored sperm to have a child via artificial reproduction. The effect of the narrow interpretation of reproductive autonomy demonstrated in this scenario, is that while (i) and (ii) are both ostensibly decisions concerning reproduction, only (i) would be protected by s 12(2)(*a*). And yet, the only distinction between these scenarios is that, in (i) the man's gametes are inside his body, and in (ii) they are outside his body. That reproductive autonomy is only worthy of constitutional protection when a man's gametes are inside his body, seems to be an arbitrary delineation contrary to SA's commitment to the rule of law.[129]

One could argue, in response, that choosing to use method (ii) would be within the ambit of the narrow interpretation of reproductive autonomy on the grounds that the gametes *came from* the man's body, and his bodily integrity was implicated when they were removed from him. However, such a response does not account for the fact that at the time that the gametes *came from* the man's body, he had no intention of using the gametes for *reproduction*. The intention to use the out-of-body gametes for reproductive purposes only arose later, and therefore the removal of the gametes could not be defined as a decision concerning reproduction. Can a person assert the right to bodily integrity over objects that *used to be* part of the person's body, but are presently separate legal objects? I suggest that the answer must be no, as an affirmative answer would be counter-intuitive and yield absurd results. Consider for instance persons who donate blood, but who then later object to their blood being given to say, persons who have religious convictions the donors find abhorrent. Can the blood donors assert the right to *bodily integrity* over their donated blood? In my view, clearly not. It is not part of their body anymore and therefore whatever happens to the blood does not affect their *body*. Giving the donated blood to persons who might be people the donors regard as objectionable may impact the donors' *psychological* integrity. However, it would be absurd to say that it affects their *bodily* integrity when their body would not be directly affected.

[129] Section 1(c), Constitution.

In the same way, in the hypothetical scenario outlined above, it would be absurd to assert that the choice to use method (ii) to have a child was a choice protected by section 12(2), so long as we insist (as the narrow interpretation does) that bodily integrity is inseparably bound to psychological integrity. This is because the time the 'decision concerning reproduction' was made, the man's body was no longer involved in the making of this choice. Clearly, then, the decision to store his sperm was *not* a decision concerning reproduction according to the narrow interpretation. Accordingly, it is also the case that at the time the man makes the decision to use his stored sperm to have a child, any state action or law that prevents him from doing so would not 'have a physical effect on the body of the person seeking to rely on [s 12(2)(a)]'.[130]

This hypothetical scenario illustrates that viewing reproductive autonomy as being bound to bodily integrity is not a workable legal position when it comes to the use of NRTs. This arbitrary in-the-body versus out-of-the-body distinction has very serious implications for those who do not have the opportunity to choose other equivalent means of reproduction. The persons involved are deprived of the opportunity to share in the experience of procreation from conception — an experience many regard as highly significant to their dignity and self-identity.[131] The reality is that bodily integrity was once viewed in conjunction with reproductive autonomy *only* because the act of reproduction was once bound to the human body. But, just as NRTs have led to reproduction being an act that no longer necessarily involves the body, so too reproductive autonomy should be seen as no longer necessarily being linked to bodily integrity.

V A BROAD INTERPRETATION OF REPRODUCTIVE AUTONOMY BASED ON THE FREEDOM TO FORM A FAMILY

Although there are many challenges with the narrow interpretation given to section 12(2)(a) in *AB*, the broad interpretation set out in the minority judgment by Khampepe J is also not without its issues. For instance, Khampepe J frames a decision concerning reproduction as one where there is 'a reproductive outcome in the form of the conception and birth of a child'.[132] This position may be criticised as being excessively broad because it does not specify to whom, and in what circumstances, it applies. Could a doctor claim that any limitation on how he or she

[130] *AB* supra note 75 para 76.
[131] This was highlighted in the expert opinion of clinical psychologist Mandy Rodrigues, who made reference to international and local research indicating that infertile persons experienced it as 'deeply distressing' and that 'infertile persons experienced infertility as a threat to their identity'. See Affidavit of Mandy Jacqueline Rodrigues in *AB* supra note 75 para 8.
[132] *AB* supra note 75 para 75.

provides reproductive healthcare services is a contravention of section 12(2)(a) because his or her decision to assist women to have children is one with a reproductive outcome? And could a scientist experimenting with a genome editing technology like CRISPR-Cas9, who intends to implant an embryo with an edited genome into a woman, claim that this is an exercise of his or her reproductive autonomy because it will result in the conception or birth of a child? I suggest that while reproductive autonomy ought not to be bound to bodily integrity, the scope of section 12(2)(a) must be defined in some way such that it allows us to delineate which decisions are protected by reproductive autonomy and which are not — in order to respond to the problem of over-breadth. As such, I argue for a broad interpretation of reproductive autonomy that is defined as a *realisation of the freedom to form a family* — a freedom that is underscored by the fundamental values of the Constitution.

(a) The freedom to form a family in SA law

The minority judgment's conceptualisation of section 12(2)(a) coincides with how the concept of reproductive autonomy is generally understood in international human rights literature.[133] Shalev points out that autonomy as per the ICCPR refers to 'the right of a woman to make decisions concerning her fertility and sexuality free of coercion and violence', and observes that the right to reproductive autonomy derives from the right to human liberty.[134] Accordingly, while often connected to bodily integrity, reproductive autonomy, at its core, is viewed by human rights advocates as being about one having the freedom to control the narrative of one's own life by choosing to have children or abstain from doing so. This sentiment is perhaps best expressed in the following statement by Berlin:

> 'It is not merely freedom "from" but freedom "to"…in the sense that one is entitled to recognition of one's capacity, as a human being, to exercise choice in the shaping of one's life.'[135]

Ngwena illustrates this with reference to the recent jurisprudence of the UN Human Rights Committee (HRC).[136] In *KL v Peru*[137] the HRC held that the psychological distress caused by the denial of access to abortion services was cruel, inhumane and degrading

[133] C Shalev 'The ICPD and the convention on the elimination of all forms of discrimination against women' (2000) 4(2) *Health and Human Rights* 38 at 45.
[134] Ibid at 46.
[135] I Berlin 'Two Concepts of Liberty' in *Four Essays on Liberty* (1969) 118 as quoted in Shalev op cit note 137 at 46.
[136] C Ngwena 'Access to safe abortion as a human right in the African region: Lessons from emerging jurisprudence of UN treaty monitoring bodies' (2013) 29 (2) *SAJHR* 399.
[137] *KL v Peru*, Communication No 1153/2003, adopted 24 October 2005, UN GAOR, HRC, 85th Session, UN Doc CCPR/C/85/D/1153/2003 (2005), as cited in Ngwena op cit note 136 at 412.

punishment in terms of article 7 of the International Covenant on Civil and Political Rights (ICCPR).[138]

Commenting on the extent to which this decision by the HRC is a substantive advancement in support of what he terms the 'right to abortion', Ngwena remarks:

> 'Beyond the duty to implement transparent domestic abortion laws, *KL* also makes a contribution to the substantive development of abortion as a human right. It is significant that the HRC found a substantive violation of art 7 of the CCPR. The HRC said that it is not only physical pain that is relevant when determining violation of art 7 but also mental suffering, especially in the case of minors. This finding...sends out a message that denial of abortion in ways that cause the pregnant woman to suffer psychological distress can constitute cruel, inhuman and degrading treatment under international human rights law.'[139]

Such a development of article 7 of the ICCPR is necessitated by the fact that sexual and reproductive rights are not mentioned explicitly in prominent international human rights treaties. As Moore observes, because reproductive rights are widely acknowledged as fundamental human rights, the right to reproductive autonomy may be inferred from other explicitly enshrined rights in these instruments, such as article 7.[140] Given that an inability to access reproductive healthcare products, services and technologies can be a source of psychological pain and distress in ways similar to abortion, the foregoing discussion illustrates how limitations of reproductive autonomy may constitute a violation of international human rights law, and that such a violation need not be contingent upon there being an impact on bodily integrity.

The problems with the way in which the scope of reproductive autonomy was delineated by both the *AB* judgments could have been ameliorated had the Constitutional Court shown greater regard for international law,[141] and the status of international legal norms as part of our law.[142] As I stated at the outset, in order to understand what reproductive rights are, one must consider where they come from. As per the ICPD Programme of Action, reproductive rights 'rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children' — in other words, on the freedom

---

[138] *KL v Peru*, Communication No 1153/2003, adopted 24 October 2005, UN GAOR, HRC, 85th Session, UN Doc CCPR/C/85/D/1153/2003 (2005) as cited in Ngwena op cit note 136 at 412.
[139] Ngwena op cit note 136 at 412.
[140] I Moore 'Indignity in unwanted pregnancy: denial of abortion as cruel, inhuman and degrading treatment' (2019) 23(6) *The International Journal of Human Rights* 1010.
[141] Section 39, Constitution.
[142] Section 232, Constitution.

to form a family.[143] Accordingly, reproductive rights in our law should be viewed in the same way: as an instance of the freedom to form a family.

This is not to say that either section 12(2)(a) or section 27(1) amounts to a right to family; no such right exists in the Constitution. However, the Constitutional Court in the Certification Judgment made clear that the freedom to form a family finds protection in the Constitution, where it remarked that:

> '…the provisions of the [Constitution] would clearly prohibit any arbitrary state interference with the right…to establish a family. [The Bill of Rights] enshrines the values of human dignity, equality and freedom, while [section 10] states that everyone has the right to have their dignity respected and protected.'[144]

As such, a proper interpretation of section 12(2)(a) and section 27(1) requires them to be considered in light of the constitutional values which underlie the freedom to form a family. I suggest that these values enjoin reproductive rights being given equal protection irrespective of whether prospective parents choose natural or artificial reproduction to give effect to their freedom to form a family by having children.

(b) Reproductive autonomy and equality

The intimate link between reproductive autonomy and gender/sex equality is an issue which has been well established in the literature on access to abortion services.[145] As Birenbaum puts it, '[i]n the context of women's lives, reproductive rights and equality are inextricably linked'.[146] Inequality in matters relating to reproduction, however, transcends lines of sex and gender, and little attention has been given to how the freedom to form a family may also serve as a vehicle to attain equality for those persons who must form families in non-traditional ways.

The potential implications of the *AB* jurisprudence and its body-centric emphasis for gender non-conforming or transgender persons and other groups (such as sexual minorities) for whom access to NRTs may provide an otherwise unattainable avenue to parenthood, were not considered by the Court. The judgement is impoverished by the absence of such a discussion.[147]

---

[143] ICPD at 46.
[144] Certification Judgment op cit note 62 para 100.
[145] See Ngwena op cit note 136 at 400; Moore op cit note 140 at 1016; BE Hernandez 'To bear or not to bear: Reproductive freedom as an international human right' (1991) 17(2) *Brooklyn Journal of International Law* 309 at 310.
[146] Birenbaum op cite note 124 at 485. See, also, RB Siegel 'Sex equality arguments for reproductive rights: Their critical basis and evolving constitutional expression' (2007) 56(4) *Emory Law Journal* 814 at 815-819.
[147] Unfortunately, an extended discussion of the systemic discrimination against these groups is beyond the scope of this thesis. For a useful exploration of the way in which the heteronormative assumptions rooted in repro-law

In this section, I specifically analyse the generally overlooked minority of the population who, due to medical reasons, are incapable of having children via natural reproduction.

Rao argues, correctly in my view, that the regulation of procreation in a way which allows certain groups to use NRTs, but bars persons from other groups from using them — on grounds such as marital status or sexual orientation — is an affront to the right to equality of those in the excluded groups.[148] Rao's theory of reproductive equality resonates with SA's own equality jurisprudence.[149] Equality is one of the founding values of our Constitution[150] and underscores the Bill of Rights.[151] As such, when interpreting the Bill of Rights the court is enjoined to promote the value of equality.[152] However, the narrow interpretation of reproductive autonomy fails to promote equality. The majority judgment in *AB* has the effect that reproductive autonomy, in the context of natural reproduction, will always be protected, whereas reproductive autonomy in the context of artificial reproduction is only selectively protected, where the method used closely resembles natural reproduction by involving the use of the prospective parent's own body.

This discrimination indicates a disparity between natural reproduction and artificial reproduction, which is unfortunately common in the law of many countries. As Robertson observes, while the value of liberty in procreation is widely acknowledged in the case of natural reproduction, the same is not the case with artificial reproduction.[153] Natural reproduction is treated by the law as an almost impenetrable sphere of private life, whereas those who use medical assistance to have children, because they are unable to do so in the conventional manner, are seen as doing so at the largesse of the state. Thus, the state is free to limit the choices of such individuals in order to impose its values on those wanting to become parents. Robertson argues, correctly in my view, that there is no justifiable reason for this double standard, since in both instances individuals are exercising the same choice — to procreate —

---

can have an adverse affect on the rights of those who fall outside the male-female binary, see M Carpenter 'The human rights of intersex people: addressing harmful practices and rhetoric of change' (2016) 24(47) *Reproductive Health Matters* 74.

[148] Rao op cite note 111 at 1460.

[149] While I generally hold the view that Rao's theory of reproductive equality has merit, I must add the qualification that I am unconvinced by her rejection of an 'absolute' procreative liberty on the grounds that it has no logical stopping point. Rao's criticism may be valid in the US context; however, some states, like SA, recognise that human rights may in certain circumstances be limited (see section 36, Constitution). Therefore, the 'logical stopping point' of procreative liberty in SA would be when its limitation is reasonable and justifiable in an open and democratic society.

[150] Section 1(a), Constitution.

[151] Section 7(1), Constitution.

[152] Section 39(1), Constitution.

[153] See, generally, Robertson op cite note 3 at 4.

ergo this choice 'should be equally honoured when reproduction requires technological assistance'.[154]

The High Court judgment in *AB* drew attention to this in concluding that section 294 of the Children's Act was unconstitutional, inter alia, because it amounted to unfair discrimination against infertile persons on grounds analogous to those listed in section 9(3) of the Constitution.[155] This is because, in Basson J's view, this provision impairs the dignity of infertile persons in a way similar to the listed grounds. While I agree that for those who have no alternative means of fulfilling their desire to have a child, depriving them of the opportunity to choose to use NRTs amounts to discrimination, I disagree that this is not one of the listed grounds of discrimination within the purview of section 9(3). Infertility is accepted as a form of disability by the WHO[156] and it has been convincingly argued by several scholars that it is worthy of such classification.[157] Disability is a prohibited ground of discrimination in terms of section 9(3) of the Constitution. Therefore, while I ultimately support Basson J's findings on there being a violation of the right to equality, we differ solely on the issue of whether this violation is of a listed ground (as I suggest) or an analogous ground (as Basson J suggests).

Regardless of whether infertility falls within the listed grounds of discrimination, however, it is clear that the recognition of reproductive rights as encompassing the ways in which non-traditional families are formed is very important. It is an essential dimension of the recognition of the rights of the individuals exercising the choice to form families in this way to 'full and equal enjoyment of all freedoms' — including the freedom to form a family.[158]

Furthermore, as was acknowledged by the High Court, the effect of this discrimination between natural and artificial reproduction is to deny those seeking to form families through the use of NRTs a life of dignity. Our courts have routinely held that the legal recognition of the decision to form familial relations is rooted in the right to dignity.[159] It was for this reason that in *Dawood v Minister of Home Affairs* the Constitutional Court found that '[t]he decision to enter into a marriage relationship and to sustain such a relationship is a matter of defining

---

[154] Ibid .
[155] *AB* (*High Court)* supra note 81 paras 74–76.
[156] See WHO 'World Report on Disability' (2011) available at *https://www.who.int/disabilities/world_report/2011/report/en/*, accessed on 18 May 2021.
[157] D Orentlicher 'Societal disregard for the needs of the infertile' (2015) *Indiana University Robert H McKinney School of Law Research Paper No 2015-32* 1 at 15. See, also, A Khetarpal & S Singh 'Infertility: Why can't we classify this inability as disability?' (2012) 5(6) *The Australasian Medical Journal* 334.
[158] Section 9(2), Constitution.
[159] AE Boniface 'The genetic link requirement for surrogacy: A family cannot be defined by genetic lineage' (2017) *TSAR* 190 at 199.

significance', and that insofar as the law limited the making of this decision it was an infringement of the right to dignity.[160]

As such, reproductive autonomy, in achieving the purpose of protecting the freedom to form a family, must be interpreted in a way that shows equal respect for all family forms. That section 12(2)(a) might be interpreted in a way that privileges families based on biological relations is unacceptable. This is because this disregards the fact that family bonds can be 'based on psychological or emotional attachment, which resembles a family', as per the Children's Act.[161] If our law recognises that families can be defined purely by psychological and emotional attachments and that these families are to be treated in the same way as families defined by biological links, our law should also protect the freedom of prospective parents to decide on the form of their families by having children that they will only have psychological and emotional attachments to. And this freedom should be given the same protection by the law as decisions on forming a family based on biological links. Interpreting reproductive autonomy as giving effect to the freedom to form a family will achieve exactly this.

(c) Access to reproductive healthcare and new reproductive technologies

In international human rights law, it has long been recognised that abolishing barriers to accessing reproductive technologies is a crucial step towards the fulfilment of reproductive health[162] — something which is also now recognised in SA jurisprudence.[163] However, the discourse in this area has almost exclusively been on the context of natural reproduction. Moving beyond this trend, Nienaber suggests that the reproductive healthcare services referred to in section 27(1) of the Constitution include the right to access services related to artificial reproduction.[164] However, whether this is in fact the case in our law is yet to be settled. Nkabinde J held that it was unclear how a challenge to section 294 of the Children's Act, based on this right, could exist because section 27(1) does not create a positive right to healthcare, only a right to have access to healthcare, subject to the means available to the state.[165] This part of the majority judgment does not, however, preclude the possibility that section 27(1) could

[160] *Dawood v Minister of Home Affairs; Shalabi v Minister of Home Affairs; Thomas v Minister of Home Affairs* [2000] ZACC 8, 2000 (3) SA 936 (CC) para 37.
[161] Chapter 1, Children's Act.
[162] L B Pizzarrossa & W Durojaye 'International human rights norms and the South African choice on termination of pregnancy act: An argument for vigilance and modernisation' (2019) 35 *SAJHR* 50 at 51.
[163] See Chapter 2 supra at 120.
[164] A Nienaber 'The grave's a fine and private place: A preliminary exploration of the law relating to posthumous sperm retrieval for procreation' (2010) 25 *Southern African Public Law* 1 at 8.
[165] *AB* supra note 75 para 319.

be applied to NRTs, since the majority judgment did not object to viewing IVF-based surrogacy within the aegis of section 27(1). Rather, the majority took issue with the claim that section 27(1) had been infringed by the genetic link requirement. I suggest that the right to access reproductive healthcare includes access to NRTs, and that a broad interpretation of reproductive autonomy necessitates such an interpretation.

The right to reproductive healthcare has been referenced to underscore that women not only have the right to choose to terminate their pregnancies, but also to access the medical services necessary to give effect to this choice.[166] This illustrates that the exercising of reproductive autonomy requires access to reproductive healthcare. The interrelated nature of the right to make decisions concerning reproduction and access to reproductive healthcare is enunciated in the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), which SA ratified on 15 December 1995.[167]

Access to NRTs has been recognised in international human rights documents as being a means necessary to exercise reproductive autonomy. For instance, the ICPD Programme of Action provides that countries should 'strive to make accessible through the primary healthcare system, reproductive health to all individuals of appropriate age'.[168] States are thus called upon to integrate family planning services into the provision of reproductive healthcare in order to 'assist couples and individuals achieve their reproductive goals and giving them the full opportunity to exercise the right to have children by choice'. Elaborating on the reproductive healthcare services states were to make accessible, the ICPD Programme of Action makes specific reference to IVF: 'In-vitro fertilization techniques should be provided in accordance with appropriate ethical guidelines and medical standards',[169] thereby *explicitly recognising NRTs as being part-and-parcel of the reproductive healthcare services states ought to make available to their citizens*.

Article 16 of CEDAW illustrates how reproductive rights are intended to protect, not only an individual's right to choose whether or not to have children, but to whatever means are necessary to exercise this choice. But what is especially important to note, is how article 16 places a positive duty on the state to take measures to ensure that individuals have all the means that they require in order to exercise these choices — which includes providing access to

[166] See *Christian Lawyers* supra note 65, para 19 and *Christian Lawyers (II)* supra note 67 para 48.
[167] UNTC 'Convention on the Elimination of All Forms of Discrimination against Women' (1979) 1249 UNTS 13.
[168] ICPD, art 7.6.
[169] ICPD Programme of Action, art 7.17.

reproductive healthcare technologies. This is reinforced at a regional level by article 14 of the Protocol to The African Charter on Human and Peoples' Rights on The Rights of Women in Africa (the Women's Rights Protocol),[170] which also enjoins states to take active measures to realise access to reproductive healthcare.[171]

In *Minister of Health v Treatment Action Campaign*,[172] the Court made it clear that the duty on the state in section 27 of the Constitution to provide access to the socio-economic rights contained therein is not immediately enforceable, but is subject to the means available to the state.[173] As such, the state is only bound to take reasonable measures to provide access to healthcare.[174] Accordingly, the right to access reproductive healthcare is not a basis upon which one can claim that the state has a duty to provide a particular reproductive healthcare service.[175] However, section 27(1) will be violated if the state fails to take reasonable measures to realise access to reproductive healthcare. Identifying what measures meet the standard of reasonableness may be difficult, but what is clear is that a failure by the state to take any measures at all, or measures that actively limit access to reproductive healthcare, would be unreasonable, unconstitutional, and a dereliction of the state's international commitments as per CEDAW, the Women's Rights Protocol, and customary international law.

This duty to refrain from limiting access was referred to by the Constitutional Court in the Certification Judgment in considering objections to the inclusion of socio-economic rights in the Constitution.[176] The Court here stated that while the state's duty to provide access to these socio-economic rights would always be subject to the means available, '[a]t the very minimum, socio-economic rights can be negatively protected from improper invasion'.[177]

In this sense, prohibiting certain groups from accessing reproductive healthcare — which includes NRTs — is a failure of the state to take 'reasonable measures to progressively eliminate the large areas of severe deprivation that effect our society' — such as the lack of access to reproductive healthcare necessary for reproduction which infertile persons in SA

[170] African Union 'Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa' (11 July 2003).
[171] Ibid.
[172] *Minister of Health v Treatment Action Campaign* [2002] ZACC 16, 2002 (5) SA 703 (CC) ('TAC').
[173] Ibid para 39.
[174] Ibid para 35.
[175] This appears to be the primary reason why Nkabinde J concluded that s 27(1) was not infringed by the genetic link requirement. See *AB* supra note 75 para 322.
[176] *Certification Judgment* supra note 62 para 76
[177] Ibid para 78.

face.[178] As such, providing access to NRTs for the treatment of infertility is something that the state is enjoined to do, and this duty entails both positive measures within its means, but also a negative duty not to limit access to reproductive healthcare. This would clearly include those infertile persons who are unable to use their bodies in reproduction, since no similar precondition regarding bodily integrity is present in section 27(1). This provides compelling reasons why the Court in *AB* ought to have found the genetic link requirement unconstitutional. It also offers a reason for interpreting reproductive autonomy broadly, as we ought to shy away from interpreting one right (section 12) in a way that impedes the exercising of another right (section 27(1)). Such an interpretation is necessary to ensure that the freedom to form a family is realised equally, for all.

VI CONCLUSION

The way in which reproductive rights have developed at the international level illustrates the value of framing reproductive rights broadly. It allows for the protection of reproductive autonomy in a way that is diverse enough to respond to changing circumstances and similarly changing threats to the freedom of individuals to choose how they want to form families. It also allows access to reproductive healthcare to be framed in a way that embraces new innovations in the means individuals may use to form a family. If reproductive rights in SA are defined in a narrow way, they are at risk of losing this adaptability and becoming obsolete in the context of artificial reproduction. The imperative for interpreting rights in a way that allows them to adapt to the progression of society was perhaps best put by Sachs J in *Minister of Home Affairs v Fourie,*[179] where he remarked:

> 'Indeed, rights by their nature will atrophy if they are frozen. As the conditions of humanity alter and as ideas of justice and equity evolve, so do concepts of rights take on new texture and meaning. The horizon of rights is as limitless as the hopes and expectations of humanity.'[180]

O' Sullivan and Bailey, shortly after *Christian Lawyers,*[181] expressed the hope that 'the complex content of a right to reproductive healthcare not be overshadowed by a single issue of

[178] *TAC* supra note 172 para 36. This is a challenge that is becoming increasingly common as the rate of infertility in South Africa continues to increase at an alarming rate. See, Statistics South Africa 'Census 2011: Fertility in South Africa, Report No. 03-01-63' available at *http://www.statssa.gov.za/publications/Report-03-01-63/Report-03-01-632011.pdf,* accessed on 18 May 2021.
[179] *Minister of Home Affairs v Fourie* [2005] ZACC 19, 2006 (1) SA 524 (CC).
[180] Ibid para 102.
[181] *Christian Lawyers* supra note 65.

abortion'.[182] Unfortunately, the overshadowing O' Sullivan and Bailey alluded to is exactly what has materialised through the narrow interpretation of reproductive autonomy stemming from the *AB* judgment. Conceiving reproductive autonomy as an instance of bodily integrity is an unduly narrow interpretation of the scope of choices prospective parents may make that relate to reproduction. As the scope of these choices is continuously expanding with the advent of NRTs, section 12(2)(a) of the Constitution ought to be interpreted in a way where the exercising of the individual's choice to procreate finds consistent protection, irrespective of how that individual chooses to procreate. To view this provision through the particular historical lens chosen by the Court in *AB* is a misrepresentation of the broader history of this right. It is also a failure to recognise that it is the ability to exercise reproductive autonomy that section 12(2)(a) was intended to protect, and not a particular method of exercising that choice.

I have argued that reproductive autonomy and the right to reproductive healthcare must be viewed as instances of the right to form a family (or abstain from doing so). This entails both these rights being interpreted as protecting, as the autonomous choice of the individual, the choice of if, when and how to form a family. And if individuals do choose to have a family, these rights ought to give equal protection to their choice whether they wish to do so by having a child via natural reproduction, or by artificial reproduction using NRTs. I have suggested that such a conceptualisation of reproductive rights follows logically from both international human rights law and SA human rights jurisprudence. Our law has developed in relation to the issue of abortion, in terms of which there has been a recognition of the extent to which abortion affects both bodily and psychological integrity. To be sustained, the interpretation I argue for requires only abandoning the idea that simply because reproductive rights have primarily been applied to using reproductive technologies that affect an individual bodily, they can never apply to decisions concerning that only impact an individual psychologically.

Viewed in this way, the decision by the majority in *AB* was incorrect insofar as it held that AB's reproductive autonomy was not impacted by the genetic link requirement — simply because her decision to use donor gametes to be implanted in a surrogate was not one that involved the use of her own body. This is because what this choice *did* involve was an autonomous choice by AB to form a family using NRTs, and, in my view, section 12(2)(a) ought to be interpreted as protecting this choice as an exercise of reproductive autonomy. Such an interpretation is necessary to show due regard to the entitlement of all persons seeking to

[182] M O'Sullivan & C Bailey 'Reproductive rights' in M Chaskalson et al (eds) *Constitutional Law of South Africa* (1998) 16-1–11.

form a family to enjoy dignity, freedom, and equality before the law — even where they wish to form families in non-traditional ways.

