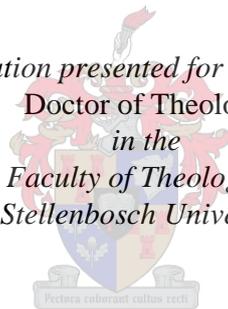


# **A Christian Bioethical Perspective on Pre-Implantation Genetic Diagnosis (PGD) and Genetic Manipulation (GM)**

by  
Manitza Kotzé

*Dissertation presented for the degree of  
Doctor of Theology  
in the  
Faculty of Theology at  
Stellenbosch University*



Supervisor: Prof. Nico Koopman

December 2013



The financial assistance of the National Research Foundation (NRF) towards this research is hereby acknowledged. Opinions expressed and conclusions arrived at are those of the author and are not necessarily to be attributed to the NRF.

## ABSTRACT

With the development and continued developing of medical technology, treatments become available without the time to reflect ethically on them. Given how fast things change in medical technology, it is important to constantly reflect anew. Ethical reflection, however, seems to be lagging far behind bio-technological developments. Pre-implantation Genetic Diagnosis (PGD) and Human Genetic Manipulation (GM) is fast becoming an everyday reality and must therefore be reflected upon. Few Christian bioethical studies have been done on the impact that this could have on the larger populace, especially the local population in South Africa, where only a small percentage would be able to access these possible treatments.

This study is motivated by the quest of ethicists in general and Christian ethicists in particular, to respond adequately and appropriately to the challenges posed by bio-technological developments. The study will outline and discuss the various Christian perspectives on PGD and GM. It will be shown that most Christian responses to bio-technological matters are done from within the framework of the doctrine of creation. In response, this study will then discuss a trinitarian perspective on the confession of God as creator and investigate whether this perspective might advance and enrich, and even amend, the quests of Christians to formulate ethical responses to the challenges posed by PGD and GM. I have made the decision to focus, for the most part, only on the work of one theologian, and will therefore be applying the trinitarian doctrine of creation as found in the work of Jürgen Moltmann to the development of a Christian bioethical perspective.

Seeing that Christian ethics in general is concerned with human dignity, social justice and wellbeing, as well as moral upliftment, the ethical implications of this type of medical technology in the South African context, with its uneven distribution of wealth and access to medical care, must also be addressed from the perspective of this study. In this regard, the concept of human beings created *imago Dei* (in the image of God), with inherent human dignity, is of particular importance.

## OPSOMMING

Met die ontwikkeling en voortdurende ontwikkeling van mediese tegnologie word behandelinge beskikbaar sonder dat daar tyd is om eties daarvoor te reflekteer. Gegewe hoe vinnig dinge verander in mediese tegnologie is dit belangrik om voortdurend nuut te reflekteer. Pre-implantasie Genetiese Diagnose (PGD) en Menslike Genetiese Manipulasie (GM) is vinnig beter om 'n alledaagse realiteit te word en daarom moet daar daarvoor reflekteer word. Daar is min Christelike bio-etiese studies gedoen oor die impak wat dit op die groter samelewing kan hê, veral in die plaaslike bevolking van Suid-Afrika, waar slegs 'n klein persentasie toegang tot hierdie moontlike behandelinge sal hê.

Hierdie studie word gemotiveer deur die poging van etici in die algemeen en Christelike etici spesifiek, om behoorlik en toepaslik te reageer op die uitdagings wat bio-tegnologiese ontwikkelinge bied. Die studie sal die verskillende Christelike perspektiewe op PGD en GM uiteensit en bespreek. Daar sal aangedui word dat die meeste Christelike antwoorde op die bio-tegnologiese kwessies gedoen word binne die raamwerk van die skeppingsleer. In reaksie hierop sal hierdie studie dan 'n trinitariese perspektief op die belydenis van God as Skepper bespreek en ondersoek of hierdie perspektief die poging om 'n Christelike etiese antwoord te formuleer op die uitdagings wat PGD en GM bied kan bevorder en verryk, en moontlik selfs wysig. Ek het die besluit geneem om hoofsaaklik net op die werk van een teoloog te fokus, en sal dus die trinitariese skeppingsleer soos gevind in die werk van Jürgen Moltmann toepas tot die ontwikkeling van 'n Christelike bio-etiese perspektief.

Aangesien die Christelike etiek in die algemeen gemoeid is met menswaardigheid, maatskaplike geregtigheid en welstand, asook morele opheffing, moet die etiese implikasies van hierdie tipe mediese tegnologie in die Suid-Afrikaanse konteks, met sy ongelyke verspreiding van rykdom en toegang tot mediese sorg, ook aangespreek. In hierdie verband is die konsep van die mens geskep *Imago Dei* (na die beeld van God), met inherente menswaardigheid, van besondere belang.

## ACKNOWLEDGEMENTS

A number of professors, friends and family members have assisted me during the time of research and writing of this dissertation. I would like to make use of this opportunity to express my gratitude to them all.

I am grateful to my doctoral promoter, Professor Nico Koopman, for his effort of advising me in this study. Thank you so much for your valuable and useful feedback throughout the years and for sharing your wisdom and insight with me, Prof. Thank you for reading through every draft and responding so quickly. It was an honour to work with you.

The German Academic Exchange Service (DAAD) made it possible for me to spend a period of focused research at the Humboldt University in Berlin. South Africa's National Research Foundation also gave financial support that made this study possible. I am immensely grateful to both of them.

I would also like to thank my parents, Bussie and Myra van der Schyff, for their encouragement and support throughout my years of study. Thank you also to my parents in-law, Frans and Elette Kotzé, and my sisters, Karlien and Anél. Thank you. I love you all.

I would also like to thank Magriet de Villiers and Henco van der Westhuizen, who acted as invaluable conversation partners throughout this study. Your insights and contributions are very much appreciated, as is your friendship. In addition, a big 'thank you' to my other friends who put up with my thesis-talk throughout these past few years without complaint, especially Carike, Charl, Janine, and Leon.

Lastly, I would like to express my immense gratitude to my husband, Gideon, for his unfailing love and support, for doing the dishes while I type, and making endless cups of coffee. Thank you. I love you.

## TABLE OF CONTENTS

Declaration .....	i
Abstract .....	iii
Opsomming .....	iv
Acknowledgements .....	v
Table of Contents .....	vi

### Chapter One

#### Introduction

1.1 Introductory Remarks .....	1
1.2 Pre-implantation Genetic Diagnosis and Genetic manipulation as a Challenge to Christian Bioethics .....	3
1.3 Scriptural Grounds for a Doctrine of the Trinity .....	13
1.3.1 Classical Doctrines of the Trinity .....	15
1.3.2 Contemporary Doctrines of the Trinity .....	19
1.4 Pre-implantation Genetic Diagnosis and Genetic manipulation in the South African Context: A Question of Human Dignity in Creation .....	27
1.5 Methodology .....	30
1.5.1 Problems with utilising the Bible in bioethics .....	33
1.5.1.1 Scripture is silent on modern bioethical issues .....	33
1.5.1.2 The worldview of Scripture is peculiar to modern readers .....	34
1.5.1.3 Scripture is diverse .....	35
1.5.1.4 The use of Scripture has a bad track-record .....	36
1.5.2 Scripture and bioethics? .....	37
1.5.3 Verhey's proposal .....	38
1.5.4 An appraisal of Verhey's proposal .....	40
1.5.5 A Proposal for a New Way of Using and Reading the Bible in Christian Bioethics .....	43

Chapter Two

Pre-Implantation Diagnosis and Human Genetic Manipulation: Criticisms and Commendations

2.1 Introduction .....	48
2.2 The Biotechnological Road to Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation .....	50
2.3 Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation as a Challenge To Christian Bioethics .....	59
2.3.1 Technology and theology .....	63
2.3.2 Personhood .....	66
2.4 Engaging with criticisms and commendations of Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation .....	70
2.4.1 Children of Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation ...	70
2.4.1.1 The influence on children born after Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation .....	73
2.4.1.2 Gender selection .....	77
2.4.1.3 Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation and ‘saviour’ siblings .....	79
2.4.2 Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation and people with disabilities .....	82
2.4.3 Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation and social justice .....	92
2.4.4 Eugenics and Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation	97
2.5 The Distinction between Curing and Enhancement .....	99

2.6 Conclusion .....106

Chapter Three

Biotechnology, Human Rights and Human Dignity: Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation in the South African Context with its Inequalities

3.1 Introduction .....109

3.2 Public Theology .....111

3.3 Healthcare Inequalities in the South African Context .....115

3.4 Health and health Care .....120

3.4.1 Is there a Right to Health Care? .....124

3.4.2 Negative and Positive Rights .....128

3.4.3 A Rights-Based Approach to Health Care .....130

3.4.4 Thomas Aquinas's Natural Law as a Base for Health as a Human Right .....131

3.5 The Right to Health and the Limitation of Health Care Resources .....136

3.6 The Right to Health and Inequality .....138

3.7 The Right to Health and Human Dignity .....142

3.8 Conclusion .....145

Chapter Four

Moltmann's Trinitarian Doctrine of Creation

4.1 Introduction .....148

4.2 Jürgen Moltmann .....151

4.2.1 Early Life .....151

4.2.2 Influences .....	154
4.2.3 Jürgen Moltmann and Karl Barth .....	155
4.2.3.1 Jürgen Moltmann and Karl Barth on the Doctrine of the Trinity .....	156
4.2.3.2 Jürgen Moltmann and Karl Barth on the Doctrine of Creation .....	163
4.3 Jürgen Moltmann’s Trinitarian Doctrine of Creation .....	164
4.3.1 The Trinity in the Theology of Jürgen Moltmann .....	167
4.3.1.1 The suffering of God .....	169
4.3.1.2 The freedom and love of God .....	172
4.3.1.3 The Son in Jürgen Moltmann’s Trinitarian Thought .....	176
4.3.1.4 The Spirit in Jürgen Moltmann’s Trinitarian Thought .....	181
4.3.2 Jürgen Moltmann’s Doctrine of Creation .....	183
4.3.2.1 Knowledge of Creation .....	191
4.3.2.2 God the Creator .....	194
4.3.2.3 The Incarnation of the Son .....	197
4.3.2.4 The Transfiguration of the Holy Spirit .....	199
4.3.2.5 Human Beings made <i>Imago Dei</i> .....	201
4.4 Criticism against Jürgen Moltmann’s Theology .....	204
4.4.1 Jürgen Moltmann’s use of Scripture .....	205
4.4.2 Jürgen Moltmann’s theology .....	205
4.4.3 Jürgen Moltmann’s lack of praxis .....	209
4.5 Conclusion .....	211

Chapter Five

Conclusion

5.1 Human Beings Created in the Image of God and Pre-Implantation

Genetic Diagnosis and Human Genetic Manipulation .....212

5.2 The Participation of Human Beings in Creation and its Consummation

and Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation .....214

5.3 Jürgen Moltmann’s Trinitarian Doctrine of Creation in Service of a

Christian Bioethical Perspective on Pre-Implantation Genetic Diagnosis

and Human Genetic Manipulation .....216

Bibliography .....219

# CHAPTER ONE

## INTRODUCTION

### 1.1 Introductory Remarks

With the development and continued developing of medical technology, treatments become available without the time to reflect ethically on them. Given how fast things change in medical technology, it is important to constantly reflect anew. Ethical reflection seems to be lagging far behind bio-technological developments. One of the areas where little work has been done to date is in the area of genetic manipulation on human beings. Pre-implantation genetic diagnosis (PGD) and human genetic manipulation (GM<sup>1</sup>) is fast becoming an everyday reality and must therefore be reflected upon.

In addition to being an oft neglected field of enquiry, very few Christian bioethical studies have been done on the impact that this could have on the larger populace, were PGD and GM to become widely and commercially available, especially the local population in South Africa, where only a small percentage would be able to access these possible treatments and afford to undergo them. The issues of accessibility and affordability bring the divide that exists between the rich and poor components of society in present day South Africa to the front. The contemporary socio-economic reality of South Africa will therefore be examined in chapter three.

This study is motivated by the quest of ethicists in general and Christian ethicists in particular, to respond adequately and appropriately to the challenges posed by bio-technological developments. The study will outline and discuss the various Christian perspectives on PGD and GM. It will be shown that most responses, theological and otherwise, to bio-technological matters, including PGD and GM, whether it is criticism or justification, are done from within the framework of the doctrine of creation. This might take on various forms, such as a particular

---

<sup>1</sup> The abbreviation “GM” will be used throughout this study to refer to specifically the genetic manipulation or genetic engineering of human beings. This study does not deal with other ethical aspects such as the genetic modification of animals, plants or consumables; the release of genetically altered organisms into the environment; the social and economic impact of the biotechnology industry; biological warfare; or the treatment of waste products.

perspective on God<sup>2</sup> as Creator, human beings as created beings, the role of humanity within creation, the integrity of creation, and so forth<sup>3</sup>.

For this reason, the methodology employed will be the utilisation of Christian doctrine in an attempt to address the issues that PGD and GM elicits for Christian bioethics. Given that the fundamental concern in the discussion of PGD and GM is the perspective on creation, doctrine of creation discourses will be used to develop a Christian response to these ethical challenges. In this study I will discuss specifically confession of God as Creator, as found in the thought of Jürgen Moltmann. Moltmann's theology is intrinsically trinitarian and his trinitarian doctrine of creation will offer the theological framework to address PGD and GM. This study will investigate whether his trinitarian doctrine on creation might advance and enrich, and even amend, the quests of Christians to formulate bioethical responses to the challenges posed by PGD and GM. This will be discussed in the fourth chapter that will detail his trinitarian doctrine of creation.

Regarding the relationship between ethics and doctrine, Moltmann reminds us that “everything done and suffered must conform to what is believed, loved and hoped for” (2012a:xiii). I view doctrine as the ideal position to approach the Christian bioethical debate surrounding PGD and GM for this reason. Jochem Douma reminds that us ethics and dogmatics are two different disciplines. He refers, however, to Calvin's *Institutes* as an example of a work that cannot be deemed either a dogmatics or an ethics in the modern sense of the word. Nevertheless, in the *Institutes* “doctrine and life are treated together from the first page to the last ... Calvin knew what every dogmatician and ethicist must know, namely, that every doctrine (in dogmatics) has an ethical side, and every ethical question roots deep in the soil of doctrine” (2003:39-40).

---

<sup>2</sup> I will aim to, as far as possible, avoid using names for God that indicates gender. Jürgen Moltmann uses masculine terms for God in the majority of instances. For a full discussion of Moltmann's use of masculine/feminine terms for God, however, see pp. xiii-xvi in the introduction of *History and the Triune God*, as well as the first two chapters, ‘I Believe in God the Father’: Patriarchal or Non-Patriarchal Talk of God? and *The Motherly Father and the Power of His Mercy*, pp. 1-25 in the same book).

<sup>3</sup> Daniël Louw, for example, indicates that in the hermeneutics of a Christian ethics, the decision has to be made whether one opts for a paradigm of creation or re-creation, as well as whether the starting point for this paradigm will be the incarnation, stressing Christ as mediator, or inhabitation, focusing on the indwelling of Christ within the human body. The traditional paradigm of creation refers to the tendency to begin with creation and introduce the notion of humankind created in the image of God, assuming a perfect creation before the Fall and a connection of some sort with God. Louw further indicates that this model leads to speculation and often, theological manipulation in attempting to establish the link between what is and the will of God. For this reason, he rather opts for the re-creation paradigm, which points towards an eschatological paradigm (2008:274-275). Although not stated in those terms, the trinitarian doctrine of creation that Moltmann sets out fits this second, eschatological paradigm of re-creation.

The relationship between ethics and doctrine is of cardinal importance and will also be examined in the fourth chapter of this study.G

Because these issues are of a public nature, this study also falls under the broader category of public theology and as such, the impact that PGD and GM could have on the larger South African population will also be discussed. Bio-ethical issues are not only personal, but also belong in the domain of public theology. For this reason, the challenges and issues that PGD and GM confront Christian bioethics with cannot be diminished or demoted to the personal domain of life. The personal is public and *vice versa*. As mentioned previously, only a small percentage of the populace would be able to access these types of treatments and afford them, should they become available.

The public nature of the bioethical questions raised by biotechnology, PGD and GM in particular, will also be referred to later in this chapter, when the South African context in specifically dealt with in section 1.4., while the broader issue of public theology will more explicitly be examined in chapter three.

Seeing as this study focuses centrally on human life, health, well-being and flourishing in personal as well as public life, this study will, from trinitarian perspective, also make a contribution to human dignity discourses. The issue of human dignity is addressed in detail in the third chapter as forming part of the human rights discourse, and in the fourth chapter, when Moltmann's anthropology as part of his trinitarian doctrine of creation is discussed.

This chapter will serve as an introduction to the rest of the study. For this reason, PGD and GM as challenges to Christian bioethics, an overview of the doctrine of the Trinity in the Bible, as well as in classical and contemporary thought, the South African context and the methodology of this study will briefly be examined further.

## **1.2 Pre-Implantation Genetic Diagnosis and Genetic Manipulation as Challenges to Christian Bioethics**

Bioethics as a field of enquiry was born in a climate of new ethical issues and choices that were raised since the 1960's. Originally, Potter proposed the term 'science of survival', but it never became widely established. Bioethics refers to the ethical issues arising from health care and

biomedical sciences (Kuhse & Singer 2001:3). Essentially, as Helga Kuhse and Peter Singer further point out, it is a version of the much older medical ethics, where the first written example is the Code of Hammurabi written in approximately 1750 BCE in Babylon, but differs by being explicitly critical and reflective and moving beyond medical ethics in that the goal is not the development of a code or precepts, but rather a better understanding of issues raised. It is prepared to ask philosophical questions and embraces the issue of public policy and direction and control of science (2001:4).

Being part of the bioethical discipline, this study will then also not attempt to give exact and definite instructions on how to deal with the Christian bioethical issue of PGD and GM. Instead, I will aim to examine the complexities at hand, ground the issues within a meaningful theological foundation, namely Jürgen Moltmann's trinitarian doctrine of creation, and then give broad guidelines for the formation of bioethical decisions and assessments based on this theological grounding.

Whilst bioethical issues have been the subject of public debate since ancient times, after the exposure of the biomedical experiments conducted during the Nazi regime in World War II, public attention was made aware of this matter. After Nuremberg, concern was raised over the degree of scrutiny of scientists and doctors by society. The public demanded more say in how biomedical discoveries were used. The raise in public concern regarding bioethics can also be seen as the result of the decline in paternalism and of Western society becoming more egalitarian. A general mistrust of scientists also seems to mark this development (Bryant *et al* 2005:24-25). With the diminishing of Western paternalism, the people in society gradually obtained more and more liberty and became free to much greater extent than before World War II to make their own decisions, also in terms of biomedical technology.

Up and until the 1970's, ethical issues in medicine were referred to as "medical ethics". The move towards "bioethics" was also of a symbolic significance as it coincided with the birth of new values in and around medical practice and the beginning of a new community (Cameron 1995:3).

The advances being made in the field of genetics has implications for our understanding of what it means to be human, the nature of freedom and responsibility, of human agency and responsibility to God, to others, to future generations and to the created order and as such, it

belongs within the domain of religious thought (Chapman 1999:3). Audrey Chapman also goes on to say that:

Many of the issues that the genetics revolution raises have significant theological components and therefore require a religious and theological response. Not only are these questions religious in nature, but for persons of faith the choices genetic developments pose cannot be addressed apart from fundamental theological precepts about human nature and standing before God and our role in creation.

(Chapman 1999:15)

At present, PGD can be utilised to determine the sex of an embryo (usually in the case of sex-linked disorders) and to identify both single gene disorders and chromosomal ailments. In the immediate future, this diagnosis is limited to those at risk of passing on genetic diseases, but as the success rate grows, so does the demand (Gavaghan 2007:6-7). Whilst this new technology causes varying degrees of concern in different circles, it is important to take note that the fear of 'designer' babies cannot be realised through PGD. Embryos are not 'designed', but simply selected without any alteration to the genetic composition. There are, however, some people that view this selection in the same manner as the alteration of the human genome. For this reason, the ethical questions that are elicited by PGD and GM are very similar for Christian bioethics and in the majority of cases, even identical. This study will therefore investigate both the questions raised by PGD and the possible challenges that GM could raise. As a result, PGD and GM will, for the most part, be discussed in the same breath, with a few exceptions, when called for.

Where concern for the so-called 'designer babies' might be justified, is in the case of gene therapy. This is also known as genetic engineering, genetic modification, or in popular parlance, genetic manipulation (GM). This entails the insertion of extraneous genetic material into, or altering the genome of an existing organism. At present, the questions raised by this type of treatment are, for the most part, hypothetical (Gavaghan 2007:8). However, at the rate of technological advances in this field and the speed at which they become publicly available, it would be wise to also reflect, maybe pre-emptively, on them as well.

One of the points of critique offered against PGD and GM is the possible harm to the children involved, physically, but above all psychologically, as they might receive the message that they

were not 'good enough' to be born without the intervention of biotechnology. It also implies that embryos are reduced to potential lives or discarded cells at the decision of the parents, raising the question common in bioethics about the status of the embryo and whether it can be argued to have interests (Gavaghan 2007:41-54).

This criticism and the assessment of embryos as entities with moral status, is clearly the result of a particular outlook on creation and the role of humanity within it. Responding in a Christian bioethical way to this type of question would require delving into the doctrine of creation, and specifically in this instance, to the position and responsibilities of human beings as created beings.

In addition to the possible risk to the individuals involved that critics identify, there is also third parties who are evaluated to be at risk of harm from PGD and GM. This includes people who are already disadvantaged by being disabled and a rise in sexual discrimination. It has to do with the message being sent to individuals that they are better off not being born.

Reducing the number of people with specific disabilities or illnesses is further seen to decrease the perceived importance of finding a cure, as well as creating the illusion that those who do have these disabilities or illnesses in some way 'deserved' it, as a result of the choices made by their parents. With regard to sex selection, discrimination against a specific sex could be amplified and further, lead to demographic distortion (Gavaghan 2007:101-106, 128-133). Critiques like these also come from a specific perception of the created order and human beings, where some attributes or rights are attributed to all persons. The view that all people are created as equal is also at play here and as such, a Christian bioethical response should also deal with the aspect of human rights, human dignity and humanity as part of creation and the created order.

In cases where an embryo is chosen or even 'engineered' in order to act as a donor for someone else, in most cases a sibling, the critique centres on the compatibility of this decision and the welfare, dignity or interests of the unborn child and the conditional having of children for own gain. Scathing appraisals refer to these kinds of cases as 'spare-part babies' or to the children involved as a 'means to an end' (Gavaghan 2007:141-152).

It is clear that a specific view of creation and human beings as part of it is at play here. Like in the previous instance, the natural and inborn right to qualities like welfare, dignity and being valued as an individual is seen as part of the created order. In the further discussion that will

take place as a Christian bioethical response to these kinds of questions, human beings as created in the image of God will be of particular importance in this instance.

Another point of critique has to do with notions of justice and equality and the underlying fear of a divided species, where one part of society is genetically 'enhanced' and accordingly, superior to those who are not. The extreme divergence within humanity that this kind of biotechnology could lead to causes many to plead for it to cease being implemented and the cutting short of all research pertaining to PGD and GM (Gavaghan 2007:171-173).

For this study, especially the fact that only a select portion of the South African population would have access to this type of treatment and be able to afford it, is of importance. Responding to these types of arguments in a Christian bioethical manner, the mutuality of humanity and guarding against the kind of divergence often found in Science Fiction, should be one of the concerns to be kept in mind. In addition, the unspoken statement in these fears is that people are, or should be, created equal. As such, it is also an issue of critique that is rooted in a particular view on creation, as mentioned in the previously criticism against these technologies.

One of the most common issues of critique in popular parlance is that PGD and GM tries to 'play God' by interfering with the natural processes. Nielson refers to a speech by former US President, George W. Bush, where he spoke out against these kinds of treatments and stated that 'the beginning of life should be the end of science' (2006:137). Perhaps this is the point of criticism that has the most obvious and clear perspective of creation and the role that human beings can and should play in it.

From these criticisms, it is clear that those who speak out against PGD and GM implicitly do so from a specific viewpoint of creation, the integrity of creation, God as Creator, human beings as created beings and the role of humanity within the created order. As such, reflection on the challenges that PGD and GM raise would benefit the most if equally viewed from a Christian perspective on creation.

In this study, the perspective that I will employ will be the trinitarian doctrine of creation as found in the work of Jürgen Moltmann.

This study also takes note of and takes seriously the critique offered against Christian bioethics by bioethicists and also some theologians, that theology has nothing to offer this field that

bioethics cannot obtain elsewhere and that theologians who busy themselves with this field of enquiry are meddling where they are neither welcome nor making a contribution.

In this regard, Bram Van de Beek states that, given that the relationship between God and humankind is not anchored in ethics, theology should not be condensed to human activity and activity, which is, in his opinion, what ethicists make themselves guilty of (1996:35). This is, however a very dualistic perspective on the world, where theologians should busy themselves only with that which is “spiritual” and not with “human activity”. It is also quite ironic, given that this study will concentrate on the theology of Jürgen Moltmann, that this is exactly one of the issues of criticism that is levelled often against his theology, namely that he constructs a theology of theory which has little or no praxis. This and other matters of critique will be dealt with towards the end of the fourth chapter, which will examine Moltmann’s trinitarian doctrine of creation.

Van de Beek goes on to argue that Christian ethics gets ‘bogged down’ in current issues, the agenda being set by culture, the era and society. In his opinion, ethics is also contrary to the variety of choices that the Scriptures offer. Finally, Van de Beek accuses those who busy themselves with ethical determinations of trying to ‘be godlike’, given that taboos exist larger in the church than anywhere else and that God knows no taboos, but knows what is going on. However, thereby Van de Beek does not contend that no ethical counsel or agreement is possible (1996:38).

Evidently, van de Beek is not against ethics *per se*, but rather against theology setting up specific rules, or making ethical rulings and judgements about particular bioethical cases.

This point of critique is also raised by Shuman, who postulates that “in their quest for moral relevance” theologians who engage with bioethical matters “frequently obscure rather than illuminate the particular substantive moral commitments of Christianity” (2012:1010). In the same approach, James Gustafson refers to people with theological training that writes about science and technology and states that:

Whether theology is thereby in interaction with these areas, however, is less clear. For some writers the theological authorization for the principles and procedures they use

is explicit ... For others, writing as 'ethicists', the relation of their moral discourse to any specific theological principles, or even to a definable religious outlook is opaque.

(Gustafson 1978a:46)

Bioethical issues are "united in the perspective of the Christian tradition in this: they all address the question of how we treat human beings" (Cameron 1995:5), and as such, bioethics is an essential part of Christian ethics.

It is precisely because I take these criticisms seriously that this study is approached from a very specific Christian perspective, that of Moltmann's trinitarian doctrine of creation, and aims to indicate how this can inform the Christian bioethical debate surrounding the issues of PGD and GM. The warnings issued by Shuman and Van de Beek are, however, an important factor that I take note of. I realise that theology, and Christian ethics in particular, should tread carefully and humbly on the technical and sophisticated dimensions of bio-ethical debate. That does not mean, however, that it is something we cannot contribute to, in an explicitly Christian manner.

Jack Hanford further explains the secularisation<sup>4</sup> of bioethics (and ethics in general) mentioned previously and the exclusion of religion from the field by looking back in history, where in the mid-1960's the only sources available to bioethical enquiry was theological, especially Catholic and the tradition of medicine itself, which was strongly influenced by religion. The Roman Catholic Church's public pronouncements at the time on various bioethical points of discussion led to many distancing themselves from it and to the field being taken over by other, secular forces, such as medicine, academia, law, media, economics and policy, to such an extent that theology has almost disappeared from bioethical discussions (2002:4-5).

I will, however, argue that by using a thicker theological foundation as the basis for ethical reflection, in this instance that of Moltmann's trinitarian doctrine of creation, theological

---

<sup>4</sup> David Hollenbach indicates that in many instances secularisation is, in fact, contrary to fact. He points out that religion is not declining worldwide and that the thesis that it is, is based on the modern Western European experience. When secularisation is understood as the privatisation of religion, it is also problematic, given the widespread visibility of religious movements, also in the political sphere. Secularisation can also be understood as the differentiation of religion from other spheres of life, such as the political, for example. Approaching the concept of secularisation in this way takes the Western respect for personal and religious freedom into account and also assumes that the public role of religious communities and institutions refrain from attempting to achieve hegemonic control of social, political and intellectual life by religion (2003:5-6). This has resulted in much debate surrounding the role of religion in public life, as will be discussed in the third chapter of this study.

bioethics does indeed offer something unique to the debate on PGD and GM. This is especially true when taken into account, as mentioned previously and as discussed in greater detail in the next chapter, that all perspectives on PGD and GM, be it criticism or commendation, stem from a particular view on creation.

Although I contend that, given the relevance of the doctrine of creation to the ethical issues elicited by PGD and GM, I acknowledge that other points of departure would be possible, and could even offer profitable and productive approaches. Some specific theological responses to the bio-ethical challenges that PGD and GM presents to Christian bioethics that do not draw on the doctrine of creation will be briefly listed here, most notably responses that take the stories of Jesus Christ, human sin or the power of God as point of departure. Other approaches that does not explicitly refer to the doctrine of creation, grounds their response in, for example, the concept of responsible stewardship, eschatology, human freedom or the covenant of God, topics that are very closely related to creation and will be touched upon when dealing with Moltmann's trinitarian doctrine of creation.

One such a response can be most clearly seen in the response of Francis Collins, the director of the U.S. Human Genome Project from 1992 to 2008, when he stated that the project is founded in Jesus' ministry of healing, calling it a "matter of discipleship, a natural extension of our commitment to heal the sick" (Verhey 2003:159). This theological response is essentially grounded in the stories of Jesus Christ<sup>5</sup> and, more specifically, his healing ministry.

Another response is that of stewardship. This tradition is embedded in Scripture and is exemplified through the vocation of human beings as servants, who have been given the responsibility of managing creation in the service of the One to whom it belongs, the Creator. This notion is also very closely related to the doctrine of creation, and as such, will also be referred to in chapter four, when Moltmann's trinitarian doctrine of creation is discussed.

Chapman, however, points out that this response is traditionally based on the notion that we live in a static and finished universe, where stewardship means to respect the natural order and not seeking to change it. Since the discovery of evolution, the theological response of

---

<sup>5</sup> See also Verhey (2003:173-177) and Chapman (1999:44-46).

stewardship would then need to be updated and reinterpreted in order to be relevant and appropriate<sup>6</sup> (1999:42). It would also be possible to interpret the utilisation of PGD and GM as being exactly responsible stewardship of creation and taking care of it to the best of human potential.

Stewardship will be touched upon in the fourth chapter, and will be discussed as part of the view of human beings created in the image of God, as part of Moltmann's trinitarian doctrine of creation.

A further response would take sin as its point of departure and trace all faults that run through our world to human sin, the "human refusal to trust God and give thanks to God". In this regard, human pride and sloth are of paramount importance, also as examples of the type of behaviour that are referred to. In this response, autonomy cannot be allowed to monopolise our moral attention, given that "being made finite and free is a call to faith and faithfulness to God" (Verhey 2003:166-168).

When human pride is seen as the ultimate sin, be humanity's refusal to acknowledge our limitations could be viewed as the ground for restricting PGD and GM. If, however, sloth is viewed as the ultimate sin, then a case could be made for the sin being failing to take responsibility for creation through the utilisation of PGD and GM. These arguments will briefly be referred to again in the next chapter, but will not make up the central focus of this study.

Another response would focus on the covenant, of human beings crying out to God in the "hope against hope" that someone would hear their cries and answer with a promise. According to this view, in delivering the people of Israel, God blessed them with a vocation to be a blessing, not with absence from this world. While technology can be a blessing, it is not the solution and the warning that also medical technologies, PGD and GM, for example, can be co-opted by pride and greed, overrides arguments in favour of it (Verhey 2003:172).

Cynthia Deane-Drummond also discusses the theocentric approach, where the focus is on the absolute power of God (1997:94) and a response that is grounded in the command of Genesis for humans to exercise dominion over creation. This command is qualified by 'the essence of

---

<sup>6</sup> For a further discussion on the response of stewardship and an attempt at reinterpretation and renewing this reaction, drawing heavily upon Biblical passages, especially those dealing with creation, see Reichenbach and Anderson's *On Behalf of God: A Christian Ethic for Biology* (1995).

the relationship between Creator and creation as one of loving involvement' (1997:96). For example, in his *Ethics from a Theocentric Perspective*, James Gustafson describes the crucial moral question, when utilising a Theocentric perspective, as “what is God enabling and requiring us to be and to do?” (1978b:1).

This argument could also be developed both ways, with the loving involvement of God being viewed as grounds for curbing the use of PGD and GM, however, the involvement of human beings in this loving relationship with God could also be seen as the very grounds for the participation and contribution of humanity to creation, also through PGD and GM.

Other responses include those that take as point of departure the eschatology<sup>7</sup>, human autonomy and moral or Christian values. Although eschatology is not the focus of this study, in Moltmann's thought, which is inherently eschatological, there are numerous cases where the aspect of eschatology is central to his doctrine of trinitarian creation and as such, it will be referred to briefly throughout this study, in particular in chapter four.

Wolfhart Pannenberg tried to show that “the triunity of God ought to inform all systematic theology” (Grenz 2004:x). Quintessentially, all Christian theology is trinitarian. When speaking of God, it is already the inferred implication that God is the Father of Jesus Christ. In the same way, speaking of Jesus Christ carries with it the understood truth that one is referring to God, the Father's Son. Similarly, the Holy Spirit implies the connection to both the Father and the Son and cannot be spoken of or studied as if the Spirit is separate and unrelated.

The importance of trinitarian theology is also summed up clearly by Dirk J. Smit:

Whether one speaks about the knowledge of God, about creation, about being, about time, about human beings, about salvation, about sin and suffering, about election, about the church, about baptism, about the Lord's Supper, about eschatology, about the Christian life, about discipleship and ethics, about calling, about hermeneutics, about love, yes, about Jesus Christ, about his cross, his resurrection and his threefold office, as well as about the Spirit, about worship and liturgy, about piety and spirituality, about

---

<sup>7</sup> For a full discussion of the 'end of the story approach', see the discussion in Verhey (2003:177-178). See also Louw (2008:275280).

prayer - a Trinitarian account always seems to help to speak in more differentiated ways about the rich and complex, dynamic and surprising ways of the biblical account ... .  
Whatever the question, it seems that the biblical grammar calls for a threefold response.  
(Smit 2009:67-68)

Given this importance of trinitarian theology, it is essential that Moltmann's trinitarian theology of creation that will be examined in chapter four is grounded within the broader context of trinitarian theology. For this reason, in the following section I make some introductory and orientating remarks on the doctrine of the Trinity, starting with the Scriptural grounds for a doctrine of the Trinity.

### **1.3 Scriptural Grounds for a Doctrine of the Trinity**

While the Christian church has traditionally confessed its faith in the triune God, the God who is Father, Son and Spirit, the doctrine of the Trinity, however, is not found in the Bible. As Shirley Guthrie draws attention to, the terms "Trinity", "one-in-threeness", "three-in-oneness" or reference to one "essence" or three "persons" are not biblical language (1994:76)<sup>8</sup>. Nonetheless, there are a number of triadic formulas in the Bible (Matthew 28 and Ephesians 4, for example), as well as in the early Christian creeds. John Leith also reminds us that, although the doctrine of the Trinity was only formulated as such in the fourth and fifth centuries, as will be mentioned shortly, "it was present from the beginning in the acts of God in creation and redemption, in the language of Christian piety, and in the liturgy of the church, especially the baptismal formula" (1993:46).

Even though the doctrine of the Trinity is not mentioned in the Bible, Christian churches have upheld the firm avowal of their belief in the triune God, born from the core Christian conviction that there is one God; that the Father is God, that the Son is God and that the Holy Spirit is God. These convictions form the heart of the doctrine of the Trinity. It is not born from mathematical speculations, but from an attempt to do justice to the very heart of the Christian faith that through the person of Jesus Christ, God has been revealed to us, that Jesus Christ died for our salvation and was resurrected from the dead and that God remains present through the Holy Spirit. The doctrine of the trinity can be described as a post-biblical attempt to explain the subject matter of Christian faith in God as Father, Son and Spirit.

---

<sup>8</sup> See also Kärkkäinen (2007:8-9) and Migliore (2004:68-70).

In the words of William Placher: “If ... as I believe, we can know God only as revealed in Christ through the Holy Spirit, then we *start* with three” (2007:1).

“Biblical faith stands or falls with this confession of one God” and the Bible is filled with the confession that there is one God. In a context where the majority of people worshipped and believed in many gods, the central confession of ancient Israel was summarised in Deuteronomy 6:4: “Hear, O Israel: The Lord our God is one Lord” (Guthrie 1994:77).

The early Christians, however, could not speak about this one God without also referring to the person of Jesus Christ. “They did not speak about Jesus’ ‘deity’ or ‘divinity’, nor did they speculate theoretically about his divine ‘nature’ or ‘essence’. They thought about what Jesus *did*”. After his death, Jesus was given the same names and authority as God and the same saving power was attributed to him. The obvious predicament was then how to relate this new revelation with the understanding of the one God? Although the New Testament does not attempt to resolve this problem, it does provide the first traces of what would later lead to the development of the doctrine of the Trinity, namely the emphasis on the simultaneous unity (Matthew 1:23, John 10:30 and 14:9, and Colossians 2:9) and distinction (John 1:1, 4:34, and 5:19) between God and Jesus (Guthrie 1994:78-79).

In the same way that it became impossible to speak about God without reference to Jesus in the early church, it was also unfeasible to refer to God without talking also about the Holy Spirit. How the Spirit could be understood was another quandary not solved in the New Testament, where the Spirit is confessed to be both the Spirit of God (1 Corinthians 2:11, 6:11, 7:40) and the Spirit of the Son (John 14:16, Romans 8:9, 2 Corinthians 3:17) as well as a third party (John 14:15-18) (Guthrie 1994:80). Roger Olson and Christopher Hall formulate this in a very apt manner:

Why would Paul, John, and the writer to the Hebrews propose such a strange, seemingly incomprehensible model for God, one in which “God” is “with God” while remaining a single unity? One can only point to their encounter with Christ for the answer. In short, Christ’s resurrection forced them to extrude a new model of the surprisingly complex God of Israel.

(Olson & Hall 2001:8)

It is clear that, although the doctrine of the Trinity is not referred to in the Bible, Christian churches have confessed their faith in the triune God. The doctrine of the Trinity, then, is born from an endeavour to do justice to the very heart of the Christian faith, proclaiming that God has been made known to us through the person of Jesus Christ, who died for our deliverance and was resurrected from the dead. As was stated previously, the doctrine of the Trinity can be described as a post-biblical attempt to explain the subject matter of Christian faith in God as Father, Son and Spirit. In the following section, some classical attempts at formulated this complex subject will be discussed as a means of grounding this study in the larger sphere of trinitarian theology.

### 1.3.1 Classical Doctrines of the Trinity

For the first, approximately sixty years of the second century CE, we do not find a developed trinitarian language or theology. There is, however, evidence of analysing and grappling with the implications of the Hebrew Scriptures, testimony of the apostles and the worship of the church in their attempt to understand God's nature and work (Olson & Hall 2001:16).

Justin Martyr spent a lot of energy arguing that Jesus of Nazareth, as opposed to Jewish objections, was the promised Messiah and consistently argued that the Hebrew Scriptures "point to the divinity of Israel's long awaited Messiah". He quickly realised, however, that asserting the divinity of Jesus raises a whole different set of questions, regarding how Christians can claim to worship only one God. Through the utilisation of illustrations in his attempts to clarify his understanding, Justin inaugurated a variety of subjects that became lasting patristic images, such as connecting Christ with the Wisdom of God in Proverbs 8:22 and coining the phrase "light from light" that would later be incorporated into the Nicene Creed (Olson & Hall 2001:21-22)<sup>9</sup>.

Iraeneus criticised Gnostic cosmology and emphasised that no one can understand the character and purposes of God; no one person can rationally explain or fully grasp the mystery that is God's triune nature. Iraeneus played an important role in stressing both the confession that

---

<sup>9</sup> See also Alexander Roberts and James Donaldson's *The Writings of Justin Martyr* (2007), Sarah Parvis and Paul Foster's *Justin Martyr and His Worlds* (2007), and Robert Alan King's *Justin Martyr on the Trinity: God as Father, Son and Spirit* (2011).

there is only one God and that the God of the old covenant and the God that is revealed in Jesus Christ is one and the same (Olson & Hall 2001:26-27)<sup>10</sup>.

The person who can arguably be said to have contributed the most to trinitarian thinking is Tertullian, who was the first to use the phrases “Trinity” (the Latin *Trinitas*), “person” (the Latin *persona*) and “substance” (the Latin *substantia*). The term *persona* literally meant a “mask” that an actor wore to play different characters. It came to have a developed meaning and it is quite possible, as Allister McGrath points out, that Tertullian wanted to convey the idea of “one substance, three persons” to mean “that the one God played three distinct yet related roles in the great drama of human history” (2007:249-250). In Tertullian’s thought, the distinction between the Persons of the Trinity is “not substantial (resulting in polytheism or tritheism), but personal” (Olson & Hall 2001:30)<sup>11</sup>.

For Arius, the biggest problem was how to understand the confession that the Son could share in the divinity of the Father. Olson and Hall indicate how Arius viewed the generation of the Son as a process, that there was a time that the Son did not exist and a time when the Son was created by the Father, although he is an elevated creature (2001:32).

The doctrine of the Trinity was formally crafted as a response to two theological debates, the first involving the relationship of Jesus to God. At the First Ecumenical Council of Nicea in 325 CE, the full deity of Jesus Christ was affirmed against the teachings of Arius, who wanted to protect the uniqueness and transcendence of God by inverting the Father's begetting of the Son into the temporal realm and thereby suggesting that the three persons are external to God, who is one and in no way three. The Council asserted that the Son is “... begotten of the Father, of the substance of the Father, begotten not made, of one substance with the Father”. In doing so, the Christological foundation for the ensuing development of the doctrine was laid (Grenz 2004:7-8)<sup>12</sup>. The Council of Constantinople was another milestone in the formulation of a doctrine of the Trinity.

---

<sup>10</sup> See also Denis Minns’ *Iranaeus: An Introduction* (2010), Paul Boër Snr’s *Against Heresies* (2012), and John Behr’s *Iranaeus of Lyons: Identifying Christianity* (2013).

<sup>11</sup> See also Eric Osborne’s *Tertullian: First Theologian of the West* (2003), Geoffrey Dunn’s *Tertullian* (2004) and Marian Hillar’s *From Logos to Trinity: The Evolution of Religious Beliefs from Pythagoras to Tertullian* (2013).

<sup>12</sup> See also Leith (1993:47-48), McGrath (2007:15) and Geza Vermes’s *Christian Beginnings: From Nazareth to Nicea* (2013).

Part of the outcomes of the Council of Nicea, also having its roots in Arius's teaching, laid the pneumatological basis for the doctrine of the Trinity. His followers, including the bishop of Constantinople, Macedonius, speculated that the Holy Spirit was the first creature of the Son, as Arius had put forward the Son was to the Father. Against these claims, the Council of Constantinople announced in 381 CE, in a statement called the Nicene Creed, that the Holy Spirit is to be "... worshipped and glorified together with the Father and the Son" (Grenz 2004:8). "The crux of the classical Niceno-Constantinopolitan teaching is that God is 'one in essence, distinguished in three persons'" (Migliore 2004:70).

The negative implication of the declaration of the unity and threefold self-differentiation of God is clear in its resistance against the distortions of the trinitarian faith, namely tritheism, modalism and subordinationism. In a tritheistic perspective, the Father, Son and Spirit are three separate and independent gods, who constitute the object of the Christian faith in a collective manner. According to modalism, the Father, Son and Spirit are simply different masks of the one God. Subordinationism views the names of Father, Son and Spirit to refer to a hierarchy of different gods, where the Father is of the highest rank and the Son and Spirit of a lower order (Migliore 2004:71).

Daniel Migliore also points out that other distortions of the trinitarian faith are the variety of unitarianisms that arose, where only one of the Persons of the Trinity is focused on. Unitarianism of the Creator emphasises the Father as the first principle of the universe, the One who creates, often in a very remote manner. In this perspective, there is little need awareness of sin and as a result, little need for forgiveness, repentance or transformation. Unitarianism of the Redeemer focuses exclusively on the second Person of the Trinity, Jesus Christ, although the Jesus this view is concerned with has little in common with the Jesus of the Gospels. Salvation in Unitarianism of the Redeemer is defined only in terms of the welfare of me and mine. Focusing utterly on the third Person of the Trinity, Unitarianism of the Spirit views the experiences and gifts of the Spirit as the most important, although these experiences and gift are not tested to determine whether they are indeed the Spirit of God's Christ, "who builds up the community and commissions it for service of God and others" (2004:73-74).

Another unique contribution to the development of trinitarian thinking and the doctrine of the Trinity was made by Augustine, who is described by Olson and Hall as the "greatest of the Western church fathers" (2001:43). In his immense and influential work, *The Trinity*, he aims to state and clarify the church's "basic" doctrine of the Trinity; indicate that this doctrine is

strongly rooted in the teachings of the Bible; work out the rules of human language and logic that should be abided by if the church is to speak about the triune God “correctly”; and try to determine in the human mind, which he viewed as the highest form of creation that is known to us, “vestiges of the Triune God who is its Origin and Creator” (Marsh 1994:131). By referring to humanity as created in the image of God, Augustine considers the human mind to be the closest analogy of God that we can conceive on a more “attainable, humble plan”. He points towards the memory, understanding and the will as three different parts that make up one single person and believes that this metaphor can help us in understanding something of the triune God (Olson & Hall 2001:48-49)<sup>13</sup>.

Thomas Aquinas also famously offered five proofs for the existence of God<sup>14</sup>, however, none of these arguments ended with the proclamation that therefore, God exists, but rather with a mystifying announcement that this is what we give the name “God” (Placher 2007:15). Aquinas' proposal regarding the Trinity<sup>15</sup>, stating the ‘double movement’ of God, the generation of the Son and the procession of the Spirit, as the dynamic within a divine intellectual essence and the four relations that these two processions produce<sup>16</sup>, is viewed by some as both the zenith of medieval Trinitarian theology and the herald its demise (Grenz 2004:12-13).

Martin Luther affirmed the simultaneous unity and threeness of God, but also appealed to “a limit of incomprehensibility within God beyond which reason must not go”. The emphasis that Luther placed on the distinctness of the three Persons of the Trinity was the new element that he introduced into the discussion as was unapologetic in his affirmation that the Father, Son and Holy Spirit witnessed to in Scripture are “three different persons” even as they are “of the same, identical divine essence” (Olson & Hall 2001:68-69)<sup>17</sup>.

---

<sup>13</sup> See also Lewis Ayres's *Augustine on the Trinity* (2010) and St Augustine's *On The Trinity* (2012, edited by Paul A. Boër, William G.T. Shedd and Arthur West Haddan).

<sup>14</sup> The argument of motion; the argument of the first case; the contingency argument; the argument from degree; and the teleological argument. See also Anthony Kenny's *The Five Ways: Saint Thomas Aquinas' Proofs of God's Existence* (2003).

<sup>15</sup> See also Thomas Aquinas's *The Trinity and the Unicity of the Intellect* (2009, edited by Rose Emmanuella Brennan), Gilles Emery and Francesca Aran Murphy's *The Trinitarian Theology of St Thomas Aquinas* (2010), and Gilles Emery's *Trinity in Aquinas* (2013).

<sup>16</sup> These four relations, according to Grenz, are constitutive of God's being in that they give rise to three persons: ‘...the procession of the Word or "generation" entails the relations of fatherhood and sonship, leading to the first two persons of Father (the one who begets) and Son (the one who is begotten). The procession of love, in turn, entails the relations of spiration and procession, leading to the third person, the Holy Spirit (the one who is spirated by the other two, who are constituted by their relation to each other) (2004:12).

<sup>17</sup> See also Christine Helmer's *The Trinity and Martin Luther: A Study on the Relationship between Genre, Language and the Trinity in Luther's Works* (2009).

“Faith is the principal work of the Holy Spirit”, John Calvin asserted. In the same way that “the invisible Father is to be sought solely in the image [Christ]”, “we must be drawn by the Spirit to be aroused to seek Christ” (*Institutes 3.1.4; 1:541; 544* as quoted in Placher 2007:92-93). Apart from God’s self-revelation in Jesus Christ, we cannot come to know God. At the same time, we cannot come to believe that self-revelation without the Holy Spirit. Calvin also stated that the doctrine of the Trinity was the only and inexorable manner to think and speak about the message of Scripture. Smit, after pointing this out, further goes on to affirm that this doctrine makes a structure available to believers to read the Old and New Testament together, speaking of the one God of both Testaments (2009:60)<sup>18</sup>.

Jaap Durand, who has argued for a trinitarian approach to theology in various publications, points out that for many centuries, spanning from the Middle Ages to the early 20th century, there was no new development in the doctrine of the Trinity. Reflection on God had become a barren and inflexible doctrine, unrelated to other dogmatic contemplation (1976:9-10). In the section that follows, the revival of trinitarian theology in the twentieth century will be examined and some contemporary doctrines of the Trinity briefly examined, placing Moltmann’s trinitarian doctrine of creation within this broader context of trinitarian theology.

### 1.3.2 Contemporary Doctrines of the Trinity

After World War I, there was a rebirth in trinitarian theology, which Stanley Grenz describes as the most far-reaching theological development of the new millennium; to such an extent that new attempts to do theology from a trinitarian perspective is perceived by some to be merely the act of ‘jumping on the bandwagon’ (2004:1).

This fresh interest in trinitarian studies was begun by Karl Barth in the early 20th century and reinforced by Karl Rahner in the mid-20th century. By the end of the century, various theologians from different traditions were reflecting on the doctrine of the Trinity and its implications for Christian theology (Coppedge 2007:14)<sup>19</sup>. Barth is also one of the most notable

---

<sup>18</sup> See also Philip Walker Butin’s *Revelation, Redemption and Response: Calvin’s Trinitarian Understanding of the Divine-Human-Relationship* (1995); Charles Paree’s *The Theology of John Calvin* (2008:39; 64-68; 142-151) and Brannon Ellis’s *Calvin, Classical Trinitarianism, and the Aseity of the Son* (2012).

<sup>19</sup> See also Eberhard Jüngel and John Webster’s *God’s Being is in Becoming: The Trinitarian Being of God in the Theology of Karl Barth* (2004); Peter S. Oh’s *Karl Barth’s Trinitarian Theology: A Study of Karl Barth’s Analogical Use of the Trinitarian Relation* (2006); and Gordon Watson’s *The Trinity and Creation in Karl Barth* (2009).

influences on the work of Moltmann, on whose trinitarian doctrine of creation this study will focus. As a result, his doctrine of the Trinity and of creation is also discussed in the fourth chapter, when it is brought into conversation with Moltmann's trinitarian doctrine of creation. A very limited number of theologians have looked at creation from a trinitarian perspective.

Jürgen Moltmann understood creation as an act of self-limitation, where God created within the infinite divine reality a finite space by 'withdrawing' from it. The dialectic of God's presence and absence is drawn into the act of creation, seeing that the act of 'withdrawing' turns creation into a 'Godforsaken' space (Grenz 2004:82-83). This study will primarily engage with the reflections of Moltmann on creation, given that he is one of the best examples of a theologian who deals with creation from an explicitly trinitarian perspective.

Although from time to time other opinions will be brought into dialogue with Moltmann and alternative views presented, for the most part this study will busy itself with Moltmann's work. Nevertheless, some of the most prominent trinitarian thought at present does merit a brief discussion here<sup>20</sup>. This brief discussion provides an informative background to the eventual discussion of Moltmann's work.

Karl Barth can be named the "church father" of our era, and from him "twentieth century theology has learned that the doctrine of the Trinity has explanatory and interpretative use for the whole of theology" (Jenson 1989:42). Barth contended that the grounds for the doctrine of

---

<sup>20</sup> While in this chapter some Western perspectives on the Trinity will be briefly referred to, it is also imperative that other points of view, trinitarian thinking also from Africa, Latin America, and Asia be mentioned and kept in mind when discussing this matter. Amongst African perspectives on the Trinity, one of the most prominent figures is Charles Nyamiti, who views the trinitarian processions as ancestral relationships, using the category of ancestor in the three categories of God as ancestor, Christ as both ancestor and brother ancestor and the Holy Spirit in the communion of saints and ancestors in *The Scope of African Theology* (1973) and *African Tradition and the Christian God* (1978). A. Okechukwu Ogbonnaya's *On Communitarian Divinity: An African Interpretation of the Trinity* (1994), where he explains communality as the essence of God is also of particular note.

From Latin America, some of the figures of significant importance are Leonardo Boff, who develops and understanding of the Trinity as a society of equals in *Trinity and Society* (1998) and Justo L. González, who focuses on the God who is a minority, approaching the study of the Trinity in a communal manner, given that the most important aspect of the Trinity in his thought is commonality, as becomes clear in *Mañana: Christian Theology from a Hispanic Perspective* (1990). Leonardo Boff attempts to "integrate a social doctrine of the Trinity with the important social concerns of the Latin American liberation project" (Peters 1993:111). Although not as prominent, trinitarian thinking is also an aspect of Juan Luis Segundo's *Our Idea of God* (1973) and Gustavo Gutiérrez's *A Theology of Liberation: History, Politics, and Salvation* (1988).

In Asian trinitarian thought, one of the most prominent figures is Jung Young Lee, who understands the Trinity as the embrace of the *yin-yang* in *The Trinity is Asian Perspective*, proclaiming that: "There appears to be ... a correlation between the *yin-yang* way of thinking and the divine symbols of the Trinity. The Creator (of the Father) is correlated with the change, the Word (of the Son) with *yang*, and the Spirit (of the Holy Spirit) with *yin*" (1996:13). Other Asian theologians of note include Masao Takenaka (*God is Rice* 1986), Swami Abhishiktananda, Aloysius Pieris, and Raimundo Panikkar, who describes the Trinity as a cosmotheandric mystery in *The Trinity and the Religious Experience of Man: Icon-Person-Mystery* (1973) and *The Unknown Christ of Hinduism* (1981).

the Trinity can be explicitly found in Scripture and that trinitarian theology is in essence the explication of the original revelation. He found this root of the Trinity in the formal structure of revelation, where God is the subject, object and predicate of the act of revelation, and in the primary statements made by the Father, Son and Holy Spirit (Peters 1993:86). Grenz further refers to Barth's perspective of the Trinity as "revelational trinitarianism" (2001:34). In this doctrine of revelation, he maintains the close correlation between the immanent and the economic Trinity, stating that "God, the Revealer, is identical with His Act in revelation" (I/I:340). In Barth's theology, Jesus Christ is God's self-revelation and identical to God. The Holy Spirit is also not only the Spirit of the Father, but also of the Son. He speaks about the Son and Spirit as being the "subjective and objective realities of God's revelation, respectively" and avoids referring to God in terms of "persons", fearing that to do so might lead to tritheism (Kärkkäinen 2007:70-71).

Karl Rahner's renowned "Rahner's Rule" marks, in Ted Peters' opinion, the new stage at which trinitarian theology has arrived after Barth. Rahner's Rule states that the economic Trinity is the immanent Trinity and the immanent Trinity is the economic Trinity. He suggests this rule with the aim of advancing his theory that "it is God as one or another of the divine persons who relates to the world; it is not God as he unity of the divine being" (Peters 1993:96). Rahner is credited with establishing "the canons of later Trinitarian language with his insistence on the identity of the economic and immanent Trinity" (Kärkkäinen 2007:76). How we experience God, in Rahner's view, is through the economy of salvation, through God's saving activity in history, and we know God as "the redeeming word in Christ and as uniting love in the Spirit. We do not know God in general (Peters 1993:96). In other words, who God is, is revealed through God's deeds and God's deeds are informative of who God is.

Rahner himself described the Trinity as "a mystery of salvation" (1970:21) and not a theoretical speculation on who God might be, stating that "God relates to us in a threefold manner, and this ... relation to us *is* not merely a copy or analogy of the inner Trinity, but this Trinity itself ... That which is communicated is precisely the triune personal God" (1970:35-36)<sup>21</sup>.

Wolfhart Pannenberg embarks in a manner that is practically identical to Barth, stating that trinitarian theology is simply stating "explicitly what is implicit already in God's revelation in

---

<sup>21</sup> See also Fred R. Sanders's *The Image of the Immanent Trinity: Rahner's Rule and the Theological Interpretation of Scripture* (2005); and Dennis J. Dowers's *The Trinitarian Axiom of Karl Rahner: The Economic Trinity is the Immanent Trinity and Vice Versa* (2006).

Jesus Christ” (Peters 1993:135). History and world experience, rather than “mythical orientation of religions” is the focus of Pannenberg’s doctrine of the Trinity (Kärkkäinen 2007:126-127). In his *Systematic Theology*, he states: “Thus, there emerges a coherent scheme of interpreting the reality of the world and of human history in terms of a trinitarian theology” (1991:189). The whole of systematic theology in Pannenberg’s opinion is the doctrine of God. Accordingly, it is only with the consummation of the world “from creation to redemption to the eschatological coming of the kingdom that the doctrine of God finally comes to its goal” (Kärkkäinen 2007:127-128)<sup>22</sup>.

Feminist Catholic theologian Catherine LaCugna states that: “The doctrine of the Trinity is ultimately a practical doctrine with radical consequences for Christian life” (*God for Us: The Trinity and Christian Life* 1991, quoted in Peters 1993:122). For this reason, she understands trinitarian theology as a theology of relationship, “which explores the mysteries of love, relationship, personhood and communion within the framework of God’s self-revelation in the person of Christ and the activity of the Spirit” (1991:22 quoted in Peters 1993:123). She takes the same direction as Rahner, recommending that the primal connection between the relations within the Trinity and the economy of salvation be retrieved. In LaCugna’s opinion, borrowing clearly from Rahner’s theology, God’s actions reveal who God is (Peters 1993:124). Because of this close relation between the immanent and economic Trinity, she favours a model of the Trinity that is dynamic and chiasmic, in which there is one ecstatic movement of God outwards, rather than the derivative methods that are usually followed (Kärkkäinen 2007:182)<sup>23</sup>.

Another prominent feminist theologian, Elizabeth Johnson, contributes to the discussion by indicating that “[n]ormative speech about God in metaphors that are exclusively, literally, and patriarchally male is the real-life context” (*She Who Is: The Mystery of God in Feminist Theological Discourse* 1993:44, quoted in Kärkkäinen 2007:198)<sup>24</sup>. Johnson pays attention to the features of speaking about God and shows that it influences our perspective of God

---

<sup>22</sup> See also Swöbel (1997:180-208) and Grenz (2001:46-51).

<sup>23</sup> See also Chopp (1997:400) and McGarth (2007:267-268).

<sup>24</sup> Other feminist theologians of note who have contributed to the discussion on metaphorical talk on God and attempting to find ways of making the language used, also in trinitarian discourse, more gender inclusive, include Mary Daly (*Beyond God the Father: Toward a Philosophy of Women’s Liberation* 1973); Elizabeth Schüssler Fiorenza (*In Memory of Her: A Feminist Theological Reconstruction of Christian Origins* 1983); Anne Carr (*Transforming Grace: Christian Tradition and Women’s Experience* 1988); Anne Case-Winters (*God’s Power: Traditional Understandings and Contemporary Challenges* 1990); Ruth Duck (*Gender and the Name of God: The Trinitarian Baptismal Formula* 1991); Rosemary Radford Ruether (*Sexism and God-Talk: Toward a Feminist Theology* 1983); Gail Ramshaw (*God beyond Gender: Feminist Christian God-Language* 1995).

considerably. Speaking about God in male terms in ecclesial language therefore suggests that God is male, “or at least more like a man than a woman, or at least more fittingly addressed as male than as female” (1993:36-37, quoted in Kärkkäinen 2007:199). Johnson also takes Rahner's rule as her methodological starting point and construct a trinitarian theology ‘from below’ rather than starting with an abstract, general notion of God. The first person of the Trinity in her theology is Spirit-Sophia, the presence and absence of the living God that occurs through the intervention of history. She described the second person in the Trinity as Jesus-Sophia, linked to the personified female figure of Wisdom and postulating that to rediscover a holistic and inclusive view of Christ, one human nature that is multidimensional must be celebrated. The third person in the Trinity that has traditionally been referred to as God the Father, Johnson names Mother-Sophia, focusing on the birth, nourishing and growth metaphor of the parent-child relationship. She is adamant that human beings cannot fully comprehend or exhaust the mystery of God (Kärkkäinen 2007:203-205)<sup>25</sup>.

With her outlook of metaphorical theology, Sallie McFague has been the leading voice in crafting a theology that makes it possible to find a balance in piling up the names of God (Kärkkäinen 2007:195 n.10). She views trinitarian thinking as more than just the question concerning Jesus of Nazareth as the second Person of the trinity. McFague also understands the Trinity as the basic conviction of God's love for the world and the world's response. In this perspective, Jesus is an affirmation, the deepening and clarification of the Trinity, which is a way of speaking about God, an attempt to express God's profound involvement in, with and for the world. Seen in this way, God is viewed as firstly Creator, Sustainer and Liberator, God as Christ the Saviour, and God as the Spirit (2001:143-144)<sup>26</sup>.

Lutheran theologian Robert Jenson, hailed by Veli-Matti Kärkkäinen as “the most significant Trinitarian theologian of North America” (2007:163), envisages the Trinity as one event, God, with three identities, adhering to the theology of Barth, but attempting to go further in liberating the Trinity “from captivity to Hellenic thinking” (Peters 1993:128). Peters summarises Jenson's contribution to present trinitarian discussion in two significant inputs. In the first instance, “he extends Barth's understanding of the relationship between time and eternity so that the immanent Trinity becomes understood as eschatological” and secondly, “he makes an

---

<sup>25</sup> See also Migliore (2004:210-211), McGrath (2007:89) and Patricia Fox's *God as Communion: John Zizioulas, Elizabeth Johnson and the Retrieval of the Symbol of the Trinity* (2001).

<sup>26</sup> See also Migliore (2004:66) and McGrath (2007:89).

interesting case for rendering *hypostasis* and *persona* in English as “identity” (1993:128). Distinguishing between “identity” and “person” makes it possible, in Jenson’s opinion, to consider God as personal and not as “a monadic entity, a self-possessed, closed unit” (*Systematic Theology, Volume 1: The Triune God* 1997:123, quoted in Kärkkäinen 2007:172)<sup>27</sup>.

Thomas Torrance also stresses that, owing to the oneness of nature between the Father, the Son and the Holy Spirit, there exists an oneness of their activity and that they act and participate in the creative work of God through their own hypostatic reality. In his view, we think and speak of God as Creator in his intrinsically ‘homoousial and perichoretic’ bound relations as Father, Son and Holy Spirit (1996:212).

In the East, John Zizioulas views the Trinity as communion, postulating that the “Holy Trinity is a *primordial* ontological concept and not a notion which is added to the divine substance or rather which follows it, as is the case in the dogmatic manuals” (*Being in Communion: Studies in Personhood and Communion* 1985, quoted in Kärkkäinen 2007:92). In Zizioulas’s opinion, there is no ontological content to the concept “God” other than in mutual relationship, and God be known only as trinitarian persons in communion. Human beings, therefore, “can approach God only through the Son and in the Holy Spirit”. Consequently, “the being of God could be known only through personal relationships and personal love. Being means life, and life means *communion*” (1985, quoted in Kärkkäinen 2007:92)<sup>28</sup>.

As will be discussed in chapter four, Jürgen Moltmann begins by grounding the Christian understanding of creation in the revelation of God’s salvation of the world in the history of Jesus Christ and regards it as the messianic interpretation of the Israelite understanding, which was shaped by the revelation of the salvation of God through the exodus, the covenant and the promise of land. Christ is seen as the ground of redemption for the whole creation and therefore, also the ground for the existence thereof. As a result of the eschatological salvation of the whole of creation through Christ, it can be deduced that the protological creation had its foundation

---

<sup>27</sup> See also McGrath (2007:262-264), Colin Gunton’s *Trinity, Time, and Church: A Response to the Theology of Robert W. Jenson* (2011), and Scott Swain’s *The God of the Gospel: Robert Jenson’s Trinitarian Theology (Strategic Initiatives in Evangelical Theology)* (2013).

<sup>28</sup> See also McGrath (207:405-406) and Patricia Fox’s *God as Communion: John Zizioulas, Elizabeth Johnson and the Retrieval of the Symbol of the Trinity* (2001).

in Christ as well, as can be seen in various New Testament statements about Christ as the 'mediator of creation' (Moltmann 1993b:94-95).

Moltmann argues that the revelation of Christ determines the trinitarian doctrine of creation:

... because Jesus was revealed as the Son of the eternal Father, the Wisdom and the creative Word which are identified with the Son also take on a personal and hypostatic character they lack in the Old Testament testimonies, although those testimonies also show tendencies in this direction ...

(Moltmann 1993b:95)

Moltmann proceeds to link the outpouring and the experience of the Spirit in the Christian community to the eschatological experience in redemption: "The powers of the Spirit are the powers of the new creation" (1993b:95). This power is then described as the creative power of God, the power that justifies sinners and raises the dead and through which a new divine presence is experienced in creation, where God the Creator dwells within his creation. Experiencing this eschatological reality of the Spirit leads Moltmann to conclude that this is the same Spirit in whose power God as the Father created the world, through the Son and safeguards it against nothingness. This, in effect, means that the power of God the Creator and the power that 'quicken created beings' is the Spirit, itself creative and not created (1993b:95-96).

"Through the presence of his own being, God participates in the destiny of his own creation" (Moltmann 1993b:96). In God's Spirit, God suffers and sighs with his creation, as the Spirit is the power of the love that creation has issued from and through which it is continued and sustained. This trinitarian conception of creation ties God's transcendence and his immanence together:

The Christian doctrine of creation takes its impress from the revelation of Christ and the experience of the Spirit. The One who sends the Son and the Spirit is the Creator - the Father. The One who gathers the world under his liberating lordship, and redeems it, is the Word of creation - the Son. The One who gives life to the world and allows it to participate in God's eternal life is the creative Energy - the Spirit. The Father is the creating origin of creation, the Son its shaping origin, and the Spirit its life-giving origin.

(Moltmann 1993b:97-98)

Richard Bauckham, one of the leading specialists on the work of Moltmann, states: "In *The Crucified God* Moltmann's theology became strongly trinitarian, since he interpreted the cross as a trinitarian event between the Father and the Son." Bauckham continues to explain that in the theology of Moltmann, God experiences a history with the world, wherein God both affects the world and is affected by the world. This is also the history of God's own trinitarian relationships as a community, including the world within their love: "This trinitarian doctrine dominates Moltmann's later work, in which the mutual relationships of the three Persons as a perichoretic, social Trinity are the context for understanding the reciprocal relationships of God and the world" (1995:6).

Joy Ann McDougal indicates that "no contemporary theologian has played a more decisive role in retrieving the practical significance of trinitarian theology than German Reformed theologian Jürgen Moltmann" (2003:178). She also indicates how Moltmann "traced the ills of modern Christian theology specifically to the eclipse of its trinitarian understanding of God" and later "deepened his earlier critique by contending that the modern demise of the doctrine had sprung forth from flawed developments within Western trinitarian thought" (McDougal 2005:6).

While the doctrine of the Trinity is not found explicitly in Scripture, Smit indicates that broadly speaking, "biblical grammar makes it possible to speak of the God of the Scriptures as the living God, involved in history, the God of the covenant and of covenantal faithfulness" (2009:39). For this reason, Ernstpeter Maurer also states that trinitarian faith is the attempt "to reflect on the living unity with God" (1999:9, quoted in Smit 2009:39).

In this section, the doctrine of the Trinity in the Bible, in classical thought and in contemporary theology was examined. In this study, I will utilise a particular perspective on trinitarian doctrine, Moltmann's trinitarian doctrine of creation, in responding to the challenges that PGD and GM confronts Christian bioethics with. One of the significant ethical challenges that PGD and GM raises is the question of social justice, especially within the South African context with its inequalities. This aspect will be appraised in the section that follows, as well as in the third chapter of this study.

#### **1.4 Pre-Implantation Genetic Diagnosis and Genetic Manipulation in the South African Context - A Question of Human Dignity in Creation**

This study seeks to determine how the Christian doctrine of the Trinity and the confession of God as Creator in particular, bears on the possibilities associated with PGD and GM on human beings. Seeing that Christian ethics in general is concerned with human dignity, social justice and wellbeing, as well as moral upliftment, the ethical implications of this type of medical technology in the South African context, with its uneven distribution of wealth and access to medical care, must also be addressed. In this regard, the concept of humans as created in the *imago Dei* (image of God) is important.

A trinitarian approach to theology and more specifically, to creation and the Triune God as Creator, offers a rationale to engage theologically with public life in an inclusive and faithful way, doing justice to the God who creates, liberates, sustains, saves and renews systematically and in doing so, actualises life.

Public theology<sup>29</sup> engages with all the spheres of public life. The spheres that make up modern society are the political, the economic and the spheres of civil society and the formation of public opinion (Smit 1996:190-198). When theology engages with these spheres, such as in the case of PGD and GM, it is important that it is guarded against fulfilling only the role of 'watchdog' through the prophetic discourse of critique and indictment. On the other side of the coin, only explicating the vision of a good society, a utopian social order, is also not the ideal and, in fact, would constitute a negligent and immature theology.

Regarding the role of the church, or of theology, in the public spheres of life, Smit further reminds us that: "The Reformed intuition is not merely that the church itself should be continuously reformed in obedience to God's revealed word and will, but in fact the whole of life, the political and social order, history and the world" (2009:424).

Nico Koopman bases his public theology on the affirmation that "God so loved the world", or on "'thick descriptions' of the content of the Christian faith traditions" (Smit 2009:526). This confessional belief has three aspects, namely the "inherent public nature of God's love", the

---

<sup>29</sup> For a full discussion on the term 'public theology', see Dirk J. Smit's *Wat beteken 'publiek'? Vrae met die oog op publieke teologie*, in *Geloof en Openbare Lewe* (2008:3-33).

“rationality of God’s love for the world” and the “meaning and implications of God’s love for every facet of life” (Smit 2009:526). In Koopman’s opinion, as Smit also indicates, this way of describing the Christian faith should be done in a trinitarian manner. In addition, he consistently and consciously approaches ethical questions from a theological, “in fact Trinitarian and confessional”, outlook (2009:526). The theological tradition provides the moral vision, frameworks, motivation and inspiration, and guides the formulation of parameters for the formation of moral character and public virtues. In addition, it can provide the values and norms that can be a factor in the making of decisions on public policy (Smit 2009:526).

By engaging with the issues brought forward by public life, including the social, political, economic, ecological, sexual, medical, cultural and personal challenges that PGD and GM raises, from a trinitarian perspective on creation, we are able to view and interact with these questions as *theological* issues. This is because they encompass all of these challenges as challenges pertaining to all people as part of the creation as well as going further than human beings and investigating the impact on the rest of creation as well.

This study is composed of three main parts.

In the first part of the study, chapter two, PGD and GM will be explained and the bio-ethical arguments that are raised for and against it will be discussed at length. The main theological responses to PGD and GM will also be outlined in this section and spelled out how these theological responses draw from the doctrine of creation.

The second part of the study, chapter three, the challenges of PGD and GM, outlined in the third chapter, will be added to by a discussion on the public challenges of PGD and GM within the South African context, which is a wide and ever widening gap between rich and poor, where only a privileged few would be able to access and afford this kind of biotechnology. In this chapter the question of health care as a human right and the aspect of human dignity as part of the human rights discourse will also be attended to.

In the last part and fourth chapter of this study, an attempt will be made to infer some theological-ethical directives from the systematic theological discussion of a trinitarian approach to creation. An exposition of Moltmann's understanding of a trinitarian perspective on the doctrine of creation will be undertaken by means of a literature review, paying special attention to how it relates to the contentions that the previous chapters outlined.

Moltmann will be the main theologian to be investigated for various reasons, including that he did extensive and innovative work on the Trinity, and on a trinitarian approach to creation. Throughout his career he relates systematic theological discussions to ethical challenges. He acknowledges the personal and public nature of these ethical matters. Moltmann also discusses these matters as human dignity challenges.

Given the limitations of this study, I have made the decision to engage extensively with the work of one theologian, rather than consulting a number of perspectives. While this approach does have certain shortcomings, such as offering only one point of view of the various outlooks that exist, I believe that the benefits far outweigh the limitations. Given sheer volume and diversity of material, attempting to discuss all crucial contemporary systematic theological works on a trinitarian approach to creation would unavoidably be a very brief and general overview. Discussing one very good theologian's position will expose one to the big number of conversation partners that that theologian, in this case Jürgen Moltmann, draws upon. Attention to the responses to Moltmann also ensures that important theological voices, besides his own voice, are attended to.

For Moltmann, the task of theology is not merely to interpret, but also to change the world, "to keep society on the move towards the kingdom" (Bauckham 1995:6). It is for this reason, that Moltmann himself aims to have his doctrines applied to ethical issues, in addition to the fact that both the Trinity and creation plays such a fundamental role in his theology, as well as the comprehensive nature of his work, the concentration of both fundamental and abstract issues in his theology, his importance for contemporary theology and that he is a Protestant theologian, that I have made the decision to focus this study on the work of Jürgen Moltmann in this study.

To this point, that the biotechnologies of PGD and GM challenges Christian bioethics in various ways have been established. These issues raised by PGD and GM will be examined in the next chapter. As part of grounded Moltmann's trinitarian doctrine of creation within the larger context of trinitarian theology, Biblical grounds for a doctrine of the Trinity, as well as classical and some contemporary doctrines of the Trinity was also discussed earlier in this chapter. That Christian bioethics need to formulate an adequate theological response is especially true with regards to the issue of social justice within the South African context with its many inequalities, also with regard to access and affordability, should these biotechnologies

become commercially available.

In the last section of this chapter, I now turn to the methodology that I will follow in this study, utilising Christian doctrine, more specifically, Moltmann's trinitarian doctrine of creation, in addressing the Christian bioethical issues raised by PGD and GM.

## 1.5 Methodology

Against the background of the discussion in the previous sections, the research question of this study might be described as an investigation into the implications of a trinitarian perspective on the doctrine of creation for addressing the challenges of biotechnological developments, with specific reference to PGD and GM.

The aim of this study, with its focus on the trinitarian approach to creation of Jürgen Moltmann, is to assess various theological responses to biotechnological issues, PGD and GM in particular, and to construct theological-ethical guidelines for dealing with PGD and GM and with related biotechnological challenges,

This study will be done within the framework of Reformed theology. For Reformed theology, the Word of God remains one of the central concepts and is employed in most Reformed studies. All Christians look to the Bible to make sense of their lives and answer ethical questions. Those in the Reformed tradition could be said to be especially vigilant in this aspect, given that one of the *solas* of the Reformation is, in fact, *sola Scriptura*: Scripture alone and that in most instances, Reformed churches guard against other forms of revelation.

One of the most important things that set theological ethics apart from the ethics employed by other sciences is the use of the Bible as primary source. For this study, however, the problem of the use of Scripture in bioethical discussion is of utmost importance.

For all Christians, especially Reformed Christians, using the Bible in ethical discussion and decision making is of utmost importance. In matters relating to modern medical discoveries and biotechnology, this is, however, easier said than done. David Kelsey postulates: "Part of what it means to call a text or set of texts 'scripture' is that its use in certain ways in the common life of the Christian community is essential to establishing and preserving the community's identity... (1975:89)

However, when the ethical field under examination is one such as bioethics, the use of the Bible becomes a rather problematic issue, for, as Eve Herold points out, the type of phenomena that bioethical discussion deals with, like stem cell research, therapeutic cloning, and the focus of this study, PGD and GM, and so forth, and did not exist when the majority of religious scriptures came into being (2006:131). On using the Bible with regards to bioethical issues, however, there are many different opinions. Gareth Jones, states for example, that “for Christians, the Bible is indeed the Word of God. It is not, however, a catalogue of correct decisions and information; it is not law in this reductive sense. The Bible is spirit, just as the Word of God is Spirit” (2001:26).

One extreme would be to remove the Bible entirely from bioethical discussion. Joseph Fletcher went so far as to reject all customs and commands found in the Bible, save “to love God in the neighbour” (1966:26). It is doubtless that there would be many Christians that would be in accord with this perspective. Kelsey also states that Scripture is no longer taken as an authority, and is, in fact, rejected in certain discussions as part of the major change in values of the developed world and the lack of theological unity amongst biblical scholars (1975:175). For Reformed Christians, however, to completely eliminate Scripture in any ethical conversation is, however, not an option.

On the other radical side, however, there would also be those who would obstinately insist that clear and comprehensible answers on modern biotechnological problems such as stem cell research, genetic manipulation and cloning are all to be found in the Bible, if one just knows where (and how) to look.

Stanley Hauerwas offers a Christian alternative to the usual monochromatic choice and describes a “scripture-shaped community”, where the Bible has no authority apart from the community of believers. He goes on to state that the Bible has to be read and interpreted from within the community of believers, recognising the authority as being part of their own and *vice versa*, also understanding that the God that speaks to them from the Bible, is the same God who speaks to them in their own community (Jones 2001:23).

Alan Verhey, one of the world leaders in Christian bioethics, makes a proposal for how the Bible can function in this kind of enquiry in his *Reading the Bible in the strange world of medicine* (2003). It is, however, my judgement that this proposal, although it has great value, is also very vague and that a new proposal is needed, one that goes even further and is more

clearly set out. Whilst Verhey's proposal is certainly of importance and esteemed by this study for the comprehensions that it delivers, it is exactly these insights that leads to the argument that the significance of the Bible for modern bioethical issues transpires more clearly when read through the lens of Christian doctrine.

Verhey formulates broad ethical guidelines for how the Bible can be read and utilized in Christian bioethical discussion; however, for a more specific and technical analysis like in this study, a more concrete suggestion is needed.

Verhey arrives at his proposal after explicating in detail the problems that arise when attempting to read and use the Bible as part of Christian bioethical discussion. These problems, that will be discussed in greater depth in what follows, are the silence of Scripture on modern bioethical issues, the strangeness of the worldview of the Bible to modern readers, the diversity and multitude of voices in Scripture and the fact that in the past, Scripture has very often been abused and used in self-serving, arrogant ways. Accordingly, this study takes these problems with the use of Scripture in bioethics seriously and therefore looks to other sources of bioethical contemplation. In doing so it does not dismiss the Bible as a source of ethical consideration or deny its worth in ethical reflection, but aims to broaden the scope of available sources.

In the discussion to follow, I intend to briefly set out the problems with reading and using the Bible in Christian bioethics, followed by an appraisal of the proposal that Verhey formulates in light thereof. In conclusion, a new proposal will be detailed that will form the methodological method of this study.

### **1.5.1 Problems with utilising the Bible in bioethics**

Although there are numerous scholars that contend that, even in bioethical matters, the Bible should be an important source, they also admit that how it is used is problematic<sup>30</sup>. In this section, I will examine the four problems of reading and utilising Scripture that Verhey identifies. Taking note of these problems is of particular importance in understanding Verhey's

---

<sup>30</sup> See, for example, Brian Brock's *Singing the Ethos of God: On the Place of Christian Ethics in Scripture* (2007); Charles Cosgrave's *Appealing to Scripture in Moral Debate: Five Hermeneutical Rules* (2002); Stanley Hauerwas's *Unleashing the Scripture: Freeing the Bible from Captivity to America* (1993); Luke Timothy's Johnson's *Scripture & Discernment: Decision-Making in the Church* (1983); and Thomas W. Ogletree's *The Use of the Bible in Christian Ethics: A Constructive Essay* (2003).

proposal and also for arguing for the utilisation of Christian doctrine in responding theologically to bioethical issues.

#### **1.5.1.1 Scripture is silent on modern bioethical issues**

When attempting to enter into bioethical discussion with the Bible as the main source, the first problem encountered is the apparent silence of Scripture.

The Bible simply does not mention the new medical technologies, because quite obviously, they did not exist when it was written. In the situations where the Biblical texts were written, other ethical problems were of importance and it is these that are addressed. These discussions might have little meaning for us today, given that the bioethical questions we ask, like questions regarding research using human embryos, physician assisted suicide, assisted reproductive technologies, the trade of reproductive materials and many others, do not relate to issues such as how household slaves should be treated or what the proper course of action should be if one person injures another's livestock by mistake. Quite obviously, when dealing with the issue of a Christian bioethical response to the challenges raised by PGD and GM, the silence of Scripture remains.

As the authors did not foresee the issues that arise in our time, there are basically no direct answers or opinions expressed in the Bible for many of the questions that new medical and biotechnological issues such as PGD and GM force us to ask.

Verhey also states: “The authors of Scriptures, even the most visionary of them, never dreamt of these new powers, and it is folly to ‘search the Scriptures’ looking for veiled references to them” (Verhey 2003:35). The silence of Scripture with regards to these modern issues could lead us to admit that perhaps it should not be the place to start as we seek a new proposal for reading and using the Bible pertaining to Christian bioethics.

#### **1.5.1.2 The worldview of Scripture is peculiar to modern readers**

In the second instance, the strangeness of Scripture should also be taken into consideration. John Rogerson even declares that:

There is no denying that the Old Testament contains material that is offensive to modern readers, and that some of its leading characters behave in ways that are illegal as well as offensive in modern society.

(Rogerson 2001:31)

But it is not only in the Old Testament<sup>31</sup> that we find content with the potential to offend, the New Testament 'household rules', for example, as found in Colossians 3:18-4:1, cautions wives to 'be subject' to their husbands, an idea that is equally offensive to the majority of modern readers, especially female readers in the developed world.

The way in which the Bible speaks about illness and healing is also strange and unfamiliar to a modern audience. Verhey also points out that when Scriptures does speak about healing and of sickness, "its words are, well, quaint" (2003:35). Various examples of the strangeness of the Biblical texts are illustrated by Verhey, such as King Asa being rebuked by the Chronicler for consulting a physician (2 Chr 16:12), people suffering from leprosy that are shunned from the community and labelled as 'unclean', without medical treatment (Lv 13:45) or the role assumed by the sick of penitent, pleading God for forgiveness and healing, given that sick people were usually blamed for their own illnesses (2003:36). Other examples can be added to this without difficulty. For instance, Rebecca consulting the Lord about what appears to be the natural kicking of foetuses in the womb (Gn 25:22), muteness caused by demonic possession (Mt 9:33) or blindness being blamed on the sins of previous generations (Jn 9:2), and sickness being used by God as a punishment (2 Chr 21:14-15) amongst many others.

Richard Mouw further points out that biblical commands, especially those relating to sickness and disease, were often part of a bigger cultural issue such as ritual purity, for example. He states that "attitudes towards the role of disease in human life are closely linked to the major biblical themes of creation, sin, and redemption" (1987:60).

Bruce Birch and Larry Rasmussen postulate: "Yet another reason Christian ethics and biblical ethics cannot be equated derives from the nature of the faith. Judaism and Christianity both insist they are *historical* religions" (1989:13). The historical nature of Christianity leads them

---

<sup>31</sup> Willem Fourie refers to James Loader as an example of an Old Testament scholar who acknowledges the ethical force of Old Testament texts, while placing value on the integrity Christian ethics as an academic discipline (2013:1).

to argue that the Scriptures do not contain timeless realities, but the reality of historical people in specific places and events.

As Verhey concludes:

We may as well admit it: Much of what Scripture says about sickness and healing is alien to us, and honest Christians are driven to admit that the words of Scripture are human words, words that they may not simply identify with timeless truths dropped from heaven without qualification as Christian counsel in bioethics today.

(Verhey 2003:37)

If we concur with Verhey's previous statement, we could conclude that perhaps, in addition to Scripture, we would do well to broaden our scope when seeking a new proposal for the role that the Bible could play in Christian bioethics in attempting to formulate a response to the challenges that PGD and GM pose.

### **1.5.1.3 Scripture is diverse**

Another factor to be taken into account is Scripture's diversity, where many different voices speak with different takes of different problems, including sickness and healing. What is argued by one book regarding illness could be rejected by another, as for example, sick people being blamed for their own circumstances and recommended to confess their sins to be healed appears to be the norm in texts like Psalm 32:3-5, Daniel 4 and Luke 5:20, while in John 9:3 and the Book of Job this premise is rejected.

Rogerson also calls attention to different passages in the Old Testament that contain conflicting moral or ethical strands, for instance Genesis 18:22-33 and Exodus 20:5 (1995:17-26). As Birch and Rasmussen further points out, Scripture itself is "the records of varied faith communities in varied circumstances seeking to discern "a word from the Lord" for their specific and often unique moment" (1989:13).

As a result of this multiplicity and diversity of Scripture and the different ways in which it can be interpreted, Verhey cautions against treating the Bible as a "... literary garage sale, looking for something we like, something that strikes our fancy ..." (2003:38). We would do well to

heed this counsel and take the whole of Scripture seriously in searching for a new way to read and use it in Christian bioethics.

#### **1.5.1.4 The use of Scripture has a bad track-record**

In the last instance, it should also be taken into consideration that in the past Scripture has very often been abused and used in self-serving, arrogant ways. Verhey affirms that “the biggest problem in joining the Bible to bioethics is not so much a problem with Scripture as a fault in the readers of Scripture” (Verhey 2003:38).

It is common knowledge that both in the past and the present, there are those readers who distort and misrepresent the reading of the Bible into the service of previously reached assumptions, who abuse Scripture. Biblical justification for atrocities committed in various periods of history and even today, against people of other races, religions, gender or sexual orientation, to name but a few, proves the conceited and superior ways in which Christians have utilised and are still exploiting the Bible. In South African society, especially, we are still very sensitive to this kind of abuse of Scripture, and rightly so, having either firsthand experience or witnessing the harms that this mistreatment of Scripture can lead to.

We cannot look for a new manner of reading and utilising the Bible in bioethics when dealing with the question of PGD and GM without taking this criticism seriously and acknowledging that Scripture is often approached with hidden agendas and to prove the point of view of the reader.

#### **1.5.2 Scripture and bioethics?**

With all the problems that exist when attempting to bring Scripture and bioethics together, it might be easier to agree, in the light of the before-mentioned, that it would be better to simply leave the Bible out of the equation. As stated previously, however, for Reformed Christians, this is not a feasible declaration. Birch and Rasmussen affirm that the Bible is an essential factor in the Christian moral life, but can be unique without being exclusive or self-sufficient. Whilst Scripture retains a special significance not shared by other sources of ethical insight, it cannot be relativised as merely one source amongst many (1989:153).

The authority of Scripture, according to Birch and Rasmussen, lies in the acknowledgement of the power of the source to influence us and not from absolute power that operates apart from the affirmation of the community:

Christians cannot escape the question of biblical authority because it is inherent in the claim that the Bible constitutes Scripture for the church ... When the Bible is claimed as Scripture by the church, a special status or authority is being claimed for it ... In the church we speak of the authority of Scripture as a way of referring to the acknowledged position of the Bible as normative for the Christian life.

(Birch & Rasmussen 1989:141-142)

Verhey quotes the well-known acclamation from 2 Timothy 3:16<sup>32</sup>, thereby demonstrating that using and appealing to Scripture are normative for Christians, not as an optional practice, but as one that is “essential to Christian community” (2003:40). As he further states, very similar to the perspective of Hauerwas mentioned previously:

To say ‘church’ is to name a community that gathers around Scripture and uses it somehow to form and reform its walk and its talk. And part of what we mean when we call certain writings ‘Scripture’ is that these writings ought to be used somehow in the common life of the church to nurture and reform it.

(Verhey 2003:40)

The question remains therefore, not *whether* the Bible should be read and employed in Christian bioethics, but *how* we should look to Scripture in Christian bioethics. In the following section, one proposal for how the Bible can be read and utilised in bioethical discussions from a Christian perspective, as suggested by Alan Verhey, will be examined.

### 1.5.3 Verhey's proposal

---

<sup>32</sup> ‘All Scripture is inspired by God and is useful for teaching, for reproof, for correction, for training in righteousness, so that everyone who belongs to God may be proficient, equipped for every good work.’

As stated previously, this study aims to give a new proposal in response to and drawing upon the one put forward by Verhey. Before this can be done, however, Verhey's proposal must be briefly set out and explained.

The first rule that Verhey identifies in his proposal, is that Scripture should be read and used *humbly*. By this he indicates that we cannot read and use the Bible as a final answer or to use it as a source of moral condemnation. He also stresses that we cannot substitute the reading and interpretation of Scripture for Scripture itself (2003:42-43). This humility implies that decisions on how to use Scripture are to be reached in the context of a *community*. Verhey views community and church as correlative (2003:42-44) and it is this stance that leads him to conclude that in using the Bible in bioethics, Scripture should be understood in six ways.

First, Scripture should not be understood as a collection of miscellaneous ancient texts, but as *canon*, the Book of the Church (Verhey 2003:44-46).

In the second place, Scripture should be viewed without and *against the dualism* of body and spirit, as Verhey states, without:

... animosity to the world that God made or to the bodies that He created. We must read not as good news about deliverance from the world God made, but as deliverance for the world God made.

(Verhey 2003:46-47)

Third, Scripture should be read *according to the creed*. This does not mean that the creed should be substituted for Scripture, but that it should guide our understanding thereof. Verhey stipulates this creed to be The Apostle's Creed, referring to it as the "short story" of the canon (2003:47). He does not mention the numerous other Christian creeds, such as the Nicene Creed, the Nicea-Constantinopolitan Creed, or the Chalcedonian Creed for example.

In the fourth instance, Verhey states that in reading Scripture humbly and in community, *exegetical care* should be taken to recognise the history and context of writings, as well as the literary issues and grammatical constructions of the text at hand (2003:48-49).

Reading Scripture in a Christian community means, in the fifth place, that it should be read *amongst diverse gifts and voices*, in a diverse community where each other's differences and what each one brings to the table is celebrated (Verhey 2003:49-50).

Lastly, Scripture should be read *prayerfully*. Verhey states that focusing oneself on God and looking to Him with reverence, humility, gratitude, hope and care forms both the practice of reading Scripture and the Christian life in general (2003:50-54).

The practice of reading the Scripture forms part of the practices of a Christian community, whereby one learns to own the past as remembering and being part of the continuing church. Through the past one also learns the virtues of reading the Bible: holiness and sanctification, fidelity and creativity and discipline and discernment (Verhey 2003:54-63).