CHAPTER 5

THE RIGHT TO CRISPR? APPLYING REPRODUCTIVE RIGHTS TO THE USE OF GENETIC TECHNOLOGIES

I INTRODUCTION

In the previous Chapter I argued how reproductive rights should be understood based on their historical development in international human rights documents and in South African Constitutional Court jurisprudence. In this Chapter, I apply this understanding to the case of GGE using CRISPR-Cas9, to ascertain if it there is *a right to use GGE technology to select for or against particular genetic traits in future offspring*. This will be done with reference to prominent case law from South Africa and foreign jurisdictions that have recently considered this question.

At the outset, it is important to reiterate that the prospect of parents using CRISPR-Cas9 for genetic selection will not be something entirely unheard of. Rather, CRISPR-Cas9 is simply the latest NRT to enable parents to realise their preference for particular kinds of offspring. To illustrate: A few months after the landmark US case of *Roe v Wade*[1] paved the way for legal first and second trimester abortions, there was reportedly widespread uptake of the use of genetic technologies in the form of PGT being for selective abortion.[2] This led to a noticeable decrease in the incidence of genetic disorders such as Down's Syndrome and Klinefelter Syndrome.[3] In other words, as early as the 1970s, many prospective parents in the US were using NRTs to select against genetic disorders. Naturally, selective abortion aided by PGT raised the question of whether the fact that parents *could* make choices about whether children are born with genetic disorders meant that they *should* make such choices.

The answer raised by bioconservative scholars to this question has often been a resounding 'no', with their reasoning alluding to how morally reprehensible it is to use technology to create so-called designer babies, and how this is an effort by scientists to 'play

[1] *Roe v Wade* 410 US 113 (1973).
[2] S Mukherjee *The Gene: An Intimate History* (2017) 269.
[3] Ibid.

God'.[4] On the other hand, bioliberals have dismissed these claims, maintaining that metaphors comparing GGE to 'human manufacturing' and 'playing God' are just another way of articulating that GGE violates the bioconservatives' idea of a natural order.[5] Moreover, bioliberals argue that the choice to use genetic technologies for GGE is a matter of right, for reasons I will expand upon below.

Discourse on relevance of human rights to GGE is a topic that has been sparsely considered in the global debate around CRISPR-Cas9.[6] Of particular import in this regard are the reproductive rights of the prospective parents who would be choosing to have a genetically modified child. Of the various ethics statements on gene editing issued in relation to CRISPR-Cas9, the only one to give significant attention to the potential role to be played by human rights is the report by the Nuffield Council on Bioethics.[7] This report notes that the use of CRISPR-Cas9 intersects with the high premium modern liberal democracies give to the need to respect the reproductive goals of persons seeking to become parents. But what is the nature of this intersection? Do the rights of reproductive autonomy and access to reproductive healthcare outlined in the previous Chapter create an entitlement, in legal terms, to choose and have access to GGE technology in SA?

In responding to these questions, this Chapter begins with a discussion of some preliminary issues relating to why we would even want to consider the use of GGE technologies like CRIPSR-Cas9 as NRTs. I then proceed to further refine the central research question in this Chapter, by defining what it means for prospective parents to 'choose genes' for their prospective children. I then briefly discuss some of the main arguments in favour of and against the proposition of a right to use GGE technologies for reproductive purposes. I conclude that the principal arguments based on procreative freedom require further investigation as to their validity within a legal context. In order to investigate this further, I proceed to consider three judgments — each from a different jurisdiction — that explore the question of parents' legal rights to make decisions relating to the genetic compositions of their offspring. I conclude by presenting my view on whether there can be said to be a 'right to CRISPR' within the current South African regulatory regime.

---

[4] See the discussion of bioconservative arguments in Chapter 1 supra at 17.
[5] G Stock *Redesigning Humans: Choosing our genes, changing our future* (2003) 131.
[6] Although some scholars have brought attention to various human rights issues, see: LG Shaver, A Sundly & A O Saif 'A Human Rights Analysis of Clustered Regularly Interspaced Short Palindromic Repeats Germline-Editing for Disease Prevention' (2020) *J Public Health Prim Care* 17.
[7] Nuffield Council on Bioethics *Genome editing and human reproduction* (2018).

It is necessary to make clear that I do not intend to make a case that genetic selection (ie selecting for or against certain traits in future offspring) is necessarily *ethically* correct and thus ought to be used. This is the sort of morally contentious issue which the law cannot reasonably be expected to reach a definitive answer on, and it is the law which this Chapter is primarily concerned with. Put differently, this Chapter seeks to ascertain whether genetic selection using GGE technologies like CRISPR-Cas9 ought to be *legally* permissible in South Africa, on the strength of legal rights vivifying the claim of prospective parents to access genetic technologies for reproductive purposes. While I do make some claims to refute assertions that GGE is inherently wrong, I do so only as far as it is necessary to respond to claims that it is this inherent wrongness that justifies a legal prohibition.

II WHY USE CRISPR AS A REPRODUCTIVE TECHNOLOGY?

Before investigating the existence (or non-existence) of a right to use GGE for reproductive purposes, I first explore the question of whether there is any need for using GGE in human reproduction in the first place. This is necessitated the number of questions which have been raised regarding this, due to the number of analogous technologies which are (at least on the face it) less problematic. In this section, I try to respond to these questions and show that there are good reasons to want to use GGE technologies like CRISPR-Cas9 in human reproduction, notwithstanding the existing alternatives.

In brief, the case for the use of GGE technology is founded upon three separate but interrelated arguments:

(a) There is no principled reason why one *should not* use GGE technology like CRISPR-Cas9 for reproductive purposes in the same way as other NRTs, because there is nothing inherently or necessarily morally wrong with it.

(b) There are practical reasons to *want to use* GGE technology like CRISPR-Cas9 for reproductive purposes, as it could provide a means for genetic selection in circumstances where other reproductive technologies would be unable to produce desirable outcomes.

(c) There are morally justifiable reasons to *prefer using* GGE technology like CRISPR-Cas9 for reproductive purposes, such as that it does not necessitate disposing of unused gametes.

Accordingly, in my view, GGE technologies like CRISPR-Cas9 ought to be viewed as NRTs akin to other biotechnological innovations with applications in human reproduction. I expand on each of these arguments below.

(a) No principled reason not to use CRISPR-Cas9 as a reproductive technology

Making this argument is required because the foremost argument raised by bioconservatives for not viewing CRISPR-Cas9 as a reproductive technology in the same way as other technologies that can be used for genetic selection such as IVF or PGT, is the notion that unlike these existing NRTs, the use of CRISPR-Cas9 for reproductive purposes is inherently wrong and should not be permitted.[8] Put differently, it is suggested that there are principled reasons for GGE technologies not to be classified and used in the same way that other reproductive technologies are — these reasons primarily pertaining to ethical objections to the act of determining genetic traits that will be inherited by future generations.[9] These unique ethical implications of GGE, according to bioconservatives, mean that we should not view technologies like CRISPR-Cas9 as NRTs, as they are not the same as the types of reproductive technologies we already allow people to use.

In order to respond to this, it is important to reiterate that the view that GGE is inherently and necessarily wrong is not a sentiment that is *universally* or even *widely* shared, especially in the case of CRISPR-Cas9. Since its rise to the centre stage of genetic technologies, several prominent scientists and bioethicists have acknowledged that GGE using CRISPR-Cas9 may be ethically permissible in at least some instances. This may be observed in a review of recent reports by major ethics bodies in the US, UK and Germany conducted by renowned biolaw scholar Hank Greeley.[10] Greeley points out that neither the 2017 report by the National Academies of Sciences, Engineering and Medicine,[11] the 2018 report by The Nuffield Council on Bioethics,[12] nor the 2019 report by the German Ethics Council[13] (all penned in the post-CRISPR era) concluded that there was anything inherently unethical about GGE, such that it

[8] See, for examples, J Habermas *The Future of Human Nature* (2003); GJ Annas, LB Andrews & RM Isasi 'Protecting the Endangered Human: Toward an International Treaty Prohibiting Cloning and Inheritable Alterations' in SAM McLean (ed) *Genetics and Gene Therapy* (2017) 415–42; E Lanphier, F Urnov & SE Haecker et al 'Don't edit the human germ line' (2015) 519 *Nature* 410–11.
[9] For a more complete discussion of these arguments see Chapter 1 supra at 17.
[10] HT Greeley 'Human germline genome editing: An assessment' (2019) 2 *The CRISPR Journal* 253–65.
[11] Committee on Human Gene Editing: Scientific, Medical, and Ethical Considerations,National Academy of Sciences, National Academy of Medicine & National Academies of Sciences, Engineering, and Medicine *Human Genome Editing: Science, Ethics, and Governance* (2017).
[12] Nuffield Council on Bioethics op cit note 7.
[13] Deutscher Ethikrat *Intervening in the Human Germline* (2019).

could never be permitted. These reports also do not take the view that GGE technologies should never be classified and used as reproductive technologies.

This view mirrors the attitude of the public towards this technology in those few countries where public opinion polls on GGE have been conducted; these show that the public is generally open to at least some aspects of GGE.[14] This position is generally premised on there being a morally defensible reasons for modifying the human genome, such as the therapeutic purpose of correcting genetic disorders, as was the case in the PEW Research Centre's recent report on people's views on the uses of GGE technology.[15] Similarly, open-minded positions have been adopted by the joint report of the International Commission on the Clinical Use of Human Germline Genome Editing, the National Academy of Medicine, National Academy of Sciences, and The Royal Society[16] — as well as the WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing.[17] In light of this, it is reasonable to say that the general opinion does not support a categorical prohibition of GGE. Therefore, there is no reason — at least in principle — why it ought not to be made accessible in the same way as existing reproductive technologies that can be used for genetic selection.[18]

That said, the endorsement of the use of GGE technology is often limited to therapeutic applications for reasons outlined in Chapter 1.[19] As alluded to earlier in this thesis, non-therapeutic uses of GGE technology have been viewed by some as more ethically problematic,[20] and such uses are often referred to as genetic *enhancement* because they are viewed as lacking any valid moral justification — and as a fundamentally eugenic endeavour. So, the question then becomes: Is it only therapeutic applications of GGE technology that

[14] Center for Genetics and Society *CGS Summary of Public Opinion Polls* (2018).
[15] PEW Research Center 'Public views of gene editing for babies depend on how it would be used' (2018) available at *https://www.pewresearch.org/science/2018/07/26/public-views-of-gene-editing-for-babies-depend-on-how-it-would-be-used/ps_2018-07-26_gene-editing_0-01/*, accessed on 12 September 2019.
[16] National Academy of Medicine, National Academy of Sciences & The Royal Society *Heritable Human Genome Editing* (2020).
[17] WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing *Human Genome Editing: A Draft Framework for Governance* (2020).
[18] This is, of course, is subject to whatever restrictions are necessary to ensure that it is used safely, ethically, and in accordance with the law of the specific polity where it is used – as with any reproductive technology. For a discussion of what such restrictions might entail, see Chapter 6 infra at 189.
[19] The distinction between therapy and enhancement is discussed more extensively in Chapter 6 infra at 184.
[20] National Institutes of Health 'Statement on NIH funding of research using gene-editing technologies in human embryos' (2015); National Academies of Sciences *Second International Summit on Human Genome Editing: Continuing the Global Discussion: Proceedings of a Workshop–in Brief* (2019).

should be permitted on the grounds that it is only these applications of the technology that are not inherently or necessarily morally objectionable?

In my view, this should not be the case as it is not apparent that the existence of morally justifiable reasons for using GGE technology is limited to therapeutic applications of the technology. In fact, the wholesale dismissal of non-therapeutic applications of GGE has been heavily criticised by some scholars as irrationally associating state-directed eugenics, which used immoral practices that limited procreative freedom to attempt to create more 'desirable' people, with individual uses of genetic technology that promote procreative freedom.[21] The assertion that there are no morally justifiable reasons for non-therapeutic applications of GGE technology is worth questioning, given that several noteworthy bioethicists[22] and reputable ethics research institutions — such as the Nuffield Council on Bioethics — have opined that there may be circumstances where even so-called genetic enhancement would be ethically justifiable.[23]

One such instance is the potential use of GGE for the selection of desirable genetic traits in future offspring, in a way similar to gamete donor selection or embryo selection via PGT. Selecting for certain traits in gamete donors is permissible in SA, according to regulation 14(1)(a)(iii), read together with regulation 8(1) of the Regulations Relating to the Artificial Fertilisation of Persons.[24] These regulations provide that recipients of donor gametes shall be aware of, and have the right to select gamete donors based on a list of characteristics provided for in the Regulations relating to the Artificial Fertilisation of Persons, including race, religion, hair colour, eye colour, and level of educational qualification. Similarly, prospective parents are permitted to utilise PGT to choose between embryos based on any number of genetic traits identifiable by genetic tests, with the sole exception of sex selection[25] as per regulation 13. Clearly, then, SA law has a highly permissive regime relating to genetic selection that ostensibly recognises that morally justifiable reasons exist for non-therapeutic genetic selection, such that the law specifically provides for it. In light of this, there is no apparent

[21] JA Robertson 'Procreative Liberty in the Era of Genomics' (2003) *Am J L Med* 439–88 at 444–46. See, also, J Harris *Enhancing Evolution: The Ethical Case for Making Better People* (2010); R Bailey *Liberation Biology: The Scientific and Moral Case for the Biotech Revolution* (2005).

[22] See, C Gyngell, H Bowman-Smart & J Savulescu 'Moral reasons to edit the human genome: picking up from the Nuffield report' (2019) *Journal of Medical Ethics* 1–10.

[23] See the comments on the necessity of a nuanced approach to the distinction between so called therapy and enhancement in paragraphs 3.33 to 3.34 of Nuffield Council on Bioethics op cit note 7.

[24] Regulations Relating to the Artificial Fertilisation of Persons GN R175 GG 35099 of 2 March 2012.

[25] Whether this exception is justifiable has been called into question in light of our current regulatory scheme and human rights jurisprudence. See: DW Thaldar 'Is it time to reconsider the ban on nontherapeutic pre-implantation sex selection?' (2019) 136 *SALJ* 223–34.

reason why genetic selection for non-therapeutic reasons would be deemed to be unacceptable in our law.

All of this illustrates that there is no convincing argument to suggest that GGE is inherently and necessarily unethical, such that it ought not be classified and used as a reproductive technology. In fact, GGE provides for genetic selection in a manner analogous to existing NRTs, and while it is a significant advancement on these existing reproductive technologies, it is not apparent that there are principled reasons for GGE not to also be classified and used as a reproductive technology. Accordingly, one must conclude that there is *no principled reason not to use CRISPR-Cas9 as a reproductive technology*.

Having established that there are no principled reasons *against* the categorisation of CRISPR-Cas9 as an NRT, I now consider the reasons *for* its use for reproductive purposes.

(b) Practical reasons to use CRISPR-Cas9 as a reproductive technology

This second argument, like the first, is prompted by the fact that bioconservative scholars assert the contrary position: the clinical use of technologies of CRISPR-Cas9 should not be pursued given that other genetic technologies can produce similar results.[26] Throughout this thesis I have maintained that GGE is just one of multiple paths towards a singular objective for prospective parents — genetic selection — and that other NRTs including gamete donor selection and PGT are simply the mechanisms for achieving this objective we have used thus far. This, however, raises the question of why anyone would use GGE technology for reproductive purposes if alternative NRTs can produce similar outcomes? This is especially when these alternative methods are well established as safe and effective and are already widely available. Put differently — is there any practical use for CRISPR-Cas9 as a reproductive technology if alternative technologies that can produce similar results exist? These questions can be answered in the affirmative, primarily because no existing reproductive technologies are truly equivalent to GGE, CRISPR-Cas9 presents possibilities previously closed to certain categories of prospective parents. This can be observed by considering the example of PGT as an alternative means for genetic selection, to which I now turn.

The line of argument that GGE ought to be avoided because of alternatives like PGT may be observed in the recent WHO Expert Advisory Committee's Draft Governance Framework

[26] F Baylis *Altered Inheritance: CRISPR and the ethics of human genome editing* (2019) at 219.

for Human Genome Editing.[27] The World Health Organization in 2019 established the Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing, with the task to 'advise and make recommendations on appropriate institutional, national, regional and global governance mechanisms for human genome editing'.[28] Pursuant to consultation with its members, individual experts and members of the public, including representatives of marginalised groups, the Committee recently released for comment a Draft Governance Framework on Human Genome Editing.[29] Despite having a generally permissive stance on the regulation of GGE, the Draft Framework nevertheless suggests that, where possible, people should use more acceptable technological alternatives to germline editing such as PGT and adoption. Beyond that, the Draft Framework also recommends that policy decisions must be made

> 'about how much weight should be given on the desire to have genetically related offspring and whether such risks are tolerable in light of the available technological and social alternatives'.[30]

Although PGT may often give intended parents the opportunity to have healthy offspring, it is not an effective strategy in all situations.[31] It has been predicted that genetic selection against single-gene disorders (also known as 'autosomal dominant', or 'Mendelian' disorders) is one of the few likely purposes for which GGE technology will be widely used in practice, given that it provides parents who are both carriers of such diseases a means to have a child that is genetically related to them.[32] This is because any embryo made from the gametes of two persons with Mendelian disorders, is bound to also carry the Mendelian disorder. As such, PGT will not allow them to select for an embryo without the disorder. At the same time, gamete selection is not a desirable alternative either, as this would mean the prospective parents would not be able to both contribute to the genetic composition of the prospective child. Genome editing is the only mechanism that such persons could use to produce a disease-free child who is genetically linked to both parents.

[27] WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing op cit note 17.
[28] WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing *Report of the first meeting* (2019).
[29] WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing op cit note 17 para 29.
[30] Ibid.
[31] R Ranisch 'Germline genome editing versus preimplantation genetic diagnosis: Is there a case in favour of germline interventions?' (2020) 34(1) *Bioethics* 63.
[32] Greeley op cit note 10 at 258.

However, considering that somatic genome editing is possible, it might be argued that GGE is unnecessary even in the case of couples with the same Mendelian disorder, because the child born with the disorder can still be treated with somatic genome therapy. Why should people genetically modify embryos or gametes when children can receive somatic genome therapy after birth? This is a question that Baylis responds to by pointing out once again that alternatives like somatic genome therapy are not always a viable substitute for GGE.[33] Somatic genome therapy, specifically, is not an option for genetic disorders that irreparably damage the fetus before birth, or that could potentially result in fetal death.

As these examples indicate, with each alternative there is to GGE technology there are limitations which GGE technology can overcome. Thus, there are undoubtedly several circumstances where *there are practical reasons to want to use GGE technology like CRISPR-Cas9 for reproductive purposes, because it could provide a means for genetic selection in circumstances where other reproductive technologies would be unable to produce desirable outcomes*.

Having established that there are practical reasons why a person may want to use CRISPR-Cas9 as an NRT over the alternatives, I now move on to the argument that people have ethically justifiable reasons to *prefer* GGE technology to other mechanisms for genetic selection.

(c) Moral reasons to prefer using CRISPR-Cas9 as a reproductive technology

The main point in support of argument (c) is that, as various authors have argued, GGE may offer moral benefits over other technologies used for genetic selection.[34] For instance, in relation to PGT, using GGE technology may be more appealing to some prospective parents because it does not entail the destruction of multiple embryos that do not possess the desired genetic traits.[35] This is an ethically compelling consideration for societies — such as SA — where the embryo is viewed by some as having a special moral status such that its destruction, in the context of medically assisted reproduction, ought to be avoided.[36] Thus, prospective parents would have a reason that is morally justifiable (at least from the perspective of SA

[33] Baylis op cit note 26 at 29.
[34] See, for example: Gyngell et al op cit note 22.
[35] Note that this is but one of many potential arguments, as I expand upon below. Focus is devoted to it solely because it is the most popularly discussed – not because it is necessarily the strongest argument.
[36] As per reg 10(2)(c) of the Regulations relating to the Artificial Fertilisation of Persons, embryos may only be destroyed under limited and specified circumstances.

policy relating to human embryos) to *prefer* using CRISPR-Cas9 for genetic selection over the alternative of PGT.

This argument (henceforth referred to as the preference argument), is one which Baylis challenges in her book: *Altered Inheritance: CRISPR and the ethics of human genome editing*, wherein she is critical of whether it can justify permitting the use of CRISPR-Cas9. In so doing, Baylis raises issues that speak to the concerns many bioconservatives have with the preference argument.[37] Baylis offers the following rebuttals to the preference argument:

1) Baylis calls into question the legitimacy of the sentiment of persons wanting to avoid destroying embryos by opting for gamete selection or selective abortion by arguing that 'reproduction by way of IVF, PGD and heritable genome editing also involves the loss of embryonic life'.[38]
2) Baylis expresses the view that GGE is riskier than the alternatives because of the heritability of changes, and seemingly suggests that this makes parental preference an insufficient reason to justify permitting its use: 'If harmful effects occurred but [are] not detected prior to embryo transfer, any children born with modified genomes could experience harms'.[39]

Each of these arguments requires careful consideration because while they may seem compelling, upon closer inspection neither is actually an argument against persons having a morally justifiable reason to want to choose GGE.

In the case of (1), Baylis advances this argument based on the fact that all methods for genetic selection entail the destruction of embryos at some point, whether that is the process of research and development for technologies like CRISPR-Cas9, or in the process of selecting specific embryos for PGT. While this is true, this argument fails to convince as it relies on a false equivalence. It equates the choice of using technology that was developed by, inter alia, destroying embryos, and the choice of using a technology that requires the destruction of embryos. These are choices that are meaningfully different for the persons making the choice, ie the prospective parents. The main difference being the former entails the loss of embryonic life in a manner that persons who object to such a loss might reasonably not feel moral

[37] While the foregoing discussion might be viewed solely as a critique of Baylis's work, it is not intended as such. Rather, the work of Baylis is analysed because it represents the best formulation of bioconservative concerns regarding the preference argument, and thus this critique is intended as a general response to these concerns.
[38] Baylis op cit note 26 at 25.
[39] Ibid.

responsibility for, and the latter entails the loss of embryonic life in a way such a person would reasonably feel moral responsibility for.

Persons' preferences (generally and in the case of genetic technologies) are based on whether they, *qua individuals*, are making choices which will lead to outcomes that they find morally abhorrent (such as the destruction of an embryo), and not necessarily whether *other individuals elsewhere* made choices that they approve of. The latter, are choices the prospective parents had no control over, and this is a morally relevant distinction, based on the widely held principle that individuals are morally responsible only for actions within their control.[40] Following this view, Baylis's argument raises a point that is likely to be peripheral to prospective parents making the choice about what method to use to bring about their prospective child, and to ensure that the child is born with the desirable genetic characteristics. For them, what matters is whether they are choosing a genetic technology that will cause embryos to be destroyed because of *their reproductive choices*. In the case of CRISPR-Cas9, the loss of embryonic life in the process of research is *not their choice*, and so it is not unreasonable that they would be indifferent to it.[41] It is another thing altogether to expect them to be indifferent to choosing PGT, knowing that their choice will cause an embryo to be destroyed that would not otherwise have been destroyed. As such, Baylis's attempts to question the legitimacy of the preference of individuals who object to the avoidable destruction of embryos fail to convince, and it stands to reason that these are justifications for preferring the use of GGE technology over PGT which ought to be taken seriously.

In relation to (2), that this is intended as an argument against a preference for GGE is odd, given that it essentially relies on the fallibility of genetic testing. We have no reason to believe that PGT is more or less likely to fail to detect 'harmful effects' in the context of GGE, as such, and if this is a reasonable prospect it is at best a reason to be circumspect about *all* genetic technologies. Moreover, it is important to note that the clinical use of these technologies

[40] The subject of the nature of moral responsibility and accountability is a highly contested, but with that being said, it is widely accepted that there is a connection between moral responsibility and control, such that it is irrational for a person to be regarded as morally responsible for actions not within their control: JM Fischer & M Ravizza *Responsibility and control: A theory of moral responsibility* (2000) at 13. It is for this reason that much of the literature on moral responsibility has grappled with the issue of how to account for moral responsibility in light of causal determinism. Some determinist scholars go as far as claiming that we cannot be held morally responsible for any of our actions in a universe which is entirely determined. For a deeper discussion of these issues, see: M Talbert, 'Moral Responsibility' in EN Zalta (ed) *The Stanford Encyclopedia of Philosophy* (2019).
[41] This argument is further supported by the fact that most genetic technologies, including PGT, were also developed in a way that entailed the destruction of human biological material. This is not something unique to CRISPR-Cas9, and thus not a reason to be averse to it specifically.

would only be permitted in circumstances where it is considered 'safe enough'.[42] While there is no universal definition of just how safe 'is safe enough', as Greeley points out, when it comes to human procreation this would likely mean the margin of error would have to be close to zero before it was deemed acceptable.[43] For this reason, as well as the heightened scrutiny of this technology, GGE may prove to be even less prone to fallibility than the alternatives.

Baylis claims that going for multiple IVF cycles and terminating foetuses which do not carry desirable genetic characteristics would always be 'safer' than using CRISPR to edit out a gene. However, even if this were true there are always safer ways to achieve a desired outcome, especially in the context of reproduction. It would be safer to adopt rather than undergo IVF, and it would be safer to not have children at all than to adopt, because only then would there be zero risk of bringing harm to a child. The question is not whether there are 'safer' alternatives, it is whether a prospective parent can have good moral reason to prefer GGE over the alternatives. The answer to the question, as illustrated by the preference argument, is 'yes', and as I have shown — nothing in Baylis's rebuttals suggests otherwise.

In conclusion, while I do not claim, as others do, that there is a moral duty to enhance future generations,[44] I maintain that the preference argument serves to illustrate there may be morally defensible reasons for using GGE technology. In this section, I sought to make this point by focusing on defending just one possible reason. But, in my view, other reasons may exist, some of which have been proposed by other scholars.[45] An extended discussion of these possible reasons is beyond the scope of this Chapter, as the above single reason sufficiently establishes the point that *there are morally justifiable reasons to prefer using GGE technology like CRISPR-Cas9 for reproductive purposes*. As such, I suggest that there is nothing necessarily unethical about non-therapeutic uses of GGE technology, nor are there any clear ethical reasons to justify an outright prohibition of the use of technologies like CRISPR-Cas9.

[42] For a discussion on reasonable standards of safety and efficacy in the context of GGE, see D Thaldar, M Botes & B Shozi et al 'Human germline editing: Legal-ethical guidelines for South Africa' (2020) 116 *S Afr J Sci* 4; B Shozi, T Kamwendo & J Kinderlerer, et al 'Future of global regulation of human genome editing: A South African perspective on the WHO Draft Governance Framework on Human Genome Editing' (2021) *Journal of Medical Ethics* 2.
[43] H Greeley *Why the Panic Over 'Designer Babies' Is the Wrong Worry* (2017).
[44] J Savulescu, J Pugh & T Douglas et al 'The moral imperative to continue gene editing research on human embryos' (2015) 6 *Protein & Cell* 476–79.
[45] See, generally: Ranisch op cit note 31.