By *remembering*, Verhey does not only mean an intellectual implementation or mental recollection, but the act of confessing the past as one's own, as part of the continuing church, owning it as both constitutive of identity and part of what determines discernment (2003:55). In his book, *Remembering Jesus: Christian Community, Scripture and the Moral Life* (2002), Verhey conceives of ethics "by way of reminder", by the telling and remembering of the Gospel (2002:11).

The three pairs of Christian virtues for reading Scripture that Verhey discusses are learnt when believers learn to read and remember Scripture.

*Holiness* sets Scripture, as well as a time and place to read and remember it, apart from other writings, whilst *sanctification* sets this canon alongside our lives to rule and guide it, allowing our behaviour and character to be determined, made new and shaped in remembrance and hope, and "themselves render the story rendered by Scripture" (Verhey 2003:56-57).

*Fidelity* is the reading of Scripture that is ready to live with integrity, faithful to the remembrance that the church has confessed as its own and in the hope that memory endures. For this, however, a process of constant change, *creativity*, is needed (Verhey 2003:57).

*Discipline* in reading Scripture marks one as ready to be a disciple, to follow Him of whom the story is told and to order one's life to fit that story with the assistance of a community of disciples and readings of the Bible. Therefore, *discernment* is needed, the ability to recognise the plot of the story against the whole of Scripture and interpret any part against that whole (Verhey 2003:59).

#### **1.5.4 An appraisal of Verhey's proposal**

Although Verhey articulates excellent broader parameters, these are in dire need of more specification and concretisation. Whilst there is nothing intrinsically incorrect in Verhey's proposal, it is undeniably very vague and whilst it sounds good on paper, it is perhaps not of real value to someone struggling to make sense of concrete bioethical issues with the Bible in hand. The proposal put forward by Verhey is irrefutably of importance and also appreciated and respected by this study for the insights that it provides. It is precisely these insights, however, that initiate the argument that the meaning of the Bible for modern bioethical issues, when read through the lens of Christian doctrine, emerges more clearly.

Verhey begins his proposal by calling for a humble reading of the Bible, a reading that does not view Scripture as the final answer. This suggestion cannot be faulted, but in the section that follows, it will be elaborated on. If the Bible is not the final answer, where else should Christians look? Telling someone grappling with a specific bioethical problem that they should not view Scripture as the one and only source, but then neglecting to tell them where else they might seek alternative sources, is perhaps, not as helpful as it could be. Granted, there are other issues that come to the fore when reading Verhey that could be constructed as other sources, such as tradition, reason and experience. These are however, never explicitly named as such and whether or not to view them as sources is open to interpretation.

In the remainder of his proposal, with the exception of stating that Scripture should be read “according to the creed”, Verhey once again details how to read and use the Bible, without naming these other sources that he urges readers to look to. In this sense, Christian doctrine can help us to unlock the biblical message by being one of these other sources that we look to in reading and utilising Scripture in the complex world of Christian bioethics.

In the second instance, Verhey's insistence that Scripture be read in community, seems to be self-evident; it is close to impossible to read the Bible in isolation, given that our worldview and ideas about God and morality are formed and influenced by those around us.

Birch and Rasmussen also agree that whilst individuals are not simply clones of a specific community, “everything we know about morality and the moral life, or anything else, for that matter, is finally a community enterprise and achievement” (1989:17-18). Therefore, it is just as true that even the most private decisions and achievements are the results of our social experience. They could neither exist nor be understood apart from that experience.

Smit also states that we bring all of our presuppositions, expectations, and understanding with us when reading the Bible and that this plays a major role in how we read and understand

Scripture, as well as how we will be touched, changed, inspired and motivated to action by that which we read or hear (2006:70).

Smit also further refers to the slogan that developed in ecumenical circles, namely that "*faith* divides, but *service* unites" to indicate how in the ecumenical movement, different churches and people from different denominations found that they could only work together when they did not discuss what the Bible says and what their church believes and confesses (2006:89). The ecumenical movement also struggled for years with their differences, eventually reaching the conclusion that "the Gospel itself is the Great Tradition, God's living presence in the church", but, as Smit justly asks, what of the Bible? (2006:94). Even when there seemed to be surprising consensus between denominations in the writing of the *Baptism, Eucharist and Ministry* document, there was critique raised from all sides, this time regarding how Scripture was used in the document (Smit 2006:103-104).

If those deeply committed to ecumenism are still struggling with these issues, it does seem a bit simplistic of Verhey to urge ordinary congregants to dive into the deep end and read the Bible with other traditions, expecting them to do what the entire movement thus far have not been able to succeed in. As a result, Christian doctrine might be a way of getting to the bottom of different interpretations of Scripture and whilst the understanding and analysis of different biblical texts will differ from one tradition, or even individual, to the next, doctrine does grant us insight into *why* they differ. It is also conceivable that many people might be more open to discussion on different interpretations of doctrine than on the sacred texts of the Bible.

When Verhey counsels that Scripture be read without dualism, he is rejecting animosity towards the created world and the human body (Verhey 2003:47). Whilst this, once again, cannot be faulted and is clearly good advice, one has to wonder how practically applicable it is. If someone has a dualist perspective of the world, and their approach and outlook are influenced by dualism to begin with, telling them to think differently all of a sudden when faced with a bioethical issue might not be very helpful. One also has to wonder how many people would have the objectivity to realise that they are thinking in a dualist manner and adjust their thinking accordingly.

Once again, whilst there is nothing innately wrong with this advice of Verhey and I appreciate its contribution to the discussion, when considered more closely on its own, it just is not very helpful to someone grappling with bioethical problems and having to make difficult decisions.

Consequently, adding the dimension of Christian doctrine in reading and using the Bible in Christian bioethical discussion might act as a safeguard against dualism, given that other features, such as reason and experience are also brought into the equation.

Verhey also advises that Christians read the Bible “according to the creed”, which is, in my opinion, the most practical helpful suggestion offered in his proposal, although the entire proposal has merit. The creed that he refers to, the Apostles' Creed or Confession of Faith, is widely used and accepted by the majority of Christians, and is a summary of basic early Christian doctrine. It takes the central understanding of the Gospels, the New Testament and the Old Testament, admittedly to a lesser extent, into account. As such, it is one of the other sources that Verhey urges readers to look to and also an ‘outside’ source that should influence their reading and understanding of the Bible.

There is little that one can fault in advising readers to take exegetical care and keeping the history, context and literary problems of a specific text in mind when applying it to bioethical, or indeed, any ethical matters. However, most ordinary readers of the Bible do not possess the necessary skills and expertise to adequately perform exegesis or have access to the type of resources that would help with these exegetical problems. Therefore, this does also not seem to be the most helpful advice offered to those grappling with bioethical questions.

Again, if the dimension of Christian doctrine is added to the reading and utilisation of the Bible in Christian bioethics, Verhey’s concern for exegetical care comes into its own. Christian doctrine is based on the biblical message and in the majority of cases, constructed by those that have taken immense exegetical care. As such, it can play an important role in unlocking the message of the Bible.

Verhey's last recommendation, that Scripture be read prayerfully, also seems to be stating the obvious. Any Christian devout and spiritual enough to want to consult the Bible on bioethical matters would seem to hopefully pray regularly in any instance. In addition, stating that Scripture be read ‘prayerfully’ is also rather vague, as Verhey does not clarify what ‘reading prayerfully’ would entail. Does it mean praying before reading the Bible? Reading with the same mind-set as one enters in during prayer, which will differ radically from one person to the next?

To summarise, whilst Verhey's proposal and guidance for utilising Scripture in bioethical discussion is undoubtedly valuable and raises some valid points, the preceding aims to establish that on its own it is too vague and just not sufficient to really be of use to those struggling with the kind of questions that bioethics deals with. Therefore, a new proposal is needed, one that addresses the shortcomings of the proposal suggested by Verhey. The following section will aim to address these limitations and put forward a new proposal for utilising the Bible in Christian bioethics.

### **1.5.5 A Proposal for a New Way of Using and Reading the Bible in Christian Bioethics**

Mouw explicates the broader perspective to divine commandments as submitting to divine revelation as it is revealed and mediated by the Bible. He indicates that not all biblical commandments are intended to be obeyed by contemporary Christians and not only imperatives should be viewed as commands. Therefore, biblical commands should be viewed in interrelatedness with other biblical writings (1987:55-56). For example, God's commands for Abram to leave his homeland (Gn 12:1) or for Hosea to marry a prostitute (Hs 1:2) are obviously not commands that were intended to be followed by anyone other than the original addressees. In the same way, there are also numerous examples of commands that are not in the imperative, for example, in Jesus' parables, which were intended to be followed universally by Christians.

That is why Christians should, as Verhey also advised in his proposal, look to sources other than the Bible when dealing with issues of a bioethical nature. However, as discussed earlier, Verhey does not unambiguously mention in what these sources might be and implicit deductions that tradition, reason and experience are the sources that he refers to might not be correct.

In my opinion, an explicit theological reading of the Bible, such as that advocated by Stephen Fowl in *Engaging Scripture* (2008) would be of the most help in the contemplation of modern ethical dilemmas.

The source that I would therefore suggest for bioethical matters would be Christian doctrine. For this study in particular, the views on God as Creator, which cannot but be influenced by Scripture. In this way, although not utilising Scripture as the main source for the ethical challenges posed by new medical knowledge and biotechnology, contemporary Reformed

Christians can remain true to their Reformed roots, regarding and confessing the importance and worth of the Bible. In this sense, Christian doctrine can help us to unlock the biblical message.

Regarding Scripture and doctrine, Kelsey states that Scripture upholds the making of theological applications, given that biblical texts are part of what shapes a theologian's creative understanding of the way in which that use is bounded by God's presence in the church. It further shows that the imaginative characterisation of Christianity's central reality is decisive for the way that theologians interpret and use Scripture (1975:205).

Smit discusses theological hermeneutics and states that it refers to a type of reading that respects the implicit allegations in Scripture itself. These implicit allegations, are then, in his opinion, amongst others that God is triune, that this living Triune God reveals Godself in the Bible and becomes known, that God calls people, renews them to become part of this calling and that God promises that God's Word and calling will not return empty, but be fulfilled (2006:171). In short, what Smit is referring to, is various aspects of the doctrine of God.

Durand also stated that the presupposition of every doctrinal utterance about God is the belief that the revealed God and God is one and the same God (1976:47). He also indicates how every doctrinal statement about God is influenced by specific parts of Scripture (Durand 1976: 46-48; 59-61; 72-74; 84-90; 99-100) and that the doctrine of, for example the Trinity, did not develop in the early church out of a general perspective on God, but from the church's struggle with the witness of Scripture regarding the Person of God (Durand 1976:71).

If we agree that Christian doctrine is profoundly and acutely influenced by Scripture, we could come to the conclusion that in the grappling with issues of a bioethical nature, where Scripture, for various reasons discussed previously, does not offer us much guidance, we could turn to doctrine as our main source. Although doctrine does not deal with specific bioethical issues, the issues that are raised in the Christian bioethical discussion surrounding the challenges of medical technology, for example by PGD and GM, are in the majority of cases deeply rooted in doctrine.

For the most part, bioethical issues are also doctrinal issues, asking questions about creation, God as Creator, the role of humankind, human beings as created beings, life and death, accountability and stewardship, personhood and so forth. In bioethical issues, especially issues of biotechnology, such as PGD and GM, the phrase "playing God" often crops up, attesting that a bigger issue regarding perspectives on God as Creator and humankind's participation in

creation is at work. Most other bioethical issues can also be traced back to doctrinal concerns; asking questions about the beginning and end of life, be it personal or biological life has to do, amongst others, with the doctrinal questions of eschatology and Christian anthropology. When questions are asked about the allocation of medical resources, it is at its very heart a matter of responsible stewardship of the earth, and the doctrine of the Church and its role, calling and ministry, to mention just a few examples. Therefore, this study is of the opinion that doctrine is the most responsible source at our disposal when engaging with issues of a bioethical nature.

Douma states that in order to avoid “reducing Christian ethics to an exercise in crass modernity, and instead go to its roots ... we will always need to return to God’s revelation in Scripture and we will always bump into dogmatics or doctrine” (2003:40).

I acknowledge that doctrine is also, in the same way as Scripture, open to interpretation and that there are various perspectives on the same doctrinal issue, as is the case when reading the Bible. However, because doctrine has to engage with these differing points of view from the whole of the Christian tradition in formulating an opinion, I deem it a superior source.

Reading and using the Bible in ethical discussion and the making of decisions, is, for the majority of Reformed Christian, of particular importance. However, because of various problems with using Scripture in issues relating to modern biotechnology, such as the silence, strangeness, diversity and misuse in the past, this is easier said than done.

Alan Verhey proposes a possible way of how the Bible can function in bioethical discussion. I argue, however, that this proposal, although of great value, is not enough on its own and too vague to be of use for ordinary Christians struggling with problems of a bioethical nature. Verhey gives broad ethical guidelines for how the Bible can function and the role that it can play in Christian bioethical discussion. For a specific and technical analysis like this study, a more concrete suggestion is needed.

Whilst Verhey's proposal is indisputably of importance and I have immense appreciation for the insights that it provides, it is exactly these insights that leads me to argue that the meaning of the Bible for modern bioethical issues comes to the front more if it is read through the lens of Christian doctrine. Verhey also appeals for a theological reading of the Bible when it is read and utilised in bioethics, and pleads for Scripture, in conjunction with tradition, reason and experience as the primary sources of contemplation. It is the view of this study, however, that by looking to doctrine, which is inspired and shaped by all of these aspects, Verhey's proposal

is improved through a more concrete and specific suggestion that still takes all of his guiding principles seriously and into account.

As the majority of bioethical issues has its roots in doctrine at any rate, a new proposal is needed, as this study aimed to provide, utilising Christian doctrine, which in turn, draws on Scripture, as the main source. In this way, the importance of the Bible in the Reformed perspective is still emphasised, but the limitations of Scripture with regard to bioethical matters is also addressed. The restrictions of the proposal suggested by Verhey, as identified in this study, are also attended to with this new proposal.

Accordingly, this study takes these problems with the use of Scripture in bioethics seriously and therefore looks to other sources of bioethical contemplation. In doing so it does not dismiss the Bible as a source of ethical consideration or deny its worth in ethical reflection, but broadens the scope of available sources.

The source for this study would be a Christian view on God as Creator, viewed from the trinitarian perspective of Reformed theologian Jürgen Moltmann, which, however, cannot but be influenced by Scripture. In this way, although not utilising Scripture as the main source for the ethical challenges posed by PGD and GM, this study will remain true to its Reformed roots, regarding and confessing the importance and worth of the Bible.

Moltmann has been criticised for his use of the Bible, an aspect that will be examined at the end of the fifth chapter, together with other criticisms that have been levelled against him. In this study, I will be reading Moltmann's trinitarian doctrine of creation in terms of his own use of the Bible. My aim is not to develop a critical evaluation of his utilisation of the Bible or theology, but rather to apply the insights from his work to the ethical issues that PGD and GM raises.

The way that we perceive God as Creator will influence the way we view bioethics, as well as the other way around. As most objections that are raised against PGD and GM have to do with views on creation, God as Creator and the role and creativity of mankind, this seems an appropriately fitting source to use for this study.

In essence, as mentioned previously, all theology is trinitarian, as to speak of God the Father is already implying the Son. One cannot mention the Holy Spirit without alluding to it that He is the one who 'comes forth' from both the Father and Son, as stipulated in the Confession of Nicea. As Coppedge states:

The Christian church's basic view of creation is expressed in the Nicene Creed, which gives a triadic structure to the role of God as Creator. It confesses one God, the Father almighty, maker of heaven and earth, one Lord Jesus Christ, through whom all things were made, and the Holy Spirit as the Lord and giver of life. So a trinitarian structure is built into the Christian understanding of the created order.

(Coppedge 2007:237-238)

Before any ethical evaluation of the complex issues of PGD and GM can be made, the procedures and ethical implications and issues must first be set out. In the chapter that follows, PGD and GM will be explained and the bio-ethical arguments that are raised for and against it examined. The main theological responses to PGD and GM will also be outlined in this chapter. In addition, I will clarify in each instance how these theological responses draw from the doctrine of creation.

## CHAPTER TWO

### PRE-IMPLANTATION DIAGNOSIS AND HUMAN GENETIC MANIPULATION: CRITICISMS AND COMMENDATIONS

#### 2.1 Introduction

The majority of people seem to receive their informing regarding reproductive technologies such as pre-implantation genetic diagnosis (PGD) and Human Genetic Manipulation (GM) from the media. The media, however, is most often aimed at sensationalism.

One example would be the front page of the *Metro* on 3 July 2003, which loudly proclaimed: “Now scientists create a he-she”. The story described the “latest in a chilling series of genetic announcements” and went on to parallel the work of Dr Norbert Gleicher<sup>33</sup> with “the work of concentration camp doctor Josef Mengele” who “experimented on Jewish prisoners in an effort to create a master race”. What had happened, in truth, was that Dr Gleicher had injected some male cells into a female embryo to find treatments for genetically linked disorders that affected females, but not males (Gavaghan 2007:144). There was no attempt to create what the media termed ‘a he-she’. The number of male cells introduced was very few and the effect that was sought was treatment for sex-linked genetic disorders. This, however, did not create a very sensational headline.

In *The Guardian* of 9 April 2002, novelist Jeanette Winterson wrote:

---

<sup>33</sup> Dr Norbert Gleicher is a fertility expert at the Center for Human Reproduction in New York, which he also founded in 1981. He is also Visiting Professor in the Department of Obstetrics, Gynaecology and Reproductive Sciences at Yale University School of Medicine. *Chicago* magazine and other organizations had chosen him as being amongst the ‘best physicians’ in reproductive endocrinology and infertility, as well as obstetrics and gynaecology, as elected by his peers (<http://www.linkedin.com/pub/norbert-gleicher/16/19/881> accessed 05 September 2012).

The truth is that all of us have to contend with our parents, for good or ill, but at least we can't be committed at birth to spending the rest of our lives as circus performers or bank clerks, or missionaries. We have free will, and the great thing about growing up is personal choice. What choice is there if your parents have already decided that you are going to be deaf, and that deafness will be your defining identity, just as it has been theirs? This is not the beauty of compatibility, it is genetic imperialism.

(As quoted in Gavaghan 2007:1)

For some, as Colin Gavaghan postulates, the concern is with what they view as the inherently hubristic, sacrilegious and dehumanising connotations of a technology that would allow the present generation to choose their successors. Others have more concrete concerns, deriving from the fear that people will be harmed, devalued or treated unjustly (Gavaghan 2007:2). Francis Fukuyama (2002) also states:

The most important threat posed by contemporary biotechnology is the possibility that it will alter human nature and thereby move us into a 'posthuman' stage of history. This is important ... because human nature exists, is a meaningful concept, and has provided a stable continuity to our experience as a species. It is, conjointly with religion, what defines our most basic values.

(Fukuyama 2002:7)

It is also possible, as Fukuyama further indicates that just as the fears expressed in George Orwell's *1984* were later seen to have been unfounded and unnecessary, similarly, apprehension regarding biotechnology such as PGD and GM may be superfluous. It may turn out to be surprisingly benign, the technology may be far less powerful than it seems today, or people might be moderate and careful in their application. However, he goes on to state that biotechnology, other than many other advances in science, mixes obvious benefits with subtle harms (2002:7).

This chapter will aim to indicate that all matters in bioethical discussion relating to PGD and GM at present, is at the core, issued from a particular perspective on creation. I will illustrate this to be the case both in instances of criticism and approval of these types of biotechnologies. This will then lead to the investigation of Jürgen Moltmann's trinitarian doctrine of creation in an attempt to formulate a Christian bioethical response in chapter four.

Charles Curran states that: "to discuss the problems raised by the possible genetic patterning of man, one must know the facts - the possibilities and the needs" (1987:373). Therefore, I consider it fitting that this chapter start by briefly outlining the path that has brought biotechnology to where it is today, before launching into and engaging with the criticisms and commendations of PGD and GM and how they illustrate particular perspectives on creation and God as Creator.

## **2.2 The Biotechnological Road to Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation**

Already in ancient Greece, the relative importance of nature *versus* nurture in human behaviour was debated. For the most part of the twentieth century, natural and social sciences have emphasised cultural drivers of behaviour at the expense of natural drivers, whilst in recent years the genetic causes have been mainly highlighted (Fukuyama 2002:20).

The selective breeding of animals and plants were not unknown or unfamiliar before Gregor Mendel, the results were just not scientific or predictable. Mendel discovered what we today call genes and that these are passed on from one generation to the next unchanged, although each unit is not necessarily expressed in every generation as an observable characteristic or feature. He furthermore concluded that each organism receives two genes for each observable trait; one from the male and one from the female parent, and that it could statistically be predicted which traits will appear in a specific generation. Today, genetic screening and prenatal diagnosis for many genetic diseases, such as Tay-Sachs or Huntington's disease, follows the rules of this model exactly. Mendel laid the basis for what would become known

as classical genetics, the aspects of genetics that can be studied without referring to the molecular details of genes (Shannon 2000:3-4).

Molecular genetics was made possible by the discovery of the existence of genes on chromosomes and the mechanisms of inheritance were further refined, recognising that many inherited traits or characteristics are not the result of single genes, but a specific combination of genes (Shannon 2000:4).

In 1953, James Watson and Francis Crick made the Nobel Prize winning discovery of the double helix structure of deoxyribonucleic acid (DNA). The foundations of modern biotechnology were laid in 1973, when Cohen and Boyer discovered the technique of recombinant DNA. Genes, which are made of DNA, “contain the information needed to manufacture proteins and enzymes, which are necessary for life ... at the heart of genetic engineering is the ability to reproduce recombinant DNA” (Sukys 2006:410)<sup>34</sup>. For this reason, the discovery of DNA is of immense importance in the ethical discussion of PGD and GM, marking the advent of biotechnology.

This triggered the beginning of the Human Genome Project (HGP) in 1988, with the purpose to map and sequence the human genome. The promise was made that by the year 2003, the 100 000 genes that make up human DNA would be identified, sequenced and mapped. They were true to their word (Verhey 2003:146-147).

D.J. Weatherall summarises the basic science behind genes in the following manner: “A gene is the unit of hereditary that determines the structure of a peptide chain, that is a string of amino acids which form the building blocks of all enzymes and proteins ... Every cell contains the genetic information to make an entire human being” (1988:43, quoted in Harris 1998:10).

The foundations of modern biotechnology were laid in 1973, when Stanley Cohen and Herbert Boyer discovered the technique of recombinant DNA. Following this discovery, the renowned ‘Berg’ letters were written in 1974 to *Science and Nature*, signed by numerous leading

---

<sup>34</sup> See also Peters (1998:1-2).

researchers and inviting other scientists to do the same. This letter was an agreement to defer these types of experiments until potential hazards were evaluated and methods developed to prevent their spread. This self-imposed moratorium on research was to protect society and science from overenthusiastic regulation. However, the possibilities of utilising this biotechnology in warfare and economics made it a national priority and soon, even those who had initiated the 'Berg' letters were busy with exactly the kind of research they had implored others to halt (Gaskell & Bauer 2006:2-3).

Audrey Chapman compares DNA to a blueprint with instructions for making cells and doing the work that goes on inside them. Genes, are subdivisions of DNA, and provide the information needed to synthesize a specific protein molecule, which is essential to the structure, function and regulation of cells by catalyzing various chemical reactions. Abnormalities or genetic diseases occur when a gene is altered or mutated, producing a change in the components, arrangement or molecular sequence, which in turn, affects the production of specific proteins. DNA is also the basic unit of heredity, with each gene determining one trait or characteristic. The human genome has 23 pairs of chromosomes, with a total of approximately 80, 000 genes (1999:4-5). The difficulty posed by the science of genetics is strikingly sketched by Weatherall:

In each cell in the body there is about 2 meters of DNA, tightly packaged and coiled. Since there are approximately  $3 \times 10^{12}$  cells in the body, if all the DNA from one human being was joined end-to-end it would stretch to the moon and back about 8,000 times. When we are embarking on a search for a single gene of, say one or two thousand bases we are looking for a needle in a molecular haystack which is about 6 million times the size of the needle. It is a tribute to the remarkable advances in recombinant DNA technology that such searches are now almost routinely successful.

(Weatherall 1988:46, quoted in Harris 1998:10)

In the early 1970's scientists discovered that it is quite common in nature for different pieces of DNA to break and re-link. They also found an enzyme that makes it possible to cut DNA at specific points and then stick to other fragments, cut by the same enzyme<sup>35</sup>. In 1973 this technology was used for the first time to add foreign genetic material into a bacterium, with

---

<sup>35</sup> At present, there are 150 types of these enzymes identified (Chapman 1999:5).

the result that the modified hybrid form divided each time the cell split. Genetic manipulation was now possible (Chapman 1999:5)<sup>36</sup>.

In 1978, *in vitro* fertilisation (IVF) became a reality and raised public concern, causing some of the first debates about the status of the embryo and the eugenic consequences of intervening with the natural processes of conception and birth. For some, the advent of IVF was the first step toward genetic manipulation (Jelsøe *et al* 2006:47).

In November 1998, researchers at the University of Wisconsin first succeeded in isolating human embryonic stem cells. This breakthrough paved the way for a variety of new biotechnological possibilities (Dick 2008:40). Out of this, genetic manipulation developed, first to manipulate plant and animal genes, but it soon became apparent that the same technology could be used on the embryos of human beings.

Chloe O'Brien became the first child to be born after PGD in 1992. Her parents, who were both asymptomatic carriers of the cystic fibrosis gene, had already given birth to a child with the disease and at Hammersmith Hospital this new technology was used for the first time. Utilising the existing technology of IVF, the O'Briens' reproductive material was used to generate several embryos *in vitro*. They were then able to take cells, or blastomeres, from the embryos at the 8-cell stage, at 3 days after fertilisation. The DNA from these biopsied cells was amplified and examined and one without the gene for cystic fibrosis was chosen to implant (Gavaghan 2007:5-6).

On 14 September 1990, a four year old girl became the first patient under approved protocol to be treated by gene therapy. At the National Institutes of Health in Maryland, she was provided with four injections of altered cells over the course of four months. The girl, whose name was not initially made public, lacked the gene that produces the enzyme adenosine deaminase (ADA) that keeps immune cells alive and functioning. Blood was taken from the patient, the T-cells isolated and then infected with a weakened retrovirus that a copy of the ADA-gene had been spliced into. These cells were then injected into the patient. More than ten years later, the

---

<sup>36</sup> See also Harry LeVine's *Genetic Engineering: A Reference Handbook* (2006); Ron Fridell's *Genetic Engineering* (2006); Paul Sukys' *Lifting the Veil: Scientific Appreciation for the Nonscientist* (2006); and Pratik Satya's *Genomics and Genetic Engineering* (2007).

identity of the girl was revealed: Her name is Ashanthi Desilva and she is alive and doing well (Munson 2004:310).

The *Boston Globe* reported on 01 June 2013 that a Dutch company, uniQure BV, received regulatory authorisation in Europe in November 2012 for a gene therapy to treat an uncommon metabolic disorder that leads to inflammation of the pancreas. This gene therapy, known as Glybera, is the first throughout in the Western world to receive regulatory approval, although it has not yet been approved by the FDA (Food and Drug Administration). This does not seem to cause concern for uniQure BV, who is busy setting up a manufacturing facility in the Boston area. They are hopeful that this facility could employ more than fifty people in time. In May 2013, Bluebird Bio, a Cambridge company, filed to sell stock to the public, hoping to raise \$86 million in order to bring a gene therapy to treat a fatal neurodegenerative disease (CCALD) to market<sup>37</sup>.

On 17 July 2013, *The Guardian* reported that scientist have succeeded in correcting the genetic defect that causes Down's syndrome, although it was only in isolated cells. In a series of experiments, cells from people with Down's syndrome and suppressed the extra chromosome that results in the condition. This discovery, however, raised the possibility of a revolutionary treatment of the disorder<sup>38</sup>.

In the Netherlands, uniQure BV announced the commencement of a human trial in Parkinson's disease with a neurotropic factor (GDNF) derived from glial cell lines. This is but one of uniQure's group of GDNF-based gene therapies in development that targets central nervous system disorders in collaboration with research conducted at the University of California in San Francisco<sup>39</sup>.

At present, PGD can be utilised to determine the sex of an embryo (usually in the case of sex-linked disorders) and to identify both single gene disorders and chromosomal ailments. In the

---

<sup>37</sup> <http://www.bostonglobe.com/business/2013/06/01/after-disappointments-time-now-for-gene-therapy/wMIbxUe3Fc6szlLHccmYMJ/story.html>, accessed on 20 August 2013.

<sup>38</sup> <http://www.theguardian.com/science/2013/jul/17/downs-syndrome-cells-fixed-chromosome-therapy>, accessed on 20 August 2013

<sup>39</sup> <http://www.uniquire.com/news/178/182/uniQure-announces-start-of-Parkinson-s-disease-gene-therapy-Phase-I-trial-by-UCSF-NIH-to-test-its-GDNF-gene-in-patients.html>, accessed on 20 August 2013

immediate future, this diagnosis is limited to those at risk of passing on genetic diseases, but as the success rate grows, so does the demand (Gavaghan 2007:6-7). Whilst this new technology causes varying degrees of concern in different circles, it is important to take note that the fear of 'designer' babies cannot be realised through PGD. Embryos are not 'designed', but simply selected without any alteration to the genetic composition.

Work is in progress to map specific genes to specific regions of the human genome. Genetic defects, as well as genetically determined inclination or resistance to certain diseases and increased knowledge about the role of the environment will be identified (Harris 1998:12).

The most common contemporary form of genetic screening after implantation or natural occurring pregnancy is amniocentesis, where amniotic fluid is withdrawn from the uterus towards the end of the first trimester and the fetal cells then analysed for particular diseases. If a genetic disease then happens to be present, therapies are being developed that will then attack the disease at gene level and prevent it from manifesting at all (Shannon 2000:29-31). Where concern for the so-called 'designer babies' might be justified, is in the case of gene therapy. This is also known as genetic engineering, genetic modification, or in popular parlance, genetic manipulation (GM). This entails the insertion of extraneous genetic material into, or altering the genome of an existing organism.

At present, the questions raised by this type of treatment are, for the most part, hypothetical (Gavaghan 2007:8). However, at the rate of technological advances in this field and the speed at which they become publicly available, it would be wise to also reflect, maybe pre-emptively, on them as well.

The ethical challenges raised by PGD and GM are extremely alike or at the very least, very similar, as are the questions these biotechnologies pose to the doctrine of creation, as will be indicated in this chapter. For this reason, I will discuss them for the most part together in this study.

When dealing with the ethical issues, the distinction between germ line and somatic gene therapy is of particular importance - germ line therapy, by affecting the reproductive cells,

impacts on the individual and his/her children, thereby affecting the gene pool. Somatic gene therapy affects only the cells of an individual. However, the risks of somatic therapy includes that the cells introduced into the body can recombine with other viruses and infect the germ cells, and accordingly, both somatic and germ line therapy leads to a greater concentration of a mutated gene in the gene pool, through allowing patients both survival and reproduction of the flawed gene (Chadwick 2001:189). Therefore, as Ruth Chadwick further indicates, the aim of current research is to one day not simply add a functioning gene, but to replace the malfunctioning ones completely (2001:190).

In bioethical discussions, a distinction is mostly made between somatic en germ lines GM. For example, the Church of Christ supports somatic GM but opposes therapy relating to the germ line (Shannon 2000:71). Roger Shinn also refers to the 1971 World Council of Churches document, *Church and Society*, which recommended genetic enquiry. In June 1973 the stand was taken that in principle, “there is no difference between treatment at the level of the gene and treatment at the level of symptoms as in ordinary medicine”. In this instance, the World Council of Churches (WCC) decreed that the replacement of a defective gene was thus viewed to be morally the same as inoculation (1998:124).

In 1982, the WCC released the *Manipulating Life* document, and declared that “to change substantially the germ-line DNA is to directly alter the foundations of the human. In what ways do we, be manipulating our genes in other than simple ways, change ourselves into something less than human?” (Shinn 1998:129). Only seven years later, in 1989 the *Biotechnology: Its Challenges to the Churches and the World* document was published by the WCC, proposing a “ban on experiments involving genetic engineering of the human germ-line at the present time”. Further ethical reflection was encouraged, however (Shinn 1998:130). Nevertheless, the designation “at the present time” does imply that this is not to be a permanent ban.

This curious occurrence of starting out from a somewhat liberal perspective and growing more conservative over time is also to be seen in the decisions taken by the President’s Commission that the then American president, Jimmy Carter, convened after initiation by the religious community. Shinn indicates this Commission concluded:

The Commission could find no ground for concluding that any current or planned forms of genetic engineering, whether using human or nonhuman material, are intrinsically

wrong or irreligious per se ... Rather, the issue that deserves careful thought is: by what objectives, should the great new powers of genetic engineering be guided?

(quoted in Shinn 1998:137)

Less than half a year afterwards, however, Jeremy Rifkin, who had been a prominent member of the Commission, released the resolution that attempts to engineer “specific traits into the germline of the human species should not be attempted” (Shinn 1998:137).

Between 2001 and 2004 there were 45 live births in the United Kingdom and more than 1000 worldwide that made use of pre-implantation genetic diagnoses (PGD). The most common and basic test is used to determine the sex of the embryo and is used in cases of sex-linked genetic disorders. As PGD can only be utilised by those prospective parents undergoing IVF, it stands to reason that, at least for the time being, this technology will be restricted to those who already know that they are at risk of passing on a genetic disorder and those who would have made use of IVF in any instance. Possibly, as the rate of success increases, so will the demand for PGD (Gavaghan 2007:6-7).

There are three approaches in genetic manipulation. The first, *eugenics*, is the selecting and recombining of genes already existing in the human gene pool, removing deleterious and improving the existing genes. Secondly, *genetic engineering*, that involves changing genes in such a way that deleterious genes are eliminated to improve not only the individual, but his or her offspring. Lastly, *euphonics* is the control and regulation of the phenotype rather than the genotype, to control genes without making any hereditary changes (Curran 1987:373-374).

In 1974, Robert Nozick<sup>40</sup> first referred to what would become known as the ‘genetic supermarket’ in *Anarchy, State and Utopia*. He stated that choices regarding “what sort of people there should be” should be left to private individuals, the prospective parents rather than

---

<sup>40</sup> Robert Nozick is one of the most prominent libertarianists. Libertarianism regards freedom to be the highest ideal, where each person is free to live as he or she will. As long as you are not interfering in someone else’s liberty, no one has the right to interfere in your life and keep you from living the life you choose.

the state. Gavaghan agrees to a certain extent, adding that “... such decisions should not *lightly* be interfered with, or, to put it another way, that it is incumbent on us to show *good reason* before we interfere with the pro-choice assumption, and take decisions about the kinds of children they will have away from prospective parents” (2007:9). To paraphrase, Gavaghan believes that rather than placing limitations and restrictions on GM and having prospective parents convince a panel or prove that their requests are creditable, those that seek to restrict their access to this type of technology should rather be asked to prove that their constraints are reasonable and for the well-being of humankind.

James Watson, who discovered the double helix structure of DNA along with Francis Crick, as mentioned previously, sees no harm in utilising PGD and GM, even for reasons of “enhancing” an embryo that has no medical or genetic defects, “provided that they are freely chosen rather than state-imposed” (Sandel 2007:70-71).

As it is unlikely that any attempt to regulate biotechnologies like PGD and GM will either ban or permit any and all forms thereof, “we need to start thinking concretely now about how to build institutions that can discriminate between good and bad uses of biotechnology, and effectively enforce these rules ...” (Fukuyama 2002:10). For Fukuyama, the answer as to who should be in charge of these rules is obvious: the state, or, if proven to be beyond the power of the individual nation-state, there should be institutions taking responsibility internationally. Whilst he admits that state control does not work in all instances or would not be successful in all sectors, it should still, to his mind, be the one to take responsibility for the regulation of biotechnology (2002:10-11).

In light of the rapidly expanding science of biotechnology, Cynthia Deane-Drummond advises that the ethics of genetic engineering constantly be reviewed (1997:79). Thomas Shannon also adds that the difficulty of just trying to keep up with the developments and announcements should lead us to recognise that technological developments outpace our capacity to think them through (2000:7).

This study aims to be a part of this constant review, examining the challenges that PGD and GM pose to Christian bioethics. Both criticisms and commendations of PGD and GM will be engaged with, indicating how all forms of both condemnation and approval stem from a particular view on God as Creator and/or the world as created, the role of humanity in creation and human beings as created beings. The expectation is also that, through engaging with questions of PGD and GM even before they become widely available or legalised, Shannon's recognition can be dealt with, allowing us to consider the implications of this new technology before it is upon us.

### **2.3 Pre-Implantation Diagnosis and Human Genetic Manipulation as a Challenge to Christian Bioethics**

The ethical issue in the balance could be summed up, as Curran puts it, "man's interference in his own evolutionary development to better the individual and the human species" (1987:373) and the implications that this will have for humankind in general, but also for specific sections of society. The possible implications and ethical issues that are at stake is summed up in the statement of the Episcopal Church in the USA at its General Convention in 1991, where four resolutions were issued associated with genetic engineering and manipulation relating to human beings:

1. There is no theological or ethical objection against the production and use of medical materials by means of genetic manipulation for therapeutic or diagnostic purposes aimed at the prevention or alleviation of human suffering.
2. There is no theological or ethical objection against gene therapy, if proved to be effective without undue risk to the patient and if aimed at prevention or alleviation of serious suffering.
3. The benefits of the new technology should be equally available to all who need these for the prevention or alleviation of serious suffering, regardless of financial status.

4. The use of results of genetic screening of adults, newborns, and the unborn for the purpose of discrimination in employment and insurance<sup>41</sup> is unacceptable.

(Episcopal Church, statement from the General Convention of the Episcopal Church, July 1991, as quoted in Shannon 2000:71)

In a 1989 publication by the Evangelische Kirche Deutschland (EKD) entitled *Gott ist ein Freund des Lebens. Herausforderungen und Aufgaben beim Schutz des Lebens*, the EKD declared their qualms against the genetic engineering of human beings. The statement pronounced that the manipulation of the human germ line is unacceptable and can only be developed by experimenting on human embryos, which the church also rejects. Another reason for the disapproval of the EKD is the predisposition towards eugenics and the dangers that this raises. The declaration ends by the recommendation that Churches and Christians seek dialogue with other disciplines, such as science, technology and economics<sup>42</sup>.

In 2002, at an ecumenical “Week for Life” in Germany, Cardinal Karl Lehmann, Chairman of the German Catholic Bishops’ Conference and Präses Manfred Kock, Chairman of the EKD Council, issues a warning on the threats of biotechnology, indicating that it allows for the use of embryonic life by human beings. They also stressed the need for a general ban on PGD in Germany and stated that it leaves no room for people that do not match up to the so-called norm<sup>43</sup>.

In February 2011, the EKD affirmed this decision, calling again for the need to ban PGD. The Church proclaimed that utilisation this biotechnology is a declaration that the embryos not selected would have a life ‘not worth living’ and that this is irreconcilable with the confession of all human beings created in the image of God. Concerning biotechnology such as PGD and GM, they declared “das der Mensch nicht sein eigener Schöpfer ist, sondern dass sicj alles Leben Gott verdankt. Darin, dass jeder Mensch zum Gegenüber Gottes geschaffen ist, liegt die unableitbare, nicht verzweckbare Würde eines jeden Menschen begründet”<sup>44</sup>.

---

<sup>41</sup> On genetic discrimination, see Peters (1998:3-6).

<sup>42</sup> <http://www.ekd.de/1731-2371.html>

<sup>43</sup> [http://www.ekd.de/1685-bulletin\\_2\\_2002\\_7.html](http://www.ekd.de/1685-bulletin_2_2002_7.html)

<sup>44</sup> [http://www.ekd.de/presse/pm40\\_2011\\_verbot\\_pid.htm](http://www.ekd.de/presse/pm40_2011_verbot_pid.htm)

Shannon quotes from Anderson, who summarises the ethical issues in the following way:

Do infants have the right to inherit an unmanipulated genome, does the concept of informed consent have any validity for patients who do not yet exist, and at what point do we cross the line into 'playing God'?

(Anderson, as quoted in Shannon 2000:105)

Chapman views the term "playing God" as a symbolic expression of concern and/or warning over the extensive power of contemporary biotechnology (1999:52). Daniël Louw also describes this phrase as not necessarily designating an "objection to manipulating material of life or to resisting contemporary developments in molecular biology and gene technology" (2008:312). For Louw, the statement "playing God" can also be seen as an expression of wonder and unease, giving articulation of the realisation that humankind is on the brink of understanding the essential machinery of life and how it works (2008:312)<sup>45</sup>.

Ian Barbour responds to this argument made so often by opponents of all genetic manipulation or engineering, but in particular to GM, namely, that human beings should not be 'playing God'. This perspective suggests that intervention in nature is to usurp God's prerogatives. In reaction, Barbour then states that God works through continuing evolutionary processes and also through our contemporary lives. It is our intelligence and creativity that, for Barbour, makes it possible for us to act as co-workers with God in fulfilling His purposes. Cole-Turner also views GM as an extension of God's activity; God seeks genetic change as a proper means of creative and redemptive activity, working through both natural processes and human beings. Therefore, human beings should be involved in GM that is consistent with nature and with the

---

<sup>45</sup> See also Glover (2006:63), Chapman (1999:52-57) and Peters (1998:8-13).

purposes of the God who renews the whole of creation in anticipation of the new creation (Shannon 2000:75-76).

Roger Willer, in a resource that the Evangelical Lutheran Church in America commissioned, recognised God at work in genetic developments, and pronounced genetic testing and screening as part of God's creative enterprise. Similarly, Ronald Cole-Turner has contended that GM expands human beings' abilities to participate in God's work of redemption and creation and should be an action that glorifies God (Chapman 1999:15-16). For Sondra Wheeler, however, the act of an individual deciding his or her own fate in isolation is an idea entirely alien to the Christian understanding of moral existence (Chapman 1999:16).

The National Council of Churches (USA) document *Genetic Science for Human Benefit* states that creation, by divine power, is not static, "but dynamic and ongoing. As creatures uniquely made in God's image and purpose, humans participate in the creative process through the continuing quest for knowledge, which now includes unraveling and learning to control the intricate powers compressed in genes of DNA molecules" (Chapman 1999:44).

This view on God as Creator and the role that humankind has to play in creation will be examined at more length in chapter four when engaging with Moltmann's trinitarian doctrine of creation. However, it does merit mentioning these perspectives here as an example of a theological commendation of PGD and GM from a perspective of God as Creator and the role of human beings within creation:

For Christianity, the theological themes of creation and procreation bring genetics into the field of ethics. The divine mandate to subdue the earth and to fill it includes man's mission to transform life according to his finest vision of humankind's future.

(Häring 1975:163, as quoted in Shannon 2000:48)

Therefore, the more important question could be what kind of person we would then desire to create and who would decide these criteria. But before a discussion of these ethical issues can

follow, however, it would do well to briefly look at technology on the whole and the issue of personhood.

### **2.3.1 Technology and Theology**

There seems to be theories that both oppose technology as a necessary evil or avoid it completely, as the Amish people in Utah do, for example, and theories that favour technology as part of profound human achievement. It is, however, important to keep in mind that technology does not only refer to the recent technological leaps forward in communication, travel or science, for example, but to all forms of human knowledge and skill that results from or in tools and equipment. The discovery of fire and of the wheel was just as much a technological feat as the invention of the mobile phone.

“Technology is many things to many people, but is external to none of us because it is a constitutive aspect of modern humanity” (Brock 2010:10). Technology forms and is a part of the environment in which our way of life, our thoughts, opinions and ethical judgements develop.

It is therefore important to note, as Daniel Callahan also states, that human beings are technological creatures; we cannot view technology with hostility (1987:228). As a result, it should be how technology is used and put into practice that should form the real discussion. As genetic manipulation, and more recently, PGD and GM, is a technological issue, a brief discussion of human usage of technology will follow.

It also important to keep in mind that technological decisions, on the whole, are in hands of a few men, and white men at that. The language of technology development is part of a “long and complex linkage of colonization and racial supremacy” (Brock 2010:8).

Relating to the language of technology it is also important to take into account that the design of new technology is a political process and that the language of different parties will differ, as will their criteria for success. Brian Brock also discusses the historical aspects of technological design, as the development of new technology never begins with a clean slate. This design is also a living process, undertaken with uncertainty and ambiguity, but also with promise. Theology looks at this process of development and asks what is this good for? Does this enrich human life? And if yes, how? (2010:11).

The dominant discourse of technological assessment views the predicament of technology as the pursuit of knowing enough to properly direct technology, whilst another approach involves setting up procedures or laws that make it difficult to misuse technology. Another discourse sees the problem rather as human ambiguity about the uses to which technology should be put. To Martin Heidegger, however, both these approaches are dead ends that only deepen the technological predicament in entrenching the assumptions that we feed it. He states that technology is not what we make, but the way in which we live - without this distinction, we are all slaves to the technological rationality that is increasingly becoming characteristic of our relations with all things, the culmination of which is the understanding of humanity itself as raw material<sup>46</sup> (Brock 2010:31-32).

Two more recent advocates of these opposite positions would be, for example, Jacques Ellul and Samuel Florman. Ellul describes technology as an “autonomous and uncontrollable force which pervades social, economic and political life”, leading to the enslavement of all that technology demands. Extended to genetic manipulation, the “fabric of life becomes subject to a form of determinism”. This fear of genetic reductionism is also expressed by Allen Verhey, who finds in this notion the folly of believing on the one hand, that human beings are completely determined by their genetic makeup, and on the other hand, that humanity is completely free, to the extent that we can alter own DNA (2012b:1920; 93). However, Florman views technology as a liberator, and stated that any undesirable effects of technology could be overcome by more technology (Deane-Drummond 1997:87-88).

---

<sup>46</sup> Brock further traces Heidegger's response to modern technology, as well as how Grant and Foucault developed and criticised these ideas. For more detail, see the discussion in Brock (2010:31-61).

Somewhere between these two absolute viewpoints, there exists one that I will endorse in this study: That technology is a part of the way we live and part of what makes up our way of thinking and doing and as a result, also out ethical judgements. It can be a good thing, one that we have no need to shun or oppose. Like everything else in creation, however, technology can also become sinful when it is worshipped, when it is fuelled not by love for God and our neighbour, but by the desire to obtain more for ourselves or to better ourselves at the cost of another. This, then, also remains true of the use of the biotechnologies PGD and GM.

Brock sums this up nicely when he points out that technology is a sin when it becomes a way of life that expresses “a quest for power and self-aggrandizement. It is a sin as life formed by the fetters of self-interest, without wonder at the goodness of existing creation, without concern for the neighbour” (2010:207).

Another important factor to keep in mind, as Fukuyama also points out, is the view that, even should it be deemed desirable to stop technological advance, it would be impossible to do so. If a country would ban some form of technology, for instance GM, those who want to continue doing it would simply move their work or research to a different location, where they would be allowed to do so (2002:11). One need only think of so-called ‘genetic tourism’, where couples from so-called first world countries like the United Kingdom, where there is a shortage of egg-donors, travel to other European or even African countries to undergo IVF treatment. In these countries, the financial incentive to donate ova result in a much larger amount being available to prospective parents seeking to make use of a donor, especially those willing to pay more for the service.

By the same logic, it could be argued that, were PGD or GM to be banned in one country, those that wish to utilise these forms of biotechnology would simply travel elsewhere to make use of it. However, this is a faulty assumption. The fact that there are individuals or organisations that do not follow the rules or go around them is not an excuse for a defeatist attitude, refraining from making rules in the first place. As Fukuyama notes, “people get away with robbery and murder, after all, which is not a reason to legalize theft and homicide” (2002:11).

As a last note, it should also be kept in mind that what is promised by technology will not always be attainable in the near future, maybe even ever. Callahan also reminds us that limits must be set to the boundless hopes and expectations that technology provokes and the social pathologies that can result from technology must be controlled (1987:227).

The majority of scientists working in the field are more modest in their promises and state that they are simply working to find the remedy for certain genetically linked diseases, that there are immense obstacles to technologies such as human cloning or genetic enhancement and that the modification of human nature is not a technological possibility, but rather the substance of science fiction (Fukuyama 2002:19).

Whilst there are many other issues involved in genetic diseases, even if one only looks to the genetic factors, many diseases are multi-genetic in origin. Often there is no simple cause to be found, and usually there is a large gap between the discovery and the subsequent cure (Shannon 2000:7).

The Human Genome Project has made it clear that variation is the norm and that there is no such thing as *the* human genome. The HGP cannot tell us what is most meaningful to an individual, what his or her hopes, dreams, loves, expectations or history is. It cannot tell us what it means to have been created by a God who loves him or her (Swinton 2007:3). No medical technology can tell prospective parents what kind of child they will have, what talents and personality he will have, if she will be witty and have a good sense of humour, what kind of books he will prefer, what music she will like listening to. In short, even if parents would be able to plan their potential child's genes exactly, it would still not tell them beforehand precisely who their child will be and who he or she will become.

It is for this reason that Shannon then also indicates that “scientists have an obligation to make clear that not all traits can be genetically identified, much less changed at will” (2000:70). Relating to the individual that a child of PGD or GM might become, it is also important to briefly examine the issue of personhood, which the following section will then briefly make mention of.

### 2.3.2 Personhood

One of the closely related issues that PGD and GM, especially in relation to persons with disabilities, raises is the definition of personhood. This is a complex and multifaceted issue that cannot be discussed at length here<sup>47</sup>. The subject will also be discussed in the fourth chapter, when Moltmann's perspective on human beings, especially pertaining to the confession that we are created in the image of God, will be dealt with. However, it would do well to briefly take notice of the question, given its definite and pronounced relation to the issue at hand.

“Claims that humans are created in the image of God underscore that persons have moral responsibility and dignity; but unless the concept is made more specific, these claims will offer little concrete guidance as to whether to proceed with particular genetic applications” (Chapman 1999:21).

Personhood is mostly defined by fixed and identifiable human abilities, capabilities, attributes and actions. Joseph Fletcher's famous fifteen positive propositions and five negative propositions relating to his 'profile of a man', encompasses the following fifteen 'positive' propositions:

1. A minimum intelligence, an IQ of 40
2. Self-awareness
3. Self-control
4. A sense of time
5. A sense of futurity
6. A sense of the past
7. Capability to relate to others

---

<sup>47</sup> For more detailed discussions, see, for example, Michael Tooley's discussion in the *Blackwell Companion to Bioethics* (Kuhse & Singer 2001:117-126). See also Moltmann (2012a:84-89).

8. Concern for others
9. Communication
10. Control of existence
11. Curiosity
12. Change or changeability
13. Balance of rationality and feeling
14. Idiosyncrasy
15. Neocortical function

(Newell 2007:46-46).

Peter Singer's definition entails a “person's capacity for self-awareness, self-control, a sense of the future, a sense of the past, the capacity to relate to others, concern for others, communication and curiosity”. When one of these factors is not present, Singer states that the individual is still genetically human with the moral protection of a ‘person’, but that he or she is no longer a person (as quoted in Swinton 2007:8). However, the contradiction in Singer's work becomes clear when one learns of his care and concern for his mother, suffering from Alzheimer's disease, which, by his former definition, would end with her becoming a non-person.

Martina Holder-Franz has a relational perspective on the human person and states that it is not our abilities that define us as human beings, but our availability for relationships (2007:61). As Swinton further states: “We do not view persons as commodities that can be accepted, rejected or exchanged for better models. Persons are fellow creatures whom we should care for and seek ways of being with” (2007:9).

“In a world where ‘doing’ reigns supreme in terms of a person's moral and social standing, Reinders calls us back to remember the significance of being” (Swinton 2007:10). God does not love human beings because of what they have or what they do, but in spite of it. Therefore,

John Swinton states that “human beings are *persons* by virtue of the fact that they are human beings, particular objects of God's love and salvific intentions” (2007:11). “*Our personhood is not defined by what we can or cannot do but by whose we are and where we come from*” (Swinton 2007:12).

Regarding the potentiality argument<sup>48</sup>, Gavaghan also rightly points out that if all potential life has to be protected, all forms of contraception would be immoral (2007:57). For if everything that had the potential to develop into a human being should be offered the same protection that human beings enjoy, every single ovum and sperm cell should be treated as the vessels of this potential, also enjoying the same protection.

Shannon further indicates that given that there is no individual subject of whom a claim can be made; there can be no violation of individuality or personhood (2000:113). Personhood and what constitutes a person is also strongly associated with the discussion regarding PGD, GM and people with disabilities. Many of the questions that can be raised under the heading of personhood will also be discussed in that section.

Wannenwetsch suggests that using terms such as the ‘inclusion’ of disabled persons implies that we are ‘including’ them into the secluded region that we inhabit as a type of benevolent stretching of the concept of personhood from the usual case to the unusual. He therefore argues that there is no need for inclusion and that this notion is based upon an abstract and preconceived concept of personhood that is merely to be applied to disabled human life (Reinders 2007:183) and quotes Spaemann, who stated that there can be only one criterion for personhood, namely biological membership of the human race (Reinders 2007:186).

The argument of personhood has particular relevance for the case of PGD, considering that the decision to implant one embryo is also the decision not to implant the others. Although the status of the embryo<sup>49</sup> and the issue of personhood is not the main focus of this study or chapter and will be touched on again in the section relating to PGD and GM and people with

---

<sup>48</sup> See also Harris (1998:76-87).

<sup>49</sup> For a full discussion on “what is the embryo” in moral or ethical terms, see Harris (1998:46-59).

disabilities, it was briefly discussed here as a result of its interconnectedness to the issue at hand.

For Christian ethics, discussing personhood is closely related to the discussion of humanity as created in the image of God, an aspect that the final and fourth chapter will discuss at length, from the perspective of Moltmann's trinitarian doctrine of creation.

## **2.4 Engaging with criticisms and commendations of PGD and GM**

Although I argue in this study that in some instances PGD and GM can be theologically justified when viewed from the perspective of God as trinitarian Creator, as will be examined in the final chapter, it also takes the criticisms of PGD and GM seriously.

In the first part of this section, the criticisms against PGD and GM will be discussed in four main parts: firstly, the impact that GM will have on the children that would be born from it; secondly, the influence on people with disabilities; in the third instance, the role of so-called 'saviour' siblings born from PGD or GM will be examined and finally, the effect of PGD and GM on social justice will be discussed.

Although the social implications of PGD and GM in a country such as South Africa, with the large and growing discrepancies between rich and poor will be discussed at length in the following chapter, given that only a small percentage of the population will have access to these types of biotechnologies, or be able to afford it, it is mentioned here briefly as well.

### **2.4.1 Children of GM**

Gavaghan summarises the question at hand adequately when he states:

Is anyone likely to be harmed by the choices prospective parents make? Will anyone's rights be infringed? Will they perpetuate injustice? If we have no reason to suppose that any of these adverse outcomes is likely, then we have no business foisting our tastes and values onto those who do not share them.

(Gavaghan 2007:41)

The most obvious parties that would be considered to be at risk are the potential children whose futures hang in the balance when their prospective parents make decisions regarding their genetic makeup.

Recently, the Human Fertilisation and Embryology Authority (HFEA) made the following statement regarding the welfare of the child and reproductive technologies: “There should be a presumption to provide treatment to all those who request it, unless there is evidence that the child to be born would face a risk of serious medical, physical or psychological harm” (Gavaghan 2007:42). The HGP further reminds us that genes differ from person to person and as Verhey points out, “a human person may not be reduced to her [or his] genes” (2003:150).

Some of those opposing genetic manipulation see it as dehumanising. As human beings are made in the image of God, interfering with human genetic material seems for them to go against this position of being made in the divine image. Several of these challengers of human genetic manipulation also makes a distinction between somatic genetic manipulation, where only the cells of an individual body is handled, and germ-line genetic manipulation, working with the hereditary material that is passed on to future generations, finding the former more acceptable (Deane-Drummond 1997:96-98).

This perspective on creation suggests that any interference with the genetic makeup of human beings goes against humankind as created *imago Dei* and that the decision as to what kind of human beings there should be, should be the prerogative of God. The theme of human dignity and human rights needs be mentioned here, as opponents of PGD and GM view the interference in the human genome as a violation of human dignity. This aspect will be discussed in the final chapter of this study, as well as referred to in the chapter that follows, where special attention will be paid to the issue of human dignity and human rights within the South African context.

The genetic manipulation of farm animals, where animals are manipulated solely for human benefit, also provides the perception that animals are simply resources to be managed (Deane-Drummond 1997:83). The same principle can easily be applied to human genetic manipulation; is it not possible that human beings are seen as resources, manipulating the babies that will benefit the parents most?

Fletcher, however, is an example of someone who views it as a moral responsibility to not pass genetic diseases on to our children. “If we choose family size we should choose family health” (Fletcher 1987:351). In this opinion, choosing not to utilise biotechnology that would result in our children being born free from hereditary diseases and genetic defects would be the morally objectionable action. Formulating the issue as one of moral responsibility for the generation to come is then clearly a perspective on the role that human beings should play in creation, taking responsibility not only for ourselves, but also for the rest of creation, also those not born yet.

One of the most commonly heard fears is that using PGD and GM will result in a homogeneous dystopia of blond-haired, blue-eyed children. However, as Gavaghan, indicates, most parents seem to want children who resemble themselves, and even if they didn't, “... those without the requisite genes for blue eyes or blond hair will quite simply be unable to pass those traits on to their offspring ...” (Gavaghan 2007:8). While this is the case with PGD, where the embryo is simply selected from those selected from the genetic material of the parents, it is not entirely true of GM, where the existing genetic composition is altered, even to include qualities that are not in the parents’ genetic make-up.

Even so, it seems unlikely that GM would lead to an entire generation of Aryan, blond children with blue eyes, as most likely the only parent who would choose such a composition would be blond with blue eyes themselves. It does not seem plausible that a couple in Nigeria or Korea would choose to have such a baby rather than one that resembled them in some way.

But what of the children that will be born after PGD and GM? How will they react to this intervention in their genetic makeup when they are old enough to realise what was done to

them? In the following section, the emotional and psychological effects that PGD and GM could have on the children of these kinds of technologies will be examined.

#### ***2.4.1.1 The influence on children born after Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation***

The response of children born after PGD and GM relating to this technology would be, for the most part, psychological and emotional, as they could hardly complain that they would have wanted to be born with a genetic disease or with lesser abilities.

There is, however, also the danger of children being loved only because they conform to their parents preferences (Shannon 2000:51). Gavaghan (2007) also indicates this:

Is it plausible that parents who use PGD will see this as a guarantee that their children will grow up according to their expectation? Such an assumption would display a startling degree of ignorance about the interaction between genes and environment and a naïve faith in genetic determinism.

(Gavaghan 2007:66)

However, as discussed earlier, if science and technology were honest about the expectations and did what could be done to ensure that prospective parents understood the process and to dispel such naïve anticipations, this can easily be avoided. Having unrealistic expectations of one's children and pressuring them to fulfil certain roles or live up to idealistic and impractical standards are also not the domain of children of PGD and GM alone and many parents expect this from their naturally born children. Julian Savulescu suggests:

Parents inevitably have hopes and expectations for their children which are deflated every day ... Some parents want their children to be great musicians. Sometimes their

desire becomes overbearing ... the answer is not to ban music schools. The solution is to help parents become more tolerant and accepting.

(Savulescu 1999:373)

The role of proper counselling prior to PGD and GM as an essential and compulsory factor should dispel these expectations and as seen above, the problem is with the attitude of parents. It is not illogical to assume that the kind of parents who would cherish unrealistic expectations of their child and pressure him or her to perform to a certain standard and achieve certain goals regardless of the child's inclination and wishes, would be the kind of parents who would expect that with or without PGD and GM.

Jonathan Glover reflects that most likely, there exists widespread agreement that what we owe to our children is related to their having a good life, but also to encourage and respect their autonomy. To have a good life, one needs obvious physical articles such as food and drink, shelter and warmth, clothes, medical care, and so forth, as well as non-physical needs like love and warmth, security, stimulus, and the chance to develop their talents and themselves (2006:51). From the perspective of what Glover terms “procreative perfectionism”, which will also be discussed at the end of this chapter as part of the distinction between therapy and enhancement, in light of owing our children the good life also means that we should aspire to have children who will have the best probability at this good life. In this case, with reference to PGD and HM, it becomes not strictly a matter of what is owed to children, given that some are chosen rather than others, but no potential child is owed being chosen. However, it also remains important to keep in mind that in a simplified vision of what the good life would entail, the danger exists that the variety of forms of the good life can be overlooked, as Michael Parker points out (Glover 2006:53-54).

Allen Buchanan and his co-authors indicate that because we have increasing control through genetic technology, genetic disadvantages could become to be viewed as injustice “where genetic intervention to correct a child’s disability is possible, it should be seen as part of what we owe to that child” (quoted in Glover 2006:61). From this perspective, given that we owe our children the medical treatment that they need, in principle genetic therapy would be no

different. The matter of PGD and HM with regard to people with disabilities will be discussed later in this chapter.

Chadwick discusses possible grievances that those that undergo GM at their parents' decision might have and indicates how all of them are essentially illogical. Stating 'I should not have had my genome altered' or variations of this, presupposes that identity has been preserved. The source of this grievance should therefore be looked for elsewhere (2001:193). Grievances on the variation of 'I should have been someone else' is also incoherent, in view of the fact that *I* could not have been someone else, as then someone else would have existed and *I* would not (Chadwick 2001:193-194). As Tom Shakespeare says:

Saying 'I would not have been born' is not logical. The point is that you were born. Prior to your birth, there was no 'I' ... Souls do not wait in limbo before birth, being prevented from coming into the world by particular acts of contraception or termination of pregnancy.

(Shakespeare 2007:69)

Laura Purdy also reflects on the issue in the same train of thought, stating that, given that possible future "children do not presently exist as actual individuals, they do not have a right to be brought into existence" (2004:341). John Harris reflects on claims that the decisions parents make can cause a child not to exist, and indicates that "since the child is as yet unconceived it does not exist anyway. Moreover and more importantly, it never will exist, and for both these reasons it cannot be harmed" (1998:71). Grievances such as 'I should have been born free from this genetic disorder' could only be made by those who were not given GM treatments and as such, is rather an argument in acclamation thereof. Finally, saying that 'I should not have been born' states that the person with the grievance was harmed by being brought into life, which is irrational or is rather an emotional claim that it would have been better if *I* had never existed (Chadwick 2001:194). Given that it is impossible to make this kind of claim on the basis of fact, it also is not a valid grievance that the children of PGD or GM could make.

Leon Kass indicates that children have brought legal suits against their parents for social and physical handicaps that can be tied to their birth and in the United States at least, courts have recognised the justice of these claims, although they have not awarded damages to a claimant (2004:346).<sup>50</sup>

Another aspect that bears mentioning is the difference between healing and enhancement, utilising biotechnology in order to cure a hereditary disease or repair a genetic disorder, and using GM or PGD to “improve” an otherwise healthy embryo. This distinction will be made at the end of this chapter, but should also be referred to here as part of the discussion on general criticism and commendation regarding PGD and GM on the basis of the children that could be born from it.

The issue of “enhancing” an embryo that has no medical flaws for the sake of “improving” it in some way has extensive implications for the bioethical debate surrounding the utilisation of PGD and GM. Michael Sandel articulates the moral objection towards the seeking of perfection and the human disposition that is expressed by it as the drive of the designing parents to master the mystery of birth: “Even if this disposition does not make parents tyrants to their children, it disfigures the relation between parent and child, and deprives the parent of the humility and enlarged human sympathies that an openness to the unbidden can cultivate” (Sandel 2007:46). Intervention in nature for the sake of health, however, is not a boundless bid for dominion and mastery (Sandel 2007:46-47). This implies that when PGD and GM are utilised as a means of healing, for the curing of hereditary diseases and genetic disorder, this point of criticism does not remain valid.

Criticisms of this kind have a perspective on creation where human beings do not have the right to decide what kind of a child they wish to have, as decisions regarding a person's genetic makeup are the prerogative of God. This view then sees any interference in this authority and privilege of God as ‘interfering’ with the work of God. It is also from this perspective that the phrase ‘playing God’ is frequently found, as seen earlier.

Verhey also responds to the accusation that human intervention in genetics through biotechnologies such as PGD and GM is “playing God” and complicates this statement, indicating that the phrase “to play God” means different things to different people. Edmund

---

<sup>50</sup> With regards to the “wrongful life” claims, see also Harris (1998:100).

Erle, for example, claimed that the phrase was without meaning, “non-sensical”, “unconstitutional or blasphemous” and even “immoral”, asserting that for the phrase to have meaning it should mean a single, universal moral principle (2012a:1016-1017).

Sandel also declares one of the ethical implications of the choosing of genetic traits and being allowed to alter and “enhance” them by means of GM as resulting in human beings viewing their talents and powers to be their own, and not a gift from God (2007:85-86). This also expressed a very specific view on creation and the role of human beings as created beings, and more specifically, being created by God, within it.

#### **2.4.1.2 Gender selection**

Fukuyama indicates that because of the conferred advantages in terms of social prestige and security for old age, in many Asian cultures, having a son is preferable to having a daughter. This, he states, “clearly harms the girls who then fail to be born” (2002:96). Gavaghan, however, questions the implied assumption that a being which has never existed can be the subject of harm (207:60). Harris also argues that when one is making a choice between existing people, unfair discrimination becomes a distinct possibility. This can never be the case in choosing between embryos, because no one will suffer adversely from the decision (2007:106-107).

It has already been stated that those who are not born cannot be harmed, on account of never having existed, any more than those who exist can claim that but for some form of intervention, they would not have existed. But, even though the girls in question cannot be harmed *per se*, it nonetheless raises an important question of concern - would PGD and GM favour one gender over the other and as a result, perpetuate existing prejudiced and discriminatory practices and attitudes towards women?

This is also the position that Jones takes in his argument against using PGD for the selection of gender, namely that this perspective views sex as a disease and that it contributes to inequality (Shannon 2000:72). Gavaghan states: “Why would parents go so far as to reject

otherwise healthy embryos on the grounds of sex if they did not hold a marked preference for children of one sex or the other? And is such a belief not, by definition, sexist?" (2007:129).

This is not necessarily the case, as some prospective parents would want to select the sex of their child for family balancing, when they already have one or more child of one gender and now wishes to have one of the other. This is not based on the absurd assumption that one sex is 'superior' (Gavaghan 2007:129). It is also true that prospective parents choosing one gender over another because of the sexist view that one gender is superior, already have this prejudice and therefore, even if they were permitted to act on it, it would not encourage their prejudice, given that it was pre-existing and would have been in place regardless.

What is at stake here should then rather be existing prejudices and attitudes. The wish to select the sex of their child does say a lot about parents, and raises an even more important issue for Gavaghan, namely preconceived notions about how a child of one gender should behave (2007:130). Parents selecting to have a girl might expect a little princess who loves her dolls and wants to bake with Mommy. What if she was, however, to be a tomboy more interested in climbing trees with her brothers and participating in sport? If parents make the decision to rather opt for a boy, how will they react when his greatest ambition is to become a fashion designer or professional ballet dancer?

But these are rather questions about social conditioning and it should be kept in mind that any parent who rejects a child on the basis of their not conforming to expected gender roles, would have done so whether the child's gender was naturally conceived or engineered.

There are also fears that allowing prospective parents to choose the sex of their future child would lead to the balance between sexes being disturbed. This, however, is an inherently sexist view, assuming that parents would favour one sex above the other. It is doubtful that this would, in fact, happen, but prohibiting all instances of PGD used for gender selection on the basis that the balance between the sexes *could* become disturbed is rather short-sighted. Harris also indicates that policies that favour the production of male children so such a great extent that discrimination against female children becomes prevalent and of endemic proportions, would

in the long-term be self-correcting (1988:14). In a later publication, he also indicated that gender selection is morally neutral and argues that it is hysteria to assume that a pattern of preference would inevitably emerge (Harris 2007:146-147). If it does become clear that prospective parents are generally favouring one sex, *then* legislation could be put into place to limit the instances where sex selection is allowed.

#### ***2.4.1.3 Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation and 'saviour' siblings***

Let us imagine a hypothetical case. Mr and Mrs Smith are both carriers for a genetic disease, for example, beta thalassaemia major, an autosomal recessive disorder, which causes an abnormally high rate of breakdown of the red blood cells and leads to severe anaemia. Frequent blood transfusions are needed, but the only thing that can act as cure or be a long term solution, would be a bone marrow transfusion, given that the frequent blood transfusions needed usually result in iron overload and subsequent organ deterioration.

Mr and Mrs Smith's only child, Johnny, has this disease. As no marrow donor can be found that is a match with Johnny, Mr and Mrs Smith decide to have another child and by using PGD and screening for compatibility, they ensure that the prospective child they are about to have will be an ideal match for Johnny. At the birth of their second child, they then harvest stem cells from the umbilical cord to be used on Johnny, thereby curing him of beta thalassaemia major.

This procedure would involve five steps. Firstly, several embryos are created by IVF, using gametes of the prospective parents, and secondly, a single cell from the embryos is biopsied. Thirdly, PGD is used to screen the embryos for the presence of whatever genetic disease is at stake, whilst simultaneously screening is done to ensure compatible umbilical cells, 'tissue typing' in popular parlance. Lastly, the embryos found to be either affected by the same disease or incompatible with the tissue of the sick child are discarded and those that are unaffected and compatible are implanted (Gavaghan 2007:143). Glover also points out that the context is of immense importance in the case of 'saviour siblings' and furthermore, to keep in mind that the second child is not harmed through the process (2006:68).

The ethical question posed by situations such as these are whether children are being used as a means to an end? In this regard, Gavaghan wonders whether it is at all possible to treat a 'potential future child' as an end in itself (2007:141). He goes on to argue that there is nothing intrinsically wrong with treating another human being as a means to an end, as long as one does not lose sight of the reality that that person is also an end in his- or herself. Gavaghan cites Beauchamp and Childress' example where one buys a newspaper or item from a vendor, when that same objective could have been obtained by means of a vending machine or non-sentient robot. In that instance, one would be treating that person as a means to the desired end, for example, to read the newspaper (2007:156). In this regard, it is helpful to consider the hypothetical case that Walter Glannon refers to, namely a scenario in which reproductive human cloning is possible and permitted, and "the parents of a recently deceased or dying child want to clone an individual who is genetically identical to that child and thus 'replace' it to compensate for their loss or else carry on the family line" (2001:118). Building on the idea of the Kantian imperative<sup>51</sup>, he admits that if the parents' only intent would be to replace their child or receive some sort of compensation, they would be treating the cloned individual solely as a means to an end. This would also deny that individual the inherent dignity and worth that all human beings possess by virtue of the fact that we are human agents with the capacity for reason. For Glannon, however, the motives for creating this hypothetical cloned individual are not as important as how it would be treated throughout its life:

If the clone were loved and treated with the dignity and respect commanded by its intrinsic worth, then cloning might be morally justifiable on Kantian grounds. Although the intention to clone the child suggests that he or she would be treated instrumentally, the fact that the child is treated as a unique individual once she exists is enough to dispel any moral qualms about the parent's behavior.

(Glannon 2001:118)

By the same reasoning then, even if a child is created 'as a means to an end', in this case to save the life of a sick sibling, it would only be considered problematic if that child is viewed

---

<sup>51</sup> See also Glover (2006:65).

*solely* in those terms, not just at the time of selection of the embryo or the genetic modification to ensure a tissue match, but also throughout his or her life.

In any ethical discussion, it is important to clarify which decisions of prospective parents seeking to make use of this technology to have a child that can act as donor for a sick sibling are being ethically scrutinised: the decision to have a child, to screen the embryos, to implant a particular embryo or to later consent to the retrieval of umbilical blood.

Relating to the first question, the decision to have a child, the question would be whether or not it is in the best interests of the child. As Gavaghan states, this is a nonsensical question: “Given that, at the time of decision, the child in question has only a hypothetical existence, it cannot possess any sort of interest, far less best interests. How, then, can its ‘best interests’ inform the decisions?” (2007:151)

The question that Gavaghan then poses in return, is whether it should be incumbent on prospective parents to give priority to the hypothetical interests of a future child over the actual interests of an existing child? (2007:151).

It is also important to keep in mind that what is being asked of these so-called ‘saviour’ siblings is not intrusive surgery or surgical intervention to harvest the required tissue, but rather tissue extracted from the discarded umbilical blood. Sheldon and Wilkinson indicate that the selected child may benefit from the existing child's company and may well derive pleasure from knowing that he or she had saved a sibling's life. Guido Pennings, Henri Schots and Ingeborg Liebaers even go so far as to state that “parents who want to have another child anyway, have an obligation to try this last possibility of saving their sick child” (Gavaghan 2007:153).

Shannon, however, rejects arguments such as these, arguing that it is the creating of a human being for the exclusive purpose of saving another human's needs (2000:115).

Should the parents have wanted to have another child in any instance, does this make the matter, ethically speaking, any easier? Then they are not creating this child purely to save an existing child, but would have had another child anyway, and are simply selecting what child to have.

The view on creation at work here closely relates with the previous, as here it is also a case of human beings deciding what kind of child they want to have and as such ‘interfering’ with the work of God. This perspective that opposes PGD and GM on the basis that human beings would ‘interfere’ in God’s work by procedures of these kinds, views the decision on what kind of human beings there should be as the prerogative of God and not one that humankind or prospective parents have the right to engage in. It also views human beings born as free and autonomous, without being created or born *for* anyone else.

The issue of being born to serve the needs of another person also brings us to the question of social justice. This will be discussed at more length in the following chapter, where the South African context in particular will be of importance. However, it also deems brief mentioning here as part of the bigger criticisms against PGD and GM and how they illustrate a specific perspective of creation and God as Creator.

#### **2.4.2 Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation and People with Disabilities**

In the previous chapter, it was indicated that part of the development of the field of bioethics was public outrage at the atrocities of biomedical ‘experimentation’ that occurred during the Nazi regime in the Second World War. This also has particular bearing on the Christian bioethical discourse on PGD and GM and the effect it could have on people with disabilities, given the extreme dehumanisation that took place during the Holocaust with regards to people with disabilities. Anton van Niekerk mentions these transgressions against human dignity that occurred at the hands of Nazi perpetrators<sup>52</sup> and indicates that the experimentation on people with disabilities sent a clear message to other people with disabilities in both Western and Eastern Europe at the time. This message was that:

---

<sup>52</sup> For a discussion on the practice of eugenics during the Nazi regime, see Glover (2006:27-28).

Disabled people were regarded by the Nazi authorities and their supporters as inferior, unwanted human beings that it would be preferable to rid the world of, and that the best use that could be made of them is to exploit their vulnerability in order to experimentally test the limits of human endurance, and to try and establish how a superlative, physically perfect super-race can be created – a race from which they, in principle, would be banned.

(Van Niekerk 2013:103)

Regarding PGD and GM and the influence it could have on people with disabilities, especially with regards to the message that it sends to people with disabilities<sup>53</sup>, Verhey indicates that:

On the one hand, we support their [people with disabilities] full inclusion into society and their rights to an equal freedom. On the other hand, we seem committed to a reproductive freedom that includes the freedom to prevent a child with a disability from being born. It is not easy to see how the negative judgement on the lives of disabled persons in such reproductive freedom can long sustain the social commitment to their full inclusion.

(2003:154-155)

Glover defines disability by postulating that “all disabilities involve functional limitation. This contrasts with purely socially constructed disadvantages” (2006:8), or in other words, difficulties or shortcomings that are socially imposed. He allows that all people, even those who have no recognised disability, have some functional limitations compared to the average person. For this reason, there is only a limitation of functioning if it damages the facilities or abilities for human flourishing (Glover 2006:9-10).

---

<sup>53</sup> See also Reinders (2013:31); Glover (2006:29-36) and Harris (2007:100-106).

Van Niekerk also further points out that literature define disability in three ways: medical, social or philosophical. The medical definition of disability is “a condition resulting from the malfunction of a part or parts of the human body or mind”, while the social definition is an “alleged adverse condition, but one that exists relative to the way in which society ... creates the condition” (2013:105). In the philosophical definition, disability is “understood in terms of real limitations that are experienced in bodily and/or mental functioning” (Van Niekerk 2013:206)<sup>54</sup>. Nico Koopman also indicates that people with disabilities experience vulnerability in a specific way. This vulnerability is physical, social and teleological, given that, in the first instance, a large number of buildings are constructed in ways that restrict and limit their movements. In the second case, people with disabilities experience social exclusion and avoidance on a daily basis. Lastly, and perhaps most importantly, Koopman signifies that people with disabilities are to a certain extent: “excluded from opportunities to make unique, indispensable contributions” (2013:45). He goes on to state that “in a culture of economisation, commodification and the estimating of someone’s worth in terms of economic value, people with disabilities experience that their contributions are valued less, because they are presumed to have less economic value” (Koopman 2013:45).

This has severe implications for the way that people with disabilities are viewed also in terms of human dignity. The aspect of human dignity will especially be discussed in the following chapter, when PGD and GM it is dealt with in the South African context with its inequalities and the reality that only a small percentage of the population would be able to access and afford these types of biotechnology. Human dignity does also merit a mention here; as Hans Reinders indicates that the notion of human dignity is based on the distinct human capacities. Given that these distinct capacities are exactly what render us unequal, however, it soon becomes clear that these capacities cannot be the basis for human dignity (2013:39). PGD and GM concerning people with disabilities then also have to take human dignity, also as a characteristic of people with disabilities into account.

Reinders postulates then that human dignity “is conferred upon each and every one of us because of our equal relationship with God. It is not the relationship we have with hum by virtue of our distinctive capacities ... but the relationship he has with us as his creatures that grounds our dignity” (2013:40). This account of human dignity as bestowed equality on all people, which will also be referred to again in the next chapter, has not only theological, but

---

<sup>54</sup> For a discussion on “normal functioning”, see Van Niekerk (2013:106-107).

also ethical implications. Reinders states that the loving kindness God confers on all of God's creatures as the basis of human dignity has repercussions for the way that people with disabilities are treated by society in the sense that Christians should attempt to mirror this loving kindness (2013:40).

Brian and Stephanie Brock share their experience of having a child with disability and refer to Barth's eschatological openness to the disabled in stating that "the value of this kind [disabled] of life is God's secret. Those around and society as a whole may not find anything in it, but this does not mean that they as a society have a right to reject and liquidate it" (2007:40). Swinton (2007) further states:

The use of genetic technology to prevent the birth of disabled children raises the question of why we want to live in a society within which a person's desirability is determined primarily by the configuration of their genes and the vacillating social consensus as to whether or not we should accept or reject that particular configuration.

(Swinton 2007:2)

In addition, Swinton draws attention to the fact that with the advent of genetic testing, there has been a concomitant decrease in the birth of babies with disabilities. However, in his opinion, genetic technology does not seem to be being used to find or offer a cure or treatment for these disabilities; rather, the focus seems to be on identifying and preventing said disabilities, where preventing primarily entails abortion: "Despite the public rhetoric of inclusion, equality and citizenship for people with disabilities, there remains a strange silence around the implications of genetic science and technology for the lives of people with disabilities" (Swinton 2007:1-2).

Whilst this argument could be used against PGD, where embryos would be chosen because of a lack of abnormalities, it is in actual fact an argument *for* GM, which tries to correct any abnormalities in the embryo, rather than aborting it. Those that argue against abortion would also do well to get on the side of GM for exactly this reason: that abortion because of

irregularities or deformities of the fetus would decrease remarkably, if GM were permitted and able to correct these abnormalities.

Waters refers to the selection of embryos on the basis of lack of disability and states that if this: “becomes practices widely it will produce a prejudicial climate against persons with disabilities”, who would then be viewed as a class of unwanted persons, products of imperfect preventative techniques or irresponsible parents and argues that accordingly, legislation should be put in place to restrict the range of conditions that can be tested for and selected against (2007:207). Kass further postulates, indicating the clear perspective on creation that is at play, the implications of genetic abortion are much more extensive than abortion in general, because of “the belief that all human beings possess equally and independent of merit certain fundamental rights, one among which is, of course, the right to life” (2004:344-345).

One of the strongest criticisms against using PGD and GM to reduce the number of people with disabilities is that empathy and support for people with disabilities might be reduced. Shakespeare states that as a condition becomes rarer, the impetus to find a treatment or a cure diminishes, furthering the isolation and prejudice that disabled people face and reducing pressure to make society accessible to all (1995:31). If genetic disease is no longer viewed as a random characteristic, it is possible that society could reduce its communal commitment to people with genetic disabilities and funding for research to combat the medical problems of such people could be discontinued (Andrews 2001:101).

However, it is also possible, as Gavaghan further indicates, that the position of some people with disabilities might be improved if their disability becomes less common, for example, people suffering from cystic fibrosis who require regular access to kidney dialysis or to organ transplantation may see fewer people ‘compete’ for the scarce resources they need to access (2007:105). Fear for a loss of support to existing disabled people should rather be met with a guarantee of support and by proactive programmes and procedures set in place that will ensure their support, rather than trying to make sure that the number of people with disabilities is not reduced.

Prevention and support are also not incompatible, as Shakespeare later also asserts by referring to the widespread practice of inoculating against polio, which does not cause discrimination

against people who have polio and to China, where a strong eugenic policy is maintained alongside increasingly good provision for people with disabilities (2007:70).

PGD and the resulting abortion of babies with disabilities seem to send a particularly negative message to those who are living with the conditions we are trying to eliminate. As Swinton postulates, it sends the message that "we love you now that you're here", but that it would have been better, nevertheless, if you did not exist and your birth had been prevented. It contends that their lives are not worth living and that they are inferior human beings. Whilst most forms of stigmatisation are primarily social and psychological, this type of stigmatisation is ontological, stating that the most fundamental component, their very DNA, is flawed (2007:6-7).

Christopher Newell also calls us to recognise that the notions of genetics, disability and humanness are contested socio-political spaces (2007:47). It should also be noted that genetic research often carries with it inherent subjectivity. It can be quite confidently stated that there is no research being conducted to find the 'genetic disposition' toward an outlook of justice or democracy, whilst the media are full of reports on research to find genes that indicate that some people are more inclined to violence, promiscuity, homosexuality, or even a belief in God. Brian Brock, Walter Doerfler and Hans Ulrich ascribe this to the fact that, unlike the traits mentioned previously, the belief in democracy or capitalism, for example, is not viewed as a disease by practitioners of modern science. They further note: "That it seems sensible to research the genetic basis of homosexuality but not of democracy indicates how the genetic sources of various conditions are not only tied to human suffering but also to questions we can no longer talk about in public" (Brock, Doerfler & Ulrich 2007:149).

Lori Andrews also notes: "In studies with varying degrees of scientific repute, genes have been implicated in shyness, bedwetting, attempted rape, homosexuality, manic-depressive disorder, arson, tendency to tease, traditionalism, tendency to giggle or to use hurtful words, and zest for life" (2001:57). Newell (2007) also quotes Mary Johnson, who said that:

A decision to abort based on the fact that the child is going to have specific individual characteristics such as mental retardation, or in the case of cystic fibrosis, a build-up of mucus in the lungs, says that those characteristics take precedence over the living itself. That they are so important and so negative, that they overpower any positive qualities there might be in being alive.

(Johnson, as quoted in Newell 2007:50).

Newell also strongly criticises the practice that views genetic screening or PGD on the grounds of gender as an undesirable "social" reason, whilst maintaining that screening on the grounds of disability is a valid and understandable "medical" reason (2007:50-51).

To the argument that foetuses with disabilities are aborted 'to avoid suffering', Swinton further inquires whose suffering is in question. He refers to a young woman with Down's syndrome and a serious heart condition. By her own interpretation of her experience, she has a positive self-identity and a strong spiritual relationship with God, who, as she puts it, made her 'special'. This leads Swinton to conclude that "the quality of a person's life cannot be anticipated by means of a genetic test" (2007:4-5).

It is also important to note that the category of the 'healthy unwell' has existed for some time, as the majority of the deaf community, for example, does not consider themselves disabled, whilst those that are not deaf usually view them as such (Newell 2007:49)<sup>55</sup>.

Holder-Franz also mentions the high margin of error in genetic testing and PGD and relates her experience of ministering to various families who decided to go through with pregnancies after the prenatal genetic tests had indicated the presence of disability, only to have a child born without any form of disability (2007:58). Mary Mahowald (2007) quotes Parens and Ash, who contend that:

---

<sup>55</sup> For a discussion on choosing deafness through PGD or GM and the interests of the child, see Glover (2006:23-26).

First, prenatal diagnosis undercuts recognition of the extent to which the meaning and impact of 'desirability' are socially constructed; second, it implies unwillingness of parents to accept an imperfect child; and third, it usually involves inadequate understanding of the disabilities it attempts to avoid.

(Parens & Ash, as quoted in Mahowald 2007:102)

This, however, is not necessarily the case. Although the termination of pregnancy is intensely problematic from a perspective of disability rights, in the case of GM, it would be more accurate to say that parents would be unwilling to accept an 'imperfect' child if the factors making him or her 'imperfect' could be avoided.

"The more commonplace it becomes for people to choose whether they want to have a particular baby or not, the less chance there is that those perceived as the weakest will be chosen" (Holder-Franz 2007:60).

Further, stating that inadequate understanding of the disability contributes to termination of pregnancy is also incorrect, as Mahowald points out that in the case of Down's syndrome, at least, in the majority of cases, the more information prospective parents have, the higher the likelihood that the decision to terminate will be made (2007:102).

Few parents have the economical, sociological and psychological resources to provide adequate care after birth to a child with disability, yet society most often expects them to. "Acknowledgement of one's inability to care for another is not equivalent to rejection of another because of a condition, or trait that renders the other unworthy of care" (Mahowald 2007:103). For this reason, Mahowald judges the decision of a prospective parent or parents to terminate a disabled foetus as eugenically neutral, as long as the rationale for the decision to terminate is conditions other than the disability itself (2007:106). Saying that one does not judge oneself able to take care of a disabled child is one thing, saying that one does not want a disabled child because disabled people are a burden on society or inherently inferior is another.

One of the most important questions that this raises for Christian bioethics is what should be viewed as a genetic 'defect'. Reinders (2007) formulates this as follows:

Quite frequently people with genetic disorders resent the notion that their lives are somehow 'defective'. By implication, they also oppose the claim that it would be better to have them changed, or, if impossible, to prevent them from coming into existence altogether.

(Reinders 2007:163)

Reinders reflects on the goodness of life, not necessarily as it was chosen, but how it turns out to be, drawing on the experiences of many disabled people who appreciate their lives as meaningful and worth living, even though it was not what they would have chosen for themselves. He concludes that life is good as it is, even when it is not the kind of life we would describe as 'normal'<sup>56</sup>. He also states that in this instance, ethical discussion does not so much call for a mapping of the morally right and morally wrong, but rather about what we regard as the good of human being (2007:163-165).

This also poses further questions: If someone tests positive for a certain genetic disease, do they have the duty to inform close relatives that they might be at risk? May a doctor waive confidentiality to tell, for example, a patient's twin that he or she had a genetic disease if their sibling tests positive and does not share the news? (Andrews 2001:45-46).

There is also the difference in the age of onset and the effects of different genetic diseases. Whilst some, such as Tay-Sachs disease, is severely debilitating in infancy and causes very young death, other diseases take years to manifest and even then, in varying degrees. There is also the fact that in some screenings, only the 'probability' for genetic disease can be tested for, which means that even if a child is at risk, it does not necessarily mean that he or she will be affected by the disease in any way (Andrews 2001:57-58). However, the reality at present is

---

<sup>56</sup> See also Glover on the subject of normalcy not being a statistical concept (2006:12).

that “when pregnant women do not undergo available prenatal testing, health care professionals blame them for the resulting genetic conditions of their children” (Andrews 2001:85).

Andrews also mentions the ‘publicisation’ of pregnancy, in Katherine Franke's words, in which women become subject to public scrutiny regarding her life, lifestyle and medical decisions the moment that they become pregnant. This confirms the premium put on healthy babies over and above the best interest of women, such as physicians ordering caesareans on non-consenting women because it is “necessary for the fetus”. Minimal respect is often given to women's bodily integrity and autonomy, giving the impression to women and society that they are mere fetal containers (2001:85-86). Andrews states:

While a couple might not be likely to abort a fetus based on its sex or based on its being an unaffected carrier of a recessive disorder, they may, when faced with a high volume of embryos, only a few of which can be safely implanted in the woman, decide to implant only noncarrier embryos or of a particular sex.

(Andrews 2001:99)

Prenatal testing and PGD identifies foetal conditions deemed undesirable and as these conditions are at present without a cure, in numerous cases, the foetus is then aborted. The majority of the criticisms raised against the screening for disabilities mentioned above focused strongly on the fact that embryos or foetuses that seemed to have some sort of disability are then aborted. The development and use of PGD and GM would limit these abortions, as with genetic intervention into the conditions that leads to the decision to terminate, the genetic disorders or hereditary diseases could then be treated and cured.

Harris defines disability as “a condition that someone has a strong rational preference not to be in and one that is moreover in some sense a harmed condition” (2007:91). For this reason, he affirms the moral status of all persons, disabled in some way or otherwise, and indicates that opting not to keep a neonate with a disability, (or genetically intervening in some way) is not an attack on people with disabilities any more than curing disability would be (2007:95).

### 2.4.3 Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation and Social Justice

Science fiction is full of examples of hypothetical situations of what could happen, should the issue of justice not be applied to PGD and GM. One only has to think of the numerous novels and movies that tell of a species divided, where one portion of the human race, the rich and successful, are ‘perfected’ individuals, whilst the other, lower classes are made up of those who are ‘unperfected’. In popular discussion on PGD and GM, the majority of people seem to base their fears of possible phenomena and events following these biotechnologies on literature or films, with even academic works citing examples from science fiction<sup>57</sup>. Science fiction, however, had to investigate the worst possible outcome; a story where biotechnology is utilised and nothing happens would be neither marketable nor much fun to watch.

The classic science fiction novel, *The Time Machine*, originally published in 1895, tells of the future where the labouring and leisured classes have diverged to the point of becoming separate species, and the former, denied the civilising influences of high culture and education, have become the beast-like Morlocks (Gavaghan 2007:171-172).