Having established that GGE technology is at least an option that one may have good *moral* reasons to pursue, I now consider whether choosing this option is something individuals have a *legal* right to do.

III DEFINING DESIGNER BABIES: WHAT DOES IT MEAN TO CHOOSE A CHILD'S GENES?

The first step in determining whether individuals have a right to choose their prospective children's genes is identifying just what choosing genes means. Language such as this, for some, invokes imagery of scientists 'playing God' by helping parents to have 'designer babies' through biotechnology that manipulates DNA — inserting or deleting genes as they see fit until they have the perfect genetic blueprint for the desired person. However, since very early in the bioethical discourse on genome editing, how seriously these claims should be taken has been called into question by scholars such as the renowned biologist Bernard Davis,[46] who in a 1992 editorial noted:

> 'Among the objections to the germ-line approach the most weighty has seemed to be fear of a slippery slope, where we begin to play God by interfering with human evolution. Yet I find this argument unconvincing, because we already engage in practices with a similar effect on human evolution. For example, a defective gene in a homozygous fertilized egg of a pair of heterozygous parents would slightly decrease the frequency of that gene in the human pool; but the current practice of negative eugenics in genetic counselling achieves precisely the same affect by offering the option of prenatal screening and selective abortion, followed by another pregnancy resulting in a normal offspring.'[47]

The crux of the point made by Davis is that no matter how one labels GGE, there is nothing new about it that occasions specific concern about this technology controlling the destiny of future generations. Nor are children who are products of GGE anymore 'designer' than children born through the use of other genetic technologies. Similar criticisms have been levelled against the outrage over designer children since the advent of CRISPR-Cas9.[48]

---

[46] Who might also rightly be labelled a bioethicist for his contributions to the ethical discourse on novel technologies, such as coinage of the term 'moralistic fallacy'. See BD Davis 'The moralistic fallacy' (1978) 272 *Nature* 390–390.

[47] BD Davis 'Germ-Line Therapy: Evolutionary and Moral Considerations' (1992) 3 *Human Gene Therapy* 361–63 at 361.

[48] H McLachlan 'Why the case against designer babies falls apart' available at *http://theconversation.com/why-the-case-against-designer-babies-falls-apart-45256,* accessed on 25 May 2021.

In addition to seconding Davis's prescient commentary, I suggest that simply describing GGE using language such as 'playing God' is problematic for another reason: It obscures the reality of what the manipulation of the genome to produce particular human traits is and what it means for the genetically modified person. In my view, describing persons who are the subject of genetic selection as 'designed' conveys the wrong message about genes and identity, and further perpetuates the pernicious myth of genetic determinism.[49] While some human traits such as skin colour are almost entirely genetically determined, and can be selected for even without the use of technology (such as through choosing a reproductive partner), most traits that account for who a person is are not that simple. Mukherjee makes an analogous point where he notes that despite the standard reference to genes as the 'blueprints' of humankind:

> 'The vast majority of genes…do not behave like blueprints [ie one gene coding for one protein with one function]. Instead, they collaborate with cascades of other genes to enable complex physiological function.'[50]

What he means by this is that very few genes directly correlate to a single trait such as a physical feature or behavioural characteristic, but often are a product of the interaction between multiple genes and non-gene genetic material. And given that the interaction between all these components and how they relate to individual traits is currently beyond our understanding, the vision of made-to-order humans will not eventuate in the foreseeable future. Indeed, it may never be on the cards, since what little we know about our genomes tells us that designing a 'perfect' genetic blueprint is not enough to design a 'perfect' person:

> 'Genes can describe the form or fate of a complex organism in likelihoods and probabilities – but they cannot accurately describe the form or fate itself. A particular combination of genes (a genotype) might predispose you to a particular configuration of a nose or a personality – but the precise shape and length of the nose that you acquire remains unknowable. A *predisposition* cannot be confused with the disposition itself: one is a statistical probability the other a concrete reality.'[51]

Therefore, the only extent to which technologies like IVF, PGD and CRISPR-Cas9 can be said to be capable of allowing parents to have 'designer babies', is, for most traits, by giving

[49] Genetic determinism refers to the notion that just as DNA is foundational to human biology, it is also foundational to human moral worth. Therefore, the commercialisation, cloning and manipulation of human genetic material are morally equivalent to the commercialisation, cloning and manipulation of human persons. A notion which, despite its clear foundation in a misunderstanding of genetic science, has proven to be pervasive both in the popular media and bioethical discourse. For further discussion on this topic, see Chapter 1 supra at 17.
[50] Mukherjee op cit note 2 at 197.
[51] Ibid at 388. Emphasis in original text.

parents the opportunity to choose to *predispose* their children to particular traits. But this is not necessarily the same thing as determining what traits the prospective child *will* have, nor — more importantly — is it the same thing as determining *who they will be*. Stock succinctly states the limitations of genetic technologies in shaping the identity of future persons where he comments: 'One day we may choose our children's tendencies, but we will never be able to choose their actual personalities'.[52] It is important to be aware of this limitation when discussing genetic selection, to make clear that while simple traits like height can be genetically chosen, traits that people value the most and which tend to form part of their identity, are not capable of being chosen in the same way.

For all these reasons, it is my view that there is significant support for the argument that the technical distinction between genetic technologies used in reproduction blur when one looks at their outcome: controlling the genetic composition of a prospective person.[53] Accordingly, I conclude that what it means to choose one's child's genes is for a prospective parent to make choices regarding the *probable* genetic composition of a prospective person, and that GGE is simply the most recent and precise tool for giving effect to this choice.

This is an important point to make because it establishes that if genetic selection, in general, is legal, and prospective parents' choices in selecting for and against certain genes using existing methods of genetic selection find legal protection, then *there is no principled reason why GGE would not also be legal and legally protected in the same way*. This is the only way — at present — that one might say a right to use CRISPR-Cas9 for reproductive purposes exists, as there are no express condonations of a right to access GGE technology in SA or elsewhere. So while some might argue this means the answer to the question this Chapter asks: 'is there a right to use GGE technology to determine the genetic composition of future offspring' is a resounding no, I suggest that an express recognition is not required. The law rarely regulates specific technologies and rather focuses on the *outcome* of these technologies,[54] and if the outcome of all genetic technologies is essentially the same (ie genetic selection), we may reasonably assume that laws that grant a right to genetic selection generally, will also specifically extend to a right to use CRISPR-Cas9 for genetic selection.

[52] Stock op cit note 5 at 111.
[53] Ibid at 110.
[54] For instance, SA law relating to artificial reproduction regulates the gametes' 'use in a living person' generally – regardless of the technology used. Thus, the general provisions of the regulations apply to all present and future NRTs, unless specified otherwise. See regulation 1 of the Regulations relating to the Artificial Fertilisation of Persons.

With that in mind, I now turn to the literature regarding whether this choice is one prospective parents have a legal right to make.

IV DO PROSPECTIVE PARENTS HAVE A RIGHT TO DETERMINE THEIR PROSPECTIVE CHILD'S GENETIC CHARECTERISTICS?

The idea that individuals should be free to choose their offspring's genetic characteristics has been referred to as 'germinal choice', and is considered a form of positive eugenics or 'newgenics'.[55] A prominent proponent of the bioliberal concept of germinal choice is Harris, who argues that while genetic technologies come with attendant risk, these risks alone cannot justify a categorical prohibition on their use.[56] Instead, what is required is an enquiry into whether these risks justify a limitation on human freedoms in light of the democratic presumption.[57]

In referring to the democratic presumption — also known as the presumption of liberty — Harris invokes a principle now commonly accepted in liberal democracies, that the rights and freedoms of individuals should not be interfered with, unless and only where there is a sufficiently strong reason for the limitation.[58] Put differently, people are presumed to be free to act as they wish, unless there are explicit legal rules prohibiting an action based on some good reason. And it is commonly regarded to be the case that the only good reason for abridging individual liberties is consideration of the liberty of others.[59]

In my view, the concept of germinal choice outlines the best possible case for a 'right to CRISPR your babies', and as such, this is the paradigm within which this Chapter will explore the question of this right's existence or non-existence. This is both in the South African context and more broadly, for reasons I expound upon in the next section.

(a) Germinal choice and right to reproductive autonomy

The abovementioned conceptualisation of the nature of rights and freedoms in a liberal democracy underlies the concept of reproductive autonomy which I outlined in the previous Chapter, as Harris makes apparent in the following passage:

---

[55] Mukherjee op cit note 2 at 273.
[56] J Harris *Enhancing Evolution: The Ethical Case for Making Better People* (2010) at 72.
[57] Ibid.
[58] SJ Laws 'The rule of law: The presumption of liberty and justice' (2017) 22 *Judicial Review* 365–73 at 368. The presumption of freedom was something that was argued to be an integral aspect of US constitutionalism in: RE Barnett *Restoring the Lost Constitution: The Presumption of Liberty* (2004).
[59] Harris op cit note 56 at 73.

> 'I have argued the key idea of reproductive liberty is surely respect for autonomy and for the values which underlie the importance attached to procreation. These values see procreation and *founding a family* as involving the freedom to choose one's own lifestyle and express, through actions as well as words, the deeply held beliefs and the morality which families share and seek to pass on to future generations (emphasis added).'[60]

Accordingly, he argues that the concept of reproductive autonomy extends to NRTs, including genetic technologies capable of being used for genetic selection. This is an argument that, at least in principle, may be justified from a legal perspective — at least in the South African context. Advancing human rights and freedoms is one of the founding values of the Constitution of the Republic of South Africa.[61] This value informs the generally permissive stance by South African statutes and courts on the regulation of reproductive technologies, as discussed in Chapter 4. Accordingly, while there is no law explicitly providing for heritable genome editing per se, South Africa's condonation of other reproductive technologies such as IVF and PGT and allowing their use for genetic selection through gamete/embryo selection and selective abortion (even without a medical indication) — all support the argument that *GGE using CRISPR-Cas9 would fall within the rights of prospective parents to make decisions concerning reproduction as per section 12(2)(a) of the Constitution*.[62]

This is something which, as alluded to above, is not exclusive to the South African context. Rights relating to reproduction are recognised in a number of international human rights instruments, reaffirming the need for state actors to respect the autonomy of parents in matters relating to reproduction. What's more, the existence of a right to select for specific genetic characteristics is more than just a novel theoretical construct based on the freedom to form a family as represented in this thesis. The law in various jurisdictions has, in one way or another, already acknowledged and given legal protection to *the interest of parents in making decisions regarding the genetic composition of their offspring*. This may best be observed in the jurisprudence on so-called reproductive wrongs.

(b) The case for an established legal interest in selecting for specific genetic characteristics

In his recent book on this subject: *Birth Rights and Wrongs*, Dov Fox argues that the law regulating human reproduction is deficient insofar as it often fails to provide individuals and

[60] Ibid at 76.
[61] Constitution of the Republic of South Africa, 1996.
[62] D Thaldar, M Botes & B Shozi et al 'Human germline editing: Legal-ethical guidelines for South Africa' (2020) 116 *S Afr J Sci* 4 at 3–5.

couples redress for negligent wrongdoing by medical practitioners who provide reproductive healthcare services.[63] As it stands, people in the US and around the world often find themselves without a legal remedy when a negligent doctor makes an error that results in thwarted attempts at reproduction; unwanted reproduction; or in a child being conceived that is substantially different from the child the prospective parents wanted to have. This is because there is generally no recognition of the notion that prospective parents have a right to have a child, or to have a child of a particular kind. This is problematic because, as Fox points out, there is clearly significant harm caused by these wrongs:

> 'Some of these wrongs *deprive* people of the pregnancy or parenthood they want. Others *impose* those on roles seeking to avoid them. Others still *confound* plans for not just any child, but for one born with certain traits.'[64]

There can be little doubt that these deprivations, impositions, or confounded plans are *morally* wrong. However, they can only be regarded as *legal* wrongs (ie harms which are legally actionable) if we accept that prospective parents have a legally protected interest to choose whether to have a child and — more importantly — a child with certain genetic characteristics (ie traits).

Establishing such a legally protected interest, however, has proven to be an obstacle in cases brought by victims of reproductive wrongs because of the reluctance of courts to recognise it. Indeed, Fox identifies a disturbing culture of disregard by the courts of victims of reproductive wrongs, because the harms they suffer fall outside the usual scope of legally recognised harms.[65] This is because legal wrongs are ordinarily recognised as arising from harmful actions that result in physical injury or financial loss. Reproductive wrongs do not fall into either of these categories, as what is lost is less tangible than good health or money — such as the loss of the potential to have a child. Fox notes that courts have indicated a reluctance to recognise these harms for policy considerations, including judges being wary of weighing in on highly emotive topics such as whether a parent ought to be recompensed for having a child other than the child they wanted — this might be taken as an indication by the court that the child who is born is to be loved or valued less.[66] But in some cases this has been unavoidable, and in analysing these cases Fox identified the right to reproductive autonomy

[63] D Fox *Birth Rights and Wrongs: How Medicine and Technology are Remaking Reproduction and the Law* (2019) at 5–6.
[64] Ibid at 6. Emphasis in original text.
[65] Ibid at 7.
[66] Ibid at 8.

(which I outlined in the previous section) as consisting of three separate but interrelated interests:

1) An interest in pregnancy.

2) An interest in parenthood.

3) An interest in the characteristics of their offspring.[67]

Each of these three interests one may have in reproduction were once bound together in the context of natural reproduction. However, with the advent of NRTs, each these interests can be held separately and by different people (rather than just the prospective parents), depending on the circumstances.[68] For example, a gay couple having a child via surrogacy have no interest in pregnancy, but do have an interest in parenthood and the characteristics of their offspring. And reproductive equality requires parity in how the law regards each of these interests.[69] In Chapter 4, I outlined how the right to reproductive autonomy, interpreted within the light of the freedom to found a family, applies to the first two interests. My analysis here will focus on the third interest, which speaks to the question at the core of this Chapter: whether the right to reproductive autonomy can be interpreted as giving legal protection to the interests of prospective parents in determining the (genetic) characteristics of their offspring.

Fox describes the third interest as follows: 'Some aspiring parents care about more than just whether they have *any* type of child — having one of a particular type also matters to them.'[70] In a similar vein, building on the remarks of the Constitutional Court that family life 'is shielded from erosion by conflicting rights of the community' in *Bernstein v Bester,*[71] Thaldar argues the interest in determining the *kind* of prospective children one has, finds protection in SA law:

> 'Does family life include the decision regarding the kinds of persons that one wants to build one's family with? I would suggest so. The law does not force one to accept any child into one's family. Typically, parents decide to build their families with a very specific kind of child — a child that was conceived using their own genetic material. The law allows this very specific choice. Accordingly, in principle, the law allows parents to decide the kind of child with whom they want to build their families.'[72]

[67] Ibid.
[68] Ibid at 16.
[69] Ibid at 17.
[70] Ibid at 20.
[71] *Bernstein v Bester* [1996] ZACC 2, 1996 (2) SA 751 (CC) para 67.
[72] Thaldar op cit note 25 at 231.

Accordingly, a legally protected interest held by prospective parents is confounded, insofar as they are prevented from choosing the kind of child they want, ie a child with a particular genetic composition. Note that this interest relates specifically to controlling whether the prospective child possesses a particular gene or collection of genes, and not necessarily to the phenotypic traits controlled by those genes. This is because there is no way to guarantee that the prospective child will possess the said traits because of the nature of genes and phenotype expression, as discussed earlier in this Chapter.

At this point one might wonder, if there is such a strong case, at least in principle, for a legal interest in determining the genetic composition of your future offspring — why is there a question of whether prospective parents have a right to use CRISPR-Cas9 for genetic selection? This is because legal authorities have been famously reluctant to give express recognition to such a right. Based on his analysis of US case law, Fox observes that one of the primary barriers to the legal recognition of an entitlement by parents to determine the genetic composition of their future offspring is the narrative that all children — even those whose birth is unintended — are a blessing or a gift.[73] This is known as the gift metaphor and is commonly invoked by courts and scholars in wrongful birth cases in defence of the argument that after a child is born — that is a child other than the one the parents wanted — this child is not an interference with the parents' rights in a way worthy of legal remedy.[74] The motivation behind the invocation of the gift metaphor by courts is the discomfort of judges in finding that 'the birth of an unwanted but otherwise healthy and normal child constitutes an injury to the child's parents'.[75] Judges fear that such a finding would be perceived as the court devaluing the child's life.

In response to this, Fox makes the important clarification that parents can and do love and value their children, even if they are born with unwanted genetic characteristics, and this does not take away from the fact that they do still incur harm by virtue of their reproductive autonomy being obstructed:

> '[T]he undeniable tenacity of parental love doesn't diminish the legitimacy of reproductive interests in offspring selection, or the loss that their frustration can incur to life plans, outcomes, and identities.'[76]

[73] Fox op cit note 63 at 128.
[74] For further discussion on the gift metaphor, see: JA Robertson 'Procreative Liberty in the Era of Genomics' (2003) *American Journal of Law & Medicine* at 442–43.
[75] *Andrew v Keltz* 838 NYS 2d 363, 365-366, 368 (Sup ct 2007).
[76] Fox op cit note 63 at 132.

Put differently, the argument here is that choosing to use genetic technologies with the vision of having a child with particular characteristics is a decision concerning reproduction, and, accordingly, an exercise of reproductive autonomy. Therefore, the birth of a child without these genetic characteristics constitutes an infringement of reproductive autonomy.

But is this an argument which could ever be sustained in law by a court? On what basis could such a right be claimed? I consider this issue in the following sections, with specific reference to cases where courts have grappled with the nature of reproductive autonomy and how it extends to choices regarding the genetic composition of prospective children. Each of the three cases discussed below emanates from different legal systems. However, they find commonality on critical legal issues related to the main research question of this Chapter: do prospective parents have a right to determine their prospective child's genetic characteristics? In each case I provide (a) an overview that outlines its significance; (b) a background to the case, including relevant facts; (c) a summary of the judgment; and (d) a discussion of how the judgment relates to the argument in favour of the recognition of a right to select for (or against) genetic traits in one's offspring based on reproductive autonomy.

V *PARK V CHESSIN* (US)

(a) Overview

Park v Chessin[77] has the distinction of being the first case in which US courts gave legal recognition to a claim for wrongful life.[78] In this case, the Park family sought damages from two obstetricians after the couple had a child with a genetic disease, despite the obstetricians' assurances that this would not happen. In this judgment, we see the New York Appellate Division affirm germinal choice as falling within the scope of a woman's right to reproductive autonomy — at least in the context of using reproductive technologies to avoid having a child with a genetic disorder.

(b) Background

When Hetty Park (the plaintiff) gave birth in June of 1969, the child lived for just five hours before succumbing to a disease that was later diagnosed as polycystic kidney disease (PKD).[79]

[77] *Park v Chessin* 60 AD2d 80 (1977).
[78] M Zhang 'Park v. Chessin (1977)' (2012) available at *https://embryo.asu.edu/pages/park-v-chessin-1977,* accessed on 25 May 2021.
[79] *Park v Chessin* para 63.

PKD is a hereditary heart disease that can manifest in both autosomal dominant or autosomal recessive forms — the latter being rarer and fatal for children in the early-life phase.[80] Unbeknownst to the Parks at the time, autosomal recessive PKD was responsible for their first child's death. Anyone with even basic insight into genetics would have known that meant that both the plaintiff and her husband must have been carriers in order for the child to be born with this form of the disease.

The distress of losing their first child caused the Parks to seek medical insight into what caused the death, before pursuing another pregnancy. After learning that a genetic disease caused their child's death, the Parks approached Dr Chessin and Dr Gibstein (the defendants), the obstetricians assisting the Park family in their efforts to have a child[81] — for advice regarding the risk this genetic disease posed to any future children they might have. The defendants (incorrectly) advised the Park family that the chances of them having another child with PKD were 'practically nil'.[82] The Parks, relying on this advice, proceeded to have another child, named Lara, who was born a year later in 1970. Despite the defendants' assurances to the contrary, Lara was also born with PKD. She succumbed to the disease after two and a half years.

Upon learning the truth about PKD and how the risk it posed to their second child was substantially higher than the defendants had claimed, the Parks instituted legal proceedings against the obstetricians who had given them the erroneous advise that ultimately led to the Parks losing a second child. The Parks' case consisted of two main claims:[83]

1) The claim brought in their own names for the losses they incurred as a result of the conduct of the defendants, including their medical and other expenses and emotional distress.

2) The claim brought on behalf of their deceased daughter Lara.

After a dismissal by a New York trial court in 1976 on the grounds that the Parks had no legally valid claim for damage,[84] the Parks' case was heard by the New York Appellate Division a year later.

---

[80] MedlinePlus Genetics, 'Polycystic kidney disease' (2020) accessed *https://medlineplus.gov/genetics/condition/polycystic-kidney-disease/*, accessed on 25 May 2021.
[81] *Park v Chessin* 88 Misc2d 222 (1976) 224 (New York trial court).
[82] Ibid 63.
[83] The Parks' claims also included damages for medical malpractice and fraud. However, given that the legal proceedings considering these issues are not relevant to the present discussion, mention of them has been omitted.
[84] *Park v Chessin* (New York trial court) 232–233.

(c) Judgment

The essence of the Parks' grievance is that they alleged that the defendants' conduct was wrongful because their advice was reckless and disregarded the existing medical knowledge.[85] As obstetricians, they ought to have known that the death of the first child due to an autosomal recessive genetic disorder like PKD, meant that the probability of a subsequent child having the disease was not 'probably nil' — but very high. Thus, they ought to have advised the Parks to take precautions against this such as undergoing genetic tests to confirm they were both carriers for PKD.[86] In considering the parents' claim, the court disagreed with the finding of the trial court, taking the view that the conduct by the defendants, in giving negligent advice was 'a wrong which is cognizable in law'.[87] Accordingly, the New York Appellate Division confirmed that the parents' main causes of action — with the exception of damages sought for emotional distress and mental anguish — were legally valid.[88]

In considering the claim made on behalf of Lara for wrongful life, the court acknowledged the reluctance of prior courts in the US, as well as other jurisdictions, to give legal recognition to claims for wrongful life. However, it took the progressive view that technological advancement in human procreation — as well as the social and legal developments as a result of these advancements — occasioned a move beyond this initial hesitation:

> '[C]ases are not decided in a vacuum; rather, decisional law must keep pace with the expanding technological, economic and social change. Inherent in the abolition of the statutory ban on abortion…is a public policy consideration which gives potential parents the right, within certain statutory and case law limitations, not to have a child. *This right extends to instances in which it can be determined within reasonable certainty that the child would be born deformed* (emphasis added).'[89]

The court's comments may be understood as acknowledging that as a result of the legal recognition of the general right to avoid procreation, there is a more specific legally protected interest in being able to avoid having a child with undesirable genetic traits which cause them to be 'deformed' — ie a genetic disease. This the court views as a logical extension of existing legal rights in light of prevailing technology and recognises that if prospective parents generally

[85] *Park v Chessin* para 84.
[86] Ibid.
[87] Ibid para 86.
[88] Ibid para 87.
[89] Ibid para 88.

have the freedom to avoid having children, *there is no logical reason why they ought not to be entitled to use technology that enables them to avoid having children with undesirable genetic traits,* such as lethal disease. The court further extended this to its reasoning for permitting the claim on Lara's behalf, remarking that '[t]he breach of this right may also be said to be tortious to the fundamental right of a child to be born as a whole, functional human being'.[90] The court here alludes to the idea that the law may protect prospective children from being born with genetic diseases. This may be justified in SA law on the principle that in all matters concerning the child, their best interests are paramount.[91] This is an idea I will consider in more detail in Chapter 6.

(d) Discussion

Ultimately, the New York Appellate Division found in favour of the Parks by ratifying their causes of action, except for any claims based on mental anguish.[92] In reaching this conclusion, the court demonstrated the legal foundations of the case in favour of a right to germinal choice. Stated briefly, the case is that *if any state recognises reproductive autonomy as a (negative) right, then it follows from this right that prospective parents are entitled to choose not to have a child with undesirable genetic traits*.

This conclusion is an example of courts giving legal recognition to germinal choice, at least in the context of selecting against certain genes. There is no reason this same conclusion could not be reached on the basis of SA law. This is especially considering that unlike the US, our law gives express recognition to reproductive autonomy in section 12(2)(a) of the Constitution.[93] If 'decisions concerning reproduction' include all choices related to exercising the freedom to form a family as I have argued, there is little doubt that the right to reproductive autonomy as per section 12(2)(a) extends (at the very least) to the choice of prospective parents not to have a child with undesirable genetic traits, such as genetic disease.

Accordingly, if facts similar to *Park v Chessin* came before a SA court, the negligence by the obstetricians could not only be construed as a delict, but also as a violation of the right to reproductive autonomy of the prospective parents. This argument finds support in the

[90] Ibid para 88.
[91] This is commonly referred to as the 'child welfare principle'. See: T Walsh 'Advancing the interests of South Africa's children: A look at the best interests of children under South Africa's Children's Act' (2011) 19 *Michigan State International Law Review*.
[92] *Park v Chessin* para 88.
[93] See Chapter 4 supra at 128–29.

following comments of the Constitutional Court in *H v Fetal Assessment Centre*[94] concerning delictual cases that parents may bring against negligent medical practitioners:

> '[H]aving regard to the fundamental right of everyone to make decisions concerning reproduction and to security in and control over one's body, the harm may simply be seen *as an infringement of the right of the parents to exercise a free and informed choice* in relation to these interests (emphasis added).'[95]

Similarly, when a child is born with genetic characteristics other than those the prospective parents desired, due to negligence — irrespective of whether these may be seen as 'harmful' in summation — *there is an infringement of the right of the parents to exercise a free and informed choice in relation to the genetic composition of the prospective child*. In other words, there is an infringement of the prospective parents' germinal choice, which I argue (with support from the Constitutional Court's reasoning in *Fetal Assessment Centre*) finds protection under the aegis of reproductive autonomy.

Having demonstrated the argument that the right not to have a child with undesirable genetic characteristics is founded on reproductive autonomy, I now consider whether reproductive autonomy may also be understood to include the right to choose to have a child with desirable genetic traits — with reference to a more recent judgment from Singapore.