In the 1997 film *Gattaca*, the so-called ‘valids’ are those whose parents have selected the best possible traits by PGD, whilst the ‘invalids’ are those who were conceived naturally. Although it is illegal to discriminate against someone on the basis of their genes, in practice, it is easy to discover a person's genetic makeup and ‘valids’ qualify for professional employment whilst the ‘invalids’ are used for unskilled labour as a result of being viewed as more susceptible to disease and educational disabilities. The only way for ‘invalids’ to rise above their genetic profile is to ‘buy’ a profile from a ‘valid’, impersonate him or her and by so doing, become a ‘borrowed ladder’. It is especially interesting that the birth of a child to those couples that opt to have a baby without the intervention of biotechnology is termed a “faith birth.”

The television series *Dark Angel*, which aired for the first time in 2000, stars Jessica Alba as a genetically enhanced super soldier who escapes from the government facility that created her and starts the search for the others that the same facility created. In this series, the fear that GM could be used by governments to create better soldiers and that these individuals would then

---

<sup>57</sup> See, for example Gavaghan (2007:65-66; 69; 103; 108; 171-172; 191).

come to be viewed as the property of the government came to the fore. The unfair advantages that the genetically enhanced characters have over their pursuers are clear and also speak of the apprehension for the injustices that GM could lead to.

In *Star Trek: Wrath of Khan*, the crew of the Enterprise encounters Khan Noonien Singh, a genetically enhanced human being. Although Khan very much superior to his human counterparts physically and mentally, he is also a great deal crueller; he seems to be without the human capacities for mercy or kindness and spends years contemplating revenge against those he believes have done him wrong. This movie was adapted and remade in 2013 as *Into Darkness*. One particular dialogue in the 2013 film is noticeable of recapitulating the fear of GM; that those “enhanced” in some way would be “better” than the rest of us and use that improvement to their advancement to the detriment of those that have not been enhanced, when Khan announces that he has been asked by the government to design more sophisticated weapons and Captain Kirk asks why Khan was chosen for this task:

Khan: Because I am better.

Captain Kirk: At what?

Khan: Everything.

As Gavaghan sums up the issue at hand, the fear is that unequal access to this kind of technology could cause or exacerbate pre-existing divisions (2007:172). Maura Ryan indicates that high-demand genetic therapies such as PGD and GM “are likely to be both very costly and (as in vitro fertilization and other reproductive technologies) available only to those who are willing and able to pay for them” (2012:977).

If the wealthy were to use PGD and GM to prevent certain diseases in their children, the possibility exists that empathy and concern for these diseases could disappear and that they could later become ‘low-class’ diseases. Furthermore, if illness is thought of as something avoidable, social provision and care for the sick might also be reduced (Gavaghan 2007:172-175). Fukuyama further notes: “If wealthy parents suddenly have open to them the opportunity

to increase the intelligence of their children as well as that of all their subsequent descendants, then we have the markings not just of a moral dilemma but of a full-scale class war” (2002:16).

It should, however, also be kept in mind that the wealthy already have more access to expensive medical procedures and better health care and that those who can afford to go to private clinics and hospitals are already in a much better position than those who are forced to wait in line in state clinics and government sponsored hospitals. Although this too, raises questions of social justice, it would be improper and incorrect to accord these problems only to the use of PGD and GM in the future.

It is also true that genetic makeup is inherently unfair, even when only viewed in natural processes. Two world-renowned athletes (naturally, without making use of PGD or GM) having a baby together are very likely to pass on genes that would equip their future child for athletics and sport in ways that surpass that of the child of a couple where only one of the parents are slightly athletic. Is this unfair? Maybe. Can something be done about it? No. Genetic makeup, in every occasion, is a lottery. As has been indicated previously, there is no guarantee that even parents using every type of technology available to have a particular type of child, will get that particular child and even if they do, it would still be incumbent on that child to develop and practice the traits that he or she was given.

Sandel also refers to the argument of unfairness used in cases of, for example, genetically improved athletes: “It has always been the case that some athletes are better endowed, genetically, than others. And yet we do not consider the natural inequalities of genetic endowments to undermine the fairness of competitive sport.” (2007:12)

Sandel further refers to critique against choosing the attributes of children and asks why some component of unpredictability or randomness seems to make a moral difference? (2007:3) He also indicates that while the often levelled criticism that it violates the child’s autonomy to be able to choose his or her life plan for him- or herself, as seen in the statement made by Jeanette Winterson earlier, wrongly implies that children are born naturally are free to choose their own aptitudes and traits (2007:6-7). The question is therefore rather that a question of the autonomy of future children born after intervention by PGD and GM, whether it is ethically permissible

to decide the characteristics of children before they are born, as opposed to letting it be randomly up to the genetic lottery.

What is true, however, is that PGD and GM would lead to some having the cards stacked in their favour, or as Gavaghan quite eloquently puts it, some children could be born "not only with 'silver spoons' in their mouths, but with 'golden genes' in their chromosomes" (2007:179). He summarises the issue at hand:

What would be unfair about a genetic supermarket is not that some people would emerge from it with unearned advantages - that, of course, happens anyway - but rather that some people had the odds stacked overwhelmingly in their favour from the beginning.

(Gavaghan 2007:182)

Verhey also adds that genetic options may one day be socially enforced (2003:155). It should also be noted that a truly pro-choice position recognises the decision to not use pre-implantation diagnoses as a valid choice and is not a promoter of this technology (Gavaghan 2007:3-4). Often, those that argue the freedom of choice<sup>58</sup> in favour of biotechnologies such as PGD and GM becoming commercially available, is of the opinion that this would imply everyone should make use of it. Gavaghan reminds us that when one makes a case for the freedom of choice, opting not to make use of available biotechnology is also a legitimate and valid choice that should be respected.

However, specified choices usually make options mandatory, whether by law, economic force or simply by social custom (Callahan 1987:228). In the same way that keeping someone in a coma on life support where the chances of recovery are slim was at some point in time options that were available only in extreme cases and have now become the norm, PGD and GM could walk the same road.

---

<sup>58</sup> See also Peters (1998:15-20).

“... Genuine concern with fairness cannot be addressed by restricting access to GCTs, [germinal choice technologies] which are at worst just one manifestation of unfairness” (Gavaghan 2007:5).

PGD and GM can also be viewed as power. Deane-Drummond refers to the power wielded by biotechnology in agricultural practice as “becoming a means of oppressing Third World economies and [it] seems to drive a wedge between rich and poor nations”. As a result, the long term social consequences have to be taken into consideration (1997:82).

As indicated earlier the issue of social justice, especially in South Africa, with the large and ever growing divide between rich and poor, will be examined at more length in chapter three and the questions raised above will be engaged with more extensively. However, it is already clear that all of the criticisms raised above are coming from a particular perspective on creation, where everyone is, or should be, created equally and with equal human rights and human dignity. In this perspective, God has the obligation to be ‘fair’ in the creation of human beings and creating someone with any type of trait or traits that surpass that of other human beings would be God acting unfairly, given that these individuals would have an unearned advantage over others.

Once again, the issue of the decision regarding what kind of human being there should be are seen as God's prerogative and one that humankind should not engage with and usurp.

There are also some people who defend PGD and, more specifically GM, for enhancement purposes, arguing that there is no difference in improving children through GM and through education, tutoring or private lessons for sport, music and so forth. Critics, however, counter this argument by claiming that manipulating the genetic makeup of children is reminiscent of eugenics (Sandel 2007:51).

#### 2.4.4 Eugenics and Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation

In 1885, Francis Galton, a cousin of Charles Darwin, coined the term "eugenic". By this he meant that Darwin's theory of natural selection should be taken into humankind's own hands, through conscious selection of desirable and better pairings of genes. In 1904, Charles Davenport called for eugenic legislation (Verhey 2003:146). Mahowald states:

Etymologically, the term 'eugenic' comes from the Greek eugenics, which means 'well-born'. In light of this derivation, its meaning is a difficult as it has ever been to answer the perennial philosophical question, what is 'the good'?

(Mahowald 2007:98)

Eugenics is not a new or modern idea. Even in *The Republic*, Plato calls for selective breeding to result in the best possible leaders. Amy Hall (2007) also refers to the eugenic movement in evangelical Christian preaching in the United States in the 1920's and 30's and states:

One symbol of the eugenics movement in the 1920s and 30s was a 'Eugenics' tree, with roots branching out to tap the 'many sources' from which the eugenics movement drew in order to become a 'harmonious entity'. Through the 'self direction of human evolution', eugenicists hoped to cultivate a tree that would flourish, bearing only good fruit for the future.

(Hall 2007:79)

Many examples exist of the eugenic movement in Christian society and in an essay written by a Reverend C.L. Dorris in 1926, readers are accused of sloth and admonished for not providing "capable offspring for future generations" as there were too many "physically, mentally, and morally defective" people. Dorris therefore warned Christians to relinquish the "individual

theory of marriage for personal pleasure” and instead, plan marriages and offspring according to ‘racial consequences’, as: “We should demand that each child born is worthy of a place in our midst” (Hall 2007:89-90).

The Baconian project finds “a natural expression in genetic enhancement”, as it does not only set humanity over nature, but also against it, using technology to master nature, which has no moral standing in this perspective (Verhey 2003:152-153).

Justice O.W. Holmes, famous for saying: “Three generations of imbeciles are enough”, advocated that coercive sterilisation of a mentally retarded woman was justified (Mahowald 2007:96). Only when “... the Nazi atrocities demonstrated to the world the horrors to which a eugenic mentality and practice could lead did professional and public support for the movement decline and eventually grow silent” (Mahowald 2007:96). Aspects of this eugenic mentality resurfaced recently with the advances made in genetic technology.

Positive eugenics is the selection of particular desirable traits, while negative eugenics aims to eliminate traits that are deemed undesirable (Swinton 2007:3). Most mothers-to-be change their behaviour considerably during pregnancy to improve their chance of a healthy baby, conduct that the majority of people see as morally commendable. They stop smoking, consuming alcohol and caffeine and most start taking some sort of multivitamin supplement, even if they have never taken vitamins before. Mahowald, however, point out that “if positive eugenics is defined as the effort to promote the birth of ‘fit’ individuals, these behaviours may well be characterized as eugenic” (2007:98).

Mahowald puts the genocide committed by the Nazis to kill whole classes of people that were viewed as undesirable on one side and the health-promoting behaviour of most pregnant women on the other side, and states that: “Between these opposite ends of the spectrum are a range of behaviours that may be construed as eugenic - sometimes separately, and sometimes in combination; they all fulfil in some way the literal meaning of eugenic as well-born” (2007:99).

The one side, considered undesirable by Mahowald, opposes the autonomy of the people affected, has to do with people that are already born, terminates and not only prevents and is controlled by the government or the state. The other, desirable side, respects the autonomy of the affected people, has to do with people that have not yet been born, avoids harms and promotes benefits and is in the hands of individuals and directed towards individuals (2007:100).

However, the line between correction and enhancement is often difficult to draw, or even find (Shannon 2000:70). All forms of PGD and GM could correctly be argued to be enhancement, given that the individual born from it is in the majority of cases enhanced in some way, even it just by being born free from some genetic disorder. Even if an ethical case could be made for the correction of certain genetic diseases and disorders; could the same be said for genetic enhancement? That is the real question that eugenics raises. This question will be discussed at length at the next section, where a distinction will be made between utilising PGD and GM in order to heal hereditary diseases and to correct genetic defects, and using it for the enhancement of the human being involved.

## **2.5 The Distinction between Curing and Enhancement**

Paul Rootwolpe argues that enhancement is a slippery social construct and turns to issues of reimbursement, public policy and normative behaviour, stating: “Yet, ultimately, any exclusive enhancement definition must fail, in part because concepts such as disease, normalcy, and health are significantly culturally and historically bound, and thus the results of negotiated values” (2002, quoted in Savulescu, Ter Meulen & Kahane 2011:4). In addition, the reality that such an approach is inherently relative is stressed by James Canton: “Different cultures will define human performance based on their social and political values” (2002, quoted in Savulescu, Ter Meulen & Kahane 2011:4). Others, such as Leon Kass, follows the ideological approach that avoids defining enhancement at all, indicating: “The human meaning and moral assessment must be tackled directly, they are unlikely to be settled by the term ‘enhancement’, any more than they are by the nature of the technological intervention itself” (2003, quoted in Savulescu, Ter Meulen & Kahane 2011:4). While important to keep in mind, this does not

mean that there can be no distinction made, as specified previously.

Concerning this definition between treatment and enhancement, enhancement can be defined “in terms of going beyond health-restoring treatment or health”, as stated by Eric T. Juengst: “The term is usually used in bioethics to characterize interventions designed to improve human form or functioning beyond what is necessary to sustain or restore good health” (1998, quoted in Savulescu, Ter Meulen & Kahane 2011:4). In a similar train of thought, Edmund D. Pellegrino also argues against enhancement on the basis that it goes beyond the healing enterprise of medicine. He indicates: “Enhancement will signify an intervention that goes beyond the end of medicine as they traditionally have been held” (2004, quoted in Savulescu, Ter Meulen & Kahane 2011:5). This approach is problematic in the sense that the definitions of concepts such as medicine and treatment are contested itself. Even when a maximally inclusive definition of medicine such as the one portrayed by McKechnie is used, disease and health are still defined in complex terms. For this reason, Julian Savulescu, Ruud ter Meulen and Guy Kahane states that it is doubtful whether it is even possible to make a “consistent and useful” distinction between treatment and enhancement (2011:4-5).

Allen Buchanan summarises the arguments against human enhancement<sup>59</sup> in the following manner:

For the first time, human biology and even the human genome itself can be shaped by human action. But the human organism is a finely balanced whole, the product of eons of exacting evolution. It is irresponsible to tamper with the wisdom of nature, the handiwork of the Master Engineer of evolution, on order to be better than well. Our situation as present is not perfect, of course, but it is clearly satisfactory; so it is a mistake to risk it for the sake of improvement. Those who seek biomedical enhancement desire perfection; they crave mastery. But such attitudes are incompatible with due appreciation of the given, a sense of gratitude for what we have.

(Buchanan 2011:1)

One such an example would be Russell Powell and Allen Buchanan’s statement that from an evolutionary perspective, the human beings is a “delicately balanced, completed, well-

---

<sup>59</sup> See also Van Niekerk (2013:107-108).

functioning masterwork” and that intentional genetic modification will very likely be “disastrously counterproductive” (2011:49).

Buchanan then continues to indicate that none of the statements made in the above quotation are remotely true. In the first instance, he points out that human biology and the human genome have been influenced by human action for as long as human beings have existed, through a sequence of enhancements of human capacities of a non-biomedical nature. Secondly, the human organism is not, in Buchanan’s words, “a finely balanced whole”, given that evolution creates “tentative, changing perishing, cobbled-together *ad hoc* solutions to transient design problems, with blithe disregard for human well-being” (2011:2). In the third instance, he indicates that nature or evolution is neither wise nor a “Master Engineer”, but rather a “morally insensitive, blind, tightly shackled tinkerer” (Buchanan 2011:2).

Regarding the term ‘enhancement’, Jürgen Moltmann indicates that it “remains unclear what we are supposed to understand by the enhancement of the human genetic make-up, because it is impossible to judge good and bad with the concepts of genetics” (2012a:79). He states, for example, that the influence that genes have on the intelligence of human beings is still greatly overestimated (2012a:79).

Sandel further indicates that the line between therapy and enhancement blurs at the edges (2007:49). This perspective is also echoed by Gerald McKenny, who argues for the problematic nature of such a distinction (1997:32-37). It is true that all instances of PGD and GM can be viewed as enhancement, for the reason that the future child is “enhanced” in some way, even by just having a hereditary disease cured or a genetic disorder repaired. However, in the bioethical discussion of PGD and GM, there is a great distinction to be made between curing and enhancement, between utilising biotechnology in order to cure an inherited ailment or mend a genetic defect, and using GM or PGD to “improve” an otherwise healthy embryo with no medical flaws.

Erik Parens also states that although “some participants think the term *enhancement* is so freighted with erroneous assumptions that we ought not even to use it. My sense is that if we didn’t use enhancement, we would end up with another term with similar problems” (1998, in Savulescu, Ter Meulen & Kahane 2011:3-4).

James Peterson differs from this perspective and argues that making a distinction between cure and enhancement is a very difficult line to draw and one that fades the closer it is inspected.

He contends that while correction is limited to achieving “normal levels”, human characteristics typically fall within a specific range and correcting the average would still mean that there are individuals who are better off than the average. With the capacities that used to be at the bottom of the scale now the average, he argues that what is deemed to be the average will simply increase and what used to be regarded as beyond normal will become the new normal (2012:970-971).

However, Peterson then goes on to question our loyalty to our present state if we tie correction to what is average today. He indicates that both our physical and spiritual lives are marked by an entire lifetime of growth and development and not instant maturity; that is the way that God has designed the world: “We can never ‘out-design’ God. Is it not possible that God might sovereignly choose to develop further our design through us? The point is not to try to be God; it is to listen, prayerfully and thoughtfully, to what the one and only God would have us do” (2012:971).

For this reason, he then formulates five standards for recognising when genetic intervention should be sanctioned. In the first instance, genetic intercession should be incremental; we should admit that we do not yet understand the related complexity of genetics, and that we very possibly never completely will. In the second case, intervening in genetics should be choice-expanding; we “should only pursue those interventions that enhance a person’s options by freeing that individual from what is clearly destructive or by increasing the person’s capability”. Thirdly, genetic intervention should be parent-directed; someone should be held accountable for the decisions that are made and that should not be a government or institution for example. In the fourth instance, any intervention into genetics should be within societal boundaries; society should set “minimal, broad limits” to guard against the possible abusive or simply foolish intervention by parents. Lastly, in the fifth case, intervening in genetic makeup should be by acceptable means; the means are as important as the end and should be as non-invasive as possible. It should be kept in mind that, as in the majority of medical occurrences, it is impossible that there will be zero risk, however, the risks should be limited as far as it is possible (Peterson 2012:971-972).

As is clear from the previous, there are also those who argue in favour of enhancement, of which John Harris is a prominent example. He indicates:

Enhancements will be enhancements properly so-called if they make us better at doing some of the things we want to do, better at experiencing the world through all of the senses, better at assimilating and processing what we experience, better at remembering and understanding things, stronger, more competent, more of everything we want to be.

(Harris 2007:2)

Harris believes that no one actually thinks that there is something in principle wrong with enhancing human beings, given that all of us have benefitted from enhancement in some way, whether it is through glasses or contact lenses or immunisation (2007:8). Harris indicates that enhancement is usually defined as “anything that makes a change, a difference for the better” (2007:36). In terms of enhancement by means of PGD or GM, however, an entirely different account is necessary. He believes that “whether the enhancements might be judged to involve creating a new species, ‘a new breed’, or amount to ‘self-evolutionism’ or ‘post-humanism’ or ‘trans-humanism’ are not moral issues” (Harris 2007:37), but that there rather exists powerful moral reasons to enhance our human capacities. If this would result in human beings becoming ‘trans-human’, in his opinion there would be nothing wrong with that, so long as becoming ‘trans-human’ is not the agenda (Harris 2007:39).

Harris is not alone in this conviction. Others, such as Simon Young, go even further. While Harris indicates that becoming ‘trans-human’ is not the agenda, Young contends in *The Transhumanist Manifesto* that that is exactly what we ought to be aiming for. He states that the very word ‘human’, is “synonymous with suffering and failure ... What is ‘the human condition’ but an affliction? What is the human being? A weak mind in a decaying body, a bundle of primitive emotions, a brief life in the knowledge of inevitable death” (2006:32).

UNESCO’s IBC maintained that “the human genome must be preserved as common heritage of humanity” (UNESCO Universal Declaration on the Human Genome and Human Rights December 1997). Harris, in opposition to this declaration, does not see any principled reasons to remain human, if it is possible to evolve into creatures or create creatures that are “better” than the present human being (2007:40). Norman Daniels is sceptical that the changes that

might come about through enhancement that people are worried about would meaningfully change ‘human nature’. He asserts, however, that there is no justification for enhancing an “otherwise normal trait” (Harris 2007:41-42).

Harris indicates that Christopher Boorse, Daniels and others define disease as the “departure from normal species functioning or species-typical functioning” (2007:44). In this view, enhancement is also then seen as a departure from the normal or species-typical functioning of an organism and to repair dysfunction can be described as “restoring species-typical functioning from below, so to speak, whereas enhancement is departing from species-typical functioning in an upward trajectory” (Harris 2007:44).

Harris also indicates that some enhancements would be radical for some, while the exact same enhancement would simply marginally ‘improve’ others (2007:44). Nicholas Agar also argues that moderate enhancements (as opposed to what he terms ‘radical enhancements’) are enhancing genetic capabilities that are beyond the present human norm. “But they are moderate rather than radical because they do not exceed the maximum attainable by any current or past human being”<sup>60</sup> (2010:17). Given that the present debate rages not so much over what Agar calls ‘radical enhancements’ as ‘moderate enhancements’, in this section I will only be addressing moderate enhancements, that enhance human beings to a level that is possible to achieve naturally. I do however, acknowledge the challenges raised also by radical enhancement, but deem them to be of a different type than those raised by moderate enhancement and will therefore not concentrate on them, given the limitations of this study.

Buchanan refers to the work of Jürgen Habermas, who indicated that a person cannot regard him or herself free if that person is the “product” of the genetic engineering of his or her parents. For this reason, Habermas indicates that: “Interventions aimed at enhancements ... violate the fundamental equal status of persons as autonomous beings ... insofar as they tie down the person concerned to rejected, but irreversible intentions of third parties, barring him from the

---

<sup>60</sup> For more on radical enhancement, see Agar (2010:6-15). Agar speculates that “the most dramatic means of enhancing our cognitive powers could in fact kill us; that the radical extension of our life spans could eliminate experiences of great value from our lives; and that a situation in which some humans are radically enhanced while others are not could lead to a tyranny of posthumans over humans (2010:11).

spontaneous self-perception of being the undivided author of his own life” (quoted in Buchanan 2011:5). Buchanan then continues to point out, however, that this quotation and Habermas’s contention with it, contains a numbing *non sequitur*. Given that the number of developmental and environmental factors that influence a person’s attributes, Buchanan views as the crudest form of genetic determinism (2011:5).

Concerning the statement about the “designed individual” and his or her ability to think of him or herself as free, if Habermas is stating that the individual would have difficulty regarding him or herself as free, Harris finds it a highly ambiguous statement. If it is an indication that this individual would not, psychologically, be able to think of him or herself as free, Harris describes it as an example of “outmoded, armchair psychology that too often occurs in anti-enhancement writing ... a vast empirical generalization about what people are and are not capable of thinking, without a shred of evidence to support it” (2011:5). If, on the other hand, it is a reference to the statement that individuals would not be free because they developed from designed embryos, Harris indicates that individuals are not free because of how they came to be, but rather whether they possess the attributes that make them free (2011:5-6).

Speaking about changing the genome of the human race by means of genetic manipulation, Moltmann states:

Of course therapeutic interventions are permissible if their aim is to heal. But manipulations designed to breed living things lacking in the human quality of ‘subjecthood’, and manipulations the purpose of which is to breed so-called supermen, destroy the essential nature of human beings, and hence the dignity of humanity too.

(Moltmann 1999:126)

Bronislaw Szerszynski also raises this point of the fear of genetic reductionism, where speaking about a human being is reduced to speaking about them in terms of their genes (2012:1004)<sup>61</sup>. To paraphrase, what Szerszynski is afraid of is the reducing of human identity to genetic coding. By reducing a human being to his or her genetic makeup, in a similar view of that of Fukuyama mentioned previously, he then fears the eventual death of what makes us human, indicating:

---

<sup>61</sup> See also Song (2012:995).

The Human Genome Project can only accept features of the human that are describable in an unequivocal reference language referring to a self-identical referent. By giving the human essence a location, by stretching it out on the chromosomes, by mapping and plotting it, it may be all the more easy to destroy it.

(Szerszynski 2012:1009)

The WCC also recognises the distinction between healing and enhancement, or what it terms 'negative' and 'positive' genetic manipulation. Negative genetic manipulation is then viewed as the prevention of genetic defects, while positive genetic manipulation entails the enhancing of genetic composition (Shinn 1998:128).

Harris indicates that therapy and enhancement are not necessarily mutually exclusive, given that the boundaries, as has been indicated throughout this section, are not precise and often does not exist (2007:57).

## **2.5 Conclusion**

Gavaghan uses the situation of Alan and Louise Masterson and their desire to have a girl after their young daughter, Nicole, was tragically killed in an accident, as a case study. Their yearning, even if it was not the most sympathetic, to achieve this by PGD was viewed by most as unacceptable. Alan Masterson stated that:

We were not trying to replace Nicole. If we were trying to replace anything it was the female element that that precious child brought to our family. Parents who have both genders know exactly what we are trying to say here. Nicole brought a whole different aspect to our family. Her interaction with the boys, her interactions with myself and indeed with Louise was completely different as a female child from the experience we

had with the boys. Girls are different to boys. It was just that female difference. This isn't a want. This is a need that we have (BBC Online 2003<sup>62</sup>).

However, Gavaghan then asks whether it should be incumbent on them to "satisfy us that their motives are worthy ... Or should the burden of proof, or of justification, lie elsewhere, with those who seek to restrict their access to this technology?" (2007:11).

Brock, Doerfler and Ulrich also refer to the following limitations of scientific knowledge with regards to human genetic processes, namely, that we still lack a full understanding of the regulatory mechanisms that govern gene function and the meaning of a great majority of the nucleotide sequences; that epigenetic mechanisms, the higher order information patterns, are only beginning to be unravelled; that most medical problems are not related to specific disturbances of the functioning of a specific range of genes; that the lack of function in one gene is sometimes mitigated, compensated for or exacerbated by the state of other genes; and that even if correlations between mutation and disease are likely, they are not always understood or proven (2007:150). In short, we still only understand a fraction of how and why genes function or not.

Fukuyama states that the biggest challenges of biotechnology are not those that are immediately on the horizon, but the ones that will arise in a decade to a generation or more (2002:17).

In this chapter, it was indicated that all perspectives on PGD and GM, both theological and otherwise, and those that are critical, as well as those that support these types of biotechnology, arrive at their respective position from a particular point of view on God as Creator, creation, human beings as created, or the nature or role of human beings within the created order. For this reason, I will be formulating a response to the challenges of PGD and GM set out in this chapter from the Christian doctrine of creation.

In the fourth chapter, Moltmann's perspective on God as trinitarian Creator and humankind as created *imago Dei* will be examined to determine a Christian bioethical response to PGD and

---

<sup>62</sup> Accessed 18 October 2011.

GM and whether the criticisms or commendations raised in this chapter do indeed give theological justification for the restriction of PGD and GM.

In the chapter that follows, however, the aspect of social justice will first be dealt with. This is one of the challenges raised in this chapter that deserves more comprehensive focus, given that this study is conducted within the South African context, a county with one of the greatest divergences between the rich and poor, as will be indicated in the chapter that follows. The South African context, with the large and growing discrepancy between rich and poor will be examined, with special reference to the issues of human rights and human dignity in the discussion of PGD and GM.

## CHAPTER THREE

# BIOTECHNOLOGY, HUMAN RIGHTS AND HUMAN DIGNITY: PRE- IMPLANTATION GENETIC DIAGNOSIS AND HUMAN GENETIC MANIPULATION IN THE SOUTH AFRICAN CONTEXT WITH ITS INEQUALITIES

### 3.1 Introduction

Through his many books, Moltmann constantly offers an impassioned appeal for the church to engage with the world by calling the world to justice<sup>63</sup>, liberation, and environmental

---

<sup>63</sup> 'Justice' is a very loaded term and one that can mean different things to different people. One of the most significant works in the entire field of social and political philosophy in the English-speaking world after WW II is John Rawls's *A Theory of Justice*, first published in 1971. Rawls's theory is presented as a modern alternative to utilitarianism and he hopes that it is congruent to "the belief that justice must be associated with fairness and the moral equality of persons" (Shaw 2002:95). Justice is not just a matter of social service, but it is thoroughly social. Society, in Rawls's view, is a cooperative undertaking amongst its members. Rawls's hypothetical-contract approach and the principles of justice that he develops from this approach are particularly important. He asks: What would we choose as the fundamental principles to govern society if we were to meet in the "original position"? Rawls suspects it would be the principles of justice. In the first place, a guarantee of certain individual liberties, and in the second place, social and economic inequalities are only justified if they benefit the least advantaged members of society. Although constitutions have been written and policies developed, the members of a society have never decided from scratch that the principle of justice should be their governing factor. It is also not a realistic future possibility. Therefore, Rawls's strategy is hypothetical: If people were in this "original position", what principles would they choose? What would the basis be for deciding on principles? Rawls believes that we would select principles we find just. People disagree on what is just and unjust and accordingly, would make decisions based on their own preconceived ideas on what justice is. People in the "original position", Rawls suggests, should be viewed as choosing on the basis of self-interest. Choosing on the basis of mutual self-interest, the principles of justice will most likely be chosen, because people agreed to them under conditions of equality and free choice. Agreement doesn't seem very likely if people are choosing principles based on self-interest, given the reality that some rules would benefit some and not others. For this reason, people in the "original position" should be viewed as being behind the veil of ignorance – they have general knowledge of history, sociology and psychology, but do not know their social position or status that would give them a biased opinion. This forces impartiality and all people would reason in the same way. Regardless of who they are, Rawls indicates that people want more "primary social goods" (income, but also rights, liberties, opportunities, status, self-respect etc). He therefore suspects that people in the "original position" will choose the principles that should govern society conservatively, because they are determining their own and their children's fate. They will not choose a utilitarian standard, because the happiness of some might be sacrificed to maximise the total happiness of society. They will follow the *maximin rule* in making decisions, to *maximise* the *minimum* they could receive. People in the "original position" will eventually approve two principles, after which they will design their basic social and political institutions in more detail, when they have more information. These principles are: Firstly, Each person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberty

stewardship. To accomplish this aim, he has been a staunch advocate for Christian engagement with political structures. While these please are present in many of his works, his two most persistent dealings with the theology that undergird his understanding of Christian political engagement are two of his lesser known works, *On Human Dignity* (1984) and *God for a Secular Society* (1997).

For Moltmann, political theology is not theology about the political, but the analysing and reconstructing of theology as a whole in light of its political functions, designating the field in which Christian theology should be articulated, but the content is not derived from the situation (Rasmussen 1995:47). In his own words:

‘Politische Theologie’ ist keine neue Dogmatik, sondern will fundamental-theologisch das Politische Bewußtsein jeder christlichen Theologie erwecken: Es gibt Theologie die sich ihrer eigenen politischen Funktion bewusst ist. Es gibt auch naive und politisch gleichsam bewusstlose Theologie. A-politische Theologie gibt es nicht, weder auf der Erde noch im Himmel.

(Moltmann 1984:153)

Moltmann also stresses that people must be freed from poverty, hunger, contempt and persecution in order to claim their human rights; human rights are only possible in a political sphere where human beings have economic rights to life, work and social security (1993d:180). In addition, he indicates that “Christian identification with the crucified Christ means solidarity

---

for all. Secondly, Social and economic inequalities are to satisfy two conditions: First, they are to be attached to positions and offices open to all under conditions of fair equality of opportunity; and second, they are to be to the greatest expected benefit of the least advantaged members of society. The first principle takes priority over the second. At the very centre of Rawls’s theory is what he calls the *difference principle*. This states that inequalities are only justified when they work to the advantage of those members of society that are least well off. If people lack incentive to undertake some of the more difficult work in society, one could allow for certain inequalities that work to everyone’s benefit, for example paying people more for more productive work. This would benefit the entire society, also those that earn less. Utilitarianism, in Rawls’s view, treats the pain and pleasure that people go through as interchangeable. It can also lead to the unfair distribution of burdens and benefits in maximising the total well-being of a society. In response to Robert Nozick’s entitlement theory, (libertarianism) he also states that the primary subject of justice should be the basic structure and arranging it into one scheme with the fundamental social institutions. The subject of justice should be the basic structure of society, because this shapes the wants, desires, hopes, and ambitions of individuals. Rawls indicates that there will always be natural differences between people, but the weight that we give these distinctions is not natural. Our characteristics are simply a genetic lottery. We therefore cannot claim credit for our attributes, not even for our virtues. Consequently, we cannot claim credit on the economic rewards of our characteristics (Shaw 2002:95-103).

with the sufferings of the poor and the misery both of the oppressed and the oppressors” (1993c:25).

This study seeks to determine how Jürgen Moltmann’s doctrine of the Trinity and the confession of God as Creator in particular, bears on the possibilities associated with PGD and GM in bioethical discourse. Seeing that Christian ethics in general is concerned with human dignity, social justice and wellbeing, as well as moral upliftment, the ethical implications of this type of medical technology must also be discussed in the South African context, with its uneven distribution of wealth and access to medical care. Moltmann’s theology also calls for this focus upon ethical implications: “Moltmann's apologetics is not one of trying to theoretically justify the Christian doctrines ... [but to] show the practical relevance of Christian faith to the struggles for justice, peace, and the integrity of creation” (Rasmussen 1995:43).

As such, Moltmann actively engages the public sphere through his theology and in utilising the insights that can be drawn from his trinitarian doctrine of creation to formulate a Christian bioethical response to PGD and GM, this study also situates itself within the broader field of public theology.

### **3.2 Public Theology**

Richard Neuhaus refers to the impossibility of sustaining what he calls the “religious evacuation of the public square”, indicating that:

When religion in any traditional or recognizable form is excluded from the public square, it does not mean that the public square is in fact naked ... When recognizable religion is excluded, the vacuum will be filled by *ersatz* religion, by religion bootlegged into public space under other names.

(Neuhaus 1984:80, quoted in Lombard 2011:239)

During the last two decades of the twentieth century, civil society has come to be described as the space that exists between society and the state. In this sphere, the state can acquire authority by consent, rather than by force. It is also the sphere where challenges against the misuse of state power can be most effectively staged (Lombard 2011:243). David Hollenbach also refers

to the role of religion in civil society and states that the *res publica* is much bigger than the field of government, but includes all those “communities and institutions that form the rich fabric of civil society. It also includes all those public forms of discourse, conversation, and argument that constitute culture” (2003:148). Public theology operates within this sphere of civil society.

Human dignity is one of the most important guiding principles in Moltmann’s theology and a concept that has been referred to briefly in the second chapter, in more detail in this chapter and will also be referred to again in chapter four of this study. Willem Fourie also refers describes human dignity to be the inherently bound up to the Protestant principles identified by Heinrich Bedford-Strohm, Traugott Jähnichen, Sigrid Reihls, Hans-Richard Reuter, and Gerhard Wegner for a Christian social ethics, a subdivision of Christian ethics interested in institutions, systems and processes. Protestant social ethics ensues from the Reformation’s core principle, namely, that God has granted every human being inalienable dignity. This is also then the first principle identified in Bedford-Strohm *et al*’s principles for a Protestant social ethics. The second principle is that this dignity enables human beings to participate in God’s reality in love, to also serve others. The third principle denotes that people should discover their own gifts and capabilities in the realisation of this dignity. These three principles lead to the remaining principles, the vision of society in the social ethical perspective. For this reason, the fourth principle indicates that for a society to be described as just, it should operate in a manner that the dignity of human beings is respected and the freedom of the individual is increased by the operation of the state, economy, science and civil society. The fifth principle affirms that this dignity and freedom in a space where people are able to realise their calling, caring for themselves and others. This principle is also dependent on the realisation of the sixth principle, which states that justice is the enabling of equal opportunities to all people. Similar to the thought of John Rawls’s theory of economic justice referred to earlier, the seventh principle indicates that the unequal distribution of wealth and property can only be tolerated when it is to the benefit of the least well-off member of society. The eighth principle condemns any system of distribution that harm the dignity and freedom of people to serve others as part of their calling and that creates system that value wealth and property as ends in themselves. The ninth principle reiterates the importance of freedom, solidarity and justice in a social market economy. Principles seven, eight and nine are all linked to just systems of wealth

distribution, while the last principle pronounces the potential that social ethics holds to contribute to the development of human systems, institutions and societal processes (2013).

Within the South African context, South Africa's diversity<sup>64</sup> holds special challenges to the function of churches in public life and forces it to continuously reassess their role and the content of their contribution (Fourie 2011).

In the remainder of this chapter, the health care inequalities that exist in present-day South Africa will be first examined, and a brief historical overview will be given of the context in which they developed. Furthermore, the relation of health care<sup>65</sup> to health<sup>66</sup> will be examined, and health care as a human right will be examined by discussing negative and positive rights, as well as a rights-based approach to health care. The right to health care is also discussed in the light of the limitations of health care resources and the socio-economic inequalities of the South African context, set out in the first part of this chapter.

In this chapter, I will argue that human beings have an inherent human right to health, rather than to health care. This statement does not exclude health care from the dimension of health, but rather aims to work with a more encompassing and comprehensive parameter than simply the right to access to health care services.

This does not mean, however, that health care should not be included in the right to health, or that governments have any less of a duty to look after the health of its people. On the contrary,

---

<sup>64</sup> For a discussion on pluralism and diversity, see also Michael Welker's *Kirche im Pluralismus* (1995). Fourie indicates, however, that South African society will differ greatly from that described by Welker and Wolfgang Huber, citing Misra-Dexter and February, who claim that the South African democracy will, by all account, still consolidate in the foreseeable future (2010). In addition, poverty and inequalities challenges development in a particular manner (UNDP 2010) and, as Robinson and Friedman (2005) have indicated, in civil society processes of reorganising is still in process (Fourie 2011).

<sup>65</sup> In this chapter and throughout this study, the term "health care" is used as an adjective to refer to that which is relating to health care, and as a noun to indicate "the prevention, treatment, and management of illness and the preservation of mental and physical well-being through the services offered by the medical and allied health professions" (<http://medical-dictionary.thefreedictionary.com/health+care> accessed on 19 July 2013).

<sup>66</sup> The term "health" used in this chapter follows the definition of the World Health Organization, namely the "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (<http://www.who.int/about/definition/en/print.html> accessed on 19 July 2013). This is very important for the manner that I view health in this chapter, as encompassing more than simply the absence of disease and including also, for example socio-economic and social aspects.

by viewing the right to health as much more than simply access to health care services, it is argued that a much more holistic view of human health care is at work, one that also calls attention to the other features that contribute to health, such as sanitation, housing, diet, and so forth, and appeals to the responsibility of government to look after these basic human needs of those who cannot afford to do so themselves. So, the notion of access to health care is included, but more than that, access to a life of health in this comprehensive sense is what is emphasised.

This, of course, also has extensive and far-reaching implications for the larger discussion on PGD and GM and what impact it would have on the current South African context, with its great and growing gap between rich and poor, or, in other words, between those who would be able to afford PGD and GM, and those who would not have access, were this technology to become commercially available.

As already indicated in the previous chapter, the issue of PGD and GM with regards to social justice is one of the concerns raised in Christian bioethical discussion. Given the reality that there are very few studies that look at this particular point of critique and even less from a South African perspective, I have chosen to discuss this one aspect of bioethical debate in greater detail, before examining the trinitarian doctrine of creation as developed by Jürgen Moltmann to establish how it might influence the bioethical dispute.

In this chapter, the inequalities that exist in present day South Africa will briefly be discussed, after which the distinction between the right to health and the right to health care will be examined by looking at negative and positive rights, a right-based approach to health care, and the natural law of Thomas Aquinas as the basis for health as a human right. The right to health and the limitation of health care resources, the right to health and inequality and the aspect of the right of health and human dignity will subsequently be discussed. In conclusion, I will argue that in the human rights discourse, the human right to health should rather be emphasised than simply the right to health care, also in dealing with the Christian bioethical issue of PGD and GM.

### 3.3 Healthcare inequalities in the South African context

At this point it is perhaps important to point out that past and present inequalities are not simply a South African issue, but one that reaches global scales.

It is very difficult, if not impossible, to construct an accurate study of global inequalities, because of the lack of household survey data regarding income that are needed to estimate global inequality (Milanovic 2011:494). However, Milanovic uses social tables from thirteen 18<sup>th</sup> and 19<sup>th</sup> century countries to approximate global inequality in the early 19<sup>th</sup> century. He then presents the evolution of global inequality from the early 19<sup>th</sup> century to the beginning of the 21<sup>st</sup> century and uses ZBFL (or Bourguignon-Morrisson) to estimate the years in between. In conclusion, he then applies the concept of the inequality extraction ratio to construct a within country framework to the global scale (2011:495).

This leads him to the deduction that what is most remarkable about today's much higher level of estimated global inequalities (which might have just peaked) is that the composition of inequality changed. Where it used to be driven by class differences within countries, it transformed to being driven by locational income differences, that is to say, by the variations in mean country incomes. While global mean income has also risen, the increase in global inequality was sufficiently strong to make the global inequality extraction ratio decline, even though only very moderately. In addition, it was generally stable in the last 100 years, leading Milanovic to conclude that during the last century, global inequality has increased at about the same rate as the maximum feasible inequality. The implication of this changing composition of global inequality toward “locationally-driven inequality”, and a broadly stable inequality extraction ratio is that citizens of rich countries are the main “inequality extractors” today, rather than individual national elites as used to be the case (Milanovic 2011:504)<sup>67</sup>.

---

<sup>67</sup> For more information on calculating global inequality, see Milanovic, B., 2005. *Worlds Apart: Measuring International and Global Inequality*. Princeton University Press, Princeton, Milanovic, B., 2006. An estimate of average income and inequality in Byzantium around year 1000. *Review of Income and Wealth* 52 (3), and Milanovic, B., 2009. Global inequality recalculated : the effect of new 2005 PPP estimates on global inequality. World Bank Working Paper No. 5061, September.

There is a growing gap between rich and poor in African countries and South Africa is, perhaps the most apparent example of this gap. Together with Brazil, South Africa is the country where the biggest gap between rich and poor exists in the entire world. The richest 10% of the population received 47.3% of the income in 1993, whereas the poorest 40% of the people had only a 9.1% share. Simultaneously, 71% of the rural population lived on 14% of the land (Barnett & Whiteside 2006:144, 165). The media reports regularly that this gap is still on the increase.

Already in 2002, Sampie Terreblanche concurred with this observation by referring to the report of Statistics South Africa in 2000. This report declared no less than 41.4% of all South African households to live in poverty, meaning that they lived on an income of between R601 and R1000. He went on to quote various statistics, proving that unemployment has increased in democratic South Africa (2002:383, 407, 412). Francis Wilson stated in 2011 that, to put it briefly, we know that although average income<sup>68</sup> places South Africa at the level of an upper middle income country in the World Bank tables, poverty is so extensive and prevalent that approximately between 40 and 50% of the population is living in poverty. This contradiction is made possible by the degree of inequality which is one of the highest in the world when measured in terms of the Gini coefficient<sup>69</sup>. This high degree of inequality even seems to be worsening (2011:1-2).

Francis Wilson further indicates that the majority of income goes to the top 10% of the South African population and uses data from Leibbrandt, Woollard, Finn and Argent's 2010 study to prove that the richest 10%, who earn more than R400 000 per household, earns more than the other 90% combined. In terms of poverty, the bottom 30% of South African households all earn well under R20 000 per annum. Around 70% of the country's population earn only 17% of the total income. Adding to these figures are the "astronomical levels of unemployment", where depending on the definition, between 25% (when defined narrowly) and 41% (when defined inclusively) of South Africans who want to work are unemployed. As Wilson contends: "Despite its best intentions, despite every effort to develop the most effective policy and despite the firm expectations of its voters, the democratic government of the new South Africa has

---

<sup>68</sup> The average income is determined by dividing the Gross Domestic Product by the entire population.

<sup>69</sup> The Gini coefficient measures the inequality amongst values of a frequency distribution, for example income. For a further discussion of the Gini coefficient in South Africa, see Phillip Mohr's *Economic Indicators* (1998:173).

been able to do little to shift the levels of poverty, of unemployment and of inequality which it inherited from the apartheid regime in 1994” (2011:2-3).

In 2013, borrowing on research by Todaro and Smith in 2011, Fanie Joubert and Jannie Rossouw argued that high levels of income inequality is a worldwide problem, resulting in deep-seated differences in quality of life between nations, but also within countries (2013:91).

Given the reality of globalisation, this is of great importance when discussing the present socio-economic conditions of South Africa. Globalisation is a secularised phrase for that which encompasses the world (Stückelberger 2002:19) and is of importance for this chapter because it encompasses, amongst other dimensions, a greater interdependence and interrelatedness between countries (Roux 2005:159). This means that global inequality influences the present inequalities in the South African context, of which health care inequalities are the focus of this chapter.

Section 21(1)(a) of the South African Constitution states that everyone has the right of access to healthcare within available resources, whilst Section 28(1)(c) grants all children the right to basic healthcare services (McQuiod-Mason & Dhai 2011:42), while the International Bill of Rights recognises justice and fairness, and provides that the law should prohibit any discrimination of any grounds (McQuiod-Mason & Dhai 2011:45).

It is common knowledge that under the Apartheid government, racial discrimination affected the health of Black, Coloured and Indian people and that the inheritance and legacy of this discrimination contributes to continued discrepancy between the services, also health care services, that South Africans of different races are able to access<sup>70</sup>.

Adila Hassim *et al* attributes this discrimination also to social conditions that resulted in ill health, the segregation of health facilities, unequal spending on health services and the failure of professional medical bodies and civil society to challenge the way that health care was managed under apartheid. The first truly democratic government in South Africa, elected in

---

<sup>70</sup> See also Van Niekerk (1993:3-6).

1994, inherited various health care inequalities, such as the racial, geographic and public *versus* private inequalities in health care (2007:11-16). Terreblanche then also elaborates:

The democratic government that assumed power in 1994 inherited a rather contradictory legacy. On the one hand, it inherited the most developed economy in Africa, with a modern physical and institutional infrastructure. On the other, it inherited major socio-economic problems, including high levels of unemployment; the abject poverty of 50 percent of the population; sharp inequalities in the distribution of income, property, and opportunities; and high levels of crime and violence. What makes these problems much more pressing is the fact that it is mainly black South Africans – and particularly Africans – who are at their receiving end.

(Terreblanche 2002:4)

In 1994 there were expectations that the power shift would also change the nature of power. Although the new political system differs fundamentally from the previous and the majority of South Africans' ideological orientation has, mostly, changed, the socio-economic transformation that has taken place has not been a deep-seated one and is inadequate in addressing the social problems that it inherited. As Terreblanche states further, since 1994 “a continuation of unequal power relations, unfree labour patterns, and uneven socio-economic development” is seen (2002:20). In chapter one, it was indicated that the gap between the rich and poor in present day South Africa is alarmingly big, and constantly growing more and more extensive.

In 2002, the South African government claimed that between 1994 and 2002, 9 million people, who had not had access previously, had been given access to clean water, and 1.5 million households to electricity. Telephone connections had been provided to 1.3 million households, 1 million houses had been built for those who previously had had no formal shelter, free medical services had been provided to expectant mothers and children younger than seven, food programmes had reached 5 million children and rural communities has benefitted from infrastructural development (Terreblanche 2002:28).

This seems to be an encouraging picture, proving that the inequalities of the past are rapidly being eradicated and that in just eight short years, the democratic South African government have bridged the gap of inequality and taken, not just small steps, but giant leaps down the road to equality for all. Terreblanche, however, dashes this idealistic representation, going on to say:

Many of the electricity, water, and telephone connections are cut off every month because users cannot afford to pay for them. Many of the houses built are of poor quality. In 1999 the department of water affairs admitted that many of its water provision projects had fallen into dysfunction or disrepair. The removal of farmers' subsidies as well as labour reforms and droughts in the agricultural sector have led to a decline in employment of blacks in this sector from 1,4 million to only 800 000. The improvement of health services in rural areas has led to a dramatic drop in the quantity and quality of health services in urban areas...

(Terreblanche 2002:28)

This reality then also has far-reaching implications for the discussion of health and health care within the South African context, for as Paul Farmer points out, in the majority of cases, the poor are sicker than those who are not poor and are at an increased risk of dying prematurely (2012:140). This is because, as has been indicated previously, health care is only one small dimension of health and there are many other factors at play.

It is, however, not the intention or purpose of this chapter to examine the causes and historical development of the inequalities that exist at present in South African society<sup>71</sup>, but rather to examine the current conditions and how these circumstances would or would not impact the availability and accessibility of GM to all South Africans. For an eventual Christian bioethical assessment of PGD and GM, this information is crucial.

---

<sup>71</sup> For a complete discussion on the historical development of South African inequality, see Terreblanche's 2002 publication, *A History of Inequality in South Africa*.

### 3.4 Health and health care

To further investigate access to health care services and give an appraisal of how accessible PGD and GM could be to people living in South Africa, taking all of the inequalities mentioned in the previous section into account, is important to also make a distinction between health and health care and also to further differentiate between the right to *health* as an element of basic human rights and forming part of the discussion on human dignity and the right to *health care*. Hassim *et al* summarise this when they state:

The right to health care is about more than the right of access to medicines and doctors – although this is very important. It is also about the duty of governments to ensure that people live in conditions that do not harm their health, but instead promote and fulfill this right.

(Hassim *et al* 2007:6)

Unfortunately, in popular and even in scholarly discourse, the two concepts seem to have become nearly interchangeable and making a case for the right to health care seems to be almost analogous to the right to health in the opinion of some.

I will maintain in this study, however, that simply arguing, whether part of human dignity discourse or not, that people have a human right to health care fails to take many of the complexities that accompanies health into account.

Health is a concept that has much further reaching associations and underlying causes than simply having access to a clinic. People with free and unrestricted access to the best physicians in the world will not be in good physical shape if they are unable to purchase fresh and healthy food. Being treated by several world-acclaimed specialists will not make someone get well

when they do not have access to clean drinking water and hygienic bathroom facilities at home. Being healthy, and having the human right to health, then, is about much more than access to health care and medical services.

Yet in arguing for a right to *health*, I am not arguing against a right to *health care*. It is not the intention of this study to deny that people need access to medical services and that, should they be unable to attain it for themselves, whether because of lack of access or the ability to pay for the services that they need, it should be the duty of the government to assist them, within reason, in accessing medical treatment. I do argue, however, that rather making a case for a right to health, a much more comprehensive view of health is offered, that take more of the complexities and aspects that make up the broader and more complete perspective on health into account.

Medicine and public health, whilst complementing and interacting with one another, are two different concepts, at the most simple differentiation, because medicine's focus is essentially on the diagnosis, treatment, relief of suffering or rehabilitation of the individual and public health emphasises the health of the entire population, identifying and measuring threats and, in reaction, developing policies (Mann 1997:6).

Jonathan Mann also points out that the contribution of medicine to health is, in fact, limited, citing that only a sixth of gained life expectancy is attributed to medicine and that only 10% of preventable premature deaths are associated with a lack of health care (1997:7). This same sentiment is echoed by many other researchers, for example Dan Brock, who states: "But health care's impact on both health and health inequalities is quite limited; for example, medical care is estimated to account for only about one fifth of life expectancy gains in the twentieth century" (Brock 2000:31). It would seem then, that it is rather socioeconomic issues than health care access that are at stake here, although access to health care undeniably also has a role to play.

Brock also postulates that both an individual's place in the socioeconomic hierarchy and the degree of income inequality in the society that he or she lives in affects their overall health (2000:33). Mann (1997) further affirms:

... while public health may cite, or blame, or otherwise identify the societal-level or contextual issues – which it acknowledges to be of dominant importance, both in influencing individual behavior and for determining health status more broadly – it does not deal directly with these societal factors.

(Mann 1997:8)

From the findings of these studies, it would be reasonable to conclude that many factors contribute to a person's health status and that health care is but one of these. Environment, nutrition, sanitation, income, social dislocation, education, economic development, class and race all play a role.

Wikler & Marchand also refer to the renowned 19<sup>th</sup> century German pathologist Rudolf Virchow, who even counted the absence of roads and failure to separate Church and State as contributing factors in an outbreak of typhus (2001:306). They also state: “The need for principles of macro-allocation is becoming even more apparent as costs of health care rise, populations age (in countries with the costliest health care systems) and the growth of resources fails to keep step” (Wikler & Marchand 2001:314).

In other words, with the distinction determinedly made between *health* and *health care*, it becomes clear that to rectify discrepancies and inequalities pertaining to health, especially in the South African context, one must look much wider than simply access to medical treatment. In this regard, the accessibility and affordability of PGD and GM is certainly not the most important feature to take into account. If we were, however, to just regard access to medical treatment for an instant, it is also clear that when such a large majority of people lack access to

even the most basic medical services, arguing that they should rather have access to PGD and GM than clinics, seems rather ridiculous.

It is clear that a much larger issue should be addressed; one that the distinction between a right to *health* and a right to *health care* then aims to achieve. In this chapter, my argument is that the moral approach would be to ensure that people receive access to comprehensive and more inclusive health that also includes socio-economic aspects of well-being. In my opinion, it is this right to health, rather than the simplistic right to health care that should be regarded as a human right. This does not mean that health care as a human right is excluded, but that a broader picture is needed to ensure a life of dignity for all and deal effectively with the issue of social justice in the context of PGD and GM, as indicated in the previous chapter. Given that this study concentrates on the theology of Moltmann, his opinion of human rights and human dignity will also be included as part of this discussion. In line with my argument that the human right to health care should be viewed in a broader manner to also include the more considerable right to health and all that it encompasses, Moltmann emphasises, as also stated previously, that people have to be freed from poverty, hunger, contempt and persecution to facilitate the claiming of their human rights. Honouring and respecting human rights, he indicates, are only achievable in a political sphere where all human beings have the economic rights to life, work and social security (1993d:180).

In the section that follows, the question whether human beings have, or rather, should have an intrinsic human right to health care will be discussed to further illuminate this subject.

### **3.5.1 Is there a right to health care?**

In 1948, the newly formed United Nations initiated the Universal Declaration of Human Rights (UDHR)<sup>72</sup>, stating that everyone has a right to a standard of living acceptable for their own and their family's health and well-being. This included food, clothing, housing, medical care and necessary social services. Article 25 the UDHR states:

Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

(Eberl, Kinney & Williams 2011:538-539)

In 1966, the International Covenant on Economic, Social, and Cultural Rights (ICESCR), the treaty to implement the economic, social, and cultural rights detailed in the UDHR, added provision for the decrease of the stillbirth-rate and infant mortality and the health development of the child; enhancement of environmental and industrial hygiene; the deterrence, treatment and control of epidemic, endemic, occupational and other ailments; and the formation of conditions that would guarantee medical services and attention in the occurrence of illness, to this list (Hassim *et al* 2007:7-8).

---

<sup>72</sup> “The conception, drafting, and adoption of the UDHR followed an extraordinary set of events in human history. The Second World War had concluded with staggering death tolls of both armed forces and civilians ... During the war, the Allies, recognizing the failures of the League of Nations in stopping the military buildup of Nazi Germany and the outbreak of war, established the UN as a world organization to prevent future wars; 51 nations signed the UN Charter. In 1946, the Economic and Social Committee of the UN established a commission on human rights to develop recommendations for a UN Commission on Human Rights ... members represented Chinese, Islamic, and Hindu perspectives, as well as a variety of Western philosophical, political, and religious views. One of the commission's first tasks was to examine philosophical thought and religious traditions around the world to identify foundational principles that would justify human rights. The commission gave this task to the “philosophical committee” ... although human rights were not explicitly laid out and defined by some of the religious traditions, sufficient common ground emerged to support developing a framework for human rights that could be agreed upon by members of the committee. The committee believed that there were certain rights that “may be seen as implicit in man's nature as an individual and as a member of society and to follow from the fundamental right to live”” (Eberl, Kinney & Williams 2011:541-542).

Article 12 of the ICESCR states: “The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health” (Eberl, Kinney & Williams 2011:539).

In 2000, in the UN Economic and Social Council, Committee on Economic, Social, and Cultural Rights published a commentary on issues related to Article 12 of the ICESCR, and reaffirmed that “Health is a fundamental human right indispensable for the exercise of other human rights. Every human being is entitled to the enjoyment of the highest attainable standard of health conducive to living a life in dignity” (Eberl, Kinney & Williams 2011:539). Cook then also indicates:

The function of modern human rights is to redress the imbalance between society’s privileged and unempowered members ... It usually falls to the weak and vulnerable of a society, and to those who advocate on their behalf, to invoke inherent human rights for the protection and promotion of their interest.

(Cook 1995:359)

Willem Landman also indicates that to understand the claim for health as a human right, the entire network of moral considerations underlying them should also be understood: “The claim that there is a human right to appropriate health care is non-basic or derivative since it presupposes a normative picture of the foundational moral values or ideals of freedom and equality, the principles of distributive social justice, and the basic moral duties of the good society” (1993:37). The way that we then unpack these underlying moral considerations informs us about the moral status of health care and the relative moral weight, whose moral response it should be, and how to ground a human right to health care. The ‘good society’ is a society in which human beings are free, able to develop and exercise the powers and capacities that are human. The conditions of freedom are political, material and cultural. In a good society, people are also equal (Landman 1993:37-40).

In this good society, Landman further indicates, basic moral duties are imposed by two principles of distributive justice: “Society has the basic moral duty to distribute equally, first,

political power and, second, benefits and burdens” (1993:44). The distinctive meaning and conceptual logic behind a serious claim to rights, in the first place, presupposes justice as circumstance, in the second place, a unique moral force that correlates with the network of duties, and in the third place, is socially and politically constituted (Landman 1993:44-45).

Landman further states: “Being healthy is a prerequisite for being free, for developing and exercising one’s characteristically human powers and capacities” (1993:49). For this reason, it is our duty to address health-related needs appropriate to secure a decent minimum, because of limited resources, other aspects of welfare that compete for these resources, and that there are limits to general obligations or sacrifices that can morally be imposed on individuals for the good of others (Landman 1993:50).

“To say that there is a right to health care does not imply a right to equal access, a right that whatever is available to any shall be available to all” (Fried 1976:29). With regard to the ‘right’ to health care access, Fried also gives an informal definition of what a ‘right’ is, stating that it is more than just what is in an individual’s interest or the preferable state of affairs or state of being. A right is what someone is entitled to, not just what they would like or prefer to have, but what must be had and may be demanded when lacking. This statement, however, is problematised when he goes on to state that the right to equality could mean that even if someone is not necessarily entitled to something, equality could be interpreted to mean that they should be able to get what someone else gets (1976:30).

This could also mean that the development of new treatments and medicines, which could be expensive, might be terminated because of the argument “if we provide it to any we must provide it to all, therefore perhaps we should provide it to none” (Fried 1976:31). As John Harris also states: “Fairness does not require that I should not try to protect myself because others cannot; it does not require that benefits should not be provided to any until they can be made available to all” (2007:28).

Most discussions on a right to health care involve the balancing of individual rights and social interests (Beauchamp & Faden 1979:122). This is also very much in line with Moltmann's arguments on human rights, as will be indicated later in this chapter and also more extensively in chapter four that deals exclusively with his trinitarian doctrine on creation, when he argues that not only can the rights of the individual and the rights of the community not supersede one another, but that this is also true of the rights of human beings and the rights of nature, or the rest of creation. To sum up this perspective very briefly: "Ebenbildlichkeit Gottes begründet das Recht des Menschen auf die Herrschaft über die Erde und die Gemeinschaft mit der nichtmenschlichen Schöpfung" (Moltmann 1984:172).

It has been argued that the only right that can be guaranteed by any government is a freedom of action and that health care, as opposed to this, is a service offered and not a right. Rather, he stated that people have the right to health, which would imply that they have the right to be protected from risks or hazards to health that would be the actions of others, but not that the government should be under any obligation to provide health goods and services. On the other hand, however, others, such as Tom Beauchamp, contend that virtually all major diseases are caused socially, rather than individually. From this perspective the only diseases to which people do not have a right to be protected from are those that are brought about by entirely natural causes (Beauchamp & Faden 1979:123-125). Anton van Niekerk also voices the conviction that "care about people's physical and mental health is neither a consumable and therefore marketable commodity" (1993:2). Rather, he views health care to be both a moral command and a responsibility (1993:2).

Both the Constitution and the Equality Act forbid discrimination on the grounds of disability, which includes denying or removing any person with a disability from any facility that supports or helps them function in society. However, the right to equality also comprises the taking of practical steps to accommodate the requirements of people with disabilities (Hassim *et al* 2007:278-279).

### 3.4.2 Negative and positive rights

In any discussion on the right to health care, the distinction between negative and positive rights should be made. A negative right would be the freedom to pursue a course of action or to enjoy conditions and a positive right the entitlement to acquire a good, opportunity or service. Whilst it would seem that the right to health care is purely a positive right, but if health care is broadened to also include certain abstentions from actions that are intended as precautionary and protective measures, aspects of negative rights are also present (Beauchamp & Faden 1979:120-121).

“Because of its role in helping protect equality of opportunity, health care can be tied to the rights to life, liberty, and the pursuit of happiness<sup>73</sup>. There is, therefore, good reason to believe that health care is a human right and that universal access should be guaranteed” (Bradley 2012:838).

All negative rights share the common characteristic that they promise the right of individuals to engage in certain activities without the intervention of others. For example, an individual might enjoy reading. This individual has the right to read to his or her heart’s content and for someone to forcefully take away his or her books, would be a violation of rights. However, this does not mean that any other individual is forced to contribute to this right, in other words, nobody else is under any obligation to give the individual books.

This concept of restricting human rights becomes clear when we consider the so-called positive rights, which infringe upon the rights of other human beings. If health care is viewed as such a right, it would be unacceptable if some people were unable to obtain it and the government would be compelled to ensure that every person has access to health care, even those who are not financially able to buy it on their own. Given that the government’s only means of paying

---

<sup>73</sup> These are so-called negative rights, also found in the Declaration of Independence of the United States of America.

for this service would be taxation, this taxation, as Bradley explains, would then provide unearned goods to one group and, as Peikoff further argues would be “an immoral infringement of the right of the taxed to keep the fruits of their labour”. He goes on to state that a system in which someone has a “right to anything at others’ expense means that they become rightless”. Barlow further argues that something cannot be called a right if its provision places an “intolerable burden” on others (Bradley 2012:838). Van Niekerk, however, argues that because health care is a human right, the State should play a role in the making available thereof, through the “provision, considerable funding and administration of a national health insurance system” (1993:11).

Those that argue that health care is not a right does not thereby claim that it is good, or even fair, for people to be without access to health care. Based upon the previous argument, those who cannot afford health care by themselves are forced to rely on voluntary charity. The contention is, however, that it is also not good, or fair, to provide the poor with health care when it is at the expense of other people’s rights (Bradley 2011:839).

However, Bradley then goes on to state that protecting even the negative rights of life, liberty, and the pursuit of happiness, might require some positive action on the part of citizens, possibly through the paying of taxes or submitting themselves to the draft. As Shue puts it, “a demand for physical security is not normally a demand simply to be left alone, but a demand to be protected against harm”. When referring to the rights to life, liberty, and the pursuit of happiness, it is done expecting that the government will do something to protect those rights. In his opinion, the clear moral boundary that Peikoff draws around negative rights thus disappears, as does his basis for claiming that health care cannot be a right (Bradley 2011:839).

On the other hand, there are many possible objections to this argument, such as redistribution and equality of need. In line with Peikoff’s argument, it could be argued that while everybody’s healthcare needs vary, nobody has a greater need than anybody else for life, liberty, and the pursuit of happiness, leading to the conclusion that, conceivably, this equality of need could exclude health care from the domain of true human rights.

Bradley's counter-argument, however, states that in reality, even the preservation and continuance of a police force involves a redistribution of wealth; whereas effective law enforcement might be an advantage to all, those individuals with no income cannot contribute to the tax needed to maintain law enforcement, and as a result, compared with their contribution to the tax pool, these individuals are receiving a greater service than taxpayers, for not only did they not contribute anything, but since they might well be homeless or living in more dangerous areas, they most likely benefit quite a bit more from the presence of a good police force than the average, taxpaying citizen. Wealthier individuals, who have the option of hiring additional, private security, also reduce the value that they obtain from law enforcement, but still pay the full tax. Consequently, from the point of view of both the wealthy and the poor, the maintenance of negative rights can be redistributive, thus, redistribution cannot serve as the moral distinction between positive and negative rights (2011:839).

Bradley differentiates between different services, such as hair care and health care, education, food and shelter by stating that the latter four can be tied to the three rights of life, liberty, and the pursuit of happiness, and argues that any chance for success in life requires that life, liberty, and the pursuit of happiness be protected. In his opinion, the rationale behind rights such as access to health care is to guarantee some minimum level of opportunity to succeed in society and life. This perspective is also supported by the work of Norman Daniels, who argues that if we think 'fair equality of opportunity' is important, then healthcare access must be controlled and structured in such a way as to help everyone achieve equal opportunity (2011:840).

### **3.4.3 A right-based approach to health care**

In a rights-based approach to public health, as Elvira Beracochea, Dabney Evans and Corey Weinstein make clear, everyone has the right to access current medical knowledge regarding prevention and treatment and that everyone has an equal right to resources to make sure that the same burden of disease our generation inherited is not passed on to the next (2011:4).

A rights-based approach also conflicts with a needs-based approach, where the health problems of a group or community is prioritized in order to overcome them, a classic example of utilitarianism<sup>74</sup>, but one that is at odds with a key principle of human rights, namely, that rights are universal. With regard to health care, a rights-based approach would argue that everyone has the right to health and that no one has more of a right than another (Beracochea, Evans & Weinstein 2011:11).

Meier *et al* also states that a rights-based approach to public health systems focuses on the underlying determinates of health rather than the provision of medicine (2011:19).

By structuring inequities in health as a violation of rights, international standards by which to frame government responsibilities and conduct can be evaluated are offered (Meier *et al* 2011:28).

#### **3.4.4 Thomas Aquinas's natural law as a base for health as a human right**

Thomas Aquinas and Enlightenment philosophers, following the tradition of natural law, fashioned a theoretical foundation for the concept of human rights, as well as the language in which such rights are executed and accomplished (Eberl, Kinney & Williams 2011:540). Although not the focus of this study, because Aquinas's natural law is so often used in theological discussions on human rights and its foundation, I deem it fitting to briefly examine the most important aspects of this argument.

In my opinion any rational justification of the idea of the rights of man, as of the idea of law in general, demands that we should rediscover the idea of natural law ... in its true metaphysical connotations, its realistic dynamism and the humility of its relation with nature and experience. We are then able to understand how a certain ideal order, rooted in the nature of man and of human society, can impose moral demands valid

---

<sup>74</sup> Utilitarianism evaluates action based on the benefit to the largest number of people.

throughout the world of experience, history and fact, and can establish, for the conscience as for the written law, the permanent principle and the elementary and universal criteria of rights and duties.

(Maritain, 1947, as quoted in Eberl, Kinnery & Williams 2011:542)

According to Aquinas, the essential “good” for human beings consists in our flourishing, which is the fulfilment of our shared nature (Aquinas, *Summa theologiae* Ia-IIae Q.18, a.5; Q.49, a.2; Q.71, a.1). He further defines human nature by a set of capacities relative to our existence as living, sentient, social, and rational animals, while human flourishing entails the actualizing of these definitive facilities of the human species to the extent that we become the most perfect, the most complete or fully actualized, human being that it is possible for us to be. In order to accomplish this, Aquinas maintains that every person has an array of natural inclinations that lead us to pursue that which we perceive to be good and desirable and that will help us to actualize our definitive capacities. Therefore, the natural law comprises a set of principles which, if followed, will satisfy our natural inclinations and lead to our perfection, according to our nature as human beings. These set of capacities, however, must be defined, although a great amount of specification is not required. Aquinas defines “law” as “nothing other than (1) a certain ordinance of reason (2) for the common good, (3) made by whoever has care of the community, and (4) that is promulgated” (*Summa theologiae* Ia-IIae Q.90, a.4), and in order for some principle to count as a law<sup>75</sup>, it must fulfil all four criteria. Aquinas identifies general principles that motivate what a moral agent ought to do in a particular situation (*Summa theologiae* Ia-IIae Q.94, a.2; *Quaestiones disputatae de veritate* Q.16, a.1). Some of these general principles are self-evident, and are immediately knowable by the human mind, without requiring any empirical enquiry. As a result, he formulates the first fundamental principle of natural law that the human mind understands as: “Good is to be done and pursued, and evil avoided”. Upon this fundamental principle, all other principles of natural law are established and, consequently, natural law commands us to use our capacity for reasoning to determine

---

<sup>75</sup> “Aquinas specifically defines natural law as human beings’ capacity to understand the general principles which underlie the existence of particular substances, actions, and events. For example, everything that exists is governed by the principle of noncontradiction, which states that the same thing — whether it is a substance, action, or event — cannot both *be* and *not be* at the same time, in the same place, in the same respect. Hence, it cannot be both raining in this very spot at this very moment and not raining in this very spot at this very moment” (Eberl, Kinney & Williams 2011:544).

what is good in agreement with our nature as rational animals and go after it, involving on the one hand, positive obligations and on the other hand, negative obligations by avoiding that what we determine to be evil, seeing as it contests our flourishing as human beings (Eberl, Kinney & Williams 2011:543-545).

Aquinas concludes: “Therefore, natural law is nothing other than a concept naturally instilled in a human being by which he is directed toward acting in accord with his proper actions; whether they are suitable to him from his generic nature, such as to procreate, to eat, and the like, or from his specific nature, such as to reason and the like” (*Summa theologiae* Supp. Q.65, a.1). He refers to life, sexual intercourse, education of offspring, pursuing truth (about God), and living in society, with respect to the mutual nature toward which human beings are naturally inclined (*Summa theologiae* Ia-IIae Q.94, a.2). Aquinas recognises that this list is not complete and encourages the practical use of reason to establish the set of goods and evils that are relative to human nature and then to define the principles of natural law that promote the goods while avoiding the evils (Eberl, Kinney & Williams 2011:545).

Maura Ryan refers to the notation of Susanne DeCrane, who indicated that morality, for Aquinas, emerges from and in communal context. She goes on to state: “Human society exists (not as an end itself but) in order to facilitate and promote the common good of the group because in so doing the circumstance and necessities of full human life can be provided for all members” (2012:978). This suggests that when existing social establishments or strategies fail to guarantee fair and equitable access to the means for a dignified human life, “justice will demand preferential treatment for those whose needs are not being met” (Ryan 2012:978).

Additionally, Aquinas also enumerates, contemporary natural law theorists have cited other goods and principles that possibly follow from his understanding of human natural inclinations. Even though some of these items are not explicitly found in his writings, “a case can be made for all of them being in the spirit of Aquinas’s natural law ethic”. Some examples would be Hughes, listing “food, shelter, proper medical treatment, affection, support and a fairly clear role in society” as necessary for a human being to flourish as a rational social animal (1976:35, as quoted in Eberl, Kinney & Williams 2011:545). Finnis also identifies seven basic forms of good for us, namely life, knowledge, play, aesthetic experience, sociability/friendship, practical

reasonableness and religion, and indicates that the basic good of life implies “every aspect of the vitality which puts a human being in good shape for self-determination. Hence, life here includes bodily (including cerebral) health, and freedom from the pain that betokens organic malfunctioning or injury” (1980:86-94, as quoted in Eberl, Kinney & Williams 2011:545-546).

Even more definite in drawing the natural law<sup>76</sup> conclusion in favour of health care as a essential good worth pursuing by moral means, Boyle states that: “health is good bodily functioning and is the perfection of our being alive just as animals. Being alive is not only a necessary condition for pursuing other goods but is part of the personal reality of a human being. This means that life and health are intrinsically good; that is, whenever an action in view promotes or protects life or health, that action is so far forth choice-worthy; that is protects or enhances life or health provides a reason sufficient for doing it, though not necessarily a reason that morally justifies doing it” (2002:79, as quoted in Eberl, Kinney & Williams 2011:546).

In its comment on Article 12 of the ICESCR, the UN Economic and Social Council, Committee on Economic, Social, and Cultural Rights declares, “the right to health, like all human rights, imposes three types or levels of obligations on States parties: the obligations to *respect*, *protect* and *fulfil* [sic]. In turn, the obligation to fulfil contains obligations to facilitate, provide and promote. The obligation to *respect* requires States to refrain from interfering directly or indirectly with the enjoyment of the right to health. The obligation to *protect* requires States to take measures that prevent third parties from interfering with article 12 guarantees. Finally, the obligation to *fulfil* requires States to adopt appropriate legislative, administrative, budgetary,

---

<sup>76</sup> Like the rights detailed in the UDHR, natural law principles are fairly general, so as to be universally valid to all human beings, regardless of their cultural background or station in life. Therefore, Aquinas appreciates the need for what he terms “human law,” which is the specific purpose of general natural law principles made by human legislators using careful practical judgment. Human laws are crafted with respect to particular communities to help instruct each community’s members in becoming morally virtuous; such laws can thus be considered culturally (*Summa theologiae* Ia-IIae Q.95, a.2 *ad* 3). Aquinas further notes the vital role that the customs of different communities play in specifying and applying natural law principles (*Summa theologiae* Ia-IIae Q 97, a 3). However, human laws must be crafted in agreement with the general principles of natural law that are universal and, as a result, binding upon all human beings despite culture or situation. Any valid human law, Aquinas asserts, must be in some way derived from the natural law; or else, it would be a “perversion of law” (*Summa theologiae* Ia-IIae Q.95, a.2).

judicial, promotional, and other measures towards the full realization of the right to health” (Eberl, Kinney & Williams 2011:549). Eberl, Kinney and Williams further state:

American society is currently engaged in a vigorous, if not rancorous, debate over the recently enacted health reform legislation: the Patient Protection and Affordable Care Act (2010) and the Health Care and Education Reconciliation Act (2010). At the core of the debate is what role government should play in providing health care to its citizens. One side of the debate posits a libertarian viewpoint, that health care services are understood to be essentially conventional economic services that should be distributed, as are other commodities, in the economic marketplace, without excessive government regulation or subsidy.

(2011:552)

Jason Eberl, Eleanor Kinney and Matthew Williams go on to state that the problem, however, with the idea of health care as a commodity distributed pursuant to market forces is that, for the great majority of people, “many health care services are simply not affordable; and while the health insurance market should render access to health care services more affordable, the cost of private health insurance remains economically unfeasible for many”. While the more liberal side of the debate would put forward that government should play more of a role in financing and the provision of health care services to ensure equal access, the question remains whether there is a middle ground between the notions of health care as a right and as a market commodity? The major factor in mitigating a middle ground is the obvious need for public subsidies, defrayed by taxpayers, to make increasingly costly health care services available to most, if not all, of its members. It is also noteworthy that there is no developed country in the world in which health care services are financed solely by the private funds of patients. Since World War II, most developed countries have enacted public programs of some variation to defray the costs of health care for its citizens (2011:552).

The report of the US President’s Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research (1983), offers such a middle ground, which provides

sound guidance in addressing health care in trade policy. The report concluded that health care was neither a right nor a pure commodity, but something in between. The Commission framed its analysis of access to health care “in terms of the special nature of health care and of society’s moral obligation to achieve equity, without taking a position on whether the term ‘obligation’ should be read as entailing a moral right.” The Commission defined “equitable access to health care” as requiring that “all citizens be able to secure an adequate level of care without excessive burdens”; and it concluded that “society has an ethical obligation to ensure equitable access to health care for all” because of the “special importance of health care”. The Commission determined that the societal obligation is balanced by individual obligations and described the content of an individual’s obligations: “Individuals ought to pay a fair share of their health care cost and take reasonable steps to provide for such care when they can do so without excessive burdens. Nevertheless, the origins of health needs are too complex, and their manifestations too acute and severe, to permit care to be regularly denied on the grounds that individuals are solely responsible for their own health” (Eberl, Kinney & Williams 2011:552-553).

### **3.5 The right to health and the limitation of health care resources**

It is a key point that equality of opportunity does not mandate that everybody has access to the entire normal opportunity range. Otherwise, as Buchanan points out, this would mandate extravagant spending on health care in a futile effort to achieve an impossible goal. Regarding health care, equality of opportunity simply means eliminating barriers to an individual’s reasonable life plans that arise from deviations from normal functioning.

(Bradley 2011:840)

Brock indicates how throughout the development of bioethics, the focus has been on health care instead of health and establishing a moral right to health care, resulting in silence regarding the moral issues faced when limited health care resources must be prioritised and the assumption that the principal inequality that needs addressing is the differential access to health care (2000:22). He also further states:

It was widely recognized that it was both morally problematic and politically counterproductive to frame the right to health care as an unlimited right and claim on resources to meet every health care need at the highest possible level – the opportunity costs for other, nonhealth needs, such as education and housing, would be too great, and major new unlimited entitlement programs had little chance of political success.

(Brock 2000:23-24)

Concerning the limitations that exist on health care resources, it soon becomes clear that even if, in theory, all people would have the right to equal access and the utilization of whatever health care service they need, or even would like, it would be impossible to provide this benefit to all human beings.

O'Neill emphasizes that a right to universal health cannot be provided, given that, in the first instance, *universal* health cannot be achieved, as total dedication to others' health or even always prioritizing health improvements over other action is unachievable, and in the second instance, since health is not a commodity that can be distributed, universal *health* is unachievable (Hessler 2008:40).

If then, there are limits on the available health care resources and universal health cannot be obtained, how can it then be decided who will have access to the limited health care resources that are available? What criteria can possibly be used? In the discussion on the right to health and the reality of the limitations of health care resources, one of the issues that come most strikingly to the forefront in scholarly discussion is that of giving priority to some, in most instances, to those who are the worse off and who would benefit the most.

Regarding prioritising, however, questions must be asked such as who the worse off are, what reasons exist for giving these members priority and how much priority they should be given.

However, it should also be kept in mind that these questions are interdependent, given that the answers given to each carry implications for the others (Brock 2000:27).

A key issue to also keep in mind with regard to prioritization and the criteria according to which some would have access to scarce resources and others not, is the relationship between health care and inequality, which will be discussed in the section that follows.

### **3.6 The right to health and inequality**

Daniels points out:

In the context of rising costs and the rapid dissemination of new technologies, there is growing debate in many countries about how to set limits on the scope of a right to health care.

(Daniels 2001:316)

Health care disparities can also be understood by focusing on the barriers to the utilisation of health care, as, introduced by Roy Penchansky and J. William Thomas. This approach acknowledges that a variety of factors on an individual-level, like income, having medical insurance or having a standard source of care, for instance, can assist or hinder the use of health services. The hypothesis is, then, that the use of available health care services depends largely on the availability, accessibility, and affordability of the services rendered to potential clients, as well as the degree to which the health care system is organized to accommodate clients and the acceptability of specific health care providers to these clients (Derose, Gresenz & Ringel 2011:1845).

Another factor to take into account when looking at inequalities in health care is information. Arrow calls attention to the fact that providers of health care and clients fluctuate in the

information that they have about health care services and the value of those services, leading to what he refers to as an “information asymmetry”. This asymmetry may possibly allow providers to influence consumers’ demand and, given that that type of behaviour would vary across different groups, it might also be a significant aspect that affects discrepancies in health care (Derose, Gresenz & Ringer 2011:1846).

In terms of a right to health care, utilitarian arguments could also be made, such as that the prevention and cure of diseases reduces human suffering, enabling people to function in ways that contribute to aggregate welfare, increases their personal security and strengthens communities. A counterargument, however, raises the possibility that resources, invested elsewhere, might produce even more net welfare (Daniels 2001:318).

Rights such as the right to food or health care are commonly referred to as welfare rights. O’Neill, however, regards this as a misnomer, given that the prominent feature of these rights are not that they contribute to the individual’s welfare, but that they are the right to goods or services that must be provided by someone else (2006:427-428).

The right to services, such as discussed in the World Health Organisation’s *International Covenant of Economic, Social and Cultural Rights* of 1966 views the right to food as a right to adequate food, not the very best food that can be obtained, and the right to health as the highest attainable standard, not even a right to adequate health. Is this a right to the highest attainable standard that they themselves can achieve with what is available to them locally and that they can afford or the highest standard that can possibly be achieved, regardless of the cost, globally? (O’Neill 2005:429).

If we can concur that the right to food does not imply that the government has a duty to provide daily gourmet meals served by a Michelin-trained chef for all of its citizens, perhaps the right to health could, then, also mean that although all people have a right to basic health care, health services such as PGD and GM, might not be included in this.

If the right to health care is viewed as a right to equality of opportunity, denying any person health care would be to restrict the range of opportunities that would otherwise be open to that

individual. However, other issues, such as the distribution of wealth and income also greatly influence the equality of opportunity that a person would have access to (Daniels 2001:319).

“Our concern for equality must be reconciled with considerations of liberty and efficiency in arriving at the overall requirements of justice” (Daniels 2001:320). Daniels goes on to explain this statement to mean that the right to equal opportunity is violated only if unfair social practices or preventable, curable diseases interfere with the pursuit of reasonable plans for life, causing an individual to lose a competitive advantage (2001:320). As he further states:

We accept, however, the fact that the natural distribution of talents and skills, working in an efficient market for them, will both enhance the social product and lead to inequalities in social outcomes. A just society will try to mitigate the effects of these inequalities.

(Daniels 2001:320).

In other words, there will be some form of inequality in terms of talents and skills, whether these are genetically screened, manipulated or enhanced, or simply occurring in nature. Therefore, the issue at stake is not actually whether PGD and GM will contribute to an unequal society, but rather how this inequality is dealt with and to what a degree it exists and becomes perpetuated by PGD and GM.

Daniels comes to the conclusion that a right to health care is important, but that it can, and should, be restricted and that not every medical need gives rise to an entitlement to services. He states that we cannot make the direct conclusion that, because an individual has a right to health care, it automatically means that he or she should be entitled to some precise health-care service, even if it is a health-care need (Daniels 2001:320-321). Harris also further indicates that “... buying educational privilege in a context in which not all can afford to do so is certainly unfair in some sense. But if we defend people’s rights to do this it is because we see education as a good and we feel it is right to encourage people to provide goods for their children and

wrong to deny them these goods even if not all can obtain them” (2007:27). The same can then also be true for health care.

In short, to say that a young child suffering from a curable disease like malaria, whose parents cannot afford medical treatment, deserves some medical attention, is not the same as claiming that a woman who believes herself to be at risk for breast cancer at the same age her mother obtained it, should be given regular free genetic screenings to see if she carries the gene.

The focus in a discussion on the right to health care could also focus on the maintenance of normal functioning, which would mean that services that are not necessary to maintain normal functioning would be excluded from the right to health care.

As Daniels states, whilst services such as cosmetic surgery, some forms of counselling or uses of, for example, Prozac, would optimise otherwise normal functioning, it is not needed for normal functioning and, as such, should not be seen as a right. “We are obliged to help others achieve normal functioning, but we do not ‘owe’ each other whatever it takes to make us more beautiful or strong or completely happy” (2011:321).

Indeed, it would seem that the problem for an interest-based account of human rights is that it permits very many rights, rather than too few, but to be fair to the account, it does not imply that people have a human right to anything that would make them better off.

(Hessler 2008:37)

If PGD and GM are viewed in this light, it might not be considered to be part of the right to health care in all circumstances. If these technologies were utilised to achieve normal functioning, for example by altering genes for genetic diseases and disabilities, it should, by the argument stated previously, then be seen as a human right and government should ensure that all people have equal access and opportunity to make use of it. However, applying PGD or GM simply to achieve what Daniels described as the optimisation of normal function, by altering genes to make children “more beautiful” or “more clever” or “more athletic” for

example, in other words, to employ these technologies for eugenic purposes, could not be seen as a right at all, and no one, neither the government nor companies offering these services, would have any obligation to offer it to anyone else than those willing to pay for it.

However, as Daniels is also then quick to point out, some of the hardest issues involved are those that relate to reproductive matters, given that, in this paradigm, where only the optimisation of normal functioning are at stake, abortion would not count as a therapeutic need. Furthermore, infertility is a departure from normal functioning and should, by this reasoning, be included (2001:321).

“The rich can buy special security systems for their homes. They can buy safer cars. They can buy private schooling for their children. Why not allow them to buy supplementary health care for their families?” (Daniels 2001:323).

### **3.7 The right to health and human dignity**

For more than one and a half century, Etienne De Villiers indicates, mainstream churches and Christian theology were completely opposed to the notion of fundamental human rights (1993:101). He further states, however, that fundamental human rights are theologically justified, “particularly health care as a human right”, given that a wide spectrum of Christian beliefs, such as for example, *imago Dei*, played a role in the historical development of human rights. These beliefs also suggest that Christians should propagate the recognition of human rights (De Villiers 1993:102): “That health is one of the basic needs of human beings as image bearers of God and that fellow human beings have the obligation to provide adequate health care to those who fall ill, is something about which the Bible leaves us in no doubt” (De Villiers 1993:103).

The conviction that all human beings have inherent value and dignity, simply on the basis that they are human, is more often than not grounded in the confession that they are created *image Dei*, in the image of God, in Christian thought. Given that the work of Jürgen Moltmann is, for the most part, the most important source of this study, I will engage mostly with his thought regarding human rights and human dignity in this section. The affirmation that human beings are created in the image of God will be discussed in much greater detail in the chapter to follow,

when Moltmann's trinitarian doctrine of creation is examined. However, it also bears mentioning here as part of the greater discussion of human rights, and especially, health as a human right.

“Wherever there came to be a concept of ‘the human being’, the right of human beings as such were formulated too”. This means that human rights are not explicitly Christian or European, although it was formulated as such during the time of the Western Enlightenment and made its way into constitutions in that form (Moltmann 1999:117). Moltmann sees the need for human rights to expand in two directions. Firstly, in the formulation of the fundamental rights of humanity and secondly, by incorporating human rights into the rights of the earth and all other living things (1999:118).

Human dignity is both the root of human rights and the bond unifying different categories of rights, be it protective rights, the rights to freedom, social rights or rights of participation (Moltmann 1999:119). Moltmann further clarifies that human dignity is not the elevation of human beings above other living things and cannot be upheld at the expense of nature (1999:120)<sup>77</sup>. Individual and social rights also belong together and one cannot take precedence over the other (Moltmann 1999:123-124)<sup>78</sup>. Moltmann explains it in the following way:

The fact that all human beings are made in the image of God is the foundation of human dignity. Human beings are intended to live in this relation to God. That gives their existence its inalienable, transcendent depth dimension. In their relationship to the transcendent God, human beings become persons whose dignity must not be infringed.  
(Moltmann 1999:122)

Moltmann further describes human beings as made in the image of God as pertaining to the human being “in allen seinen Lebensbezügen” (1984:169), in other words, the economic, social, political and personal dimensions are meant to reflect the confession that we are created in God's image.

Human dignity, Moltmann states, is already defined in the Old Testament: “The Abrahamic

---

<sup>77</sup> See also Moltmann (2011:611) and Bauckham (1995:17).

<sup>78</sup> See also Moltmann (1984:170-172; 1993d:181).

religions – Judaism, Christianity and Islam – are responsible for the religious background of Western civilizations, and they have always seen this dignity as belonging to the human being as the image of God” (2012a:87)<sup>79</sup>. For a long time, this dignity was viewed as something that resided in the human soul, not in the body, and through this perspective the body came to be viewed as something that does not form part of the likeness to God and that the soul could simply make use of. Still later, the likeness to God came to be seen as “the conscious subjectivity of will and perception” (Moltmann 2012a:87). However, as Moltmann is quick to point out, it is the whole of the human being that is the image of God, his or her body included (2012a:87). For the discussion of human dignity within the sphere of human rights and as relating to the examination of health and health care in the larger Christian bioethical debate on PGD and GM, the implications of this affirmation are that human dignity and human rights also refer to bodily dignity.

Moltmann also indicates that the crucified Christ has always been the Christ of the poor:

They find in him the brother who put off his divine form and took on the form of a slave (Phil. 2), to be with them and to love them. They in him a God who does not torture them, as their masters do, but becomes their brother and companion. Where their our lives have been deprived of freedom, dignity and humanity, they find in fellowship with him respect, recognition, human dignity and hope.

(Moltmann 1993c:49).

For this reason, Christian theology cannot but take seriously the plight of the poor and the suffering. Within the context of the right to health and health care, Christ’s “preferential option for the poor” as confessed in the *Confession of Belhar*, adds another very important notion to the discussion, one that will also be of note for the examination of PGD and GM in terms of human rights and human dignity.

De Villiers also indicates that the Bible calls upon Christians to champion the rights of the poor and weak. Concerning health care, this means that the preferential option for the poor should be respected (1993:105).

---

<sup>79</sup> See also Moltmann (2012a:87-88).

The right to lead a life of dignity is also an inherent part of human dignity (Moltmann 1999:127). For this reason, the bigger issue of economic injustice should be addressed. Relating closely to this, Maura Ryan rightly indicates that in many regions access to basic health care, clean water, satisfactory nourishment, maternal and child care and the treatment and prevention of HIV/AIDS are far more serious crises than the availability of genetic treatments (2012:974-975).

For this reason, I raise the larger issue of socio-economic justice and not simply the issues that the conversation on social justice directly confronts PGD and GM with, such as the inequality that would exist in access and affordability. Given the large discrepancies that exist in the health care sector at present, these concerns can very easily be argued away. In this regard, one can simply state that the social injustices that they refer to are present in any case and that it does not, in a unique way, contribute to the Christian bioethical discussion on PGD and GM. Arguing in this way, without taking the broader socio-economic context into account, could lead one to make the case that because the inequalities and these forms of biotechnologies could exacerbate already exists, it does not add something original to the bioethical discourse. This was also seen in the previous chapter when social justice was briefly discussed.

### **3.9 Conclusion**

In Moltmann's theology, "God is a God of promises, promises that open up a future into which the people may enter in obedience ... Something which yet is not and thus opens the future. Promises of God have their ground not in history itself, but in God and in God's faithfulness" (Rasmussen 1995:62). This means that the future that is promised cannot be deduced from the present reality, God's promise is something that is not yet, therefore it stands in contradiction with the present. It is not a rigid scheme, there is room for surprises, promises that transcend historical fulfilment and point to fulfilment in the future, creating a history of promise. "Discipleship, which concerns life here and now, exists in the horizon of the coming kingdom. It criticizes what is in terms of what is promised" (Rasmussen 1995:64).

In the light of this perspective of Moltmann, this chapter looked at the present South African reality as part of the life that exists here and now, standing in contradiction to the promised

future that we eagerly await. Taking its cue from Moltmann's view mentioned above regarding Christian discipleship, this chapter serves to criticise the present reality with its inequalities, especially in this context, relating to health and health care services as part of the greater debate surrounding PGD and GM.

The inequalities of the present South African context, with its great and growing gap between rich and poor, and unequal distribution of wealth and resources are also acutely visible in the sector of health care. This, of course, also has extensive and far-reaching implications for the larger discussion on PGD and GM and what impact it would have on the current South African context or, in other words, between those who would be able to afford PGD and GM, and those who would not have access, were these types of biotechnology to become commercially available.