VI *ACB V THOMPSON* (SINGAPORE)

(a) Overview

Much like *Park v Chessin*, the Singaporean case of *ACB v Thomson*[96] was a claim based on the tort of negligence. In this case, an unnamed married couple approached the courts seeking damages after a mishap at the IVF clinic where they were receiving treatment, which caused the wife's eggs to be fertilised with the sperm of a man other than her husband.[97] This led to the couple having a child that was only genetically linked to the wife, when their desire was to have a child that was the biological offspring of both of them. In a touchstone judgment by Singapore's Court of Appeal, it was affirmed that the prospective parents were entitled to damages from the IVF clinic on the grounds that the prospective parents have a right to 'genetic affinity' with their offspring, and the negligence of the IVF clinic had interfered with this

[94] *H v Fetal Assessment Centre* 2015 (2) SA 193 (CC).
[95] Ibid para 59.
[96] *ACB v Thomson Medical Pte Ltd and Others* [2017] SGCA 20.
[97] Ibid para 3.

right.[98] This case is the closest example of a judicial decision on whether the legal rights of parents entitle them to choose their prospective child's genetic composition — in this case by selecting for genetic relatedness.

(b) Background

The appellant in this case was a Chinese Singaporean woman referred to as ACB.[99] ACB and her husband wanted to have children, however, like many couples around the world, they had challenges doing so 'naturally'. The couple consulted with an obstetrician who advised them to use IVF, and they then enlisted the services of Thompson Medical, an IVF clinic. The couple began their first IVF cycle in 2006, and by 2007 ACB and her husband welcomed their first child into the world. Desiring to grow their family further, the couple once again used the services of Thompson Medical in 2010. Later that same year, the couple had a second child, referred to as Baby P.

Shortly after the birth of Baby P, her parents noticed that she looked distinctly different from both of them, and her elder brother.[100] Baby P had a noticeably different skin tone to the rest of her family, and different hair colour. Baby P's parents took her for blood tests and they discovered that Baby P had a different blood type from her sibling. All this considered together was a cause of concern for ACB and her husband, who investigated further and discovered that ACB's eggs had been fertilised by sperm from an unknown Indian donor during the IVF process.[101] Upon learning this, the parents instigated legal proceedings against Thompson Medical and the medical practitioners involved in their treatment (the respondents).[102] Among the main heads of damages raised by ACB and her husband, was what the court referred to as 'the upkeep claim' — which was described as follows:

> '[F]or upkeep costs and it included, among other things, the cost of enrolling Baby P in an international school in Beijing where the Appellant and her Husband presently reside, the cost of tertiary education in Germany, travelling expenses, medical expenses, and the cost of feeding and caring for Baby P until she is financially self-reliant.'[103]

[98] Ibid para 210.
[99] Ibid para 6.
[100] Ibid para 8.
[101] Ibid para 8.
[102] Ibid para 10.
[103] Ibid para 11.

The upkeep claim spawned interlocutory litigation. The respondents approached the court to have the preliminary issue of the legal validity of the upkeep claim addressed prior to the commencement of the primary litigation.[104]

To clarify, the parents' argument was not that they did not want Baby P, and therefore should be compensated for the cost of raising her. They had been actively trying to have another child and were happy that they had one. Rather, they sought to make the more nuanced case that the child they ended up having (due to the respondents' negligence) was not the child they wanted. Why not? Because the child they wanted was one with a genetic link to both ACB and her husband, and Baby P was only related to one of them.[105] One might say in response: 'How dare they complain? They wanted a baby and they got one, they should consider themselves lucky!' This, in essence, was the respondent's defence:

> 'They argued that the child is a blessing, and that there was something distasteful, if not morally offensive, in treating the birth of a normal, healthy child as a matter of compensation.'[106]

This defence is an example of the aforementioned gift metaphor alluded to above, which Fox referred to as a common cause of reluctance for courts in cases of this nature, and this was again the case in the court a quo (the High Court).[107] The respondents were successful in the High Court,[108] where the judge expressed his displeasure at the idea of granting the relief sought by ACB, and Baby P growing up, 'thinking her very existence was a mistake' because the clinic was forced to pay for her upkeep.[109] The parents appealed this judgment to Singapore's highest court.

(c) Judgment

In dealing with the merits of this case, the Singapore Court of Appeal expressed feeling stuck between refusing the upkeep claim, and thereby denying the parents compensation for what was clearly a wrong done against them, and the equally undesirable alternative of allowing the parents' claim for the upkeep of Baby P and thereby allowing a child's existence to be a 'continuing source of loss'.[110]

---

[104] Ibid para 13.
[105] Ibid para 24
[106] Ibid para 3
[107] Fox op cit note 63 at 62.
[108] *ACB v Thomson Medical Pte Ltd and others* [2015] SGHC 9.
[109] Ibid para 16.
[110] Ibid para 4. The court saw this as something that 'denigrates the worth of Baby P'.

The case on behalf of the parents was a compelling one because their grievance was not based solely on sentimental ties to the idea of genetic relatedness. A simple DNA mix-up, while clearly an obstruction of the parent's reproductive plans , is arguably something which could be put out of mind if all that was different about Baby P was her genes. But it was not that simple. Every day ACB and her husband had to look at Baby P and be reminded of the clinic's negligence, and how it interfered with their plans for *how they wished to form a family*.[111] Ultimately it was the fact of this in-road into their reproductive plans which the court felt was legally actionable, and not the claim for damages arising from the upkeep of Baby P. The court avoided choosing from either of the undesirable paths before it, and instead created a third avenue of its own:

> '[W]e are prepared to recognise, in the circumstances of this case, the Respondents' negligence has caused the Appellant to suffer a loss of "genetic affinity", and that this should be an actionable head of damage' '[112]

Before exploring this novel head of damage, it is important to consider the court's reasons for dismissing the alternatives. The rationale of the Singapore Court of Appeals in rejecting the upkeep claim was twofold. Firstly, the court was unwilling to hold that any of the obligations of parenthood (including the financial upkeep of a child) could be something that is the basis of legal damages for public policy reasons.[113] It was made clear in the judgment that this finding emanated from the court's views regarding the moral underpinnings of parenthood:

> 'This is not a factual claim and it has nothing to do with the subjective perceptions of individual parents; nor has it anything to do with the felt reality of parenthood…Rather, it is a *normative* claim about the paradigm of family relationships which exist in the law, which views the responsibilities of parenthood as obligations of a legal and moral character that arise in relation to the birth of a *new life.*'[114]

The court also made clear its view that ACB and her husband could not 'have their cake and eat it too' regarding their parenthood of Baby P. That is, they could not both claim to fully accept her as their own while also declining to accept the pecuniary obligations of being her parents.[115]

---

[111] Ibid para 132–136.
[112] Ibid para 24.
[113] Ibid para 86.
[114] Ibid para 90. Emphasis in original text.
[115] Ibid para 93.

Secondly, the court took the view that granting the relief sought by ACB and her husband in the upkeep claim, 'would be fundamentally inconsistent with the nature of the parent–child relationship and would place the Appellant in a position where her personal interests as a litigant would conflict with her duties as a parent'. [116] What the court meant by this was that acknowledging a claim for upkeep would put parents in a position where they had to come to court and prove their child was a net loss to them when set off against the benefits brought by the child (monetary and otherwise).

Due to its dissatisfaction with the upkeep claim, the court then turned to consider alternative remedies for the wrong suffered by ACB and her husband. The court briefly considered an award based on loss of autonomy.[117] However, it eventually decided against recognising loss of autonomy as an actionable injury in its own right, stating that 'such a development would pose significant problems of legal coherence and would be contrary to well-established principles on the recovery of damages'.[118] In other words, the court concluded that tort law in Singapore did not provide for a loss of autonomy as a general head of damages, and was unconvinced that this was the occasion to invent one. In doing so, the court did, however, note that its reasoning related to incongruency between (i) the concept of loss of autonomy as a general head of damages and (ii) the principles of tort law. Thus, the difficulty in formulating (i) in a way that adheres to the legal canons pertaining to (ii) in Singaporean law, should not be taken as dismissing the notion that autonomy of the parents had been affected in a legally significant way.[119] The court then turned its attention to the novel remedy of loss of genetic affinity — a term derived from the work of Fred Norton.[120]

In its discussion of this concept, the court proceeded by affirming that what was of relevance, in this case, was the desire of ACB to have a child of her own, with her husband. Put differently, her desire was for a child with a genetic link to both her and her husband, which the court labels as a desire for genetic affinity.[121] And in the court's view, the legally relevant loss suffered by ACB as a result of the respondent's negligence was the frustration of the desire for genetic affinity.

---

[116] Ibid para 95.
[117] Ibid para 106.
[118] Ibid para 115.
[119] Ibid. For example, one of the court's reasons was that recognising loss of autonomy as a head of damages in tort law 'would undermine existing control mechanisms which keep recovery in the tort of negligence within sensible bounds'.
[120] See F Norton 'Assisted reproduction and the frustration of genetic affinity: Interest, injury, and damages note' (1999) 74 *New York University Law Review* 793–843.
[121] *ACB v Thompson* para 127.

The desire to preserve genetic affinity is described as being a strong one, for reasons of creating bonds between parent and child, as well as fostering belonging in religious and cultural groups.[122] For these reasons, the court endorsed the view that people who make use of NRTs to have a child ought to be able to do so in a way that satisfies the desire for genetic affinity if they so wish.

(d) Discussion

An argument based on genetic affinity is one that is likely to resonate well in the African context. As I alluded to in Chapter 2, the preservation of genetic relatedness is prized especially highly in African communities — so much so that the propagation of genetic offspring is viewed as a moral obligation.[123] This, unfortunately, can lead to some undesirable outcomes, as evidenced by reports that African women face heightened levels of stigma and prejudice for being infertile.[124] But even if this is the case, one might still wonder why a strong the desire for genetic relatedness would be legally actionable? After all, humans desire many things, but the mere fact of a strong desire for something does not amount to a legal entitlement for the said thing. In defending the legal significance of the desire to preserve affinity, the Singapore Court of Appeal stated thus:

> 'Now, all this is not to lay out a prescriptive definition of what family should be or, worse, to denigrate adoption, which is a precious and valuable thing, but to explain that persons who *consciously* choose to undergo IVF do so because of a deep desire to experience, as far as it is possible, the ordinary experience and incidents of parenthood. And when, as in the present case, a person has been denied this experience due to the negligence of others then she has lost something of profound significance and has suffered a serious wrong.'[125]

While the court did not use human rights language in reaching its conclusion, in essence, the reasoning here can be seen as affirming the reproductive autonomy of prospective parents, in that *the remedy of genetic affinity is based on the court's recognition of the need to give legal protection to the reproductive plans of prospective parents*. In other words, while the court did not base its conclusion on the loss of autonomy as a general head of damages, it was ultimately the significance of the prospective parent's right to reproductive autonomy that

[122] Ibid para 128.
[123] G Tangwa 'Some Reflections on Biomedical and Environmental Ethucs' in K Wiredu (ed) *A Companion to African Philosophy* (2008) at 391. See, also, Chapter 2 supra at 71–72.
[124] See LF Mabasa *The psychological impact of infertility on African women and their families* (unpublished doctoral thesis, UNISA, 2009).
[125] *ACB v Thompson* para 129. Emphasis in original text.

informed its finding that they had suffered a significant legal harm in losing out on genetic affinity with Baby P.

This is especially clear in the court's finding that what is truly lost by parents whose desire for genetic affinity is obstructed, is the parents' 'chance to have a family structure which comparts with her aspirations'.[126] This is made even more apparent in the statement that ACB's 'interest in maintaining the integrity of her reproductive plans…is one which the law should recognise and protect', which in this case called for the recognition of a claim for genetic affinity. [127] Under different circumstances (such as where ACB's reproductive plans were thwarted due to state policy), this same interest could have been protected through a claim that ACB's reproductive rights had been violated.

Evidently the harm in this case may be described as both a tort and an infringement of ACB's freedom to form a family, as I described it in Chapter 4. ACB sought to form a family in which her children were genetically linked to both her and her husband, and negligence obstructed this aspiration. This is something which the Singapore Court of Appeals recognised as actionable under tort law but *could also find protection under the aegis of the right to reproductive autonomy*. If a similar case came before SA courts, the harm suffered by ACB and her husband could be conceptualised as a violation of their reproductive autonomy as per section 12(2)(a), as choosing the genetic composition of a prospective child is clearly a 'decision concerning reproduction'.

In summary, the Singapore Court of Appeals' judgment in *ACB v Thompson* reinforces that parents generally have an interest in making decisions about the circumstances within which they form a family. This includes an interest in making certain decisions regarding the genetic characteristics of their prospective children (such as whether they are genetically linked to their parents) — and interference with that interest is a basis for a legal remedy. This judgment is a further affirmation of the principal arguments underlying germinal choice. Just as the court in *Park v Chessin* took the view that the right to select *against* genetic disorders was a logical extension of the freedoms already currently afforded to prospective parents in making decisions concerning reproduction, *ACB v Thompson* demonstrated that a logical extension of reproductive autonomy is the recognition that parents have an interest in selecting *for* genetic relatedness and that this interest is worthy of legal protection.

[126] Ibid para 130.
[127] Ibid para 135.

What is important to note here is that while the case dealt with genetic affinity, this right was premised on the more general right of parents to make decisions that pertain to their prospective children (what the court referred to as 'reproductive plans'). Accordingly, there is no reason why the same reasoning could not be extended to other decisions regarding a prospective child's genetic composition.

VII *STEWART V BOTHA* (SA)

(a) Overview

The South African case of *Stewart v Botha*[128] was a landmark judgment in the development of the law concerning reproductive wrongs in South African case law. In this case, the Cape High Court was confronted with a set of facts similar to those in *Park v Chessin*, where a family sought relief against medical practitioner who failed to provide them with information of vital importance to their decision of whether or not to have a child. Unlike *Park v Chessin*, however, this information pertained to congenital disorders rather than genetic ones, and the mother in question (unlike Mrs Park) alleged that if she been informed of the child's health status, she would have terminated the pregnancy. Despite these differences, a common thread flows between the judgments in these cases — and similar subsequent cases in SA — of recognising the significance of the need to give legal protection to the prospective parents' interest in making choices regarding the characteristics of their offspring. In doing so, this judgment was the first in SA (and among the cases examined here) to explicitly recognise this interest as falling within the scope of the prospective parent's *right to reproductive autonomy*.

(b) Background

The Stewart family wanted to have a child, and in the process of doing so, Mrs Stewart (the plaintiff) received medical advice and treatment from of a general medical practitioner and a specialist is obstetrics and gynaecology (the defendants).[129] Mrs Stewart gave birth in 1993 to a child they named Brian, who had what was described as 'severe physical disabilities'[130] as a result of spina bifida and hydrocephalus.[131] Aggrieved that the defendants failed to inform them

[128] *Stewart v Botha* 2007 (6) SA 247 (C).
[129] Ibid para 1;4.
[130] Ibid para 1.
[131] *Stewart v Botha* [2008] ZASCA 84, 2008 (6) SA 310 (SCA) para 1 (Supreme Court of Appeal).

of these disorders prior to the birth of Brian, Mr and Mrs Stewart instituted legal action against the defendants in the form of two claims:

1) Mrs Stewart brought a claim in her personal capacity for damages in respect of past and future medical expenses due to Brian's disorders, as well as the cost of special schooling and other costs related to Brian's maintenance.

2) Mr Stewart brought a claim on behalf of Brian for damages relating to the medical expenses occasioned by his disability.[132]

Both these claims hinged on the assertion that the defendants had a duty to inform Mrs Stewart of Brian's disorders and that they would result in serious physical deformity, and they failed to do so.[133] This failure, Mrs Stewart argued, prevented her from having the opportunity to choose to terminate the pregnancy and not bring a severely deformed child into the world — a choice Mrs Stewart expressed she would have made. In other words, but for the failure by the defendants to detect the disorders in question and to inform Mrs Stewart about them, she would not have given birth to Brian and incurred the expenses that his birth in a physically deformed state occasioned.

In response, the defendants raised an exception to the second claim, Brian's so-called 'wrongful life' claim, on the grounds that 'such a claim is not recognised in South African law'.[134] This exception was the core issue upon which the court had to rule. No exception was raised in relation to the first claim, Mrs Stewart's wrongful birth claim. However, due to the interrelated nature of the claims, the court's judgment also considered the legal validity of this claim. In doing so, the court makes valuable and incisive comments that are relevant to this discussion, although not directly relevant to the main issue. For this reason, my discussion of the judgment will focus on the wrongful life claim and return to the court's comments in discussion of the judgment.

(c) Judgment

On the main issue of the wrongful life claim, the Cape High Court held that South African law does not recognise such claims, and considered cases in other jurisdictions to illustrate how significantly this policy can vary.[135] In the course of this discussion the court noted that other

[132] Ibid para 2.
[133] Ibid para 4.
[134] Ibid para 6.
[135] *Stewart v Botha* para 11.

courts often reject such claims on the basis of what it terms the 'sanctity of life' argument, which was phrased as follows in the US case of *Bruggeman v Schimke*:[136]

> 'It has long been a fundamental principle of our law that human life is precious. Whether a person is in perfect health, in ill health or has or does not have impairments or disabilities, the presence of life is valuable, precious and worthy of protection. A legal right not to be born to be dead rather than to live with deformities is a theory completely contradictory to our law.'[137]

In cases such as this, the sanctity of life argument is often used by courts to shy away from recognising a claim for wrongful life, on the grounds that recognising such a claim would be the same as suggesting that medical practitioners had a duty to prevent a physically or mentally disabled child from coming into being. The court in this case, however, was not persuaded by this argument, and found that it was based on a fundamental misunderstanding of the relevant legal issue:

> 'The unlawfulness of the defendants' negligent omissions vis-à-vis Brian is that it precluded the mother from making an informed decision on whether or not to abort the foetus. That is the duty owed to Brian. To complete his cause of action, he will have to allege and ultimately prove that his mother would, had she been properly advised, have chosen to have an abortion and that she would have been able to do so in terms of the provisions of the Choice of Termination of Pregnancy Act. It is therefore incorrect to categorise the duty to the child as being a duty to terminate the life of the foetus. The defendant owed the child a duty to properly advise the mother. *The true basis of the claim is founded in the right of his mother to make a properly informed decision.* The fact that the only "remedy" at present available to prevent the child from being born with severe congenital deformity is a legally sanctioned abortion, should not be the reason for denying the child, once it is born, the claim which it clearly should on moral grounds be entitled to against the professional person who negligently made it impossible for the mother to exercise the choice to have an abortion (emphasis added).'[138]

As this remark makes apparent, the court in this judgment — much like in *ACB v Thompson*[139] — was clear in expressing its view that the true harm in cases of reproductive wrongs is the obstruction of the prospective parents' reproductive plans, and normative considerations such as concerns about placing monetary value on human life should not distract from the need for a remedy for this harm. In this case, that remedy comes in the form of damages for suffering harms associated with being born with physical and cognitive

[136] *Bruggeman v Schimke* 718 P 2d 635 (Kan 1986).
[137] Ibid 254.
[138] *Stewart v Botha* para 22.
[139] See *ACB v Thompson* para 135.

deformities, which would not have occurred had due respect been given to the prospective parents' reproductive autonomy.

The court also contemplates another commonly raised objection to wrongful life claims — that it would open the door to the undesirable outcome of children seeking damages for being born with disorders (genetic or otherwise).[140] But the court also dismisses this objection, pointing out that unlike the medical practitioners, the actions of parents in choosing to bring a child into the world with or without a particular deformity or disability, is a choice that finds legal protection in the Bill of Rights:

> 'The couple who decides with knowledge of the risks involved, to conceive and the expecting mother who decides not to procure an abortion in the face of the known or foreseeable risks, *act in the exercise their constitutional right to make decisions concerning reproduction*. Whether or not it should be held to be unlawful vis à vis the child for the parents to conceive and for the mother not to obtain an abortion, will depend on the circumstances and the views of the community incorporating the constitutional values and norms set out in the Constitution. It should not be determined by the fact that the child is entitled to sue a doctor who has failed to act in accordance with the standards demanded of him by his profession and in a manner contrary to what he was engaged to do, namely to treat and advise the mother with the necessary skill and care (emphasis added).'[141]

In so doing, the Cape High Court made the first explicit recognition in SA law of the interest of parents in choosing the characteristics of their offspring to which Fox refers.[142] It held that this interest not only finds protection within the law of delict, but also within the scope of reproductive autonomy as per section 12(2)(a) of the Constitution. This goes a step further than the *Park v Chessin* and *ACB v Thompson* judgments in acknowledging the freedom of parents to choose for or against specific characteristics for a prospective child is a matter of right, a recognition which was also made subsequent to this case in the above-mentioned case of *Fetal Assessment Centre*.[143]

Ultimately, the Cape High Court in *Stewart v Botha* decided against allowing a claim for wrongful life. However, its reasons lie not in the court's feelings about the ethics of such

[140] *Stewart v Botha* para 23.
[141] Ibid.
[142] Fox op cit note 63 at 8.
[143] *Fetal Assessment Centre* para 59.

claims, but instead in what it perceived as challenges in proving damages.[144] This finding was confirmed by the Supreme Court of Appeal.[145]

(d) Discussion

Although the Cape High Court in *Stewart v Botha* primarily concerned itself with the merits of the claim that no legal action for wrongful life existed under South African law, it also gave much-needed attention to the issue of the wrongful birth claim with reference to the case of *Friedman v Glicksman,*[146] citing the following passage:

> 'A doctor acts wrongly if he either fails to inform his patient or incorrectly informs his patient of such information she should reasonably have in order to make an informed choice of whether or not to proceed with her pregnancy or to legally terminate such pregnancy. The fault element of the delict is to be found in the foreseeability of harm which the doctor–patient relationship gives to the doctor. *Once proper disclosure is not made and the patient is deprived of her option, it seems to me that the damages she has suffered by giving birth to a disabled child* are clearly caused by the fault of the doctor, provided she would have terminated the pregnancy if the information had been made available to her (emphasis added).'[147]

This passage articulates the case law in this area, giving legal protection to the freedom of parents to choose to terminate a pregnancy to avoid giving birth to a child with undesirable characteristics such as physical deformity, as in *Park v Chessin* above.[148] Building on this, the court notes that this freedom is further affirmed by the provisions of the Choice of Termination of Pregnancy Act, which allows pregnant women to terminate pregnancies on whatever grounds they wish during the early stages of pregnancy, and particularly notes how this Act provides that pregnant women are entitled to information which is relevant to their pregnancy.[149] What is more, that SA law gives protection to the interest of parents in determining the characteristics of their offspring described by Fox, which is made apparent where the court remarks that:

> 'The Provisions of the Act thus permit the mother in specific circumstances to choose non-life for her potentially deformed child. Implicit in this decision is the choice between non-life and life in a state of severe physical and mental abnormality.'[150]

[144] *Stewart v Botha* para 30.
[145] *Stewart v Botha* (SCA) para 16–17.
[146] *Friedman v Glicksman* 1996 (1) SA 1134 (W).
[147] *Friedman v Glicksman* para 1139J–1140C, as cited in *Stewart v Botha* para 12.
[148] *Park v Chessin* para 88.
[149] *Stewart v Botha* para 18.
[150] Ibid para 18.

As illustrated in all the cases discussed above, a logical and necessary extension of this freedom to determine the manner and state of existence of one's prospective child, is the entitlement to select for or against a particular genetic composition. It would be quite odd to suggest that parents had a right to choose not to have a child because of a genetic abnormality, but that this did not translate into a right to choose to use new genetic technologies to avoid having a child with the same genetic abnormality. Conversely, it would be nonsensical to suggest that pregnant women are entitled to terminate pregnancy because an implanted embryo did not have the desired genetic traits, but that they were not entitled to use genetic technologies to select for the same desired genetic traits.[151]

In conclusion, based on the discussion of the issue of wrongful birth in *Stewart v Botha*, it seems to me apparent that if a woman has a right protected by section 12(2)(a) to make a decision that will determine the characteristics of their prospective child, including (but not limited to) whether they are born with a physical or mental disorder as per *Park v Chessin* or with a genetic affinity to both its parents as per *ACB v Thompson — there is no reason in law why this right does not also extend to the use of genetic technologies such as CRISPR-Cas9 for reproductive purposes*. Accordingly, if another person or the state prevented such use, it may constitute a breach of the prospective parents' reproductive autonomy. Such a legal environment, in its openness to the use of reproductive technologies for both medical use and as a vehicle for prospective parents to give effect to reproductive plans, in my view may be described as affirming germinal choice.

VIII CONCLUSION

The object of this Chapter was to investigate the existence (or non-existence) of a legal right to use GGE technologies like CRISPR-Cas9 for reproductive purposes in order to determine the genetic characteristics of future offspring. I have shown that this a valid inquiry despite doubts from bioconservative lines of thought because prospective parents would have practical and moral reasons to want to use CRISPR-Cas9 as a reproductive technology, even though other technologies can produce similar outcomes. In beginning to outline the case for a 'right to CRISPR your babies' I elucidate how GGE — while often viewed as exceptional or an

[151] Despite the apparent absurdity, this situation is currently entrenched in SA law. As Thaldar observes, the current legal regime relating to termination is such that a pregnant mother can terminate a prenate for the purpose of sex selection, prior to 12 weeks – yet a prospective mother cannot select between embryos for sex selection. In other words, selective abortion for sex selection is *legal*, but embryo selection for sex selection is *illegal*. See Thaldar op cit note 25 at 232.

outlier — is simply another method of genetic selection (albeit a newer and more precise version). There is nothing outlandish about considering giving legal protection to prospective parents choosing to determine their prospective child's genetic characteristics. Indeed, this is something the law already does in various contexts, including where genetic selection is done via gamete selection, embryo selection or selective abortion.

Having settled these foundational issues, I then outlined that the case for a right to use CRISPR-Cas9 as a reproductive technology for genetic selection is one that is in principle founded on the bioliberal concept of germinal choice. This is the idea that individuals ought to be free to choose the genetic characteristics of their future offspring because there are legally justifiable reasons to deprive people of this freedom. I have argued that the concept of germinal choice finds support under the concept of reproductive autonomy, which I outlined in Chapter 4, such that there is — at least in principle — a case for 'a right to CRISPR' in South Africa based on section 12(2)(a) of the Constitution. I showed how this is more than just a theoretically compelling argument. It is one which finds support in jurisprudence from around the world in cases relating to reproductive wrongs. In these cases, courts have had occasion to consider the very question posited by this Chapter. And where they have answered it in the affirmative, they have done so in language that makes it abundantly clear that the concept of a right to select for or against specific genetic traits in future offspring is *founded on the reproductive autonomy of prospective parents*.

For these reasons, I conclude that for any state such as SA that recognises reproductive autonomy as a fundamental human right, the case made by the concept of germinal choice is a compelling one. If prospective parents have the freedom to use NRTs to select donor gametes, select between embryos, and engage in selective abortion of embryos because they do not possess certain genetic characteristics, it stands to reason that the same freedom extends to those prospective parents using CRISPR-Cas9 to select for the same sorts of genetic characteristics they might select for using these other NRTs. Any law which prohibits this would arguably violate prospective parents' reproductive autonomy and also raise issues of infringing upon their right to access reproductive healthcare (section 27(1)(a) in the Constitution) in cases where GGE technology may be the best (or only) means for the prospective parents to fulfil their reproductive plans.