To summarise then, it has been indicated that health care plays only a lesser part in determining a person's health. In this chapter I have argued that in the human rights discourse, the human right to health should rather be emphasised than simply the right to health care. This does not mean, however, that health care should not be included in this right, or that governments have any less of a duty to look after the health of its people. On the contrary, it is my opinion that by viewing the right to health as much more than merely the right to have access to health care services, a much more holistic view of human health care is at work, one that also puts emphasise on the numerous other features that contribute to health, for example sanitation, housing, diet, and so forth, and appeals to the responsibility of government to look after these basic human needs of those who cannot afford to do so themselves. In addition, by accentuating the larger issue of social justice and not simply the matter of access and availability that is directly related to PGD and GM, I believe that this chapter also dealt, however briefly, with the much larger issue of socio-economic justice.

As already indicated in the previous chapter, the issue of PGD and GM pertaining to social justice is one of the many concerns that are raised in Christian bioethical discussion. Given the reality that there are very few studies that look at this particular point of critique and even less from a South African perspective, I have chosen to discuss this one aspect of bioethical debate

in greater detail, before examining the trinitarian doctrine of creation as developed by Moltmann in the chapter that follows to establish how this perspective might influence the bioethical dispute and enable us to formulate a responsible Christian response from the “thicker” foundation of Christian doctrine.

## CHAPTER FOUR

### MOLTMANN'S TRINITARIAN DOCTRINE OF CREATION

#### 4.1 Introduction

In chapter two, it was indicated that all ethical discussions on PGD and GM, whether critique or commendation, stems from particular perspectives on creation, be it God as Creator, the role of humanity in creation, the role of humanity as part of the created order, the integrity of creation, and so forth. Chapter three dealt with one aspect of this critique or commendation, namely that of social justice, human dignity and human rights, in more detail, and once again, it was shown that the issue of creation becomes central in a serious and earnest discussion. In the light of this, in attempting to contribute to the ethical discussion of PGD and GM, it is only fitting that we now turn to the Christian doctrine of creation.

Although there are many possible perspectives from which to view creation, this study has chosen to work with a trinitarian view on creation. In addition, because of the limitations of this study, I have made the decision to engage only with the work of one theologian, in detail. While this does have certain shortcomings, such as offering only one perspective of the numerous ones that exist, I believe that the benefits far outweigh the limitations.

Trying to give an overview of all of the theological studies done on the doctrine of creation would, at best, necessarily be a very brief and general overview of the most important and influential works, simply because of the sheer mass and diversity of material. In contrast, by focusing on just one author, a much more fruitful approach can be taken, where an actual position can be described and discussed in far greater detail, as well as the reasoning behind it and the influences that other theological works had on that particular position.

Jürgen Moltmann is one of the most prominent Protestant theologians whose work focuses equally on the Trinity and creation. In *The Theology of Jürgen Moltmann*, Richard Bauckham, one of the world's leading Moltmann scholars, describes Moltmann's later trinitarianism as characterised by mutual relationships without hierarchy, within the Trinity itself, between the Trinity and creation, and within creation itself (1995:7). When looking at the creation of the

Father, Moltmann, in *The Trinity and the Kingdom*, only looks at aspects regarding creation that affects God and thus, presents the doctrine of creation as a doctrine of God. Given that the focus of this chapter is Moltmann's trinitarian doctrine of creation, the primary resources for establishing this doctrine will be his *Trinity and the Kingdom* (1993a) and *God in Creation* (1993b). This does not mean that the rest of his opus will not be regarded, but that these two books will be used more extensively than others. Moltmann often repeats core elements found in these two primary resources in subsequent writings, and this will also then be indicated throughout.

In focusing solely on the work of Moltmann to discuss the movement of political theology, Arne Rasmussen defends his decision by stating that Moltmann's work is "more comprehensive and wide ranging than the work of any other contemporary political theologian". In addition, he also indicates that Moltmann's concentration on the issues of fundamental theology, as well as a high level of abstraction, makes this tension in his work much more clear than in that of others. The importance of Moltmann's work for contemporary theology in general and the fact that he is a Protestant theologian are also given as reasons for his decision (1995:15-16). The tension in Moltmann's theology can be summarised as his willingness to endure the tensions of paradox, as is clear from the title of *The Crucified God*. This paradox is also clear from the events on the cross, which forms the central axis of Moltmann's theology and the godforsaken cry of the Son<sup>80</sup>. Moltmann asserts: "The theology of the cross must begin with contradiction and cannot be built upon premature correspondence" (1993c:28). On the cross, Jesus is portrayed as a man in pain, not someone who we would view as God. In Moltmann's words: "This humanized Christ represented a contradiction to all ideas of God, and of man as divine" (1993c:40). This "suffering of God" is the paradox that is sustained throughout Moltmann's work without any attempt being made to reduce it.

As stated in the previous chapter, Moltmann does not try to justify the Christian doctrines on a theoretical level. Instead, he aims to indicate the practical relevance that the Christian faith holds for the struggles for justice, peace and the integrity of creation. In other words, how the

---

<sup>80</sup> Moltmann indicates: "All Christian theology and all Christian life is basically an answer to the question which Jesus asked as he died. The atheism of protests and of metaphysical rebellions against God are also answers to this question. Either Jesus who was abandoned by God is the end of all theology or he is the beginning of a specifically Christian, and therefore critical and liberating, theology and life. The more the 'cross of reality' is taken seriously, the more the crucified Christ becomes the general criterion of theology. The issue is not that of an abstract theology of the cross and of suffering, but of a theology of the crucified Christ" (1993c:4).

Christian doctrines respond to our ethical issues.

The clear correlation between ethical reflection and doctrine also becomes more pronounced when Moltmann reminds us that “everything done and suffered must conform to what is believed, loved and hoped for” (2012a:xiii). In Moltmann’s opinion, “a Christian theology which sees its problem and its task in knowing God in the crucified Christ, cannot be *pure* theory” (1993c:68). He indicates that he has always started from theology to consider and present ethics. This does not imply that the theory should first be established and the practice developed thereafter, or that Christian ethics should simply be seen as part of the doctrine of the church. Rather, everything that is done should be consistent to what is confessed in terms of doctrine. There is, from Moltmann’s perspective, not a one-direction relation between the disciplines of theory and practice, or doctrine and ethics: “Theory is not in the vanguard, nor is practice. In the hope to which both are related, they share a dialectical relationship of reciprocal influence and correction” (2012s:xiii).

Joy Ann McDougal indicates that what Moltmann set out to do from *The Trinity and the Kingdom* onwards, was to develop “concrete doctrine” and “practical theory” (2003:179).

In addition, although Moltmann has never launched an explicit in depth study of bioethical matters, in *Ethics of Hope* (2012) he focuses on the specific issue at hand, namely genetic manipulation<sup>81</sup>

For Moltmann, the task of theology is not merely to interpret, but also to change the world, in Bauckham's words, "to keep society on the move towards the kingdom" (1995:6). It is for this reason, which Moltmann himself aims to have his doctrines applied to ethical issues, in addition to the remarks of Rasmussen, that I consequently focus this chapter on the work of Jürgen Moltmann. Rasmussen highlights the comprehensive nature of Moltmann's work and the concentration of both fundamental and abstract issues in his theology. His importance for contemporary theology is also emphasised, as well as the fact that he is a Protestant theologian. In addition, both the Trinity and creation plays a fundamental role in his theology.

This chapter will therefore discuss Moltmann's trinitarian doctrine of creation in dialogue with the ethical issues raised by PGD and GM, as set out in chapters two and three, and indicating

---

<sup>81</sup> See, for example 2012:79; 80; 110; 127.

throughout the value that this perspective adds to the debate surrounding PGD and GM.

To this end, Moltmann's biography and theological influences, especially that of Karl Barth, will be discussed, followed by an overview of Moltmann's doctrine of the Trinity, paying special attention to the role of the Father, Son and Spirit in creation, followed by the doctrine of creation as found in the work of Moltmann, again concentrating on the role of the Father, Son and Holy Spirit, as well as the knowledge of God in creation and the creation of human beings in the image of God. In conclusion, the correlation between Moltmann's doctrine of trinitarian creation and the ethical issues raised by PGD and GM will be examined in more detail.

## **4.2 Jürgen Moltmann**

### **4.2.1 Early life**

Jürgen Moltmann was born on 8 April 1926 in what Moltmann himself describes in *A Broad Place: An Autobiography*, as a "shared 'settlement' of a few teachers who, in the wake of the youth movement of the time, were enthusiasts for 'the simple life' (propogated by Ernst Wiechert) 'on their own soil'" (2007:3).

His initial source of theology, as Bauckham describes it, was experiencing the reality of God for the first time as a prisoner of war in 1945-1948, experiencing the two themes that would, later in the 1960's and early 1970's, form his theology: God as the power of hope and God as the One who is present in suffering (1995:1). Moltmann describes this in *A Broad Place*, detailing his call-up to the barracks in Delmenhorst and undergoing military training as part of the heavy weapons company of an infantry battalion. From September 1944 until February 1945, his regiment spent their time in the south of the Netherlands, in the Reichswald and Cleves. He narrates the confusion of the young men in the division, where their only source of information was propaganda, and the horrors of war and open combat, the despair of watching his companions die in his arms, asking the inevitable question: Why his companion and not him? What to go on living for? (2007:20-23) In February 1945, British and Canadian troops surrounded the company from all sides on a hill outside of Cleves and as his fellow soldiers were either shot or surrendered, Moltmann and a few others hid in the ruins of a house. The

following day he watched the advance of the British tanks and artillery as they moved into the Reichswald Forest. He recounts how, starving, thirsty, filthy, and covered in lice, he surrendered to the British forces and became a prisoner of war (2007:24-25).

Moltmann was sent to a camp for prisoners of war in Zedelgem and describes the cold despair of the captives, the “inward imprisonment of the soul which was added to the outward captivity” that he also explains as “mental and spiritual torment”. When the war ended on 8 May 1945, the Red Cross declared that, given that there was no longer a German state, they were no longer responsible for the German prisoners and their rations were cut drastically. However, he also narrates the slow and gradual reawakening of his senses, the joy of a blossoming cherry tree, hearing music (2007:26-27). In August 1945 he was transferred to a camp on the Ayrshire coast of Scotland that was well-equipped and where an attempt at some kind of instruction was made by a Catholic professor of philosophy. Moltmann also volunteered for every kind of work that was called for as a way of getting out and soon became the interpreter for the group, acting as middleman between some of the prisoners who made toys and the Scottish family who wanted to assist them and buy what they made. He writes about the hospitality of the Scottish overseers and their families, who did not reproach or blame their former enemies and how this made it possible for Moltmann, and the others, to “live with the past of our own people, without repressing it and without growing callous”, becoming human again (2007:27-29).

In September 1945 they were confronted with pictures of the atrocities of Belsen and Buchenwald concentration camps, realising for the first time what it was that they had fought for, and for Moltmann “every patriotic feeling for Germany – ‘holy Fatherland’ – collapsed and died”. It was only when Fritz Valentin, a Jewish friend of his father, returned to Hamburg from English exile, that he felt “in duty bound to return to this land of contradictions” (2007:29).

There are two experiences that Moltmann recounts as having raised him from depression to a new hope. The first is the welcoming encounter with the Scottish families, and the second, a Bible that an army chaplain had distributed. He read the book without much understanding in the evenings and the lament of Psalm 39<sup>82</sup> caught his attention, seeming to be an echo from his

---

<sup>82</sup> I am dumb and must eat up my suffering within myself.

own soul, calling that soul back to God. Reading the Gospel of Mark, he was struck by Jesus' death cry, 'My God, why have you forsaken me?' and felt the conviction growing within him that this was someone that understood him completely, who is with him in his cry to God and has felt the same forsakenness that he was living in. He summoned up the courage to live again in understanding the assailed, forsaken Christ as he knew that Christ understood him and was seized by a great hope for the resurrection into God's "wide space where there is no more cramping" (2007:29-30).

This first experience of God clearly set the tone for his first theological work, *Theology of Hope*, which he would later publish, focusing on this eschatological hope in the resurrection that he experienced in the prisoner of war camp. In his own word:

I have never decided for Christ once and for all, as is often demanded of us. I have decided again and again in specific terms for the discipleship of Christ when situations were serious and it was necessary. But right down to the present day ... I am certain that then, in 1945, and there, in the Scottish prisoner of war camp, in the dark pit of my soul, Jesus sought me and found me. 'He came to seek that which was lost,' and so he came to me when I was lost.

(Moltmann 2007:30)

In the spring of 1946, Moltmann applied to be sent to an educational camp, where he was able to complete his Abitur, the examination that was required for study at a university. He also attended lectures both on the educational side for aspiring teachers and those of the camp's theological school and decided to become a pastor. He further described this time as being the most intensive intellectual life that he has even experienced, and that they "received what we had not deserved, and lived from a spiritual abundance we had not expected (2007:31-33).

Another event that changed his life, was the first international SCM conference after the war, held in Swanwick, where a group of Dutch students told the prisoners of war, who had been invited, about the Gestapo terror in their country, the slaughter of their Jewish friends and the

---

My life is as nothing before thee.  
Hear my prayer, O Lord, and give ear to my cry.  
Hold not thou thy peace at my tears,  
for I am a stranger with thee, and a sojourner, as all my fathers were.

devastation of their homes. They said that Christ was the bridge on which they were possible to meet with the German captives, and, stepping “on the bridge which Christ had built” from the Dutch students to the prisoners of war, they were able to confess the guilt of their people and ask for reconciliation. When they embraced, he experienced it as an “hour of liberation”, feeling like a human being once again (Moltmann 2007:33-34).

Moltmann returned to his childhood home in April 1948, but it was not the same. They lived in four rooms that remained after the house had been bombed in 1944 and he attended theological lectures in Hamburg that were held in the church hall as a preliminary step to a faculty. However, he had grown accustomed to theological education of a higher quality and Pastor Hellmut Traub, who he described as the “one ray of light” in those lectures, introduced him to his friend Ernst Wolf, who was a lecturer at Göttingen and helped Moltmann to get a place to study there. After being tutored all summer by his classically educated father, he passed the required Greek examination and in October 1948 set off to Göttingen to study theology (2007:39-40).

#### 4.2.2 Influences

As a student at Göttingen, he absorbed the theology of Barth and later, while remaining indebted to Barth, was also inspired by his teachers, namely Otto Weber, Ernst Wolf, Hans Joachim Iwand, Gerhard von Rad and Ernst Käsemann. The Dutch ‘apostolate theology’ of A.A. van Ruler<sup>83</sup> and J.C. Hoekendijk added to his eschatological perspective on the church as having a universal mission toward the coming kingdom of God. He was also influenced to a great extent by Dietrich Bonhoeffer, reading his works before they reached the popularity that they still enjoy today. From Bonhoeffer and Wolf, he developed his social ethics and avocation

---

<sup>83</sup> Van Ruler’s trinitarian theology also had a profound influence on Moltmann’s thought. In a 1956 article, *The Necessity of a Trinitarian Theology*, he indicates a variety of reasons why the only viable approach to God and humanity is a trinitarian theology. Van Ruler states that the insight was discovered in the Reformation that “in Christ, God mirrors himself, mirrors himself in my self-consciousness, in my heart, and in my existence. The point of evangelical love (*agape*) is that it touches human beings. God’s revelation only reaches its goal in my faith” (quoted in Lombard 2011:245). Lombard goes on to indicate that for Van Ruler, “the implications of such *iustificatio Dei activa* is that it results in a *iustificatio Dei passiva*, in our own acceptance of God’s work done in Christ as our own. The internal testimony of the Holy Spirit, God’s wrestling with us, results in our reciprocal wrestling with God. Van Ruler then proceeds to link this insight to ‘the needs of modern consciousness’ (an affirmation of humanity’s active agency), ‘the ecumenical future’ (the church as part of God’s eschatological movement towards the kingdom of God), and the ‘role of the church in the world’ (affirming God’s involvement as creator, savior and fulfiller of God’s plan in and for the concrete world)” (Lombard 2011:245-246). This means that for Van Ruler, it is impossible to speak about a difference between the inner-trinitarian relationships and a social, or what we today call public theology. The aspect of human beings as having active agency, also in creation, is a thought that is also very evident in Moltmann’s theology, as will be indicated later in this chapter.

of the involvement of the church, also in secular society. Iwand also first introduced Moltmann to the work of German philosopher Georg Wilhelm Friedrich Hegel, which would later play an extremely important role in his 'dialectical interpretation' of the cross and the resurrection of Jesus Christ. Von Rad and Käsemann provided a solid grounding for his early theology in current thinking about biblical theology (Bauckham 1995:1-2).

In an earlier work on Moltmann's theology, *Moltmann: Messianic Theology in the Making*, Bauckham also writes about the influence of Iwand and Hegel on Moltmann's work, stating:

From Iwand Moltmann learned ... to appropriate Hegel's interpretation of the modern experience of the absence of God in relation to the godforsakenness of the crucified Jesus and Hegel's idea of a dialectical historical process of reconciliation corresponding to the dialectic of cross and resurrection.

(Bauckham 1987:6)

Moltmann was not the only German theologian developing a future-orientated theology in the late 1950's and early 1960's. As a result of the continuing failure of previous systematic attempts to deal in a satisfactory manner with the undeniable eschatological orientation of biblical theology and the continuing failure of theology to critically engage with the realities of contemporary society, Gerhard Sauter, Johannes Baptist Metz and Wolfgang Pannenberg, who would later be a colleague of Moltmann's at Wuppertal, all formed part of this so-called 'school of hope'. Each, however, had a distinctive line of theological development (Bauckham 1987:4-5).

Reading the work of Jewish Marxist philosopher Ernst Bloch for the first time in 1959, all of these converging influences on the theology of Moltmann were brought together. *Theology of Hope* was conceived as a type of theological parallel to Bloch's philosophy of hope, and throughout Moltmann's career this dialogue with Bloch has continued (Bauckham 1995:2).

In view of the clear influence that the work of Barth had on Moltmann's work, it is necessary to briefly look at the ways in which he was influenced by Barth, and where he later differentiated from the perspectives of Barth, in particular regarding the doctrine of God and the Trinity.

### 4.2.3 Jürgen Moltmann and Karl Barth

As William Waite Willis reminds us, it is generally agreed that there is a theological close relation of Moltmann to Barth in that both are Christologically based and Moltmann follows Barth's methodology, deriving his theology from the concrete history of Jesus Christ centred in the cross and his resurrection (Willis 1987:79). In other ways, however, Moltmann diverges from Barth sharply. It is also true that the Christological orientation is a common motif of current trinitarian theology and that Moltmann is not unique in this instance. Pannenberg, Jüngel and Wagner all belong to this school of orientating theology in a Christological manner.

Although there are numerous issues where the work of Barth and Moltmann could be compared to one another, with converging concerns and conflicting topics, this section will only deal with those that directly impact the larger topic at hand, that of Moltmann's trinitarian doctrine of creation. For this reason, only the influence of Barth on Moltmann's perspective on the Trinity and on the doctrine of creation, and the areas where they differ within these doctrines will be discussed. The idea is not to make a choice between the two theologians, but rather to develop a better understanding of both, especially of Moltmann, as a result of the brief comparison, with regard to their thinking on trinity and creation.

#### 4.2.3.1 Jürgen Moltmann and Karl Barth on the Doctrine of the Trinity

George Hunsinger refers to the fact that the Trinity only played a minor role in modern Protestant theology prior to Barth. Barth placed the Trinity in the front of his *Church Dogmatics*, thereby re-orientating Protestant back towards the great Catholic tradition and revived the interest in trinitarian theology that is still visible today (2011:294).

Ingolf Dalferth, speaking about the relation between Moltmann and Jüngel, also makes this clear in his statement: "Moltmann starts from the same Barthian legacy but moves in a different direction" (1995:151). Samuel Powell also attributes this orientation to Barth, and indicates: "The writings of two of the leading theologians of our day, Jürgen Moltmann and Wolfhart Pannenberg, demonstrate that Trinitarian theology today takes its cue from Barth and not from liberal theology" (2001:193).

In *Church Dogmatics I/I*, the following statement is made by Barth: “The doctrine of the Trinity is what basically distinguishes the Christian doctrine of God as Christian, as therefore what already distinguishes the Christian concept of revelation as Christian, in contrast to all other possible doctrines of God or concepts of revelation” (1957:301)<sup>84</sup>. This means that revelation has a trinitarian structure where God reveals Godself as Revealer, the act of revelation (objectively) and the ‘perpetual impartation’ of that revelation (subjectively) (Hunsinger 2011:295). In this trinitarian structure, God the Father is the Revealer, God the Son the act of revelation and God the Holy Spirit the ongoing impartation of that revelation.

Moltmann discusses his own social doctrine of the Trinity against Barth’s trinitarian monarchy, indicating how it surpasses Barth’s that does not express the “personal encounter of the Father who loves the Son, the Son who prays to the Father and the Spirit which confesses the Father and the Son.” Barth develops his doctrine from the principle that God is Lord; however, as Moltmann points out, this is not how the New Testament witnesses to God, but rather as the “Father of our Lord Jesus Christ.” In contrast, Barth refers to the Father who “rules and commands in exaltation” and the Son who humbly obeys, even though he himself found this “hard”, “insidious”, and even “offensive” (1991:130-135). In this regard, Joy Ann McDougall points out that Moltmann, similar to Barth, does not attempt to situate the doctrine of the Trinity in the Bible by appealing to texts from the New Testament that could be described in terms of triadic formulas, for example, but contending that the doctrine of the Trinity is a “true and necessary interpretation of the New Testament witness” (2005:11).

Speaking about God in *Church Dogmatic II/I* Barth further writes:

He can feel, and be affected. He is not impassible. He cannot be moved from outside by an extragenous power. But this does not mean that He is not capable of moving Himself. No, God is moved and stirred, yet not like ourselves in powerlessness, but in His own free power, in His innermost being ... open, ready inclined (*propensus*) to compassion with another's suffering and therefore to assistance, impelled to take the initiative to relieve this distress.

(Barth 1957:370)

---

<sup>84</sup> For a full discussion of Barth’s concept of the self-revelation of God, see Moltmann (2007:44-50).

For Barth, the suffering of Jesus must be considered the suffering of God, given that the doctrine of the Trinity means that God is who God is in God's revelation in Jesus Christ, and in the suffering of Jesus, God is given and known concretely (Willis 1987:89). "The suffering of God is not only the identity with human suffering in the suffering of Jesus, but also means that this human suffering of Jesus brings suffering into the being of God". Willis goes on to state that Barth's doctrine of the Trinity is based on the eternal sending by the Father and obedience of the Son in the unity of the Holy Spirit - the Trinity conceptualises the God who can and does suffer in the very depths of God's inner being (1987:90).

Moltmann modifies Barth's Christocentric epistemology by emphasising what he calls the *history* of Jesus as told in the Bible. This is not an anti-Barthian modification, and can be regarded as the natural development of Barth's own theology. The difference, however, is that for Barth, Jesus Christ is revelatory because of the incarnation, while for Moltmann, it is because history discloses the trinitarian life of God (Powell 2001:198).

In a similar vein, Moltmann also contends that Barth is too *theological* and not trinitarian enough, which he describes as a critical limitation in Barth's theology. Similar to Rahner, Barth has to make the distinction between the God "who was in Christ"; the God who proceeds from Godself in the primal decision and the God who was or is previously Godself (Moltmann 1993c:203).

Barth describes God as One in three different senses: personal, ontological and dominical. This leads him to refer to the Triunity of God, or to unity in Trinity. Personally, God is One as a single acting Subject that is always presupposed by and expressed in God's threeness. God's essence is also ontologically simple and indivisible. Finally, God's oneness is the oneness of the Lord, identical to God's sovereignty and freedom (Hunsinger 2011:299). Barth offers no analogies for God's mysterious identity of threeness with oneness, oneness with threeness. In *Church Dogmatics I/1* he writes: "This is the unique divine threeness in the unique divine oneness", (364) thereby accepting that not everything can be resolved (Hunsinger 2011:301). God's oneness is further constituted by three modes of being, that of the Father, Son, and Holy Spirit. Simultaneously, God's threefold otherness is constituted by oneness, entailing that the divine Persons are equal and all forms of subordination be rejected (Hunsinger 2011:302).

Trinitarian doctrine maintains the unity of essence between Christ and God; Christ is understood in divine terms and God is understood in Christian terms (Moltmann 1993a:131).

The divine unity can only be grasped in a trinitarian manner, which means that Christian faith cannot rightly be called monotheistic in the sense of the One God (Moltmann 1993a:134). Moltmann describes Barth's approach to his doctrine of the Trinity as starting from the sovereignty of the One God in order to secure it by the doctrine of the Trinity, rather than starting with the Trinity. Barth's trinitarian doctrine is developed out of the logic of the concept of God's self-revelation that God's essence is God's sovereignty, as God reveals Godself as Lord and correspondingly, humankind is absolutely dependent. He considers God's sovereignty to be God's nature, making it the equivalent of God's divinity; it is impossible to speak about three Persons to whom terms such as subjectivity or 'I-ness' can be ascribed in relation to the other Persons. Three modes of being are all that remains, as Barth approvingly notes (1993a:140-141).

Barth emphasises God's self-revelation again when he stresses that the doctrine of the Trinity cannot be establishing the same revelation thrice (Moltmann 1993a:141). He sees the Spirit merely as the bond of love that links the Father and the Son, but, as Moltmann argues, this mutual relationship of love has no need for a third Person and the Spirit in Barth's thought is not a Person but only an energy (1993a:142-143). Barth's only attempt to formally secure the Spirit as a Person is through the common 'proskynesis' of the Holy Spirit with the Father and the Son:

It is only in the later volumes of *Church Dogmatics* that the biblical idea of covenant makes it possible for Barth to talk about a partnership, a mutual relationship, even about friendship between God and free man, in which God does not merely speak and decree, but also hears and receives.

(Moltmann 1993a:144)

Regarding divine unity, Moltmann argues that instead of taking the philosophical postulate of absolute unity as starting point, one should rather start with the biblical history. In this instance, the unity of the Father, Son and Spirit is the eschatological question about the consummation of the trinitarian history of God (1993a:149). The unity, at-oneness of the Trinity is given in

fellowship of the Father, Son and Spirit (Moltmann 1993a:150). An additional doctrine of unity is therefore not necessary.

Making the distinction between the economic and immanent Trinity is only a factor of liberty and necessity were the only options in the concepts of God. Given that God is love and God's liberty cannot consist of loving or not loving: "The notion of an immanent Trinity in which God is simply by himself, without the love which communicative salvation, brings an arbitrary element into the concept of God which means a break-up of the Christian element" (Moltmann 1993a:151). "Der trinitarische Schöpfungsbegriff verbindet die *Welttranszendenz Gottes* mit seiner *Weltimmanenz*" (Moltmann 1985:109).

For this reason, the distinguishing element between the economic and immanent Trinity is found, for Moltmann<sup>85</sup>, in doxology, in the Church's praise and worship. God is not an object, we know God only in so far as we love; we know in order to participate in the fullness of divine life. Doxological theology is responsive; praise and knowledge is a response to salvation (1993a:152).

However, doxology also goes beyond thanksgiving; God is worshipped, praised and loved for who God is, not simply out of gratitude for our salvation (Moltmann 1993a:153). Therefore, Moltmann states that the principle behind the Christian doctrine of the Trinity is that: "Statements about the immanent Trinity must not contradict statements about the economic Trinity. Statements about the economic Trinity must correspond to doxological statements about the immanent Trinity" (Moltmann 1993a:154).

Bauckham also points out that the economic and immanent Trinity are not preserved in Moltmann's theology, but rather, that the Trinity is envisaged as a trinitarian history of God with the world. The doctrine of the Trinity is "not an extrapolation from the history of Jesus and the Spirit", but *is* the strictest theological interpretation of the history of Jesus Christ and the Holy Spirit (1995:156). In this way, Moltmann also transcends the subordination of pneumatology to Christology that is so common in the Protestant tradition. Creation is included

---

<sup>85</sup> See also Moltmann (1993a:159-161).

in the trinitarian history of God: “The Father creates, as he redeems, *through* the Son *in the power of the Spirit*” (Bauckham 1995:159).

For Moltmann, the doctrine of the Trinity can be conceived only dialectically. He attempts to define God's oneness solely by means of *perichoresis* and suggests that the three divine Persons are three subjects or centres of activity, thereby rejecting Barth's notion of God as a self-identical Subject consisting in three modes of being. In Moltmann's opinion, the unity of the triune God is eschatological rather than Barth's notion of perfectly eternal (Hunsinger 2011:309-311). Moltmann describes this in the following way:

If we search for a concept of unity corresponding to the biblical testimony of the triune God, the God who unites others with himself, then we must dispense with both the concept of the one substance and the concept of the identical subject. All that remains is: the unitedness, the at-oneness of the triune God ... the concept of God's unity cannot in the trinitarian sense be fitted into the homogeneity of the one divine substance, or into the identity of the absolute subject either; and least of all into one of the three Persons of the Trinity. It must be perceived in the *perichoresis* of the divine Persons.

(Moltmann 1993a:150)

Hunsinger maintains that while Moltmann believes that this proposal avoids Arianism and modalism, his proposal runs the risk of opening doors for tritheism (2011:311). This critique will be dealt with later in this chapter in the discussion of Moltmann's doctrine of the Trinity, especially with regards to his critique on strict monotheism and Molnar's claim that Moltmann's theology is pantheistic.

In Moltmann's opinion, a line should be drawn between monotheism and trinitarianism. He goes so far as to deny that Christianity should be monotheistic whatsoever. In doing so, he is not advocating polytheism in the form of tritheism, but rather that trinitarianism is neither monotheism nor polytheism. Ted Peters explains it in the following way: “It is something unique on its own account. It is the peculiar product of the Christian experience with the God who suffered in the cross of Jesus” (1993:103).

It is then also this perspective that the unity of the triune God is eschatological that Barth strongly objects to in Moltmann's thought.

In a letter to Moltmann in 1964, following the publication of *Theology of Hope*, Barth criticises: "the unilinear way in which you [Moltmann] subsume all theology in eschatology ... disturbs me that for you theology becomes so much a matter of principle (an eschatological principle)" (Moltmann 1991:126). Barth detected a 'one-dimensional' eschatological thought in *Theology of Hope*, as opposed to his own 'three-dimensional' resolution, writing:

Would it not be wise to accept the doctrine of the immanent Trinity of God? You may thereby achieve the freedom of three-dimensional thinking in which the *eschata* have and retain their whole weight while the same (and not just a provisional) honour can still be shown to the kingdoms of nature and grace. Have my concepts of the threefold time (CD II.2, 47.1; II.1, 619-38) and threefold parousia of Jesus Christ (CD IV.3, 69.4) made so little impact on you that you do not even give them critical consideration?

(Barth, as quoted in Moltmann 1991:126-127)

Moltmann also criticises Barth's understanding of God's self-revelation in relation to the immanent Trinity. Barth's version of the epiphany of the eternal present is affected by Platonic thinking in so far as in Barth's concept, God reveals himself by taking humanity within the circle of God's own eternal self-knowledge. Moltmann, however, sees God's self-revelation not the pure presence of God, a present without a future (resurrection), but rather as an event of promise that points beyond itself to the not yet existing reality of the future (Bauckham 1987:91-92). This orientation towards the future is only very prominent in Moltmann's perspective of creation, and one of the areas where he again diverges sharply from the thought of Barth on the matter.

It is surprising that Barth was so harsh in his criticism of Moltmann concerning the emphasis he places on eschatology, taken into account that Barth himself had earlier written in his commentary of *Romans*: "Christentum, das nicht ganz und gar und restlos Eschatologie ist, mat mit Chistus ganz und gar und restlos nicht zu tun" (1922:298, quoted in Moltmann 1997:33).

It is clear that Barth was a very big influence on Moltmann in developing his doctrine of the Trinity. While there are numerous matters on which they disagree and critique one another, there are enough congruent thoughts to appreciate that Barth was one of Moltmann's biggest influences in developing his trinitarian doctrine of creation that is the focus of this chapter. In the section that follows, Barth and Moltmann's perspectives on the doctrine of creation will be discussed, indicating again the important influence that Barth was on the construction of Moltmann's trinitarian doctrine of creation.

#### ***4.2.3.2 Jürgen Moltmann and Karl Barth on the Doctrine of Creation***

Similar to his doctrine of the Trinity, the doctrine of creation found in Barth's thought also has an anthropocentric focus, where he relates the covenant of God only to human beings. Not only does this not fit into the Reformed tradition where God created the world for God's own glory and the covenant is stressed to be with all creatures<sup>86</sup>, and is developed into the consummation of the new creation in the glory of God, Barth also contradicts himself. He states that "creation itself is the beginning of this history [of the covenant]", which would imply that creation itself is God's covenant not simply the establishing of that covenant with only one of God's creatures (Moltmann 1991:128-129).

In contrast, Moltmann continuously refers to the community of and fellowship of creation. In his discussion of human rights, as examined in chapter four, he also constantly stresses the reality that the rights of humanity and the rights of nature should be held in harmony and that one cannot supersede the other<sup>87</sup>.

Barth's hierarchical parallels of, for example, the Father and the Son within the Trinity, God and the world, heaven and earth, soul and body, and man and woman, is dissolved and brought into terms of mutuality and the fellowship of creation replaces the hierarchical orders of creation in Moltmann's perception (1991:127). Moltmann refers to human fellowship as a sphere where there is no subordination (1993a:157), and this perspective is also true of his view on relationships within the Trinity, which he regards as relationships between equals and

---

<sup>86</sup> See also Moltmann (2012a:112-113).

<sup>87</sup> See also Moltmann (1984:170-172; 1993d:181; 2011:611; 2012a:88-89). In *Ethics of Hope*, this unity with nature is especially stressed as part of human dignity.

without hierarchy. The example mentioned in the previous paragraph of Moltmann's view on the rights of humanity not surpassing that of nature also holds true here.

In addition, Barth narrowly associates the Holy Spirit with revelation, while Moltmann adds the experience of God to his theology. This is not done as an alternative to revelation through the word of God, but in correlation to it (Bauckham 1995:22). In Moltmann's opinion, Barth did not pay enough attention to the world as design for the future kingdom of God (1993b:62). Moltmann also critiqued Barth's doctrine of time that did not make a distinction between future and advent keeping to the eschatology of eternity. Barth had replaced Blumhardt's future eschatology that had been his point of departure with this doctrine of time in the 1920's (1991:127).

### **4.3 Jürgen Moltmann's Trinitarian Doctrine of Creation**

In this section, I will be examining Moltmann's trinitarian doctrine of creation. In the first section, a brief overview over his theological career will be given, before looking in particular at the work of the Trinity in his theology. This will be done by focusing on the suffering of God, the freedom of God and the confession that God is love, and the role of the Son and the Holy Spirit, respectively, in his Trinitarian thought.

Moltmann's theological career can be divided into three sections. In the first instance, his publication of the trilogy that is perhaps to date still his most well-read and renowned works, *Theology of Hope* (1964), which looks at theology from the lens of God's promise and Christ's resurrection as hope for creation. In *The Crucified God* (1972), he turned his attention to the godforsakenness of the crucifixion and God's solidarity and identification with the suffering world through it. *The Church in the Power of the Spirit* (1975) dealt with the subject of the Church and of the Spirit and moves beyond what has been termed "the dialectical tension of the previous two volumes" by also focusing on the transfiguration of the Spirit that transforms the whole of creation corresponding to the resurrection of Christ<sup>88</sup>.

---

<sup>88</sup> *A Brief Overview of Moltmann's Writings* on <http://diglotting.com/2013/01/23/Moltmann-his-writings/> accessed on 19 July 2013.

The second phase of his theology can be summarised in what he himself refers to as his “systematic contributions”, in part as a result of criticisms against his previous work in the 1970s that he was offering a theology of theory without any praxis. This point of critique will be addressed later in this chapter when criticisms against Moltmann are looked at in particular. In this second phase, Moltmann focused on specific issues and did not aim to again present an entire theology through a specific lens. He published *The Trinity and Kingdom of God* (1980) that dealt with the doctrine of God; *God in Creation* (1985), looking at the doctrine of creation; *The Way of Jesus Christ* (1989) on Christology; *The Spirit of Life* (1991) on pneumatology; *The Coming of God* (1995) on eschatology; and *Experiences in Theology* (2000) that dealt with the matter of theological method.

In what can be deemed the third stage of Moltmann’s theological career, he is writing a variety of books with a greater focus on political theology and themes of liberation and freedom, as well as examining new boundary circumstances of human beings, such as for example ecological disaster in *God for a Secular Society* (1997) and *Ethics of Hope* (2012). Other books in this phase are *A Passion for God’s Reign* (1998), *Science and Wisdom* (2002) and *Sun of Righteousness, Arise!* (2010).

Moltmann’s first book, *Theology of Hope* (1964) focused on the issue on eschatology. He writes, however, that the term eschatology is in itself wrong, in that there cannot be a doctrine of the last things, if doctrine is understood on the basis of recurring experiences and are open to all. The Greek word ‘*logos*’ refers to the reality that exists in the present and always will, therefore, there cannot be a ‘*logos*’ of the future, unless it is simply the continuation of the present. If the future is considered to be something new, as is the case in Christian thought, it cannot be considered a ‘logical’ truth. For this reason, Christian eschatology does not speak about the future *per se*, but rather sets out from the definite reality in history and declares the future of that reality. Christian eschatology proclaims the future of Jesus Christ, the resurrected Lord (1997:12-13)<sup>89</sup>.

---

<sup>89</sup> Given that eschatology is not the main focus of this study, I will not discuss Moltmann’s eschatological thought in much detail, although it will be necessary at times to refer to it where it overlaps with his doctrine of trinitarian creation. The entire *Theology of Hope* concentrates on the matter of Christian eschatology. For further discussion, see in particular, on eschatology and revelation (2007:31-84), on God’s promise within the context of world history (2007:85-124), on Jesus Christ’s resurrection and his future (2007:125-209), on eschatology as viewed throughout history (2007:210-279) and on the church in the light of this eschatology (2007:280-312). See also Moltmann

The grounds for Christian hope is eschatology, more specifically, the coming of Christ; however, a distinction must be made between this hope and the modern concept of hope. In Moltmann's opinion, we do not, in the Enlightenment view of human potential, progressively move towards a fuller accomplishment or attainment of a better world, all the while becoming smarter, faster, kinder or better people in an improved or enhanced manner of being human<sup>90</sup>. Even the concept of God's progressive revelation that relates with the utopian dream of modernity is based on the utopian idea of historical progression. This idea is evident to a great extent in proclamations such as Robert Sinsheimer's after an initial conference about the launch of a project for genome-sequencing, stating that: "For the first time in all time a living creature understands its origin and can undertake to design its future". Similarly, James Watson expressed the need for "the courage to make less random the sometimes most unfair courses of human evolution" (Song 2012:1001).

Against this view, Moltmann contends that the hope we have in Christ is not the same. The structure of Christian hope is formed by Jesus Christ's resurrection from the dead and its implications for history and human life. It is an eschatological hope that takes a specific event in history, the crucifixion and resurrection of Christ, as its starting point and announces the future of that reality (1997:17). It is not hope based on human progress in and through history, but hope in the creation *ex nihilo* of God, an all-or-nothing recreation that confronts us in history, and starts anew with the resurrection.

It is clear that the concept of human progress, and especially Moltmann's perspective that Christian hope is much more than this, has implications for the Christian bioethical discussion of PGD and GM. This matter will be dealt with in the conclusion, when the role of human beings in creation and its consummation will be discussed as related to human freedom and the mastery of nature.

---

(2012a:19-41).

<sup>90</sup> For examples of this perspective, see Christopher Lasch's *The True and Only Heaven: Progress and Its Critics*, W.W. Norton, New York (1991:40-81) and Hannah Arendt's *The Human Condition* (1998:105; 295).

Christian hope, Moltmann explains, sees the world as full of possibilities – the possibilities of the God of hope – and the present reality and humanity in the hand of God, who calls into history from its end, its consummation, making all things new. By hearing the call of God, Christians acquire the freedom<sup>91</sup> to renew life in the present and change the existing world for the better (1997:21).

As Bauckham writes: “The most important controlling theological idea in Moltmann's early work is his dialectical interpretation of the cross and the resurrection of Jesus, which is then subsumed into the particular form of trinitarianism which becomes the over-arching theological principle of his later work” (1995:4)<sup>92</sup>. The cross and the resurrection represent complete opposites in Moltmann’s work - death and life, the absence of God and the presence of God. However, in this contradiction, the crucified Jesus and the risen Jesus is the same Person and by raising the crucified Jesus, God has created continuity in this radical discontinuity (Bauckham 1995:4-5).

Moltmann’s later trinitarian thought is characterised by mutual relationships without hierarchy; within the Trinity, between the Trinity and creation, and within creation (Bauckham 1995:7).

The cross and the resurrection bring both a Christological understanding of the kingdom of God, and an eschatological one. The resurrection of Jesus Christ is the basis for a new type of hope in the kingdom, which implies that the promised future exists not only in the giving of the Spirit, but that the Spirit becomes the pledge of the future that is still to come (Moltmann 1997:202). As Bauckham further postulates:

In *The Crucified God* Moltmann's theology became strongly trinitarian, since he interpreted the cross as a trinitarian event between the Father and the Son. From this point he developed an understanding of the *trinitarian history* of God with the world, in which the mutual involvement of God and the world is increasingly stirred.

(Bauckham 1987:5-6)

It has been made clear in this section that Moltmann’s theology is intrinsically trinitarian. In the section that follows, the important role that the Trinity plays in Moltmann’s theology will

---

<sup>91</sup> See also Moltmann (1971:137-138).

<sup>92</sup> On the subject of the ‘death of God’ and the resurrection of Jesus Christ, see also Moltmann (2007:150-155).

be further examined, focusing specifically on the suffering of God, God's freedom, the Son in Moltmann's trinitarian thought and the role that the Holy Spirit plays in his theology.

#### 4.3.1 The Trinity in the Theology of Jürgen Moltmann

In this section, the Trinity in Moltmann's theology will be discussed, with reference specifically to the suffering of God; the freedom of God and the notion of God as love; and the role of the Son and the Holy Spirit respectively in Moltmann's trinitarian thought. In utilising the insight gained from Moltmann's trinitarian doctrine of creation, a Christian bioethical perspective on PGD and GM can eventually be formulated in response to the challenges of these kinds of biotechnology.

“Die Trinitätslehre ist in den letzten zehn Jahren wichtig geworden, weil durch sie *das unterschiedend Christliche* formuliert wird“ (Moltmann 1991:11). For Moltmann, what has become especially important in the last few years, is: “1. der Begriff der trinitarischen Gemeinschaft, 2. die Frage nach den männlichen und den weiblichen Metaphern, 3. die weitere Ausarbeitung der trinitarischen Kreuztheologie und 4. die Perspektiven einer trinitarischen Geschichtsauffassung“ (1991:11).

Ever since Tertullian, the Christian Trinity has been depicted as “belonging within the general concept of the divine substance: *una substantia - tres personae*”. While the three Persons differ from one another, they are one in their common divine substance. Therefore, understandably, Augustine and Thomas Aquinas viewed this one, common divine substance as the foundation of the trinitarian Persons, and thus, primary in comparison (Moltmann 1993a:16). Presenting the trinitarian Persons in the one divine substance had far-reaching implications, both for Western theology and for Western thought in general. Protestant orthodoxy and theological textbooks since the time of Aquinas divide the article on God in two. Firstly, the proof and assurance is given that there is a God and that God is one. Only after that the doctrine of God as triune is developed (Moltmann 1993a:17).

Moltmann criticises this, stating that: “... the unity of the absolute subject is stressed to such a degree that the trinitarian Persons disintegrate into mere aspects of the one subject ... leads unintentionally but inescapably to reduction of the doctrine of the Trinity to monotheism”

(1993a:18). For this reason, Moltmann, starting with the special Christian tradition of the history of Jesus, develops a historical doctrine of the Trinity. In this way, he presupposes the unity of God neither as homogeneous substance nor identical subject (1993a:19).

In his discussion of the Trinity, Moltmann critiques Christian monotheism. The doctrine of the Trinity cannot be termed ‘a speculation’, given that it is the theological premise for Christology and soteriology, having been developed to preserve faith in Christ as Son of God and direct Christian hope towards salvation in divine fellowship (Moltmann 1993a:129). Furthermore, Moltmann states:

... monotheism and monarchianism are only the names for two sides of the same thing: the One is the principle and point of integration for the Many. The One is the measure of the Many. The One God has always been appealed to and comprehended in the context of the unity of the world.

(Moltmann 1993a:130)

He concedes that strict monotheism must be theocratically conceived and implemented, but that faith in Christ is threatened as soon as it becomes part of the doctrine and worship of the Church; Jesus Christ must either withdraw into the series of prophets, and give way to the One God, or disappear into the One God as one of God’s manifestations. Theological Christology is made impossible by the strict concept of the One God that cannot be parted or imparted; “it is ineffable.” Strict monotheism forced us to think about God without Christ, and about Christ without God. As opposed to strict monotheism, trinitarian doctrine sustains the unity of essence between God and Christ and Christ is understood in divine terms, while God is understood in Christian terms. The doctrine of the Trinity is much more than the deification of Christ and the Christianisation of the notion of God. “God cannot be understood without Christ, and Christ cannot be understood without God” (Moltmann 1993a:131-132).