All that said, this right for which I have argued is (like any other) not absolute, as public policy considerations may merit a limitation of how GGE technology like CRISPR-Cas9 can

be used for genetic selection in SA, such as may be observed in relation to the current ban on using PGT for non-medical sex-selection.[152]

In the next Chapter, I will consider arguments in favour of banning or at least limiting the use of CRISPR-Cas9 as a reproductive technology.

[152] See regulation 13 of the Regulations relating to the Artificial Fertilisation of Persons. For a critical analysis of this ban, see Thaldar op cit note 25.

CHAPTER 6

DETERMINING LIMITATIONS ON THE USE OF GERMLINE GENOME EDITING TECHNOLOGY

I INTRODUCTION

As discussed in Chapter 5, some consider human germline genome editing using technologies like CRISPR-Cas9 an unprecedented intrusion into the destiny of future generations. However, an analysis of the purpose and function of GGE technology reveals that their use falls within the ambit of liberties afforded to prospective parents in making decisions relating to reproduction. For this reason, in the US context, the National Academies of Sciences, Engineering, and Medicine 2017 report on human genome editing notes that: 'Access to heritable genome editing would be consistent with the broadest legal and cultural interpretations of parental autonomy rights in the United States.'[1] This sentiment can be extended to any state that gives legal recognition to reproductive rights because these rights extend to reproductive technologies, as discussed in Chapter 4. However, as I outlined in Chapter 2, rights from the Afrocentric perspective can never be absolute. They must be balanced against countervailing interests and, where necessary, they may be limited. So the question then becomes: under what circumstances might such limitation occur? This is the question this Chapter seeks to answer.[2]

I begin by considering the foremost means of delineating between acceptable and unacceptable applications of GGE technology, the 'therapy vs enhancement' binary. I consider various perspectives on using this framework as a means for determining the permissibility of GGE applications and conclude that it is fundamentally flawed. For this reason, I argue applications of GGE should not be grouped together into broad categories based on generalisations, but should be assessed on a case-by-case basis, guided by specific criteria that dictate under what circumstances the said applications would be permitted or not permitted. I consider what these criteria might be in the South African context, and identify two grounding

[1] National Academy of Sciences, National Academy of Medicine, National Academies of Sciences, and Medicine, *Human Genome Editing: Science, Ethics, and Governance* (2017) at 120.

[2] The discussion in this Chapter relates specifically and solely to limitations of GGE technology for policy reasons, and not to those related to scientific and technical reasons such as safety and efficacy. As stated in Chapter 1, this thesis presupposes that these scientific and technical issues can and will be resolved, and as such it will focus on how technologies like CRISPR-Cas9 should be regulated once the technology is available to the public.

principles based on the Afrocentric worldview: (1) the principle of established threats to the public interest, and (2) the principle of procreative non-maleficence. I argue that these grounding principles form the *minimum criteria* for legitimate limitations of the use of GGE technologies. The application of each of these grounding principles is illustrated with reference to a common objection made against using GGE technology.[3]

II THE CURRENT FRAMEWORKS FOR LIMITING THE USE OF GGE TECHNOLOGIES: THE THERAPY VS ENHANCEMENT BINARY

The therapy vs enhancement binary holds that therapeutic applications of GGE are permissible as they are morally justifiable, and enhancement applications are impermissible since they lack moral justification.[4] As a policy proposal, the therapy vs enhancement binary suggests that we should permit GGE when it is done for therapeutic purposes (such as to avoid the transmission of genetic diseases), and prohibit GGE if it is done for non-therapeutic purposes (such as to determine eye colour). Accordingly, in terms of this framework, the only criteria for regulatory limitation on the use of GGE technology are that the potential application is not intended for a therapeutic purpose.

As I have alluded to in earlier Chapters, the assertion that the only ethical purpose of GGE is the therapeutic purpose of 'curing' disease — and that there are no morally justifiable reasons for non-therapeutic applications of germline editing — is worth questioning. Consider, for instance, that several noteworthy bioethicists and reputable ethics bodies have stated that there may be circumstances where so-called genetic enhancement would be ethically justifiable.[5] These include a group of scholars and thinkers who have been identified as 'transhumanists', who argue that there is nothing wrong with the desire to enhance ourselves genetically since society already permits and even encourages enhancement through methods like education and pharmaceuticals.[6] Transhumanists also have a good reason for wanting to

[3] Note that these examples are intended only as illustrations of how these principles may be applied, and thus engagement with the particulars of these examples is avoided. For current purposes, an in-depth analysis of the particulars of any specific applications of GGE and objections thereto is in my view unwarranted. It would detract from the principle purpose of this Chapter: to provide guidance on the conditions within which the state might prohibit or prescribe conditions to the use of GGE technologies like CRISPR.

[4] National Academy of Sciences, National Academy of Medicine, National Academies of Sciences, and Medicine op cit note 1 at 145–46.

[5] For a discussion of the weaknesses in the supposition that no morally sound justifications exist for non-therapeutic applications of GGE technology, see Chapter 5 supra at 146.

[6] R Naam *More than human: Embracing the promise of biological enhancement* (2005) at 9; J Harris *Enhancing Evolution: The Ethical Case for Making Better People* (2010) at 2.

do this, given the flawed condition of our genomes.[7] In addition, there is evidence that negative feelings in the general public about GGE for non-therapeutic reasons may be less prevalent than commonly suggested. In a recent study of 1537 participants across 67 countries, 'only half of respondents…disapproved, or strongly disapproved of the use of GGE for enhancement purposes'.[8] This is true even in places such as the UK where the memory of 20th century eugenics in Europe might be expected to lead to repudiation of genetic technologies.[9] For these reasons, the assumption underlying the therapy/enhancement binary, that there are *no morally justifiable reasons for non-therapeutic applications of GGE technology* — is not widely supported by academia or the general public. This is for good reason, because while therapeutic applications provide a good reason for GGE, it does not follow that we should then prohibit all non-therapeutic applications.

Beyond this, there are several conceptual flaws in the idea of a therapy/enhancement distinction that give one reason to question its legitimacy. Of these, the most notable is that these concepts are not meaningfully distinct from each other. As Brown elucidates, 'it is not clear that the distinction is a descriptive one. Some have argued that our concept of disease is at least partly a normative concept'.[10] Critics have also pointed out that this non-distinction is further evidenced by how therapy and enhancement are not mutually exclusive; a particular therapy can be both a treatment that seeks to restore normal function, while also enhancing normal function.[11] An example of this would be prosthetic limbs, which enable a person with no feet to walk, but also allow that person to run more quickly than people who do not use prosthetics. In one sense the person's need for prosthetics is disabling, but in another sense, it also enhances their capabilities.[12] Similarly, some therapeutic genetic interventions to remedy disease may also have unintended beneficial effects. It seems irrational to suggest that these applications ought to be prohibited — solely because of these ancillary benefits.

---

[7] N Bostrom 'Human Genetic Enhancements: A Transhumanist Perspective' (2003) 37 *The Journal of Value Inquiry* 493–506 at 497; A Porter 'Bioethics and Transhumanism' (2017) 42 *The Journal of Medicine and Philosophy: A Forum for Bioethics and Philosophy of Medicine* 237–60 at 237; G Stock *Redesigning Humans: Choosing our genes, changing our future* (2003) at 4.

[8] A Jedwab, DF Vears & C Tse et al 'Genetics experience impacts attitudes towards germline gene editing: A survey of over 1500 members of the public' (2020) 65 *Journal of Human Genetics* 1055–65 at 1062.

[9] A van Mil, H Hopkins & S Kinsella *Potential uses for genetic technologies: Dialogue and engagement research conducted on behalf of the Royal Society* (2017) at 47.

[10] W Miller Brown, 'The Case for Perfection' (2009) 36 *Journal of the Philosophy of Sport* 127–39 at 132.

[11] J Harris *Enhancing Evolution: The Ethical Case for Making Better People* (2010) at 56; F Baylis *Altered Inheritance: CRISPR and the ethics of human genome editing* (2019) at 62; R Naam *More than human: Embracing the promise of biological enhancement* (2005) at 20.

[12] See H Hassani, M Ghodsi & M Shadi et al 'A Statistical perspective on running with prosthetic lower-limbs: An advantage or disadvantage?' (2014) 2 *Sports* 76–84; K Lechler & M Lilja 'Lower extremity leg amputation: An advantage in running?' (2008) 1 *Sports Technology* 229–34.

In my opinion, the therapy/enhancement binary is obviated by one fundamental flaw. The concepts themselves are not based on any objective and universally accepted criteria, but by subjective judgments about things such as what constitutes a 'healthy' genome. As Mukherjee points out:

> 'The synthesis of evolutionary biology and genetics reminds us that these judgments are meaningless: enhancement or illness are words that measure the fitness of a particular genotype to a particular environment; if you alter the environment, *the words can even reverse their meaning* (emphasis added).'[13]

In other words, because these are subjective judgments which are defined by environmental contexts, they are infinitely malleable. One person's therapy can be another person's enhancement.[14] To illustrate, I return to the example of HIV immunity which some describe as an unjustified enhancement[15] because of the availability of alternative treatments in developed states; however, in the African context, it would be justified as a therapeutic intervention.[16] There are several other cases similar to this, for example dementia and certain types of cancer, the prevention of which would clearly be beneficial to the health of those who carry a greater risk of developing them, but which are defined as an enhancement since they are not 'curing' a disease but providing immunity to one.[17]

Because of all these difficulties, Baylis concludes — correctly in my view — that the ethical permissibility of GGE applications should be assessed individually, and that 'enhancements (both health-related and non-health-related) are not by definition unacceptable'.[18] This conclusion is further ratified by the fact that empirical research on attitudes towards GGE seems to be shaped by the severity of the disease or disorder it is being applied to, rather than whether or not a disease is being 'cured'.[19] This, in my view, suggests that what people support is not the idea of the therapy/enhancement binary, but rather the idea that GGE should be used when there is a good reason for it. And avoiding the inheritance of a genetic disease *is not the only good reason*.

---

[13] S Mukherjee *The Gene: An Intimate History* (2017) at 350.
[14] J Harris *Enhancing Evolution: The Ethical Case for Making Better People* (2010) at 44.
[15] F Baylis *Altered Inheritance: CRISPR and the ethics of human genome editing* (2019) at 48.
[16] See Chapter 1 supra at 11.
[17] R Naam *More than human: Embracing the promise of biological enhancement* (2005) at 148.
[18] Baylis op cit note 15 at 63.
[19] See AJ Armsby, Y Bombard & NA Garrison et al 'Attitudes of Members of Genetics Professional Societies Toward Human Gene Editing' (2019) 2 *The CRISPR Journal* 331–39.

III AN ALTERNATIVE FRAMEWORK FOR ASSESSING GGE APPLICATIONS: THE UBUNTU VIRTUE ETHIC

In this section I apply the Afrocentric approach to the question of determining legitimate limitations to the use of GGE technology. In so doing, I will illustrate how any regulatory framework relating to GGE in SA ought to deal with issues where there is a tension between the interests of the community (insofar as South African society may be regarded as a community) and the interests of the rights of the individual. In particular, I intend to outline how the individual's 'right to CRISPR relates to the interests of the South African community in protecting the best interests of future generations.

In order to do this, I briefly revisit some arguments made in Chapter 2 regarding how, in the Ubuntu ethic, the individual and the community relate to each other.[20] What is apparent from the discussion thus far is that in African philosophy generally — and the moderate communitarianism for which I argue, specifically — what is ethically permissible cannot be solely determined through a focus on the individual. This would exemplify a disconnection of the individual person from his ties to society in a way that African philosophers have been critical of,[21] because of how these ties are foundational to the communitarian theory personhood. In discussing how African communitarianism diverges from Western philosophy and its fixation with the idea of individual autonomy, Bennet highlights this fundamental social connection where he remarks that 'African philosophy…takes a *relational* approach to the idea of individual identity'[22] (emphasis added). This is notwithstanding that moderate communitarianism recognises the individual as not subordinate to the community, and as having rights. But these rights must still be exercised in a way that, as far as possible, preserves harmonious relations with the community in which the individual lives.[23]

Individual autonomy, and what it entitles one to do, must be informed by an understanding of how the exercise of that freedom impacts on those the individual is relationally tied to — that is, his or her community. One cannot simply assert that the individual has a right to CRISPR-Cas9 and regard that as the end of the matter regarding its permissibility. It is essential also to consider how the exercise of that right may affect those around him or

[20] For a more expansive discussion of this issue, see Chapter 2 supra at 35.
[21] See W de Liefde *Lekgotla: The Art of Leadership Through Dialogue* (2005) at 11.
[22] TW Bennett & PJ Jacobs *Ubuntu: An African Jurisprudence* (2018) at 35.
[23] See Chapter 2 supra at 57.

her.[24] In other words, *an Afrocentric approach to determining acceptable applications of GGE technology based on the Ubuntu ethic entails recognising the rights of the individual, but also recognising the individual as connected to the community and considering how the interests of the community and those of the individual are interwoven*.[25] It is for this reason that our courts often made reference to Ubuntu when engaged in a 'balancing act' where there was a conflict between individual rights and the public good.[26] This is precisely the kind of conflict at the heart of the controversy regarding acceptable uses of GGE technology.

Accordingly, I suggest that it is necessary one try to resolve these conflicts by acknowledging that neither societal interests nor individual rights to use GGE technology take precedent in *all cases*, but instead we should assess the permissibility of particular applications by balancing these against each other. The basic liberties of the individual must, of course, not be arbitrarily infringed upon based solely on determinations such as public attitudes — for reasons I expanded on in Chapter 3.[27] That said, it must also be borne in mind that GGE must be carried out in a way that is aligned with the virtue ethic that is Ubuntu. To reiterate, in accordance with virtue ethics like Ubuntu, an action is right, if and only if it is what a moral agent with a virtuous character would do in the circumstances.[28] This means that a prospective parent using CRISPR-Cas9 *will be acting immorally and impermissibly insofar as the particular application he or she is using it for would entail him or her failing to act with Ubuntu*. This may be because the prospective parent failed to act with due regard to broader societal interests or the child who will be born from the genetically modified embryo. I consider when this will be the case later in this Chapter.

It is important to note that I do not suggest that the Ubuntu ethic can give us hard and fast rules about how to regulate GGE. As Bennet suggests, Ubuntu can only provide foundational ethical norms, which, when applied to specific cases such as gene editing, will provide guidance regarding what constitutes moral behaviour in that context.[29] This is similar to how Ubuntu has often been used by our courts, such as in the renowned *S v Makwanyane* judgment in which the court interpreted the Ubuntu ethic's general invocation of treating

[24] PH Coetzee 'Particularism in Morality and its Relation to Community' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* (2002) at 279; K Gyekye 'Person and Community in African Thought' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* (2002) at 308.
[25] Bennett & Jacobs op cit note 22 at 86.
[26] See, for example, *SAPS v Solidarity obo Bernard* [2014] ZACC 23, 2014 (6) SA 123 (CC) para 173–174.
[27] See Chapter 3 supra at 105.
[28] J Oakley 'A Virtue Ethics Approach' in H Kuhse & P Singer (eds) *A Companion to Bioethics* (1998) at 88.
[29] Bennett and Jacobs op cite note 22 at 50.

individuals with respect and empathy as antithetical to capital punishment.[30] Similarly, I suggest applying Ubuntu to regulating GGE for the purpose of providing guidance on questions related to fundamentally value-laden issues such as what constitute ethically permissible applications of GGE technology.

In order to be practically useful, the insights derived when considering these kinds of specific problems may be used to formulate ethical principles. By developing such principles, one can provide general action guidelines which can be used to determine what is permitted or prohibited in particular cases.[31] Given their practical utility, it is unsurprising that in mainstream bioethics — particularly in the domain of research ethics — ethical principles have become the most common mechanism for considering ethical problems. Most notable being Childress and Beauchamp's brand of principlism.[32] While the Ubuntu ethic is not, I suggest, a form or principlism, I do intend to borrow from the strengths of a principle-based approach by formulating two grounding principles that may be used when assessing applications of GGE technology.[33] In my opinion, these grounding principles elucidate the minimum criteria for the permissibility of GGE applications in both the Ubuntu ethic and in the SA legal context — and thus ought to inform the much-needed policy development in this area.

IV GROUNDING PRINCIPLES FOR GUIDING THE REGULATION OF GGE

(a) The interests of the community

(i) The role of public opinion

First and foremost, the main interest which the community may have in relation to GGE is having a voice in if, when and how CRISPR-Cas9 is used. This is of vital importance if the technology is ever to have widespread acceptance among African people. But the question then arises as to what role public opinion ought to have in the ultimate determination of permissible uses of GGE. If one relies solely on public opinion, cosmetic enhancements are the one form that are consistently viewed as the most ethically problematic.[34] What appears to be the driving

[30] *S v Makwanyane* [1995] ZACC 3, 1995 (3) SA 391. For a general discussion of this and other cases of the judicial application of Ubuntu, see Chapter 2 supra at 52.
[31] JF Childress 'A principle based approach' in H Kuhse & P Singer (eds) *A Companion to Bioethics* (1998) at 61.
[32] TL Beauchamp & JF Childress *Principles of biomedical ethics* (2001).
[33] Oakley endorses taking such an approach, pointing out that virtue ethics is by no means opposed to using principles to guide moral judgements. Oakley op cit note 28 at 87.
[34] See, for example, Van Mil et al op cit note 9 at 48.

force here is that individuals do not seem to really have a good reason for these kinds of edits. But then again, the relevant question from a policy-making perspective is: do we have a reason to stop them?

Bioliberal scholars have laid out the reasons for this. They argue that when it comes to determining if, when and how people may use reproductive technologies, the principles of liberty and freedom require that individuals can use them unless there is strong evidence to indicate that they should not do so.[35] This is often referred to as the 'democratic presumption'.[36] In referring to the democratic presumption, these scholars invoke a principle now commonly accepted in liberal democracies that the rights and freedoms of individuals should not be interfered with — unless and only where there is a sufficiently strong reason for the limitation.[37] Put differently, people are presumed to be free to act as they wish, unless there are explicit legal rules prohibiting an action based on some good reason. [38] As evidenced by the discussion in Chapters 4 and 5, this is a position we in SA are inclined to accept, due to the extent to which it reflects the values of our Constitution as well as our jurisprudence.

This being the case, it might seem that there is little room to accommodate the views of the public on demarcating acceptable applications of GGE technology. But this is not true. As I have argued in Chapter 2,[39] community engagement plays a vital role in African communitarianism, particularly relating to controversial matters. The potential role public opinion could play here was most recently stated in a 2021 opinion published by the European Group on Ethics:

> 'Against the background of these far-reaching questions about concepts of humanness and naturalness and their ethical dimensions, it is clear that there is no one scientific, unambiguous and thus binding answer as to what the relation between the genome of a human embryo and humanness and naturalness is, and what ethical orientation this can provide. Rather, the need arises for a broad, inclusive and nuanced social debate on the foundations of our view (or indeed

[35] I de Melo-Martin 'The Ethics of Sex Selection' in RL Sandler (ed) *Ethics and Emerging Technologies* (2014) 90–103 at 93.
[36] E Dahl 'The presumption in favour of liberty: A comment on the HFEA's public consultation on sex selection' (2004) 8 *Reproductive BioMedicine Online* 266.
[37] SJ Laws 'The rule of law: The presumption of liberty and justice' (2017) 22 *Judicial Review* 365 at 368.
[38] JA Robertson 'Procreative liberty in the era of genomics' (2003) 29(4) *American Journal of Law & Medicine* 439 at 444.
[39] See Chapter 2 supra at 76.

many possible views) of humanity, which takes all perspectives into account and brings them into discussion.'[40]

The community's voice could thus be expressed as more than just a thumbs up or thumbs down for specific applications, but may actually provide valuable insight into questions such as the meaning to be given to particular concepts. This would inform how core concepts are defined and understood in the South African context, perhaps even how we categorise GGE applications.

However, even in recognising how public engagement is undoubtedly critical, it cannot ever justify an abdication of our commitment to respecting the fundamental freedoms of the individual.[41] Engagement with the community may be an essential part of formulating policy on GGE, but public sentiment alone cannot trump the liberties of the individual. Having established this conceptual foundation, I will now set out the first of the grounding principles.

(ii) The principle of established threats to public interests

Several purported public interest arguments have been raised to argue for prohibitions on all applications of GGE. In the following discussion, I will consider one example of this: the public interest in promoting social equality. It is argued that GGE technologies like CRISPR-cas9 will only be accessible to the rich, with the consequence of exacerbating existing inequalities in society[42] — particularly in societies like SA, given the wide gap between rich and poor and the lack of access to healthcare for the underprivileged.[43] Therefore, it ought not be made available while such social inequalities exist. This example illustrates that arguments based on the public interest often rely on predictions about possible adverse social impacts caused by genetic technologies. Similar to arguments about non-medical applications of GGE sliding us down a 'slippery slope' to the eugenics of old, these arguments are essentially predictions about what

[40] European Group on Ethics in Science and New Technologies *Opinion on Ethics of Genome Editing European Group on Ethics in Science and New Technologies* (2021) at 26–27.
[41] The reasons for this are not unique to our context. They are shared by all jurisdictions that recognise fundamental human rights. As Stock puts it: 'No amount of debate on advanced reproductive technology will settle the question of whether human genetic enhancement is right or wrong. But in pluralistic societies, this situation is not new or even unusual. There are many diverse, value-laden issues concerning sexual orientation, religion and lifestyle. We have come to rely more and more on tolerance and individual discretion in these areas, and I suspect that eventually we will also have to do the same with advanced reproductive technologies.' G Stock *Redesigning Humans: Choosing our Genes, Changing our Future* (2003) at 133.
[42] Van Mil et al op cit note 9 at 16.
[43] M Kotzé 'Human genetic engineering in the South African context with its inequalities: A discourse on human rights and human dignity' (2014) 113 *Scriptura* 1 at 3–6.

a future society with GGE would look like, which requires those who raise these arguments to make empirical claims about adverse societal outcomes.[44]

The problem with this connects to a point made in Chapter 2 regarding how some philosophers interpreted Ubuntu as 'distinctively African': Empirical claims require justification, otherwise they cannot be taken seriously.[45] In the absence of such justification with empirical evidence, these possible adverse outcomes and their threats to the public have not been *established as posing a sufficiently serious risk to justify prohibiting specific applications of GGE*, and one cannot use them as a basis to limit access to a technology like CRISPR-Cas9 unless they are so established. The challenge with establishing threats to the public interest in relation to GGE, however, is that this would require empirical evidence that does not yet exist. To get around this, Evans suggests that research specific to CRISPR-Cas9, or even GGE in general, is not necessarily required; we can also rely on analogous research such as that which is conducted for other reproductive technologies.[46]

In this vein, one can note that social equality has not been compromised by previous novel technologies, because while new technologies are often expensive initially, in time they typically become far less expensive. The early adopters of new technology pay a premium for it, and essentially fund the ongoing research and development of the technology to make it more accessible.[47] Another response to this is if concern for a threat to a public interest is strong (for instance, if a large majority express fear about social inequality being exacerbated during public consultations), states then ought to take measures to mitigate the risk, rather than adopt policies that would restrict the freedom of those who would use GGE technology. From a legal perspective, this would be the appropriate response for a liberal democracy to concerns about exacerbating inequality. This is evidenced by the Constitutional Court dictum that measures to promote the achievement of equality call for 'equality of the vineyard not the graveyard'.[48] In other words, the solution to the concern about GGE exacerbating inequality cannot be to suppress the technology, as that would mean levelling down to the 'equality of the graveyard';

[44] B Cwik 'Revising, correcting, and transferring genes' (2020) 20 *The American Journal of Bioethics* 7 at 8; I. de Melo-Martin 'Germline gene editing: Minding the past and the future' (2020) 20 *The American Journal of Bioethics* 36 at 36.
[45] A West 'Ubuntu and business ethics: Problems, perspectives and prospects' (2014) 121 *Journal of Business Ethics* 47 at 49.
[46] JH Evans 'The empirical examination of the social process of genetic enhancement, objectification, and maltreatment' (2019) 19 *The American journal of bioethics* 32 at 33.
[47] Naam illustrates this point with reference to penicillin, which was very expensive when first placed on the market in 1941, but has since become much more affordable. Naam op cit note 6 at 64.
[48] *Minister of Home Affairs v Fourie; Lesbian and Gay Equality Project v Minister of Home Affairs* [2005] ZACC 19, 2006 (1) SA 524 para 149.

rather, if the state seeks to promote the achievement of equality in the context of human germline editing, it must do so by levelling up to the 'equality of the vineyard'.[49] As Harris has pointed out, the appropriate approach for a state that is genuinely concerned about novel technologies exacerbating inequality would be to take measures to make these technologies as widely available as possible, and thereby remedy the inequality and promote human flourishing.[50]

To illustrate: universal health coverage of medically assisted reproduction is one strategy to promoting access to new reproductive technologies[51] which has yielded positive results in some jurisdictions.[52] Such an approach may be viable in SA, which is currently in the process of implementing National Health Insurance (NHI).[53] This would be a means through which we can attend to concerns about threats to public interests, without prohibitive regulation that limits the rights of those who want to use GGE technology.

From the foregoing discussion, it is apparent that while public concerns about GGE applications ought to be considered, these concerns cannot in themselves provide a basis for policy determinations. Predicted adverse outcomes, pose a threat to the public interest, must be established as posing a legitimate threat before they can reasonably be used as a basis upon which to limit people's use of GGE technology. This I refer to as the 'principle of established threats to public interests'. This is the first grounding principle, which can be stated as follows:

A prospective application of GGE technology must be judged on its own merits to assess whether it ought to be permitted, or whether that application of GGE poses a threat to the public interest — established by evidence — that requires that specific application of GGE be prohibited or only permitted in specific circumstances.

This grounding principle is a benchmark requirement for both ethical and legal permissibility of any potential application of GGE. In other words, if there are concerns regarding a particular application and it being contrary to the public interest, these concerns

[49] A similar argument is made by Dworkin, where he comments: 'The remedy for injustice is redistribution, not denial of benefits to some with no corresponding gain to others.' R Dworkin, *Sovereign Virtue: The Theory and Practice of Equality* (2002) at 440.
[50] Harris op cit note 14 at 14. A similar point is also made by Naam, who states: 'If equality of access is the goal, it makes more sense to encourage the development and use of enhancement techniques, to make them as widely accessible as possible rather than restrict them.' Naam op cit note 6 at 70.
[51] D Hemel 'The case for universal health coverage for in vitro fertilization' (November 2018) available at *https://www.seattletimes.com/opinion/the-case-for-universal-health-coverage-for-in-vitro-fertilization/*, accessed on 25 May 2021.
[52] See, for example, the case of Canada in: MP Vélez, MP Connolly & IJ Kadoch et al 'Universal coverage of IVF pays off' (2014) 29 *Human Reproduction* 1313.
[53] National Health Insurance Bill B11-2019.

ought to be taken seriously if they meet the criteria established by the grounding principle. The criteria here are that the anticipated adverse outcome for the public evidence must be established as one that poses a sufficiently serious risk to justify *prohibiting* a specific application of GGE or placing restrictions on when it is *permitted*. Failing which, these concerns cannot be a basis upon which the freedom of individuals to use GGE technologies can be limited. For instance, with reference to the social inequality argument, on the current evidence it is not apparent that the adverse outcome of further entrenching social inequality is sufficiently likely to meet this criterion, and even if it were, it is not apparent that this outcome would require limiting specific applications of GGE. If, however, new evidence were to indicate otherwise, this could be a legitimate public interest justification for denying applications of GGE that were deemed to give certain classes of individuals unfair advantages relative to the rest of society.

(b) The interests of the prospective person

(i) The significance of the prospective person from an Afrocentric perspective

One might assume that the Ubuntu ethic could provide little insight on how we ought to deal with prospective persons, since they are not yet born and are thus not part of the community. But the invocation on individuals to act with Ubuntu is not only limited to persons now living. In the philosophical worldview of sub-Saharan Africans, ethical acts are judged not only in how they impact those who are presently in existence, but also in how they treat the revered ancestors and *future generations*.[54] It is for this reason that Murove remarks that:

> 'An ethical act worthy of approval is, thus, one that preserves and incorporates the past into the present with the aim of providing the same memory for future generations.'[55]

This view manifests the vision of individuals in a community as part of an interconnected whole, which transcends the community of living persons and extends to people (and things) that are not part of the physical realm.[56] In his endeavour to parse this metaphysical aspect of the Ubuntu ethic, Ramose describes the nature of being as consisting of three interrelated 'dimensions':

1) The dimension of the living (umuntu)

[54] MF Murove 'Beyond the Savage Evidence Ethic: A Vindication of African Ethics' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (2009) at 27.
[55] Ibid.
[56] Ibid at 28–29.

2) The dimension of those who have passed away from the world of the living, and now live as the 'living dead' (abaphansi)
3) The dimension of those yet to be born or 'the beings of the future'. [57]

This idea of living persons having a metaphysical connection to future generations is manifested in how African cultures understand the origin of personhood, as illustrated by the tshiVenda idiom 'muthu u bebelwa muṅwe', which translates: one person is born, for another person to also be born.[58]

All of this leads to a conclusion that is relevant to the current inquiry: Since the Ubuntu virtue ethic requires persons to act in a way that preserves harmonious relations, it is generally wrong to intentionally cause harm to other persons.[59] By the same token, it is morally wrong for a prospective parent to *knowingly and intentionally take actions which will cause the prospective person (once born) to experience undue pain and suffering*. To do so would be to fail to act with Ubuntu, and accordingly it would be morally wrong. Note that this conclusion does not attribute rights or personhood to the unborn child. It only recognises them as a morally relevant entity — one that the prospective parent has a duty to act with Ubuntu towards. And this duty entails, at the very least, not causing the prospective person to be born in circumstances where they will experience undue pain and suffering. Having established this conceptual foundation, I now argue for the second grounding principle.

(ii) The principle of procreative non-maleficence

Germline genome editing does not only potentially relate to the rights of prospective parents, but also the rights of the children who may be born with genetically altered genomes. This has proven to be one of the primary points of concern about what applications of GGE technology may be permissible.[60] This is not only an ethical concern, but one that has legal significance. Scholars such as Knoppers and Klediderman have pointed out that given that heritable genome editing can affect the health and well-being of the prospective child, consideration must be given to the principle that in all matters concerning the child, the best interests of the child

[57] MB Ramose 'The Philosophy of Ubuntu and Ubuntu as Philosophy' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* (2002) at 236.
[58] Murove op cit note 54 at 29.
[59] M Munyuka & M Mothlabi 'Ubuntu and its Socio-Moral Significance' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (2009) at 65.
[60] I de Melo-Martin 'Germline gene editing: Minding the past and the future' (2020) 20 *The American Journal of Bioethics* 36 at 37; E Kleiderman, MT Nguyen & BM Knoppers 'Of the rights and best interests of future generations' (2020) 20 *The American Journal of Bioethics* 38 at 39.

should be paramount — commonly referred to as the 'child welfare principle'.[61] Most liberal democracies recognise the child welfare principle in their domestic law or are party to international agreements which enjoin them to give effect to it, such as the United Nations Convention on the Rights of the Child.[62] While in one sense GGE may be viewed as promoting the best interests of the child — when used remedially for genetic disorders — it might also be viewed as potentially compromising the welfare of the prospective child. For instance, proponents of a moratorium on heritable genome editing have raised, among their many concerns, that '[c]hildren with edited DNA could be affected in detrimental ways, such as by experiencing psychological harm as a result of knowing that they were born with altered genomes'.[63] Here, again, we see how often arguments against GGE must necessarily rely on predictions about the actual outcomes for future generations. Fortunately, our law has adapted criteria for weighing anticipated outcomes for future offspring against the standard of the best interests of the child, which may help determine how seriously we ought to take the fear of psychological harm to genetically modified offspring.

The child welfare principle first emerged in SA in the common law and was applied by courts when determining familial disputes over care for and contact with children. The child welfare principle was included in the final draft of the SA Constitution in 1996 in a form very similar to those seen in prominent international instruments, as a direct consequence of legal developments relating to the rights of children. Since then, the child welfare principle has expanded beyond its usual domain of family law, and has most recently featured prominently in reproductive law.[64] The way in which the child welfare principle applies in this context was illustrated in *AB v Minister of Social Development*[65] which I discussed in detail in Chapter 4. To recap, the applicant in the *AB* case was an infertile woman who intended to become a mother through a surrogacy arrangement. However, given that she could not contribute her own eggs for the conception of the surrogate child, she was legally prohibited from using surrogacy by section 294 of the Children's Act, known as the 'genetic link requirement'.[66] The applicant

[61] BM Knoppers & E Kleiderman 'Heritable Genome Editing: Who Speaks for "Future" Children?' (2019) 2 *The CRISPR Journal* 285 at 286.
[62] United Nations Human Rights Office of the High Commissioner 'Convention on the Rights of the Child' (1989).
[63] ES Lander, F Baylis & F Zhang et al 'Adopt a moratorium on heritable genome editing' (2019) 567 *Nature* 165 at 167.
[64] For a more extensive discussion of the jurisprudence on the child welfare principle in SA, see: B Shozi *A Human Rights Analysis of Posthumous Reproduction* (unpublished LLM thesis, University of KwaZulu-Natal, 2018) at 83.
[65] *AB v Minister of Social Development* [2016] ZACC 43, 2017 (3) SA 570 (CC).
[66] Children's Act 38 of 2005.

challenged the constitutionality of the genetic link requirement in court. She argued that it infringed on several of her constitutional rights — including her reproductive rights.

The Minister of Social Development opposed the application by relying on the child welfare principle. The Minister argued that the genetic link requirement served a legitimate purpose because it is in the best interests of children that they should know their genetic origins.[67] At this stage, however, there was no child in existence. Therefore, what the Minister was effectively proposing, was that the child welfare principle should apply to the *prospective* child. This line of reasoning was supported by the amicus curiae, the Centre for Child Law, who argued:

> '(a) Knowing one's genetic origins is essential to human wellbeing.
>
> '(b) People have a right to the truth about their origins.
>
> '(c) Children who are aware that they are donor-conceived suffer psychologically when they are denied information about their origins and identity.'[68]

Here we see another implicit recognition of the idea that an essential aspect of protecting the best interests of the child entails considering how *present* actions may harm *future* offspring. Importantly, the applicant did not take issue with the application of the child welfare principle to the prospective child. Instead, she adopted a strategy of proving — through expert evidence by psychologists — that not knowing one's genetic origins is unlikely to impact negatively on one's overall psychological well-being, and therefore does not constitute harm to the welfare of the prospective child.[69]

The majority of the Constitutional Court held that we must indeed protect the best interests of the *prospective* child by protecting it from what it saw as the harmful consequence of being born into a family in which the child did not have shared genetic origins with his/her parents.[70] The basic principle underlying the majority judgment, developed through the jurisprudence on the child welfare principle which preceded it, can be articulated as follows:

---

[67] *AB* para 13;144.
[68] *AB* para 30.
[69] For an extensive discussion of the nature of the evidence in support of the applicant's case, see: DW Thaldar 'Post-truth jurisprudence: The case of AB v Minister of Social Development' (2018) 34 *South African Journal on Human Rights* 231 at 235–237.
[70] See a detailed analysis of the Court's reasoning in Chapter 4 supra at 124. See, also, AE Boniface 'The genetic link requirement for surrogacy: A family cannot be defined by genetic lineage' (2017) *TSAR* 190 at 199.

The scope of possible reproductive decisions that prospective parents may take, at least in the context of artificial reproduction, should be legally limited to exclude decisions that are likely to cause harm to the prospective child.

This principle I refer to as the grounding principle of *procreative non-maleficence*. The idea of procreative non-maleficence is not new, and various versions of it have been proposed in the ethics literature.[71] However, the *AB* judgment represents the first time this principle was used in litigation in an attempt to strike a balance between the rights of prospective parents and of prospective children, by limiting reproductive autonomy's domain to acts which are not harmful to the prospective child.[72] But what exactly will constitute *harm* to the prospective child? The *AB* judgment did not explore this question in any detail, but I will briefly do so here.

Mill made it clear that harm cannot reasonable be defined to include mere offence to people's sensibilities — to constitute harm, an act must violate a right or an important interest.[73] However, at least since harm's rise to prominence as a normative concept in Mill's *On Liberty*, its exact meaning has been a point of contention in philosophy.[74] In law, where the concept of harm has come to play an important role in both criminal law and in the law of civil wrongs (delict or tort), the concept is ever-evolving to reflect a society's *boni mores*.[75]

This evolving nature of the exact parameters of harm is not a weakness, but rather a strength as it avoids the ossification of the concept at one point in time. Given that the objective of the principle of procreative non-maleficence is to build a conceptual bridge between protecting the best interests of *existing* children and protecting the best interests of *prospective* children, an equivalent conceptual bridge should be constructed in our understanding of harm to the prospective child. In other words — *If a reproductive decision by a prospective parent is likely to have an effect on the prospective child that would constitute either a civil or criminal wrong in law if caused by an act by a parent toward an existing child, such a reproductive decision would constitute harm to the prospective child.* This would, in my view, be the absolute baseline for a conceptualisation of harm. However, additional harms which are not currently legally recognised may also qualify as legally significant harms if there is sufficient

[71] See M Parker 'The best possible child' (2007) 33 *Journal of Medical Ethics* 279; B Saunders 'First, do no harm: Generalized procreative non-maleficence' (2017) 31 *Bioethics* 552.
[72] Whether the Constitutional Court in *AB* used this principle correctly, however, is questionable. For a summary of the main criticisms of the court's findings, see: Shozi op cit note 64 at 87–88.
[73] JS Mill *On Liberty and the Subjection of Women* (2007) at 8.
[74] D Jacobson 'Mill on Liberty, Speech, and the Free Society' (2000) 29 *Philosophy & Public Affairs* 276; PN Turner '"Harm" and mill's harm principle' (2014) 124 *Ethics* 299.
[75] A Eser 'Principle of harm in the concept of crime: A comparative analysis of the criminally protected legal interests' (1965) 4 *Duquesne University Law Review* 345–418; J Feinberg *Harm to Others* (1984).

evidence to establish a significant adverse impact on the prospective child. This would be in line with the above-mentioned principle of established threats to the public interest.

But does the idea of harming a prospective child not create a legal fiction that a prospective child is a person with rights? Not necessarily. One must remember that from an ethical perspective, the prospective child here is not being regarded as a person proper in terms of the Ubuntu ethic, but rather as a metaphysical entity that the prospective parent has a duty to treat with Ubuntu. As such, a person may perform an act in the present, which violates the prescripts of Ubuntu, even if the person who will be affected by that act does not yet exist. What this means from a legal perspective, is that the wrongful act and the subsequent harm can take place at different points in time. As a result, the person who suffers the harm does not need to exist when the wrongful act occurs — only when the harm occurs.

This is not an idea that our law is unfamiliar with. There is a precedent that a child who is born with disability (the harm) due to a car accident (the wrongful act) that took place during the pregnancy — before the child's existence as a person in law — can hold the negligent driver who caused the accident, and hence the disability, liable for a civil wrong.[76] The concept of harm to a prospective child is therefore properly understood as an anticipated future event: harm that will materialise and affect the prospective child if and only after he or she comes into existence. In engaging in this analysis, it is important to note that the concept of the 'prospective person' is a mental construct of a person that may exist in future, and does not refer to the prenate. Although an embryo or fetus may become the prospective person, an embryo or fetus cannot be equated with the prospective person.[77]

From the preceding discussion, it is apparent that there are two elements to applying the principle of procreative non-maleficence: firstly, showing that the predicted adverse outcome constitutes a legal harm; and secondly, proving that the predicted adverse outcome is likely to occur on a balance of probabilities. If both of these are met, then the GGE application in question would be impermissible as it violates the principle of procreative non-maleficence. If there is no predicted adverse outcome or if the predicted outcome fails to meet both these elements, then the application in question ought to be permitted.

With this in mind, we can consider the example alluded to earlier in this section — psychological harm to the genetically edited offspring. Note that this scenario assumes that a

[76] *Pinchin v Santam Insurance* 1963 (2) SA 254 (W).
[77] See D Thaldar 'Criteria for assessing the suitability of intended surrogate mothers in South Africa: Reflections on Ex Parte KAF II' (2019) 12 *South African Journal of Bioethics & Law* 61.

prospective person would know, or at least learn, that they are genetically modified. In some cases, the gene-edited child learning this information could be avoided (provided there were no disclosure requirements in place). However, in other cases the gene-edited child is highly likely to be aware of their modified genome, for instance where the application would cause some noticeable physical variation between the gene-edited child and their family. In such cases would it be impermissible to use GGE to 'edit in' a gene, the effect of which is clearly observable (meaning the child would know that they were edited) — because of fears that this knowledge would cause psychological harm?

Regarding the first element of the principle of procreative non-maleficence, it is well established in our law that psychological harms are an actionable head of damages,[78] and thus the fear of psychological harm to the prospective child is at least in principle one our law takes seriously. But now consider the second element: is it likely that children born as a result of CRISPR-Cas9 will experience psychological harm as a result of knowing they were gene edited? It seems not, if we consider analogous evidence from other NRTs, where similar fears were raised. There is vast evidence that has irrefutably established that children born via NRTs (whether they are aware or unaware of the means of their conception) have not experienced long-term developmental challenges or psychological harm.[79] Nor do children who know they were 'designer babies' suffer from identity crises due to knowing the means of their conception.[80] Furthermore, children suffering psychological harm due to the stigma associated with being conceived via NRTs, has not manifested.[81] Given this evidence, it is not likely that gene-edited persons would be psychologically harmed due to knowing that they were edited. Accordingly, the concerns regarding psychological harms to edited prospective persons fail to meet the test of procreative non-maleficence and cannot be seen as justification for the limitation of the 'right to CRISPR'.

[78] *Bester v Commercial Union Versekeringsmaatskappy van SA Bpk* 1973 (1) SA 769 (A) para 779 G.
[79] F Maccallum & S Golombok 'Children raised in fatherless families from infancy: A follow-up of children of lesbian and single heterosexual mothers at early adolescence' (2004) 45 *Journal of Child Psychology and Psychiatry, and Allied Disciplines* 1407; S Golombok, C Murray & V Jadva 'Non-genetic and non-gestational parenthood: Consequences for parent-child relationships and the psychological well-being of mothers, fathers and children at age 3' (2006) 21 *Human Reproduction (Oxford, England)* 1918; RW Chan, B Raboy & CJ Patterson 'Psychosocial adjustment among children conceived via donor insemination by lesbian and heterosexual mothers' (1998) 69 *Child development* 443.
[80] Nuffield Council on Bioethics *Donor conception: Ethical aspects of information sharing* (2013) at 65.
[81] Ibid at 72; K Vanfraussen, I Ponjaert-Kristoffersen & A Brewaeys 'What does it mean for youngsters to grow up in a lesbian family created by means of donor insemination?' (2002) 20 *Journal of Reproductive and Infant Psychology* 237 at 247.

V CONCLUSION

The goal of this Chapter was to consider whether there might be cases where the 'right to CRISPR', which I established in Chapters 4 and 5, could be limited. The most commonly cited basis for the limitation of the use of GGE technology is the therapy/enhancement binary, which I have shown is fundamentally flawed in two ways. Firstly, it falsely assumes that non-therapeutic applications of GGE are unjustified or less justified than therapeutic applications. Secondly, it is founded on an unstable conceptual foundation of normatively loaded concepts of 'health' and 'disease', which are defined in varied and subjective ways. This impairs its practical usefulness as a framework for assessing permissible applications of GGE. Therefore, I argue that rather than relying on these categories to attempt to group certain kinds of applications together, each ought to be assessed on its own merits.

This assessment, I suggest, ought to be guided by the Ubuntu virtue ethic, which I have established in Chapter 2 as both embodying the ethical ethos of our state, and resonating with the norms of our legal system. And when one considers the circumstances in which individual rights may be limited within the Ubuntu ethic, there are two grounding principles which form the minimum criteria for permissibility in the SA context:

(1) The principle of established threats to the public interest:
A prospective application of GGE technology must be judged on its own merits to assess whether it ought to be permitted, or whether that application of GGE poses a threat to the public interest — established by evidence — that requires the specific application of GGE be prohibited or only permitted in specific circumstances.

(2) The principle of procreative non-maleficence:
The scope of possible reproductive decisions that prospective parents may take, at least in the context of artificial reproduction, should be legally limited to exclude decisions that are likely to cause harm to the prospective child.

In circumstances where a prospective application of GGE technology does not violate either of these principles, in my view that application ought to be permitted.

It is vital to note that each of these principles provides the *baseline* for justifications of policies that limit specific applications of GGE, and places the onus on those who (1) claim a public interest is threatened or (2) anticipate harm to the prospective child — to meet the standards set by the grounding principles. From a regulatory standpoint it would be incumbent on the state to test any limitations on GGE against the grounding principles, failing which any

limitations established would be open to criticism as being morally unjustified and legally invalid intrusions into the rights of those who would use GGE technologies. This is aligned with the findings of Chapters 4 and 5 regarding how reproductive rights extend to NRTs, and how these extend to the use of GGE technology like CRISPR-Cas9 for reproductive purposes. In accordance with this prima facie right and the democratic presumption, those who would limit the use of GGE technologies should justify their reasons by meeting the criteria set by the grounding principles — not vice versa.

CHAPTER 7

CONCLUSION

I INTRODUCTION

In the beginning of this thesis I referred to Berg's famous 'gene chimera' experiments and how these were the singular moment in human history when the idea of genome editing was more of a future scientific reality than science fiction.[1] It is fitting to return to this moment to reflect on the kinds of questions that entered the minds of scientists and ethicists, who at the time were seriously reflecting on the possible implications of making permanent, heritable changes to the human genome. As Mukherjee describes,[2] some of these questions included: What if we could cure genetic diseases? Could this be wrong? What about programming eye colour, intelligence, or even height? If we could do this, should we? And what would be the impact on human society if we did? These are questions we continue to grapple with today, which states need to provide answers for (at least partially) through regulation.

This thesis provided guidance on how South Africa ought to develop regulation on modifying the human genome at germline level. It has done so by taking a novel, 'Afrocentric approach' that has yielded novel insights on the ethical, legal and human rights questions that emanate from the literature on germline genome editing (GGE). For this reason, in this concluding Chapter, I confine myself to recounting these insights, illustrating how the conclusions in each Chapter relate to each other, and proposing how they might be applied in practice. Note that this thesis, and this Chapter, has largely avoided making concrete recommendations in the way of draft regulations or guidelines. The reason for this is that this work has focused on addressing the theoretical foundations of how SA should approach the regulation of GGE, rather than more practical topics such as what form that regulation should take. The latter would entail a more extended discussion involving the technicalities of SA's regulatory infrastructure that is beyond the scope of this thesis.[3]

[1] See Chapter 1 supra at 2.
[2] S Mukherjee *The Gene: An Intimate History* (2017) at 226.
[3] For an extended discussion of the complex nature of the various ethical and legal authorities relevant to the regulations of genome editing in South Africa, see B Townsend & B Shozi 'Altering the Human Genome: Mapping the Genome Editing Regulatory System in South Africa' (2021) 24 *PELJ* 1.

In this Chapter I briefly summarise the main arguments of each Chapter and share final thoughts and recommendations on how GGE should be regulated in SA.

II SUMMARY OF MAIN CONCLUSIONS

The point of departure for this thesis was that GGE technology is in need of regulation, but what that regulation will entail is something that depends on some fundamentally value-laden questions. As pointed out in Chapter 1, determinations on the legality of GGE in many countries around the world have largely been based on the lawmakers' views on the morality of genome editing. For instance, in Chapter 3, I illustrated that the reason several states in Europe prohibit GGE is because the idea of modifying the human genome is regarded as undignified conduct. Therefore, we cannot deal with the legal issues relating to the GGE technology CRISPR-Cas9 in isolation. It is necessary to take an interdisciplinary approach that also investigates the underlying ethical issues and how these relate to the legal perspective. That is the approach this thesis has taken by answering the question of how to regulate GGE technology from an Afrocentric perspective. Such a perspective is valuable, because, despite the value-laden nature of core issues relating to genome editing, the various policy proposals put forward for regulation have largely been based on a Eurocentric perspective. For SA to take a path that is sensitive to its own unique context, it cannot blindly follow these proposals. Our policy on the law relating to genome editing and where it stands on the value-laden questions must be determined in accordance with SA law and the values of its people. This is what this thesis set out to achieve in its adoption of the Afrocentric approach.

Part 1 of Chapter 2 of this thesis provided an in-depth analysis of the history and development of the streams of thought in African philosophy. I described the development of African philosophy as coming in the form of three 'waves', with the first wave being those works of early scholars such as Tempels seeking to establish that African philosophy exists. The second wave constituted scholarship which, having established that African philosophy exists, was focused on describing the content of African philosophy. The third wave, which we currently find ourselves in, builds on established understandings about the content of African philosophy (such as how it prizes the community and views the individual as inherently linked to it), and seeks to apply it to specific contexts such as bioethics.

While describing the historical origins and development of African philosophy, I also sought to elucidate the aspects that form a logical and coherent account for morality. In this regard, I argued for a view of morality prefaced on the idea of a particularistic morality, that

is, the idea that morality is not entirely subjective but is based on foundational, universal moral norms. These moral norms are further defined and given flesh by the particular circumstances of the moral actor. Within the particular circumstances of the people of sub-Saharan Africa, their moral philosophy is best described as moderate communitarianism. Moderate communitarianism entails, broadly, viewing the individual as a fundamentally social being who is intrinsically and inextricably connected to a community. The consequence of this is that the community shapes what constitutes morally permissible conduct for the individual — but does so through dialogical relations with the individual. The community is not conceived as superior to or more important than the individual; in prescribing moral norms, it is constrained by its duty to recognise the value of the individual. In this sense, the individual can be seen as having a duty to uphold the moral standards of the community and maintain communal harmony, but also as having a right to be treated with respect and not to have his/her liberty arbitrarily circumscribed.

I further argued that in the context of SA, the values of African people are embodied in the philosophical concept of Ubuntu. I argued that Ubuntu may be applied as a virtue ethic. I have in this thesis sought to apply the Ubuntu virtue ethic to the various moral quandaries raised by GGE technology. Applying the Ubuntu ethic to the question of the permissibility of GGE, I concluded in Chapter 3 that while our law is currently unclear, there is no principled reason why GGE should not be permitted. This is because in accordance with the Ubuntu ethic, the principal reason in favour of prohibiting it — that it is inherently wrong as manipulating the human genome violates human dignity — fails to convince. The Ubuntu ethic and how this ethic views human personhood is a departure from the Western philosophical view in several ways. Most significantly, it does not accommodate notions of a 'sacred' human genome, the manipulation of which would constitute a violation of human dignity. In terms of the Ubuntu ethic, the moral significance of the human person is not grounded solely on some or other biological trait such as intelligence or rationality, but rather on the individual's capacity to commune with and participate in the community of persons. Moreover, the way in which dignity has been interpreted in South African human rights jurisprudence is very different to how dignity is understood in those states that consider genome editing to be undignified conduct.

Another feature of the Ubuntu ethic that is relevant to the ethics of GGE is that it provides for the recognition of individual rights, which are conceived of as the community's obligations to treating the individual with respect. One such right — the right to reproductive autonomy

— provides the basis for a legal entitlement to access and use NRTs, as discussed in Chapter 4. Reproductive rights, as a concept, have a long and storied history in international human rights jurisprudence. But throughout that history, the central feature of rights relating to reproduction is that they were an expression of the fundamental freedom of individuals to choose if, when and how to form a family. I have argued that in light of this history we must interpret reproductive rights as they now exist in SA's Bill of Rights — as extending to the freedom of individuals to use NRTs in expressing their freedom to form a family. Such an interpretation is a natural evolution of the procreative liberty of prospective parents which liberal democracies like ours strive to protect through reproductive rights.

As I argued in Chapter 5, given that this right to use and access NRTs is entrenched in sections 12(1) and 27(1) of the Constitution, it follows that people have a right to use GGE technology. This is because GGE technology is not meaningfully different from existing NRTs which can be used for genetic selection such as donor selection and PGT. Accordingly, GGE technology cannot be regarded as beyond the scope of choices parents are already permitted to make. Moreover, I have argued that there are several good reasons to allow the use of GGE technologies for reproductive purposes, including that it is arguably *less* ethically problematic than existing NRTs that can be used for genetic selection and because in some situations it can achieve results that the alternatives cannot. Anticipating objections about a 'right to CRISPR', I have also shown that the laws of several jurisdictions — including the US, Singapore and SA — have already recognised such a right in the context of cases for reproductive negligence. Clearly then, the idea of a right to determine the characteristics of future offspring is not something that is new to the law, as courts have been open to compensating people where their attempts to do this have been obstructed. Therefore, there is a convincing case in favour of a right to use and access GGE technologies like CRISPR-Cas9 where they are safe and efficacious.

That being said, rights within the Ubuntu ethic are not absolute. Just as these rights are based on the obligations of the community to respect the individuality of the person, so too must the person act with respect towards the community. In relation to the regulation of GGE, this respect entails recognising that in at least some cases the right of the individual to use GGE technology may be limited. However, when this is the case, it requires that we avoid categorical exclusions of certain types of applications because we assume they are unethical. This is commonly done in the global discourse on GGE which has proposed the exclusion of so-called 'non-therapeutic applications' (also known as 'enhancements'). The reason for this aversion to

non-therapeutic applications is based on the assumption that there is no ethical justification for non-therapeutic applications. However, as I have shown, in the context of SA, there may in fact be morally defensible reasons for non-therapeutic applications. This once again reinforces why SA policy on regulating GGE should be based on the Afrocentric perspective, which (as referred to above) entails considering such context-specific factors.

Having regard to the Ubuntu ethic, I concluded that the 'right to CRISPR' may be limited only in cases where the intent is to avoid certain predicted adverse outcomes for the broader community — including the welfare of the future genome-edited child. However, these predicted adverse outcomes must meet the criteria established by two grounding principles: (1) the principle of established threats to the public interest, and (2) the principle of procreative non-maleficence. I suggest that these grounding principles will ensure an equitable balance between the rights of the individual and the interests of the community in protecting both the public interest and the welfare of future generations.

III FINAL REMARKS AND RECOMMENDATIONS

This research is novel in its approach of critically engaging with the ethical and legal issues pertaining to GGE from an African perspective, with a view to promoting regulation in SA which is decolonised and Africanised. Clearly, the global discourse on GGE may put forward recommendations which are rooted in a Eurocentric paradigm, and this research has shown how African states might critically engage with these proposals and formulate policy which is instead rooted in an Afrocentric perspective.

SA is definitely in dire need of regulatory reform relating to GGE technologies like CRISPR-Cas9. This regulation, in my view, ought to be open to the prospect of parents modifying the genomes of future offspring, but also should place reasonable and evidence-based limitations on the types of traits parents may select for. This would be best facilitated by a statutorily mandated institution which could assess potential GGE applications on a case-by-case basis to determine whether they ought to be permitted, limited in specific cases, or prohibited altogether. These limitations/prohibitions should be deemed legitimate only as far as they are shown to be rationally related to the goals of (1) protecting the public interest or (2) protecting the prospective child.

The particulars of when exactly GGE might be limited should, I suggest, be determined by public input through the mechanism of deliberate public engagement known as imbizo, which is described in Chapter 2. It is worth reiterating that public input cannot on its own justify

limitations of individual rights. However, public input can be a useful mechanism for understanding the norms and interests of the community, and to help determine to what extent anticipated adverse outcomes should be taken seriously. The imbizo provides a context within which policy propositions for the regulation of GGE can be considered by the general public. This can be done through curated discussions involving experts who help ensure that people are informed, are given an opportunity to speak, listen to others, and seek to reach consensus. Even if such consensus is not reached, at the very least deliberative public engagement will foster the kind of understanding necessary for creating a world where GGE technologies like CRISPR-Cas9 can be made available and used — without being obfuscated by mystery and misinformation.

BIBLIOGRAPHY

I PRIMARY SOURCES

(a) International law

African Union ‘Protocol to the African Charter on Human and People's Rights on the Rights of Women in Africa’ (11 July 2003).

Convention for the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine: Convention on Human Rights and Biomedicine (Opened 4 April 1997, entered into force 1 December 1999) ETS 164.

International Covenant on Civil and Political Rights UNGA Res 2200, UN GAOR, 21st Sess, Supp No 16, UN Doc A/6316 (1966), 993 UNTS 171.

International Covenant on Economic, Social and Cultural Rights UNGA Res 2200, UN GAOR, 21st Sess, Supp No 16, UN Doc A/6316 (1966), 993 UNTS 3.

Proclamation of Tehran. Proclaimed by the UN International Conference on Human Rights (13 May 1968) UN Doc A/7433.

UN General Assembly ‘Implementation of the World Plan of Action adopted by the World Conference of the International Women’s Year’ (12 December 1975) A/RES/3490.

UN General Assembly ‘International Conference on Human Rights’ (Tehran 22 April–13 May 1968) (19 December 1968) UN Doc A/CONF.32/41 A/RES/2442.

UN General Assembly Res 2211 ‘Population growth and economic development’ (17 December 1966) UN Doc A/RES/2211(XXI).

UN General Assembly Res 3520 ‘World Conference of the International Women’s Year’ (15 December 1975) UN Doc A/RES/3520.

UN General Assembly Resolution A/RES/53/152, UN GAOR, 53rd Sess (1998).

UN Population Fund ‘Programme of Action’ adopted at the ICPD (Cairo 5–13 September 1994).

UN Secretary General ‘Inquiry Among Governments on Problems Resulting from the Interaction of Economic Development and Population Changes’ (24 November 1964) UN Doc E/3895/Rev 1.

United Nations 'Final Act of the International Conference on Human Rights' UN International Conference on Human Rights (Tehran 22 April–13 May 1968) published on 19 December 1968 A/CONF.32/41.

United Nations 'Proceedings of the World Population Conference' UN Department of Economic and Social Affairs World Population Conference, 1965 (Belgrade, 30 August–10 September 1965) UN Doc E/CONF.41/2.

United Nations 'Report of the Fourth World Conference on Women' UN (Beijing, 4-15 September 1995) UN Doc A/CONF.177/20/Rev.1.

United Nations 'Report of the International Conference on Population and Development' UN Population Fund (UNFPA) (Cairo 5-13 September 1994) 1995 UN Doc (A/CONF.171/13/Rev.1).

United Nations 'Report of the World Conference of the International Women's Year' UN (Mexico City 19 June–2 July 1975) UN Doc E/CONF.66/34.

United Nations 'World Population Plan of Action' UN World Population Conference (Bucharest 19–30 August 1974) UN Doc E/CONF.60/19.

United Nations Human Rights Office of the High Commissioner 'Convention on the Rights of the Child' (1989).

Universal Declaration of Human Rights, UN General Assembly (10 December 1948) 217 A (III).

Universal Declaration on the Human Genome and Human Rights, UNESCO General Conference Resolution 29 C/17, UNESCO GC, 29th Sess (1997).

UNTC 'Convention on the Elimination of All Forms of Discrimination against Women' (1979) 1249 UNTS 13.

(b) International case law

KL v Peru, Communication No 1153/2003, adopted 24 October 2005, UN GAOR, HRC, 85th Session, UN Doc CCPR/C/85/D/1153/2003 (2005).

Van Oosterwijck v Belgium ECHR 7 [1980].

(c) South African legislation

Children's Act 38 of 2005.

Constitution of the Republic of South Act 200 of 1993.

Constitution of the Republic of South Africa Act 108 of 1996.

National Health Act 61 of 2003.

National Health Insurance Bill B11-2019.

Regulations Relating to the Artificial Reproduction of Persons GN 175 *GG* 35099 of 2 March 2012.

Sexual Offences Act 23 of 1957.

(d) Foreign legislation

The Constitution Act, 1867 (Canada).

(e) South African case law

AB v Minister of Social Development [2015] ZAGPPHC 580, 2016 (2) SA 27 (GP).

AB v Minister of Social Development [2016] ZACC 43, 2017 (3) SA 570 (CC).

Affordable Medicines Trust v Minister of Health [2005] ZACC 3, 2006 (3) SA 247 (CC).

African Christian Democratic Party v Electoral Commission [2006] ZACC 1, 2006 (3) SA 305 (CC).

August v Electoral Commission [1999] ZACC 3, 1999 (3) SA 1 (CC).

Barkhuizen v Napier [2007] ZACC 5, 2007 (5) SA 323 (CC).

Bato Star Fishing (Pty) Ltd v Minister of Environmental Affairs and Tourism [2004] ZACC 15, 2004 (4) SA 490 (CC).

Bernstein v Bester [1996] ZACC 2, 1996 (2) SA 751 (CC).

Bertie Van Zyl (Pty) Ltd v Minister for Safety and Security [2009] ZACC 11, 2010 (2) SA 181 (CC).

Bester v Commercial Union Versekeringsmaatskappy van SA Bpk 1973 (1) SA 769 (A) 779 G.

Bhyat v Commissioner for Immigration 1932 AD 125.

BOE Trust NO [2012] ZASCA 147, 2013 (3) SA 236 (SCA).

Case v Minister of Safety and Security; Curtis v Minister of Safety and Security [1996] ZACC 7, 1996 (3) SA 617 (CC).

Certification of the Constitution of the Republic of South Africa [1996] ZACC 26, 1996 (4) SA 744 (CC).

Christian Lawyers Association of SA v Minister of Health 1998 (4) SA 1113 (T).

City of Tshwane v Afriforum [2016] ZACC 19, 2016 (6) SA 279 (CC).

Cloete v S; Sekgala v Nedbank Limited [2019] ZACC 6, 2019 (4) SA 268 (CC).

Daniels v Campbell NO [2004] ZACC 1, 2004 (5) SA 331 (CC).

Daniels v Scribante [2017] ZACC 13, 2017 (4) SA 341 (CC).

Dawood v Minister of Home Affairs; Shalabi v Minister of Home Affairs; Thomas v Minister of Home Affairs [2000] ZACC 8, 2000 (3) SA 936 (CC).

De Lange v Methodist Church [2015] ZACC 35, 2016 (2) SA 1 (CC).

De Reuck v Director of Public Prosecutions [2004] ZACC 19, 2004 (1) SA 406 (CC).

Dikoko v Mokhatla [2006] ZACC 10, 2006 (6) SA 235 (CC).

Doctors for Life International v Speaker of the National Assembly [2006] ZACC 11, 2006 (6) SA 416 (CC).

Everfresh Market Virginia (Pty) Ltd v Shoprite Checkers (Pty) Ltd [2011] ZACC 30, 2012 (1) SA 256 (CC).

Ex parte WH [2011] ZAGPPHC 185, 2011 (6) SA 514 (GNP).

Ferreira v Levin [1995] ZACC 13, 1996 (1) SA 984 (CC).

Friedman v Glicksman 1996 (1) SA 1134 (W).

Furman v State of Georgia 408 US 238 290 (1972).

Golden Fried Chicken (Pty) Ltd v Oh My Soul (Pty) Ltd t/a Oh My Soul Café (D1739/2019) [2019] ZAKZDHC 30 (25 March 2019).

H v Fetal Assessment Centre [2014] ZACC 34, 2015 (2) SA 193 (CC).

Hlophe v Mahlalela 1998 (1) SA 449 (T).

Hoffman v South African Airways [2000] ZACC 17, 2001 (1) SA 1 (CC).

JT v Road Accident Fund 2015 (1) SA 609 (GJ).

Land Access Movement of South Africa v Chairperson, National Council of Provinces [2016] ZACC 22, 2016 (5) SA 635 (CC).

Matatiele Municipality v President of the Republic of South Africa [2006] ZACC 2, 2006 (5) SA 47 (CC).

MEC for Education: KwaZulu-Natal v Pillay [2007] ZACC 21, 2008 (1) SA 474 (CC).

Metiso v Padongelukfonds 2001 (3) SA 1142 (T).

Minister of Health v New Clicks [2005] ZACC 14, 2006 (2) SA 311 (CC).

Minister of Health v Treatment Action Campaign [2002] ZACC 16, 2002 (5) SA 703 (CC).

Minister of Home Affairs v Fourie [2005] ZACC 19, 2006 (1) SA 524 (CC).

Minister of Safety and Security v Gaqa [2002] ZAWCHC 9.

Minister of Safety and Security v Xaba 2003 (2) SA 703 (D).

Modderfontein Squatters, Greater Benoni City Council v Modderklip Boerdery (Pty) Ltd [2004] ZASCA 47, 2004 (6) SA 40 (SCA).

Natal Joint Municipal Pension Fund v Endumeni Municipality [2012] ZASCA 13, 2012 (4) SA 593 (SCA).

National Coalition for Gay and Lesbian Equality v Minister of Justice [1998] ZACC 15, 1999 (1) SA 6 (CC).

Paulsen v Slip Knot Investments [2015] ZACC 5, 2015 (3) SA 479 (CC).

Pinchin v Santam Insurance 1963 (2) SA 254 (W).

Port Elizabeth Municipality v Various Occupiers [2004] ZACC 7, 2005 (1) SA 217 (CC).

Poswa v MEC for Economic Affairs, Environment and Tourism, Eastern Cape 2001 (3) SA 582 (SCA).

Rossouw v Sachs 1964 (2) SA 551 (A).

S v Jordan [2002] ZACC 22, 2002 (6) SA 642 (CC).

S v M 2004 1 BCLR 97 (O).

S v Makwanyane [1995] ZACC 3, 1995 (3) SA 391 (CC).

S v Mhlungu [1995] ZACC 4, 1995 (3) SA 867 (CC).

SAPS v Solidarity obo Bernard [2014] ZACC 23, 2014 (6) SA 123 (CC).

Shoprite Checkers (Pty) Ltd v MEC for Economic Development, Environmental Affairs and Tourism: Eastern Cape [2015] ZACC 23, 2015 (6) SA 125 (CC).

South African Police Service v Solidarity obo Barnard 2014 (6) SA 123 (CC).

Stewart v Botha [2008] ZASCA 84, 2008 (6) SA 310 (SCA).

Stewart v Botha 2007 (6) SA 247 (C).

Stopforth v Minister of Justice; Veenendaal v Minister of Justice [1999] ZACC 72, 2000 (1) SA 113 (SCA).

The Citizen 1978 (Pty) Ltd v McBride [2011] ZACC 11, 2011 (4) SA 191 (CC).

Thibela v Minister van Wet & Orde 1995 (3) SA 147 (T).

(f) Foreign case law

United States

Andrew v Keltz 838 NYS 2d 363, 365-366, 368 (Sup ct 2007).

Bruggeman v Schimke 718 P 2d 635 (Kan 1986).

Eisenstadt v Baird 405 US 438 (1972) (Supreme Court of the US).

Griswold v Connecticut 381 US 479 (1965) (Supreme Court of Connecticut).

Park v Chessin 60 AD2d 80 (1977).

Park v Chessin 88 Misc2d 222 (1976) 224 (New York trial court).

Roe v Wade 410 US 113 (1973).

Canada

Blencoe v British Columbia (Human Rights Commission), [2000] 2 SCR 307 (Canadian Supreme Court Decision).

New Brunswick (Minister of Health and Community Services) v G (J), [1999] 3 SCR 46 (Canadian Supreme Court decision).

R v Morgentaler, [1988] 1 SCR 30 (Canadian Supreme Court decision).

Winnipeg Child and Family Services v KLW, [2000] 2 SCR 519 (Canadian Supreme Court Decision).

Singapore

ACB v Thomson Medical Pte Ltd and others [2015] SGHC 9.

ACB v Thomson Medical Pte Ltd and Others [2017] SGCA 20.

France

Conseil constitutionnel decision No. 2010–613 DC of 7 October 2010, J.O. 18345 (Fr.).

II SECONDARY SOURCES

(a) Books

Angier, TP 'The Metz method and "African ethics"' in G Hull (ed) *Debating African Philosophy: Perspectives on Identity, Decolonial Ethics and Comparative Philosophy* (Oxon: Routledge, 2018) 195–210.

Annas, GJ, LB Andrews & RM Isasi 'Protecting the Endangered Human: Toward an International Treaty Prohibiting Cloning and Inheritable Alterations' in SAM McLean (ed) *Genetics and Gene Therapy* (Oxon: Routledge, 2017) 415–42.

Bailey, R *Liberation Biology: The Scientific and Moral Case for the Biotech Revolution* (Amherst: Prometheus, 2005).

Baillie, HW & T K Casey (eds) *Is Human Nature Obsolete?: Genetics, Bioengineering, and the Future of the Human Condition* (Boston: MIT Press, 2004).

Bamford, R 'Decolonizing bioethics via African philosophy: Moral necolonialism as a bioethical problem' in G Hill (ed) *Debating African Philosophy: Perspectives on Identity, Decolonial Ethics and Comparative Philosophy* (Oxon: Routledge, 2018) 43–59.

Barnett, RE *Restoring the Lost Constitution: The Presumption of Liberty* (New Jersey: Princeton University Press, 2004).

Baxley, AM *Kant's Theory of Virtue: The Value of Autocracy* (Cambridge: Cambridge University Press, 2010).

Baylis, F *Altered Inheritance: CRISPR and the ethics of human genome editing* (Cambridge: Harvard University Press, 2019).

Beauchamp, TL & JF Childress *Principles of biomedical ethics* (New York: Oxford University Press, 2001).

Bennett, TW, AR Munro & PJ Jacobs *Ubuntu: An African Jurisprudence* (Cape Town: Juta, 2018).

Berger, PL & SP Huntington (eds) *Many Globalizations: Cultural Diversity in the Contemporary World* (New York: Oxford University Press, 2002).

Berlin, I 'Two Concepts of Liberty' in *Four Essays on Liberty* (Oxford: Oxford University Press, 1969).

Beyleveld, D & R Brownsword *Human Dignity in Bioethics and Biolaw* (New York: Oxford University Press, 2001).

Biko, S *I Write What I Like: Selected Writings* (Chicago: University of Chicago Press, 2002).

Burley, J (ed) *The Genetic Revolution and Human Rights: The Oxford Amnesty Lectures 1998* (Oxford: Oxford University Press, 1999).

Childress, JF 'A principle based approach' in H Kuhse & P Singer (eds) *A Companion to Bioethics* (Chichester: Wiley-Blackwell, 1998)

Coetzee, PH 'Particularity in morality and its relation to community' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (London: Oxford University Press, 2002) 273–86.

Coetzee, PH & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (London: Oxford University Press, 2002).

Cornell, D *Law and Revolution in South Africa: Ubuntu, Dignity, and the Struggle for Constitutional Transformation* (New York: Fordham University Press, 2014).

De Liefde, WHJ *Lekgotla: The Art of Leadership Through Dialogue* (Houghton: Jacana Media, 2005).

De Melo-Martin, I 'The Ethics of Sex Selection' in RL Sandler (ed) *Ethics and Emerging Technologies* (London: Palgrave Macmillan UK, 2014).

De Waal, J, I Currie & G Erasmus *The Bill of Rights Handbook* 3 ed (Cape Town: Juta & Company, 2000).

Deacon, M 'The status of Father Temples and ethnophilosophy in the discourse of African philosophy' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (London: Oxford University Press, 2002) 115–32.

Della Mirandola, GP *Oration on the Dignity of Man* (Washington, DC: Regnery Publishing, 1996).

Du Plessis, LM & JR De Ville 'Personal rights: life, freedom and security of the person, privacy, and freedom of movement' in D Van Wyk, J Dugard, B de Villiers & D Davis (eds) *Rights and Constitutionalism: The New South African Legal Order* (Netherlands: Kluwer Law International, 1994) 212–263.

Dworkin, R *Sovereign Virtue: The Theory and Practice of Equality* (Cambridge: Harvard University Press, 2002).

Feinberg, J *Harm to Others* (New York: Oxford University Press, 1984).

Fischer, JM & M Ravizza *Responsibility and control: A theory of moral responsibility* (New York: Cambridge University Press, 2000).

Fox, D *Birth Rights and Wrongs: How Medicine and Technology are Remaking Reproduction and the Law* (New York: Oxford University Press, 2019).

Fukuyama, F *Our Posthuman Future: Consequences of the Biotechnology Revolution* (New York: Picador, 2003).

Gyekye, K 'Person and community in African thought' in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (London: Oxford University Press, 2002) 348–66.

Habermas, J *The Future of Human Nature* (Cambridge: Polity Press, 2003).

Harris, J *Enhancing Evolution: The Ethical Case for Making Better People* (New Jersey: Princeton University Press, 2010).

Hountondji, PJ *African Philosophy: Myth and Reality* 2 ed (Bloomington: Indiana University Press, 1996).

Hull, G (ed) *Debating African Philosophy: Perspectives on Identity, Decolonial Ethics and Comparative Philosophy* (Oxon: Routledge, 2018).

Kant, I *Groundwork of the Metaphysics of Morals: A German-English Edition* (New York: Cambridge University Press, 2011).

Kaphagawani, DN ‘African conceptions of a person: A critical survey’ in K Wiredu (ed) *A Companion to African Philosophy* (Massachusetts: Blackwell Publishing Ltd, 2004) 332–42.

Kayange, GM *Meaning and Truth in African Philosophy: Doing African Philosophy with Language* (Cham: Springer International Publishing, 2018).

Kuhse, H & P Singer *A Companion to Bioethics* (Chichester: Wiley-Blackwell, 1998).

Kuper, A *The Invention of Primitive Society: Transformations of an Illusion* (Florence: Taylor & Frances/Routledge, 1988).

Laleye, IP ‘Is there an African philosophy in existence today?’ in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (London: Oxford University Press, 2002) 101–14.

Larmore, C *The Morals of Modernity* (New York: Cambridge University Press, 1996).

Mazrui, AA ‘Africa’s wisdom has two parents and one guardian: Africanism, Islam and the West’ in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (Scottsville: University of KwaZulu-Natal Press, 2009) 33–59.

Mbigi L & J Maree *Ubuntu: The Spirit of African Transformation Management* (Randburg: Knowledge Resources Publishing, 2005).

Mbiti, JS *African Religions & Philosophy* 2 ed (Garden City: Heinemann, 1990).

Menkiti, IA ‘On the normative conception of the person’ in K Wiredu (ed) *A Companion to African Philosophy* (Massachusetts: Blackwell Publishing Ltd, 2004) 324–31.

Menkiti, IA ‘Person and community in African traditional thought’ in RA Wright (ed) *African Philosophy: An Introduction* 3 ed (New York: University Press of America, 1984) 171–81.

Metz, T ‘A bioethic of communion: Beyond care and the four principles with regard to reproduction’ in M Soniewicka (ed) *The Ethics of Reproductive Genetics: Between Utility, Principles, and Virtues* (Cham: Springer International Publishing, 2018) 49–66.

Mill, JS *On Liberty and the Subjection of Women* (London: Penguin Classics, 2007)

Mill, JS *Three Essays on Religion: Nature, the Utility of Religion, Theism* (Amherst: Prometheus, 1998).

Mukherjee, S *The Gene: An Intimate History* (New York: Large Print Press, 2017).

Munyaka, M & M Mothabi 'Ubuntu and its socio-moral significance' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (Scottsville: University of KwaZulu-Natal Press, 2009) 63–84.

Murove, MF 'African bioethics: An exploratory discourse' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (Scottsville: University of KwaZulu-Natal Press, 2009) 157–77.

Murove, MF 'Beyond the savage evidence ethic: A vindication of African ethics' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (Scottsville: University of KwaZulu-Natal Press, 2009) 14–32.

Murove, MF 'Introduction' in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (Scottsville: University of KwaZulu-Natal Press, 2009).

Murove, MF (ed) *African Ethics: An Anthology for Comparative and Applied Ethics* (Scottsville: University of KwaZulu-Natal Press, 2009).

Naam, R *More than human: Embracing the promise of biological enhancement* (New York: Broadway Books, 2005).

National Academy of Sciences, National Academy of Engineering, Institute of Medicine & National Research Council Committee on Science, Engineering, and Public Policy *Scientific and Medical Aspects of Human Reproductive Cloning* (Washington, (DC): National Academies Press, 2002).

O'Sullivan, M 'Reproductive rights' in S Woolman & M Bishop (eds) *Constitutional Law of South Africa* (Cape Town: Juta & Co Ltd, 2013) 37-1–28.

O'Sullivan, M & C Bailey 'Reproductive rights' in M Chaskalson et al (eds) *Constitutional Law of South Africa* (Cape Town: Juta & Co Ltd, 1998) 16-1.

Oakley, J 'A virtue ethics approach' in H Kuhse & P Singer (eds) *A Companion to Bioethics* 2 ed (Chichester: Wiley-Blackwell, 2009) 91–104.

Olafson, FA *Heidegger and the Ground of Ethics: A Study of Mitsein* (Cambridge: Cambridge University Press, 1998).

Oruka, HO ‘Four trends in current African philosophy’ in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (London: Oxford University Press, 2002) 141–6.

Prozesky, MH ‘Cinderella, survivor and saviour: African ethics and the quest for a global ethic’ in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (Scottsville: University of KwaZulu-Natal Press, 2009) 3–13.

Rachels, J *The Elements of Moral Philosophy* 4 ed (New York: Mcgraw-Hill Book Company, 2003).

Ramose, MB ‘The ethics of Ubuntu’ in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (London: Oxford University Press, 2002) 379–87.

Ramose, MB ‘The philosophy of Ubuntu and Ubuntu as philosophy’ in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (London: Oxford University Press, 2002) 270–80.

Ramose, MB *African Philosophy Through Ubuntu* (Harare: Mond Books, 1999).

Robertson, JA *Children of Choice: Freedom and the New Reproductive Technologies* (New Jersey: Princeton University Press, 1996).

Rodney, W *How Europe Underdeveloped Africa* (Cape Town: Fahamu/Pambazuka, 1982).

Sen, A *Identity and Violence: The Illusion of Destiny* (New York: Penguin Books India, 2007).

Senghor, LS & M Cook *On African Socialism* (New York: Praeger, 1964).

Serequeberhan, T ‘The critique of Eurocentrism and the practice of African philosophy’ in PH Coetzee & APJ Roux (eds) *Philosophy from Africa: A Text with Readings* 2 ed (London: Oxford University Press, 2002) 75–93.

Shizha, E ‘African indigenous perspectives on technology’ in G Emeagwali & E Shizha (eds) *African Indigenous Knowledge and the Sciences: Journeys into the Past and Present* (Rotterdam: Sense Publishers, 2016) 47–61.

Shutte, A ‘Ubuntu as the African ethical vision’ in MF Murove (ed) *African Ethics: An Anthology of Comparative and Applied Ethics* (Scottsville: University of KwaZulu-Natal Press, 2009) 85–99.

Shutte, A *Ubuntu: A New Ethic for a New South Africa* (Pietermaritzburg: Cluster Publications, 2001).

Sieghart, P *The International Law of Human Rights* (Clarendon Press, Oxford, 1983)

Silver, LM *Remaking Eden: How Genetic Engineering and Cloning Will Transform the American Family* (New York: Ecco, 2007).

Singer, P *Animal Liberation* (New York: Avon Books, 1977).

Stock, G *Redesigning Humans: Choosing our Genes, Changing our Future* (Boston: Mariner Books, 2003).

Talbert, M 'Moral Responsibility' in EN Zalta (ed) *The Stanford Encyclopedia of Philosophy* (Metaphysics Research Lab, Stanford University, 2019).

Tangwa, G 'Some African reflections on biomedical and environmental ethics' in K Wiredu (ed) *A Companion to African Philosophy* (Massachusetts: Blackwell Publishing Ltd, 2004) 387–95.

Taupitz, J (ed) *Die Bedeutung der Philosophie für die Rechtswissenschaft: Dargestellt am Beispiel der Menschenrechtskonvention zur Biomedizin* (Verlag: Springer, 2001).

Tempels, P *Bantu Philosophy* (Portland: HBC Publishing, 2010).

Wiredu, K 'Introduction: African philosophy in our time' in K Wiredu (ed) *A Companion to African Philosophy* (Massachusetts: Blackwell Publishing Ltd, 2004) 1–28.

Wiredu, K (ed) *A Companion to African Philosophy* (Massachusetts: Blackwell Publishing Ltd, 2004).

(b) Journal articles

Adil, E, JG Hardee & N Sadik 'Pakistan: The Family Planning Program, 1965-1967' (1968) 1 *Studies in Family Planning* 4–11.

Albertyn, C 'Women and the transition to democracy in South Africa' (1994) *Acta Juridica* 57–60.

Araki, M & T Ishii 'International regulatory landscape and integration of corrective genome editing into in vitro fertilization' (2014) 12 *Reprod Biol Endocrinol* 108–20.

Ardekani, AM 'Genetic technologies and ethics' (2009) 2 *J Med Ethics HistMed* 11–5.

Armsby, AJ, Y Bombard & NA Garrison et al 'Attitudes of Members of Genetics Professional Societies Toward Human Gene Editing' (2019) 2 *The CRISPR Journal* 331–39.

Ashcroft, RE 'Making sense of dignity' (2005) 31(11) *J Med Ethics* 679–82.

Ayala, T & L Caradon ‘Declaration on population: The world leaders' statement’ (1968) 1(26) *Studies in Family Planning* 1–3.

Baliou, S, M Adamaki & A Kyriakopoul et al ‘CRISPR therapeutic tools for complex genetic disorders and cancer (Review)’ (2018) 53 *International Journal of Oncology* 443–68.

Barugahare, J ‘African bioethics: Methodological doubts and insights’ (2018) 19 *BMC Medical Ethics* 98–108.

Bayefsky, R ‘Dignity, honour, and human rights: Kant’s Perspective’ (2013) 41(6) *Political Theory* 809–37.

Behrens, KG ‘A critique of the principle of “respect for autonomy”, grounded in African thought’ (2017) 17(2) *Dev World Bioeth* 126–34.

Behrens, KG ‘Towards an indigenous African bioethics’ (2013) 6(1) *SAJBL* 32–5.

Beyleveld, D & R Brownsword ‘Human dignity, human rights, and human genetics’ (1998) 61(5) *Modern Law Review* 661–80.

Birenbaum J ‘Contextualising choice: Abortion, equality and the right to make decisions concerning reproduction’ (1996) 12(3) *South African Journal on Human Rights* 485.

Boniface, AE ‘The genetic link requirement for surrogacy: A family cannot be defined by genetic lineage’ (2017) *TSAR* 190.

Borgmann-Prebil, Y & A Obermaier-Muresan ‘Solidarity in Europe – Alive and active’ (2018) *European Union* 1–14.

Bosley, KS, M Botchan & AL Bredenoord…et al ‘CRISPR germline engineering – The community speaks’ (2015) 33(5) *Nat Biotechnol* 478–86.

Bostrom, N ‘Human Genetic Enhancements: A Transhumanist Perspective’ (2003) 37 *The Journal of Value Inquiry* 493–506

Carpenter, M ‘The human rights of intersex people: addressing harmful practices and rhetoric of change’ (2016) 24(47) *Reproductive Health Matters* 74.

Caulfield, T ‘Human cloning laws, human dignity and the poverty of the policy making dialogue’ (2003) 4(3) *BMC Med Ethics*.

Cavaliere, G ‘Genome editing and assisted reproduction: Curing embryos, society or prospective parents?’ (2018) 21 *Med Health Care and Philos* 215–25.

Center for Genetics and Society *CGS Summary of Public Opinion Polls* (2018).

Chan, RW, B Raboy & CJ Patterson 'Psychosocial adjustment among children conceived via donor insemination by lesbian and heterosexual mothers' (1998) 69 *Child development* 443–57.

Cohen IG 'The Constitution and the rights not to procreate' (2008) 60 *Stanford Law Review* 1138.

Coleman, AME 'What is "African bioethics" as used by Sub-Saharan African authors: An argumentative literature review of articles on African bioethics' (2017) 7(1) *Open Journal of Philosophy* 31–47.

Committee on Human Gene Editing: Scientific, Medical, and Ethical Considerations, National Academy of Sciences, National Academy of Medicine & National Academies of Sciences, Engineering, and Medicine *Human Genome Editing: Science, Ethics, and Governance* (2017).

Cooper, D & B Grinder 'Probability, gambling and the origins of risk management' (2009) *Financial History* 10–2.

Cox, PR, J Peel & CJ Thomas 'The world population conference, Belgrade, 1965' (1966) 58 *The Eugenics Review* 7–14.

Cwik, B 'Revising, correcting, and transferring genes' (2020) 20 *The American Journal of Bioethics* 7–18.

Dahl, E 'The presumption in favour of liberty: A comment on the HFEA's public consultation on sex selection' (2004) 8 *Reproductive BioMedicine Online* 266–67.

Davis, BD 'Germ-Line Therapy: Evolutionary and Moral Considerations' (1992) 3 *Human Gene Therapy* 361–63.

Davis, BD 'The moralistic fallacy' (1978) 272 *Nature* 390–390.

De Melo-Martin, I 'Germline gene editing: Minding the past and the future' (2020) 20 *The American Journal of Bioethics* 36–38.

Deutscher Ethikrat *Intervening in the Human Germline* (2019).

Doudna, JA & E Charpentier 'The new frontier of genome engineering with CRISPR-Cas9' (2014) 346(6213) *Science* 1258096-1–9.

Doyle, DJ ‘What does it mean to be human? Humanness, personhood and the transhumanist movement’ (2010) 1(2) *EBEM* 107–31.

Eser, A ‘Principle of harm in the concept of crime: A comparative analysis of the criminally protected legal interests’ (1965) 4 *Duquesne University Law Review* 345–418.

European Group on Ethics in Science and New Technologies *Opinion on Ethics of Genome Editing European Group on Ethics in Science and New Technologies* (2021).

Evans, JH ‘The empirical examination of the social process of genetic enhancement, objectification, and maltreatment’ (2019) 19 *The American journal of bioethics* 32–34.

Eze, MO ‘What is African communitarianism? Against consensus as a regulative ideal’ (2008) 27(3) *S Afr J Philos* 386–99.

Fayemi, AK ‘African bioethics vs. healthcare ethics in Africa: A critique of Godfrey Tangwa’ (2016) 16(2) *Dev World Bioeth* 98–106.

Fayemi, AK & OC Macaulay-Adeyelure ‘Decolonizing bioethics in Africa’ (2016) 3(4) *BEOnline* 68–90.

Gade, CBN ‘The historical development of the written discourses on *Ubuntu*’ (2011) 30(3) *S Afr J Philos* 303–29.

Gade, CBN ‘What is Ubuntu,? Different interpretations among South Africans of African descent’ (2012) 31(3) *S Afr J Philos* 484–503.

Gowlett, JAJ & RW Wrangham ‘Earliest fire in Africa: Towards the convergence of archaeological evidence and the cooking hypothesis’ (2013) 48(1) *Azania: Archaeological Research in Africa* 5–30.

Gowlett, JAJ ‘The discovery of fire by humans: A long and convoluted process’ (2016) 371(1696) *Phil Trans R Soc B* 20150164.

Greeley, HT ‘Human germline genome editing: An assessment’ (2019) 2 *The CRISPR Journal* 253–65.

Greeley, H *Why the Panic Over ‘Designer Babies’ Is the Wrong Worry* (2017).

Golombok, S, C Murray & V Jadva ‘Non-genetic and non-gestational parenthood: Consequences for parent-child relationships and the psychological well-being of mothers, fathers and children at age 3’ (2006) 21 *Human Reproduction (Oxford, England)* 1918–24.

Gyngell, C, H Bowman-Smart & J Savulescu 'Moral reasons to edit the human genome: picking up from the Nuffield report' (2019) *Journal of Medical Ethics* 1–10.

Harris, J 'Germline modification and the burden of human existence' (2016) 25(1) *Camb Q Healthc Ethics* 6–18.

Hassani, H, M Ghodsi & M Shadi et al 'A Statistical perspective on running with prosthetic lower-limbs: An advantage or disadvantage?' (2014) 2 *Sports* 76–84

Heidari, S 'Sexual rights and bodily integrity as human rights' (2015) 23 (46) *Reproductive Health Matters* 1–6.

Hellsten, SK 'The role of philosophy in global bioethics: Introducing four trends' (2015) 24(2) *Camb Q Healthc Ethics* 185–94.

Hernandez, BE 'To bear or not to bear: Reproductive freedom as an international human right' (1991) 17 (2) *Brooklyn Journal of International Law* 309.

Himonga, C, M Taylor & A Pope 'Reflections on judicial views of ubuntu' (2013) 16(5) *PER/PELJ* 369–429.

Holmgren, M 'Raz on rights' (1985) 94(376) *Mind* 591–5.

Hopkins, PD 'Bad copies: How popular media represent cloning as an ethical problem' (1998) 28(2) *Hastings Cent Rep* 6–13.

Isasi, R, E Kleiderman & BM Knoppers 'Editing policy to fit the genome?' (2016) 351(6271) *Science* 337–9.

Jacobson, D 'Mill on Liberty, Speech, and the Free Society' (2000) 29 *Philosophy & Public Affairs* 276–309.

Jedwab, A, DF Vears & C Tse et al 'Genetics experience impacts attitudes towards germline gene editing: A survey of over 1500 members of the public' (2020) 65 *Journal of Human Genetics* 1055–65.

Jinek, M, K Chylinski & I Fonfara et al 'A programmable dual-RNA-guided DNA endonuclease in adaptive bacterial immunity' (2012) 337(6096) *Science* 816–21.

Jordaan, D 'Stem cell research, morality, and law: An analysis of *Brüstle v Greenpeace* from a South African perspective' (2017) 33(3) *SAJHR* 429–51.

Jordaan, DW ‘Antipromethean fallacies: A critique of Fukuyama’s bioethics’ (2009) 28(5) *Biotechnol Law Rep* 577–90.

Khetarpal, A & S Singh ‘Infertility: Why can't we classify this inability as disability?’ (2012) 5(6) *The Australasian Medical Journal* 334.

Kleiderman, E, MT Nguyen & BM Knoppers ‘Of the rights and best interests of future generations’ (2020) 20 *The American Journal of Bioethics* 38–40.

Knoppers, BM & E Kleiderman ‘Heritable genome editing: Who speaks for “future” children?’ (2019) 2(5) *CRISPR J* 285–92.

Koplin, JJ, C Gyngell & J Savulescu ‘Germline gene editing and the precautionary principle’ (2020) 34(1) *Bioethics* 49–59.

Kotzé, M ‘Human genetic engineering in the South African context with its inequalities: A discourse on human rights and human dignity’ (2014) 113(1) *Scriptura* 1–11.

Lander, ES ‘Brave new genome’ (2015) 373 *N Engl J Med* 5–8.

Lander, ES, F Baylis &F Zhang et al ‘Adopt a moratorium on heritable genome editing’ (2019) 567 *Nature* 165–8.

Lanphier, E, F Urnov & SE Haecker et al ‘Don’t edit the human germ line’ (2015) 519 *Nature* 410–11.

Laws, SJ ‘The rule of law: The presumption of liberty and justice’ (2017) 22 *Judicial Review* 365–73.

Lechler, K & M Lilja ‘Lower extremity leg amputation: An advantage in running?’ (2008) 1 *Sports Technology* 229–34.

Luckey, C ‘Commercial surrogacy: Is regulation necessary to manage the industry?’ (2011) 26 *Wis J L Gender & Soc* 213–40.

Łuków, P ‘A difficult legacy: Human dignity as the founding value of human rights’ (2018) 19 *Hum Rights Rev* 313–29.

Maccallum, F & S Golombok ‘Children raised in fatherless families from infancy: A follow-up of children of lesbian and single heterosexual mothers at early adolescence’ (2004) 45 *Journal of Child Psychology and Psychiatry, and Allied Disciplines* 1407–19.

Macintosh, KL ‘Heritable genome editing and the downsides of a global moratorium’ (2019) 2(5) *CRISPR J* 272–9.

Matolino, B & W Kwindingwi ‘The end of ubuntu’ (2013) 32(2) *S Afr J Philos* 197–205.

Mauron, A ‘Is the genome the secular equivalent of the soul?’ (2001) 291(5505) *Science* 831–2.

Mbiti, JS ‘Christianity and traditional religions in Africa’ (1970) 59(236) *Int Rev Mission* 430–40.

McCrudden, C ‘Human dignity and judicial interpretation of human rights’ (2008) 19(4) *EJIL* 931–44.

Metz, T ‘African and Western moral theories in a bioethical context’ (2010) 10(1) *Dev World Bioeth* 49–58.

Metz, T ‘African values and human rights as two sides of the same coin: A reply to Oyowe’ (2014) 14(2) *Afr Hum Rights Law J* 307–21.

Metz, T ‘Toward an African moral theory’ (2007) 15(3) *Journal of Political Philosophy* 321–41.

Metz, T ‘Ubuntu as a moral theory and human rights in South Africa’ (2011) 11(2) *Afr Hum Rights Law J* 532–59.

Miller Brown, W ‘The Case for Perfection’ (2009) 36 *Journal of the Philosophy of Sport* 127–39

Mnyongani, F ‘De-linking ubuntu: Towards a unique South African jurisprudence’ (2010) 31 *Obiter* 134–45.

Mokgoro, JY ‘Ubuntu and the law in South Africa’ (1998) 1 *PER/PELJ* 1–11.

Molefe, M ‘Personhood and rights in an African tradition’ (2018) 45(2) *Politikon* 217–31.

Moore, I ‘Indignity in unwanted pregnancy: denial of abortion as cruel, inhuman and degrading treatment’ (2019) 23(6) *The International Journal of Human Rights* 1010.

National Academy of Medicine, National Academy of Sciences & The Royal Society *Heritable Human Genome Editing* (2020).

National Academies of Sciences *Second International Summit on Human Genome Editing: Continuing the Global Discussion: Proceedings of a Workshop–in Brief* (2019).

National Institutes of Health 'Statement on NIH funding of research using gene-editing technologies in human embryos' (2015).

NeJamie, D 'Griswold's Progeny: Assisted Reproduction, Procreative liberty, and sexual orientation equality' (2015) *The Yale Law Journal Forum* 340.

Ngwena, C 'Access to safe abortion as a human right in the African region: Lessons from emerging jurisprudence of UN treaty monitoring bodies' (2013) 29 (2) *SAJHR* 399.

Nienaber, A 'The grave's a fine and private place: A preliminary exploration of the law relating to posthumous sperm retrieval for procreation' (2010) 25 *Southern African Public Law* 1.

Norton, F 'Assisted reproduction and the frustration of genetic affinity: Interest, injury, and damages note' (1999) 74 *New York University Law Review* 793–843.

Nuffield Council on Bioethics *Donor conception: Ethical aspects of information sharing* (2013).

Nuffield Council on Bioethics *Genome editing and human reproduction* (2018).

Orentlicher, D 'Societal disregard for the needs of the infertile' (2015) *Indiana University Robert H McKinney School of Law Research Paper No 2015-32* 1.

Oyowe, AO 'Strange bedfellows: Rethinking ubuntu and human rights in South Africa' (2013) 13(1) *Afr Hum Rights Law J* 1–22.

Parker, M 'The best possible child' (2007) 33 *Journal of Medical Ethics* 279–83.

Porter, A 'Bioethics and Transhumanism' (2017) 42 *The Journal of Medicine and Philosophy: A Forum for Bioethics and Philosophy of Medicine* 237–60.

Rakotsoane, FCL & AA van Niekerk 'Human life invaluableness: An emerging African bioethical principle' (2017) 36(2) *S Afr J Philos* 252–62.

Ranisch, R 'Germline genome editing versus preimplantation genetic diagnosis: Is there a case in favour of germline interventions?' (2020) 34(1) *Bioethics* 63.

Rao, N 'Three concepts of dignity in constitutional law' (2011) 86(1) *Notre Dame L Rev* 183–272.

Rao, R 'Equal liberty: Assisted reproductive technology and reproductive equality' (2008) 76 *The George Washington Law Review* 1457.

Robertson, JA 'Procreative liberty in the era of genomics' (2003) 29(4) *Am J Law Med* 439–88.

Saunders, B 'First, do no harm: Generalized procreative non-maleficence' (2017) 31 *Bioethics* 552–58.

Savulescu, J, J Pugh & T Douglas et al 'The moral imperative to continue gene editing research on human embryos' (2015) 6(7) *Protein Cell* 476–9.

Segers, S & H Mertes 'Does human genome editing reinforce or violate human dignity?' (2020) 34(1) *Bioethics* 33–40.

Serlin, D 'Confronting African histories of technology: A conversation with Keith Breckenridge and Gabrielle Hecht' (2017) 127 *Radical History Review* 87–102.

Shalev, C 'The ICPD and the convention on the elimination of all forms of discrimination against women' (2000) 4(2) *Health and Human Rights* 38.

Shaver, LG, A Sundly & A O Saif 'A Human Rights Analysis of Clustered Regularly Interspaced Short Palindromic Repeats Germline-Editing for Disease Prevention' (2020) *J Public Health Prim Care* 17–21.

Shozi, B, T Kamwendo & J Kinderlerer, et al 'Future of global regulation of human genome editing: A South African perspective on the WHO Draft Governance Framework on Human Genome Editing' (2021) *Journal of Medical Ethics* 2.

Siegel RB 'Sex equality arguments for reproductive rights: Their critical basis and evolving constitutional expression' (2007) 56(4) *Emory Law Journal* 814.

Ssebunnya, GM 'Beyond the sterility of a distinct African bioethics: Addressing the conceptual bioethics lag in Africa' (2017) 17(1) *Dev World Bioeth* 22–31.

Steiner, HJ 'Political participation as a human right' (1988) 1 *Harvard Human Rights Yearbook* 77–134.

Steinmann, R 'The core meaning of human dignity' (2016) 19(1) *PER/PELJ* 1–32.

Taleb, NN, R Read & R Doua et al 'The precautionary principle (with application to the genetic modification of organisms)' (2014) *Extreme Risk Initiative – NYU School of Engineering Working Paper Series* 1–17.

Teffo, JL 'Botho/Ubuntu as a way forward for contemporary South Africa' (1998) 38(365) *Word and Action* 3–5.

Teng-Zeng, FK ‘Science, technology and institutional co-operation in Africa: From pre-colonial to colonial science’ (2006) 22(1) *EASSRR* 1–37.

Thaldar, D ‘Criteria for assessing the suitability of intended surrogate mothers in South Africa: Reflections on Ex Parte KAF II’ (2019) 12 *South African Journal of Bioethics & Law* 61–66.

Thaldar, D & B Shozi ‘Procreative non-maleficence: A South African human rights perspective on heritable human genome editing’ (2020) 3(1) *CRISPR J* 32–6.

Thaldar, D, J Kinderlerer & S Soni ‘An optimistic vision for biosciences in South Africa: A response to the ASSAf report on human genetics and genomics’ (2019) 115(7/8) *S Afr J Sci* 1.

Thaldar, D, M Botes & B Shozi et al ‘Human germline editing: Legal-ethical guidelines for South Africa’ (2020) 116(9/10) *S Afr J Sci* 1–7.

Thaldar, DW ‘Is It time to reconsider the ban on nontherapeutic pre-implantation sex selection?’ (2019) 136 *SALJ* 223–34.

Thaldar, DW ‘Post-truth jurisprudence: The case of *AB v Minister of Social Development*’ (2018) 34 *SAJHR* 231.

Thomas, A & M Bendixen ‘The management implications of ethnicity in South Africa’ (2000) 31 *J Int Bus Stud* 507–19.

Townsend, B & B Shozi ‘Altering the Human Genome: Mapping the Genome Editing Regulatory System in South Africa’ (2021) 24 *PELJ* 1–28.

Trounson, A & L Mohr ‘Human pregnancy following cryopreservation, thawing and transfer of an eight-cell embryo’ (1983) 305 *Nature* 707–709.

Turner, PN ‘“Harm” and mill’s harm principle’ (2014) 124 *Ethics* 299–326.

UN Population Council ‘Declaration of Population’ (1967) 1(16) *Studies in Family Planning* 1–12.

Van Binsbergen, WM ‘Ubuntu and the globalisation of Southern African thought and society’ (2001) 15(1/2) *Quest* 53–89.

Van Mil, A, H Hopkins & S Kinsella ‘Potential uses for genetic technologies: dialogue and engagement research conducted on behalf of the Royal Society: Findings report December 2017’ (2017) *Royal Society* 1–123.

Vanfraussen, K, I Ponjaert-Kristoffersen & A Brewaeys 'What does it mean for youngsters to grow up in a lesbian family created by means of donor insemination?' (2002) 20 *Journal of Reproductive and Infant Psychology* 237–52.

Van Niekerk, C 'Assisted reproductive technologies and the right to reproduce under South African law' (2017) 20 *Potchefstroom Electronic Law Journal* 1–31.

Vélez, MP, MP Connolly & IJ Kadoch et al 'Universal coverage of IVF pays off' (2014) 29 *Human Reproduction* 1313–19.

Venter, E 'The notion of ubuntu and communalism in African educational discourse' (2004) 23(2-3) *Studies in Philosophy and Education* 149–60.

Walsh, T 'Advancing the interests of South Africa's children: A look at the best interests of children under South Africa's Children's Act' (2011) 19 *Michigan State International Law Review*.

West, A 'Ubuntu and business ethics: Problems, perspectives and prospects' (2014) 121 *J Bus Ethics* 47–61.

WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing *Human Genome Editing: A Draft Framework for Governance* (2020).

WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing *Report of the first meeting* (2019).

Widdows, H 'Is global ethics moral neo-colonialism? An investigation of the issue in the context of bioethics' (2007) 21(6) *Bioethics* 305–15.

Wilkinson, S 'Commodification arguments for the legal prohibition of organ sale' (2000) 8(2) *Health Care Anal* 189–201.

(c) Theses and dissertations

Doyle, J *What Does it Mean to be Human? Life, Death, Personhood and the Transhumanist Movement* (unpublished doctoral thesis, University of Pretoria, 2017).

Mabasa, LF *The Psychological Impact of Infertility on African Women and their Families* (unpublished doctoral thesis, University of South Africa, 2009).

Radebe, MK *The Unconstitutional Criminalisation of Adult Sex Work* (unpublished LLM thesis, University of Pretoria, 2013).

Shozi, B *A Human Rights Analysis of Posthumous Reproduction* (unpublished LLM thesis, University of KwaZulu-Natal, 2018)

Steinmann, AC *The Legal Significance of Human Dignity* (unpublished doctoral thesis, North-West University, 2016).

(d) Websites and online sources

Academy of Science of South Africa 'Human genetics and genomics in South Africa: Ethical, legal and social implications' (2018) *ASSAf* available at *http://research.assaf.org.za/handle/20.500.11911/106*, accessed on 20 September 2019.

Association for Responsible Research and Ethics in Genome Editing 'Statement from ARRIGE Steering Committee on the possible first gene-edited babies' (2019) available at *http://arrige.org/ARRIGE_statement_geneeditedbabies.pdf*, accessed on 17 September 2019.

Blatch, S 'Great achievements in science and technology in ancient Africa' (1 February 2013) *ASBMB Today* available at *https://www.asbmb.org/asbmb-today/science/020113/great-achievements-in-stem-in-ancient-africa*, accessed on 12 March 2020.

Centre for Genetics and Society 'Summary of public opinion polls' (2018) available at *https://www.geneticsandsociety.org/internal-content/cgs-summary-public-opinion-polls#igmdata*, accessed on 12 September 2019.

G, S 'As China ends the one-child policy, what is its legacy?' available at *http://theconversation.com/as-china-ends-the-one-child-policy-what-is-its-legacy-49975*, accessed on 6 May 2021.

Gyekye, K 'African ethics' (9 September 2010) *Stanford Encyclopedia of Philosophy* available at *https://plato.stanford.edu/entries/african-ethics/*, accessed on 15 July 2020.

Hemel, D 'The case for universal health coverage for in vitro fertilization' (November 2018) available at *https://www.seattletimes.com/opinion/the-case-for-universal-health-coverage-for-in-vitro-fertilization/*, accessed on 25 May 2021.

Living Zimbabwe 'Gays and lesbians in Zimbabwe and their rights' (16 September 2009) available at *http://www.livingzimbabwe.com/gays-and-lesbians-in-zimbabwe-and-their-rights/*, accessed on 7 July 2020.

Marie, C 'How myth still makes us: Prometheus' (12 October 2018) *Medium* available at *https://medium.com/@thesmalldeath/how-myth-still-makes-us-prometheus-b3d9efe3c8ca*, accessed on 12 March 2020.

McLachlan, H 'Why the case against designer babies falls apart' available at *http://theconversation.com/why-the-case-against-designer-babies-falls-apart-45256,* accessed on 25 May 2021.

Medical Research Council 'Guidelines on ethics in reproductive biology and genetic research' available at *http://www.mrc.ac.za/sites/default/files/attachments/2016-06-29/ethicsbook2.pdf,* accessed on 18 July 2019.

MedlinePlus Genetics, 'Polycystic kidney disease' (2020) accessed *https://medlineplus.gov/genetics/condition/polycystic-kidney-disease/*, accessed on 25 May 2021.

Merriam-Webster 'Manipulate' available at *https://www.merriam-webster.com/dictionary/manipulation,* accessed on 7 July 2020.

National Academies of Science Medicine and Engineering 'International summit on human genome editing' (2015) available at *https://www.nap.edu/catalog/21913/international-summit-on-human-gene-editing-a-global-discussion,* accessed on 24 August 2019.

Nightingale, K 'Photo 51: The key discovery behind the structure of DNA' (2020) available at *https://www.sciencefocus.com/the-human-body/photo-51-the-key-discovery-behind-the-structure-of-dna/,* accessed on 23 April 2021.

PEW Research Center 'Public views of gene editing for babies depend on how it would be used' (2018) available at *https://www.pewresearch.org/science/2018/07/26/public-views-of-gene-editing-for-babies-depend-on-how-it-would-be-used/ps_2018-07-26_gene-editing_0-01/*, accessed on 12 September 2019.

Statistics South Africa 'Census 2011: Fertility in South Africa, Report No. 03-01-63' available at *http://www.statssa.gov.za/publications/Report-03-01-63/Report-03-01-632011.pdf,* accessed on 18 May 2021.

UNAIDS ‘South Africa’ (2018) available at *https://www.unaids.org/en/regionscountries/countries/southafrica*, accessed on 25 September 2019.

UN General Assembly ‘Outcomes on Population’ available at *https://www.un.org/en/development/devagenda/population.shtml*, accessed on 6 May 2021.

UN Population Information Network 'Recommendations for the Further Implementation of the World Population Plan of Action' available at *https://www.un.org/popin/icpd/conference/bkg/mexrecs.html*, accessed on 25 April 2021.

UNESCO ‘Universal Declaration on the Human Genome and Human Rights’ available at *http://www.unesco.org/new/en/social-and-human-sciences/themes/bioethics/human-genome-and-human-rights/*, accessed on 10 September 2019.

Van Mil, A; H Hopkins & S Kinsella ‘Findings report December 2017’ (2017) available at *https://royalsociety.org/~/media/policy/projects/gene-tech/genetic-technologies-public-dialogue-hvm-full-report.pdf*, accessed on 12 September 2019.

WHO ‘World Report on Disability’ (2011) available at *https://www.who.int/disabilities/world_report/2011/report/en/*, accessed 18 May 2021.

WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing ‘Report of the first meeting’ (2019) available at *https://www.who.int/ethics/topics/human-genome-editing/GenomeEditing-FirstMeetingReport-FINAL.pdf?ua=1*, accessed on 24 September 2019.

Zhang, M ‘Park v. Chessin (1977)’ (2012) available at *https://embryo.asu.edu/pages/park-v-chessin-1977*, accessed on 25 May 2021.