#### ***4.3.1.1 The suffering of God***

While the suffering of God might not at first glance appear to be directly related to the larger

issue at hand, namely Moltmann's trinitarian perspective on creation and how that can be applied to the ethical challenges that PGD and GM raises, it is of extreme importance for the way that Moltmann views the doctrine of God as trinitarian, as well as the doctrine of creation.

The notion of God's suffering is emphasised in particular in *The Crucified God*, where Moltmann starts by referencing Karl Rahner's proclamation that through Jesus' death, "our death [becomes] the death of the immortal God himself" (Rahner, quoted in Moltmann 1993c:201), which Moltmann indicates is only meaningful if seen in a trinitarian manner. He further refers to Rahner's invitation to consider the worth of Jesus' death not simply with regards to salvation, but also in its very nature. Rahner postulated that one cannot assume that this death has no effect on God and accordingly, "this death itself expresses God" (Rahner, quoted in Moltmann 1993c:202).

In Greek philosophy, the divine substance cannot suffer or it would not be divine. In the same way, nominalist and Idealist philosophy the absolute subject cannot suffer or it would not be absolute. In contrast to this, at the very heart of the Christian tradition, is the history of Jesus' suffering, where Godself is involved in history. If this was not the case, there could be no redemptive activity radiating from Jesus' death. It is not just God allowing Jesus to suffer for us, which would make the cross no more than a human tragedy and God a "cold, silent and unloved heavenly power"; God is perceived only in Jesus' suffering and the passion of Jesus is discovered only in God (Moltmann 1993a:21-22).

The patristic period held fast to the apathy axiom, whereby God cannot suffer, because only a single alternative was perceived: a subject either has an essential incapacity for suffering, or a fateful subjection to suffering. However, as Moltmann points out, a third alternative does exist, namely active suffering, the voluntary "laying oneself open to another and allowing oneself to be intimately affected by him ... the suffering of passionate love" (1993a:23). To put it differently, "God does not suffer out of deficiency of being, like created beings. To this extent he is 'apathetic'. But he suffers from the love which is the superabundance and overflowing of his being. In so far he is 'pathetic'" (Moltmann 1993a:23). In the patristic period, it was Origen alone who spoke about divine suffering as God's suffering of love, the compassion that is at the heart of mercy and pity, taking another's suffering unto oneself. It was also Origen who, for the first time, made the claim that divine suffering does not only refer to God's suffering for us, but also of a divine suffering that exists between the Father and the Son within the Trinity

(Moltmann 1993a:24).

The suffering of God can only be spoken about in trinitarian terms. Abraham Heschel was one of the first to explicitly contest the theology of the apathetic God, stating that in God's *pathos*, God enters into the people that God has chosen and becomes a partner in covenant. In this way, God is affected by Israel's experience; their acts, sins and suffering, and God becomes capable of suffering in the fellowship of God's covenant with Israel: "Creation, liberation, covenant, history and redemption spring from the pathos of God" (Moltmann 1993a:25).

In early rabbinic theology and the kabbalistic doctrine of the Shekinah, Heschel's term of divine pathos is described as God's self-humiliation, that the history of the world develops out of God's acts of creation, choosing the patriarchs, making a covenant with the people, the exodus and the exile (Moltmann 1993a:27). All of these acts are viewed as acts of self-humiliation, because the almighty God who reigns in heaven and created all chooses to descend and reside with that creation, and draws them into it, entering into a relationship and a covenant with them; the God who is in control of the universe dwells with widows and orphans.

As Moltmann further expresses it, "but as the accommodations of eternal love they are at the same time already *anticipations* of the universal indwelling of God's eternal glory" (1993a:27-28).

In the nineteenth and twentieth century, English theology resolved to take God's capacity for suffering as starting point, because of the Anglican idea of eucharistic sacrifice. The basic concept running through the literature of this time is the necessity of seeing the eucharistic sacrifice, crucifixion and heart of the triune God together from a single perspective (Moltmann 1993a:30-31).

The historic suffering of Jesus reveals the eternal passion of God; God's eternal nature is the self-sacrifice of love. This sacrifice is more than simply a divine response to the sin of humanity, or a decision of free will on God's part, that might or might not have been made. Because God is nothing other than love, the crucifixion on Golgotha is the inescapable revelation of the nature of God in a world of suffering and evil (Moltmann 1993a:32). "To see the cross as God's act of loving solidarity with all who suffer apparently abandoned by God requires an incarnational and trinitarian theology of the cross" (Bauckham 1995:11-12).

The Spanish writer and philosopher, Miguel de Unamuno, wrote that in God's boundless love, God interpenetrates everything living, thereby imposing a limitation of God self, because in this way God, who is infinite, enters into the finite creation. If God enters into the finite creation, God also participates in its evolution<sup>93</sup> and God and the world are involved in a common redemptive process. In this way, God participates in the pain of the world and suffers in all who suffers. In the same way, we also participate in God's pain. For Unamuno, God's suffering is a contradiction of God's world, but also a contradiction in God self, given that it “forbids us to think of God's unity in the sense of a logical identity, whether it be of a substance or a subject” (Moltmann 1993a:39-40).

Berdyaev describes the inner reason why the world and its history exist as the freedom willed by God in the beginning; human history is a tragedy because humanity continually misuse and suppresses this freedom. This is God's tragedy as well, because God wants humanity to be free; the history of humanity's freedom is simply the side of the history of God's suffering that is open to our experience and perception (Moltmann 1993a:42). God wants this freedom, because God also longs for humanity, for what Moltmann describes as “the free manifestation of men and women in their free creative activity”. This means that a movement, a history, a tragedy should be assumed in God self if the reason for the mystery of human freedom is to be found in God self (1993a:43). God has a passionate longing not just for a random ‘other’, but for the ‘other’ of humanity, of human beings made *imago Dei*. This longing is not because of a deficiency of being within God, but rather from the superabundance of God's creative fullness (Moltmann 1993a:45).

The ground for creation, Berdyaev also finds within the Trinity. The creation of the world by the Father is the moment of most profound mystery in the relationship between God the Father and God the Son; there is something in this relationship that potentially goes beyond it and leads to the creation of the world. The incarnation of the Son can then be seen as fulfilling God's eternal longing to become human and make every human being “a god out of grace”;

---

<sup>93</sup> For a full discussion of the doctrine of creation and the theory of evolution, see Moltmann (2012a:121-129). In *God and Creation*, chapter 8, ‘The Evolution of Creation’, focuses on the development of the human species through a theological anthropology that draws upon biblical texts and scientific theories including Darwinism among others. Moltmann also stresses the ongoing creative development within the earth and life on earth and the presence and activity of the triune God in this ongoing creation.

God creates the ‘other’ to participate in the divine life and return the divine love (Moltmann 1993a:46).

#### ***4.3.1.2 The freedom and love of God***

In *Church Dogmatics I/II* section 28, Barth, in an attempt to mediate between the concepts of liberty and God's goodness, defined God as “the One who loves in freedom”. He continually relates God's freedom to God's love. Moltmann, however, sees various ambiguities in this, stating:

... either God loves as one who is free, who could just as well *not* love; or his freedom is not distinguished from his love at all, and he is free *as* the One who loves. In the first case there is still an arbitrary element which makes responding love difficult. In the second case there is a tautology.

(Moltmann 1993a:55)

For this reason, Moltmann then chooses the concept of freedom belonging to the language of community and fellowship; mutual participation in life, communication without lordship or servitude, becoming free beyond the limitations of individuality. “God demonstrates his eternal freedom through his suffering and his sacrifice, through his self-giving and his patience”, whereby God keeps humanity, God's image and God's world, God's creation, free and pays the price for our freedom (1993a:56).

The kingdom of the Father is determined by the creation of the world and its preservation. The freedom of created beings is restored by the kingdom of the Son that is determined by the liberation of human beings. The kingdom of the Spirit is determined by the powers and energies of new creation. These powers and energies cause people to become God's home and dwelling, and they take part in the new creation (Moltmann 1993a:212-213). Moltmann states:

Through science and technology people try to make themselves the lords of nature instead of its slaves. This is certainly the first step into the realm of freedom, for with the progressive liberation of men and women from dependency on nature and their

progressive self-determination the particular history of human beings with nature begins.

(Moltmann 1993a:213)

However, he is then quick to clarify that the acquiring of power is not yet the determination of how that power will be used (1993a:213). This matter of the participation of human beings in creation and mastering nature as a step into the domain of freedom, quite clearly is bursting with application towards the Christian bioethical discussion on PGD and GM. In the conclusion of this chapter, this matter shall be examined in detail.

Freedom and the realm of the Good are stages that are always present in the experience of freedom; human beings always live in transition from necessity to freedom, from freedom to choice, to practicing what is good. As Moltmann proposes: “The more power mankind acquires over nature, the more dangerous the human history of freedom becomes, and the more urgent the orientation towards the realm of the Good” (1993a:214).

The truth of freedom is love, the opening and sharing of life with others. The other becomes an expansion of freedom, not a limitation<sup>94</sup> (Moltmann 1993a:216). Moltmann summarises the trinitarian doctrine of the kingdom in terms of this freedom:

*The trinitarian doctrine of the kingdom is the theological doctrine of freedom. The theological concept of freedom is the concept of the trinitarian history of God: God unceasingly desires the freedom of his creation. God is the inexhaustible freedom of those he has created.*

(Moltmann 1993a:218 – italics author’s own)

The Biblical tenet “God is love”, (1 John 4:16) is the basis for a theology of divine passion.

---

<sup>94</sup> For a more detailed discussion on freedom, see Moltmann (1993a:219-222).

Moltmann developed this statement in six theses:

1. *Love is the self-communication of the good.* Love is the power of good going out of itself, entering into another, where it participates and gives itself. Love wants to live and give life, opening the freedom to live.
2. *Every self-communication presupposes the capacity for self-differentiation.* God, the One who loves, communicates God self and is both the One who communicates and the One who is communicated.
3. *In communicating God self, God's own being is disclosed.* God communicates God self not because of a compulsion or arbitrary resolve, but because of the “inner pleasure of his eternal love”.
4. *In trinitarian terms, God's love is the love of like for like within the trinity.* This love is necessary and not free, but in going out of itself, it becomes creative and free love as well; love for the ‘other’.
5. *God's self-humiliation* begins with the creation of a world that, although it is not God, corresponds to God. “Creative love is always suffering as well”, because only through suffering can creative love act creatively and redemptively for the freedom of the beloved.
6. *The creation of the world and humanity for freedom and fellowship is always bound up with the process of God's deliverance from the sufferings of God's love.* Not only does God suffer with and for the world, but liberated human beings suffer with and for God (Moltmann 1993a:57-60).

Bauckham indicates that Moltmann's doctrine of God hinges on the concept of dynamic relationality; God as triune is understood as three divine subjects in mutual loving relationship. In addition, God's relationship with the world is seen as a relationship of reciprocity, where in God's love for the world, God both affects and is affected by it. The trinitarian history of God's relationship with the world is thus a history where God includes the world in God's own trinitarian relationships. For Moltmann, this is the meaning of the claim that “God is love” (1995:15).

#### ***4.3.1.4 The Son in Moltmann's Trinitarian Thought***

Moltmann indicates that where Jesus is acknowledged to be the Son of God, Christian faith is

present and for this reason, “it is right that christology should once again have become the centre of Christian theology” (1993:82). Given that there have been disagreements about Jesus from the very beginning of Christianity, concerning for example his Person; resurrection and enthronement as Christ; divinity and incarnation; humanity and sinlessness, Moltmann postulates that Christian theology is presented with two tasks: In the first place, the “critical verification of the Christian faith in its origin in Jesus and his history<sup>95</sup>. The second task is a critical verification of Christian faith in its consequences for the present and the future” (1993c:84).

The doctrine of the Trinity was finally established by the Athanasian Creed, although there is a hermeneutic difference to the proclamation of God in the New Testament. Paul, already, through his dogmatic acknowledging of Jesus as the Son of God, obscured “Jesus’ religion” and replaced the moral discipleship of Jesus with a religious cult of Christ. As Adolf van Harnack stated in *What is Christianity?* (1957): “The Gospel, as Jesus proclaimed it, has to do with the Father only and not with the Son”. In the light of this, Moltmann asks the question whether, if the doctrine of the Trinity is not already established in the New Testament, it could not be a way of interpreting what the Bible, in Barth’s words, the testimony of God’s Word, proclaims? The manner in which God reveals Godself is the biblical root for the doctrine of the Trinity; the trinitarian structure of God’s revelation of God self as Lord. In the New Testament, Jesus manifests as the Son and his history is the reciprocal, changing, living relationship between Father, Son and Holy Spirit. Therefore, Moltmann starts from the following presupposition: “*The New Testament talks about God by proclaiming in narrative the relationship of the Father, the Son and the Spirit, which are relationships of fellowship and are open to the world*” (1993a:61-64).

In the New Testament, there is furthermore distinguished between the title of “Son of God” and the name, “the Son”, used in an absolute sense. The name ‘Son’ in the absolute sense is applied at Jesus’ baptism, where the interpretative account also refers to the Spirit of God descending upon him, referring both to Jesus’ personal inspiration and legitimisation as prophet and the beginning of the messianic age, where the Spirit is poured out on ‘all flesh’.

---

<sup>95</sup> Because of the limitations of this study, the Person of Jesus Christ will be focused on with regards to the Trinity and the doctrine of creation as found in Moltmann’s theology. Moltmann does, however, discuss the historical dimension of Jesus as the Christ in the chapter, *The Historical Trial of Jesus* (1993c:112-159) and the consequences for the present and future in the chapter, *The Eschatological Trial of Jesus Christ* (1993c:160-199) in *The Crucified God*.

The divine proclamation: “Thou art my beloved Son in whom I am well pleased” (Mark 1:11), or “This is my beloved Son” (Matthew 3:17), evidently has roots in the royal Israelite ritual of Psalm 2:7 and the Servant of God in Isaiah 42:1, but the synoptic gospels add the word ‘beloved’. In the Old Testament, the especially dear son is always the only son. Therefore, John changes ‘beloved’ to ‘only begotten Son’ in 1:14 and elsewhere, while Paul uses the phrase ‘his own Son’ (Romans 8:32). As evident from Hebrews 11:17, these phrases also point to Isaac. This is of extreme importance to understand the surrender of the Son by the Father on the cross (Moltmann 1993a:65-67).

The servant of God in Isaiah 42:1 also indicates that the history of the Christ is not triumphal, but the suffering of the servant that Isaiah 53 promises. Apparently, very early in the Christian tradition the name of the Son was linked with the passion history of Jesus (Moltmann 1993a:67).

Moltmann further indicates that Matthew 11:27 and the Gospel of John speak about “exclusive and mutual knowing, loving and participating”. In Matthew, using the term ‘the Son’ in the absolute sense at Jesus’ baptism suggests that one ought to relate the revelation of Jesus in this verse to his baptism: “All things have been delivered to me by the Father; and no one knows the Son except the Father; and no one knows the Father except the Son and any one to whom the Son chooses to reveal him” (1993a:67).

In addition, when Jesus is called the Son, it is the whole of Israel that is being thought of and not merely individuals within Israel (Moltmann 1993a:68).

The mutual knowing between Father and Son is mutual loving, the love of like for like. This means that it is exclusive. In Matthew 11:27, the opening statement is that the Son is installed as lord of the divine kingdom by the Father. The final clause states that the act of revealing is distinguished from the exclusive mutual knowing of the Father and Son; the knowledge being referred to is of the one who is unlike. “‘Like is known by like’ applies to the exclusive relationship of the Father and the Son. ‘Those are unlike know one another’ is true of the revelation to men and women through the Son. This axiom only permits a trinitarian interpretation, not a monotheistic one” (Moltmann 1993a:68-69).

Furthermore, Jesus calls God "Abba", which was not part of Israelite tradition. This name does not stress God's lordship or majesty, but rather an intimacy that was previously unheard of. Jesus also referred to God exclusively as "my Father". In his relationship to God, Jesus understood himself as the Son (Moltmann 1993a:69-70). As Moltmann then goes on to say, Jesus proclaimed the kingdom of God *his Father*, not of God *the Lord*:

God's fatherhood toward Jesus the Son is the mark of the lordship and kingdom which Jesus preaches ... In this kingdom God is not the Lord; he is the merciful Father. In this kingdom there are no servants; there are only God's free children. In this kingdom what is required is not obedience and submission; it is love and free participation.

(Moltmann 1993a:70)

The kingdom that Jesus proclaims cannot be divided from his Person, for it is the kingdom that the Father has made over to the Son. The kingdom itself has a trinitarian structure (Moltmann 1993a:71).

God sends his Son. This is not just some son of God being sent, but "the Father's Son". As Moltmann stipulates: "In the sending, the Son is wholly understood in the light of the Father, and in this sending the Father is revealed as the Father through the Son" (1993a:72). In other words, Jesus' sonship is communicated and received in faith, pointing towards the relationship between Jesus and the one who sent him. This, however, has now become inclusive at the same time as exclusive; the way it is communicated to believers absorbs them into it. There is still a difference between the sending and the receiving that forbids us from reducing both the sonship of Jesus to the sonship of believers and *vice versa*. The openness of Jesus' prayers reveals his sonship and the "Abba" prayer takes believers into fellowship with the Father, through the Spirit. As Moltmann further states: "The men and women who are liberated through the Son are not supposed merely to listen and obey; they can also ask, and share decisions" (1993a:73).

Jesus' preaching of the kingdom and its effect is grounded in his relationship with the Father. His baptism, call, proclamation and ministry occur through the Spirit and has to be understood in a trinitarian sense (Moltmann 1993a:74).

Moltmann understands the beginning of Jesus' suffering as his unanswered prayer in Gethsemane and the cup that he prays to be taken away from him as his fear of separation from

the Father (1993a:76). God becomes godforsaken at the death of Jesus Christ, the Son, the most profound rejection by God, his Father. History somehow softens the horror of the cross, and even in the gospels, Luke 23:46 and John adds "it is finished" to Jesus' words on the cross, a far cry away from the godforsaken Son's cries on the cross (Moltmann 1993a:78).

To preserve the divinity of Christ, Cyril interpreted Jesus' cry, "my God, why have you forsaken me", as Jesus praying for us, not for himself. Athanasius stated that Jesus pretends to be weak in order to deceive Satan and vanquish him more completely. Modern theology has described this as Jesus' inward faith against the appearance of despair. However, Moltmann indicates that on the cross, Jesus addresses God for the very first time not as Father, but simply as "my God". On the cross, the relationship between Father and Son breaks down and the Son becomes forsaken by God. The Son loses his sonship, the Father loses his fatherhood: "It is only as the One who is forsaken and cursed that the Son is still the Son. It is only as the One who forsakes, who surrenders the other, that the Father is still present" (1993a:79-80).

The Father forsakes, abandons the Son for us, so that God might become the Father of the forsaken. The Son is surrendered to death and forsakenness to become the brother and saviour of the condemned. The cross reaches into the depths of the Godhead, impressing on the trinitarian life in eternity (Moltmann 1993a:81).

The relationships within the Trinity break on the cross, but on the cross the Father and Son represent a single surrendering movement to such an extent that they are one. This act of surrendering takes place through the Spirit, who is the link in the separation, as well as the joining bond (Moltmann 1993a:82).

Patriarch Philareth wrote: "The Father is crucifying love, the Son is crucified love, and the Holy Spirit is the unvanquishable power of the cross". The cross stands at the centre of the Trinity (Moltmann 1993a:83).

The eschatological proclamation of the exaltation of the risen Christ also has a trinitarian structure. Although not the focus of this study, it will nevertheless be very briefly examined as part of the greater, trinitarian history of God<sup>96</sup>.

---

<sup>96</sup> For Moltmann's full discussion, see 1993a:83-89.

God has enthroned Jesus through his resurrection to be the Son of God in power, through the sanctifying Spirit (Romans 1:3). The activity of the Holy Spirit is of utmost importance in the raising of the Son from death; through the creative Spirit (Romans 1:4; 8:11; 1 Peter 3:18; 1 Timothy 3:16), through the glory of the Father (Romans 6:4), through the power of God (1 Corinthians 6:14), “Jesus is risen into the innermost being of God himself. He has been exalted into the divine origin of the Holy Spirit. That is the trinitarian centre” (Moltmann 1993a:87-88).

In the sending, surrender and resurrection of the Son, the Holy Spirit acts on Jesus and Jesus lives from the creative Spirit's works, in the eschatological proclamation this now becomes reversed: The risen Christ sends the Spirit, is present in the life-giving Spirit and acts on humanity through the energies and charisma of the Spirit. The Holy Spirit is understood eschatological in the whole New Testament, as the power of the new creation and the resurrection. The Spirit's “present efficacy is the rebirth of men and women” and in the future, the raising of God's kingdom of glory (Moltmann 1993a:89).

Moltmann further indicates that humanity becomes integrated into the history of the Trinity through the experience of the Spirit in faith, baptism and fellowship and becomes participators in the eschatological history of the new creation in the trinitarian history of Godself (1993a:90). This participation and the impact that it can have on the discussion of PGD and GM will once again be stressed in more detail later, in the conclusion of this chapter.

Although the focus of this study, as mentioned previously, is not eschatology, the form of the Trinity in eschatological processes can be summarised as follows: God the Father subjects everything to the Son; the Son transfers the consummated kingdom to the Father and subjects himself to the Father. All activity in the eschatology goes out from the Son and the Spirit, with the Father being on the receiving end (Moltmann 1993a:93).

In the New Testament, there is a clear trinitarian co-working of God the Father, Son and Holy Spirit; the patterns, however, change (Moltmann 1993a:95). In the sending, delivering and raising Christ from the dead, the pattern is outlined as Father – Spirit – Son. In the lordship of Christ and the sending of the Spirit, the pattern that Moltmann sketches is Father – Son – Spirit. Lastly, when the eschatological completion and glorification is considered, the pattern is Spirit

– Son – Father.

The contradiction between God and godforsakenness, the godless world is overcome by the event of divine suffering, as was indicated previously. The trinitarian differentiation is of immense importance here; for love to reach and reconcile, godforsakenness is taken within the divine experience by the experience of the Son, separating the Son from the Father, or in Moltmann's formulation, setting "God against God". At the point of deepest separation, however, the Father and the Son are still united in their love for each other and for the world. This love leads the Father to abandon the Son to death and the Son to surrender himself. The gulf of sin and suffering is bridged by the love between the Father and Son on the cross. This also bridges the chasm of divine absence from history, taking the entire reality into God's embrace; the relationship between the Father and Son opens on the cross to include the whole of creation. The Holy Spirit then enters here as the third element, giving what appears to be only a binitarian element eschatological openness and direction (Bauckham 1995:153-154).

#### **4.3.1.4 The Spirit in Jürgen Moltmann's Trinitarian Thought**

The Holy Spirit plays an essential role in Moltmann's theology from *Theology of Hope* onwards, although the Spirit is rarely explicitly mentioned therein. The Spirit, however, plays an increasingly important role in his subsequent books. Bauckham also indicates: "Through the mission of the church the promise already affects the world in anticipation of the new creation and begins to transform the world already in the direction of its promised eschatological transfiguration" (1995:151). This mission of the church is the main concept of mediation between the promise in the resurrection of Christ and its eschatological fulfilment.

The Spirit arises as the life of the new creation from the resurrection of Christ and moves history to its eschatological transfiguration in *Theology of Hope*. In *The Crucified God*, the Spirit arises from the event of the cross as reconciling love of God, and moves history towards the eschatological unification of the world with God: "The structure is the same, but in the second case it is trinitarian – in this sense: that Moltmann identifies the Spirit with the love which unites the Son and the Father on the cross and thereby flows out from the event of the cross to include all reality in the divine love" (Bauckham 1995:154).

The Spirit is also mentioned a number of times as the One that "arises from the event of the

resurrection of Christ and is an earnest and pledge of his future, of the future of universal resurrection and of life” (Moltmann 1997:211). It is then clear that in *Theology of Hope*, at least, the Spirit is mainly understood in an eschatological manner. It is of particular importance for understanding Moltmann’s later development of the Spirit that the Spirit is historically located here between the resurrection and the universal future of Christ, as the Mediator between the particular (Christ) and the universal (the world).

In the sending, surrender and resurrection of Christ, the Holy Spirit acts on Jesus Christ and Jesus Christ lives from the creative Spirit’s works, now reversed: The risen Christ sends the Spirit and is present in the life-giving Spirit’s and acts on human beings through the energies and charismata of the Spirit. The Spirit is understood eschatological in the whole of the New Testament, as the power of the new creation and the resurrection. The Spirit’s “present worth is the rebirth of men and women”, while in the future the Spirit will raise the kingdom of glory (Bauckham 1995:89).

In Moltmann’s theology, human beings are integrated into the history of the Trinity, Bauckham indicates, through the experience of the Spirit in faith, baptism and fellowship, and we become participants in the eschatological history of the new creation in the trinitarian history of God (1995:90).

Bauckham further states that it is in the Eucharistic form of the Trinity that the Spirit really comes to the fore. Here, our experience of God’s activity moves towards its goal, the worship and enjoyment of God by creation in the new creation. In our praise, the Holy Spirit glorifies the Son and through the Son, the Father. The Spirit is the real subject of activity here. The third form of the Trinity is this trinitarian doxology, where there is no order of Persons, simply the movement from praising God’s works to praising God and the adoration of God for God’s own sake (1995:160-161).

If creation is then viewed as a trinitarian act, creation cannot simply be ascribed to God the Father, but also equally to the Son and the Holy Spirit (Moltmann 2012b:66). Moltmann describes the Holy Spirit as “the overflowing love of God from which creation originally issues forth” (McDougall 2005:108).

In the next section, I will focus on Moltmann’s doctrine of creation, which is, as I will indicate, done very particularly from a trinitarian perspective.

#### 4.4 Moltmann's Trinitarian Doctrine of Creation

In *The Trinity and the Kingdom*, Moltmann developed a social doctrine of the Trinity. In *God in Creation* he then develops a corresponding ecological doctrine of creation, understanding God as triune in awareness of the Holy Spirit for the sake of Jesus Christ; God constitutes in Godself the fellowship of the three Persons of the Trinity. If God is to be understood in a trinitarian manner, then God's relationship to the world can no longer be viewed as one-sided, but rather as an "intricate relationship of community" (Moltmann 1993b:1-2).

The Christian interpretation views the act of creation in a trinitarian manner: "the act of creation is a trinitarian act: God the Father creates through his eternal Word in the energies of his Spirit this non-divine reality, which though it is non-divine is nevertheless interpenetrated by God" (Moltmann 2012b:66).

The political implication of such a trinitarian doctrine of creation is that it includes a covenant with nature and the rights of both humanity and the rest of creation (Moltmann 1993b:3)<sup>97</sup>. This argument has already been briefly discussed in the previous chapter, with regards to human rights and the right of all human beings to health. In the conclusion of this chapter, when Moltmann's trinitarian doctrine of creation will be brought into conversation with the ethical challenges raised by PGD and GM, it will be examined again, this time specifically within the context of the perspective that it delivers on creation and the role that human beings can or should play in it.

Developing a doctrine of creation cannot be complete without creative imagination and an expectation of the future. Moltmann sets out to present an emphatically Christian doctrine of creation, understanding "Christian" in the original messianic sense, moulded by the proclamation and history of Jesus Christ. A doctrine of creation in light of Jesus the Messiah, determined by the messianic time that began with him, "directed towards the liberation of men and women, peace with nature, and the redemption of the community of human beings and

---

<sup>97</sup> See also Moltmann (1984:170-172; 1993d:181; 2011:611).

nature from negative powers, and from the forces of death". This "messianic doctrine of creation therefore sees creation together with its future – the future for which it was made and in which it will be perfected" (1993b:4-5).

Creation in the beginning was an open creation, with its consummation when it will become the home and dwelling place of God's glory. Human beings already partially and provisionally experience the indwelling of God through the Holy Spirit, but the hope is still for the full indwelling of the future (Moltmann 199b:5). Moltmann further differentiates the efficacy of the Holy Spirit into creating, preserving, renewing and consummating activity (1993b:12). Viewing creation in such a manner, in light of its eagerly awaited consummation, impacts on the way that PGD and GM is understood in the Christian bioethical discourse. The way of this influence will be discussed in the conclusion at the end of this chapter.

As Moltmann himself writes:

Wie das israelitische Verständnis der Welt als Schöpfung durch die Heilsoffenbarung Gottes in Exodus, Bund und Landverheißung geprägt ist, so ist das christliche Verständnis der Welt als Schöpfung Gottes durch die Heilsoffenbarung Gottes in der Geschichte Jesu Christi geprägt ... Sie ist auch der Grund dafür, warum in christlichen Verständnis der Schöpfer des Himmels und der Erde als der "*Vater Jesu Christi*" verkündigt und der alttestamentliche "Monotheismus" trinitarisch entfaltet wird: Der Vater hat durch den Sohn im Geist Himmel und Erde geschaffen.

(Moltmann 1985:106)

The Christian doctrine of creation, then for Moltmann, is characterised by the revelation of God in Jesus Christ and the experience of the Spirit:

Der den Sohn und den Geist sendet, ist der Schöpfer: *der Vater*. Der die Welt unter seiner befreienden Herrschaft zusammenfasst und erlöst, ist das Schöpfungswort: *der Sohn*. Der die Welt lebendig macht und am ewigen Leben Gotten teilnehmen lässt, ist die Schöpferkraft: *der Geist*. Der Vater ist die schaffende, der Sohn die prägende und der Geist die lebengebende Ursache der Schöpfung.

(Moltmann 1985:109)

The centre of Moltmann's ecological doctrine of creation is the recognition of the presence of God in the world and the world in God, not the distinction between God and the world. This does not mean that God is understood in worldly terms or that the world is divine – it is not in nature, but in human history, which is determined by God's covenant and promise, that God reveals Godself (1993b:13). This centre of the trinitarian doctrine of creation, holds evident value for the ethical discussion on PGD and GM, and will be discussed in this chapter's conclusion. "Through the powers and potentialities of the Spirit, the Creator indwells the creatures he has made, animates them, holds them in life, and leads them into the future of his kingdom" (Moltmann 1993b:14). For Moltmann, this is God's immanence. The transcendence of God must eliminate the concept of causality from the doctrine of creation – creating the world is vastly different from causing the world. God the Creator is present in the world through the Spirit, therefore God's relationships to creation are "an intricate web of unilateral, reciprocal and many-sided relationships" (1993b:14). Some of these are one-sided, such as making, preserving, maintaining, and perfecting, but numerous others are mutual, such as indwelling, sym-pathising, participating, accompanying, enduring, delighting and glorifying (Moltmann 1993b:14).

Bauckham further indicates that Moltmann starts from the assumption that God's relationship with the world is reciprocal, seeing as it is living and not one-sided (1995:98). "The creation is a work of divine humility" (Bauckham 1995:99), given that the world is not a matter of indifference for God, but that God gives it God's own impress as the world also impresses on God. God is love, and this is not simply a statement of the process whereby love emanates and flows from God, but God also expects and needs love; the world is intended to be God's home, God wants to dwell in the world (Bauckham 1995:99). Creation in Moltmann's theology is understood as a work of God's grace and narrated as history because creation opens up the prospect of God's history with the world. Initial creation is completed and fulfilled by the

messianic future of creation, the transfiguration of creation in the “eternally unveiled presence of God, by the enduring righteousness of the world and its eternal pacification. God himself will dwell in the world” (Bauckham 1995:102).

The presence of the Creator in creation and the mutuality of some aspects of God’s relationships to this creation, as well as God’s continuous act of guiding creation to the future of promise, again, are of much worth for the ethical challenges of PGD and GM and will be related to it in the conclusion of this chapter. Moltmann also explains it in the following way:

The trinitarian doctrine of creation ... does not start from an antithesis between God and the world, so that it can then go on to define God and the world over against one another ... it proceeds differently, starting from an immanent *tension* in God himself: God creates the world, and at the same time enters into it. He calls it into existence, and at the same time manifests himself through its being. It lives from his creative power, and yet he lives in it ... The God who is transcendent in relation to the world, and the God who is immanent in that world are one and the same God.

(Moltmann 1993b:14-15)

The rabbinic and kabbalistic doctrine of the Shekinah can help us to understand God’s self-differentiation and the tension in creation. Shekinah refers to God’s descending to human beings and dwelling amongst us by God’s cutting Godself off from Godself, giving Godself away, suffering with those that God has created. As previously mentioned, the doctrine of the Trinity can further help in understanding this self-differentiation, as God creates, redeems and reconciled through the Son and in the power of the Spirit is present in creation, and the redemption and reconciliation of creation (Moltmann 1993b:15):

Today, a theological doctrine of creation which can responsibly be maintained must first of all come to terms critically with its own traditions and the history of its own influence, before it can face up to the dialogue with the modern natural sciences and the contemporary philosophy of nature.

(Moltmann 1993b:21)

Part of this traditions and influence includes the current ecological crisis that was brought about by humankind's quest for dominion and exploitation in 'subduing the earth'<sup>98</sup>. Moltmann also answers the question as to why God's creation is threatened by chaos and has fallen victim to annihilation in the following manner: "Because the Creator is by no means 'the all-determining reality' of what he has created – in that case creation would be itself divine – but because he has conferred on creation its own scope for freedom and generation" (1991:204-205).

Moltmann also further describes the present state of the world in creation theology to God's continuous creation, where God sustains and preserves creation and we eagerly anticipate the future of promise in God's kingdom (2010:205).

The kingdom of God, the resurrection and the new creation, is present here as the promise and hope for its future consummation. Its presence is determined by the contradiction to the present reality, leading us to the recognition of the real absence of the kingdom. In the words of the Reformers, the kingdom of God is *tectum sub cruce et sub contrario*; it is here, hidden beneath that which is its opposite (Moltmann 2007:203).

The Christian understanding of salvation in Christ colours the understanding of creation. In the New Testament, belief in creation demonstrates that the experience of salvation has universal significance for the whole of the universe. Jesus Christ is the foundation of the whole of creation's salvation and therefore also the foundation of the existence of all creation from eternity. Stating that Christ is the mediator of creation denotes that the Son is both creation's goal and foundation (Moltmann 1993a:102).

The New Testament witnesses to the experience of Christ's salvation and faith in Christ as creation's mediator, but also to the experience of the Holy Spirit and the hope that through the Spirit, creation will be transformed into God's home, where God will dwell. Through the Spirit,

---

<sup>98</sup> For further discussion of these crises, see also Moltmann 1993b:20-52.

there is a new divine presence whereby God dwells *in* human beings, therefore humanity and the church are already glorified in the body, but there is also hope for the future glory when the entire creation will be transformed through the indwelling of God's glory through the Spirit; creation can, as a result, only be understood in trinitarian terms (Moltmann 1993a:104-105).

As stated previously, when looking at the creation of the Father in *The Trinity and the Kingdom*, Moltmann only looks at aspects regarding creation that affects God and thus, presents the doctrine of creation as a doctrine of God.

Regarding the question of *contingentia mundi*, that asks whether the creation of the world is necessary for Godself, or merely fortuitous, whether it proceeds from God's nature or will and whether it is eternal or temporal, Moltmann pleads for a ceasing of interpreting God's freedom as arbitrariness and God's nature as divine natural law; God's nature is goodness, therefore the freedom of God's will lies in God's will to goodness. In God, necessity and freedom coincide. As a result, the idea of the world is already present and indeed, inherent in the Father's love for the Son. In relation to the world, the Son is the *Logos*, the word through whom the Father created all (1993a:107-108). The *Logos* is the *Son* in relation to the Father, as Moltmann further asserts:

The Father utters the eternal word in the Spirit and breathes out the Spirit in the eternal utterance of the Word. Through the eternal Son/Logos the Father creates the world. He is the mediator of creation. It is for his incarnation that God preserves the world. He is creation's liberator. It is in looking towards his kingdom of freedom that God loves those whom he has created. He is the crown of creation.

(Moltmann 1993a:108)

Moltmann further distinguishes between creation *outwards* and *inwards*. Creation is an act of the triune God in unity, directed outwards. In creation, incarnation and redemption, the inner

life of God therefore has to be distinguished from the outward acts of God. The inner life only provides the reason and justification of the outward acts (1993a:108).

A self-limitation of God who is infinite and omnipresent must be assumed because of the *creatio ex nihilo*, creation out of nothing; there is for God a 'within' and a 'without' and God goes creatively "out of himself". It is only because God withdraws into Godself that the space exists where God becomes active creatively; rather, therefore, creation exists simultaneously outside and inside of God. The trinitarian relationship is so wide that there is space, time and freedom for the whole of creation within. Creation is therefore a feminine concept, a bringing forth by God letting the world become and be in Godself. In Moltmann's opinion, the very act of creation is one of self-humiliation and self-limitation. God clears out in order to create space for the world that is to be. To make something "'outside' himself, the infinite God must have made room for this finitude beforehand, 'in himself'" (1993a:109). In this sense, creation itself is the zone of godforsakenness.

The subject of godforsakenness is also brought to the fore very explicitly in the climax of *The Crucified God*, when Moltmann writes:

When God becomes a man in Jesus of Nazareth, he not only enters into the finitude of man, but in his death on the cross also enters into the situation of man's godforsakenness. In Jesus he does not die the natural death of a finite being, but the violent death of the criminal on the cross, the death of complete abandonment by God. The suffering in the passion of Jesus is abandonment, rejection by God, his Father. God does not become a law, so that man participates in him through obedience to a law. God does not become an ideal, so that man achieves community with him through constant striving. He humbles himself and takes upon himself the eternal death of the godless and the godforsaken, so that all the godless and the godforsaken can experience communion with him.

(Moltmann 1993c:276)

Moltmann proposes that the experience of godforsakenness, that God has abandoned and rejected us, is common to human experience. It is absurd to image God experiencing this: How can God experience God's own absence? It is only God's trinitarian nature that makes this

possible, through which God willingly surrenders God's Godship and becomes truly and fully human. This makes it possible for God to experience the human condition, also the experience of godforsakenness, and thereby redeem it.

Moltmann, in using the definition of *creation ex nihilo*, presents a trinitarian doctrine of creation that consists of the creating work of God the Father, the deliverance and reconciliation of the whole of creation through the work of the Cosmic Christ, as well as the continuing presence of the Creator Spirit through the indwelling of the Holy Spirit in the world.

Creation is both an act of power and an act of self-humiliation, of God humbly drawing into Godself. As Moltmann puts it, when God acts creatively, God acts on Godself (1993a:110).

The creative Spirit is already present at creation in the beginning. Creation exists only in the power of the Holy Spirit, which entered into it. The Spirit cries out of the redeeming freedom of the enslaved creation (Moltmann 1993a:111).

Regarding the inner relationship of the Trinity, Moltmann states that the Father, through the alteration of love for the Son, through the contraction of the Spirit, and the Son, through the alteration in response to the Father's love, through the inversion of the Spirit, opened the space, time and freedom for "that 'outwards' into which the Father utters himself creatively through the Son" (1993a:111).

The Father determines to create the world in love for the Son and therefore, through God's eternal will, the world is destined for good and is an expression of God's love. For this reason, God has pleasure in it (Moltmann 1993a:111-112)<sup>99</sup>. The Father creates in love for the Son, but also through the Son. The Son's function of mediator in creation is in correlation with the idea of the incarnation of the Son of God and the lordship of the Son of Man (Moltmann 1993a:112).

---

<sup>99</sup> See also Moltmann (2012a:115-117).

The Son is the divinely immanent archetype of the idea of the world, given that the Son is destined to be the Logos. If the Father creates the world out of love for the Son, through the Son's answering love the world becomes the bliss of God the Father and God the Son; the purpose of creation is to glorify God. The purpose of creation is then fulfilled in the "free joy of existence, in the happiness of gratitude and the eternal praise of created beings" (Moltmann 1993a:112-113).

God the Father creates through the operation of the Holy Spirit, through the energies and powers of God's own Spirit that bridges the differences between Creator and creature, between Actor and act and Master and work (Moltmann 1993a:113).

To summarise then, in creation, all activity proceeds from the Father, but must be ascribed to the unity of the triune God (Moltmann 1993a:114).

#### **4.4.1 Knowledge of creation**

A biblical doctrine of creation should draw on the whole of Scripture and not just Genesis 1 and 2 (Moltmann 1993b:53). In other words, drawing exclusively on the creation narratives found in the first two chapters of the Bible and utilising them alone in the development of a creation doctrine would present a doctrine that is not biblical, but merely based on a fraction of the Bible. This focus upon the whole Bible is a good demonstration of Moltmann's trinitarian approach. In the discussion of a trinitarian methodology in chapter 1 of this study this holistic reading of the Bible was sketched as one of the features of a trinitarian approach.

For this reason, in developing his trinitarian doctrine of creation, Moltmann employs references to creation throughout Scripture, and also discusses the issue of where knowledge regarding creation is obtained at length. The aspect of the knowledge of creation will be briefly examined, since it illuminates Moltmann's trinitarian understanding of creation.

The way that the modern world regards knowledge, Moltmann indicates, is in terms of domination, by acquiring power over objects or reasoning by ‘grasping’ it or ‘getting’ it, taking possession of something and doing with it what we want. For the Greek philosophers and the Father of the Church, however, knowing meant knowing in *wonder*, becoming a participant in perceived knowledge (1993a:9).

The world does not reveal itself as being created by God by itself. In the biblical tradition the experience of the world created by God is determined by the revelation in Israel’s history of the creative God. The *special* experience of God, emerging from God’s revelation of Godself, leads to and interpreted Israel’s *general* interpretation of the world. This experience has a double relationship to each other; it shows the God of the covenant to be the Creator of the whole world, the universality of the one true God. All of creation enters into the salvation that Israel experienced and hopes for. “Creation is the universal horizon of Israel’s special experience of God in history”. Israel did not simply develop a protological understanding of creation, but also an eschatological one, given that in biblical theology the scope of creation starts at the creation of the heavens and the earth “in the beginning” (Genesis 1:1) right up to the creation of the “new heavens and the new earth” (Isaiah 65:17) at the end (Moltmann 1993b:54).

The final syllable in the German word for creation, *Schopfung*, means the process is completed, in this case, that creation is finished. Thinking about creation, we mostly involuntarily think about the beginning, the condition of the world brought about and completed (Moltmann 1993b:54-55).

Biblical tradition witnesses to God’s creation in perspectives of the beginning of time, historical time, eschatological time, and accordingly, a doctrine of creation must embrace “creation in the beginning, creation in history, and the creation of the End-time: *creatio originalis – creatio continua – creatio nova*” (Moltmann 1993b:55). As Moltmann further states, creation in the beginning already points to the history of promise with the Patriarchs,

which in turn points to the messianic history of Jesus Christ, while both point to the coming kingdom of God, when the earth and heaven will be renewed (1993b:55)<sup>100</sup>.

In theological tradition there have been two sources of knowledge of God, namely creation and Scripture. Nature is an imperfect source of knowledge and is simply the innate knowledge in the inner testimony of a person's conscience and acquired knowledge through the knowledge of nature: The first is direct knowledge of God and the second mediated knowledge, but is still generally accessible. Both, however, are imperfect sources and lack the final validity in the perspective of the "supernatural mystery of faith" (Moltmann 1993b:57).

For Moltmann, the created world is also understood as a promise and anticipation. In understanding creation in the present, in view of its glorifying and redeeming future, one can, as Barth did, interpret the world as a parable. Like the parables of Jesus, everyday, ordinary experiences become signs and present realisations of the kingdom of heaven. The world as a parable refers to its correspondence with the kingdom of heaven, which it does not yet resemble, but there is a similarity in its unmistakable dissimilarity (1993b:60-61). As Moltmann further states with regards to the eschatological dimension of creation:

The world as creation can be and has to be a parable of its own future, the kingdom of God; but it is not a parable of God himself. It is only in the kingdom of glory that the world will become God's image and likeness, because it will become his own dwelling.

(Moltmann 1993b:62)

For Paul, the resurrection of Christ is the beginning of the End-time process of the raising of the dead, the creation of the new world. The Christian form of belief in creation is faith in the resurrection, creation under the conditions of this life that is subject to death (Moltmann 1993b:66). "In II Cor. 4.6, Paul sees the enlightenment of faith through knowledge of Christ in

---

<sup>100</sup> See also Moltmann's discussion on the revealing of God throughout history in the form of promise and in the history that is marked by promise in *Theology of Hope* (2007:36-38).

the same, single perspective as creation in the beginning: the person who believes will be irradiated by the light of the new creation ... participates in the new creation” (Moltmann 1993b:66-67).

Moltmann also views knowledge of the world as creation as the most primal form of thanksgiving for the gift of creation and the community found in it, and praise of the Creator. In this manner knowledge of the world as creation also has a Eucharistic character. For this reason, he defines the essential character of a human being as being destined to be a Eucharistic being (1993b:70).

Moltmann discusses the premise of Rothe, that the self-revelation of God is linked to the idea that history provides an eschatological and progressive advancing self-realisation of God (2007:65). Although he does not state his concurrence with the hypothesis, he also does not dispute it. If history could be viewed as God progressively revealing Godself and the kingdom, this would mean that scientific and technological progress, such as PGD and GM, could be seen as an element in this process of revelation.

#### **4.4.2 God the Creator**

The Hebrew verb ברא (*br'*) is used in the creation narrative in the tradition of Priestly writing, indicating the divine bringing forth. There is no corresponding human analogy of bringing into existence that which did not previously exist, that is completely new, not potentially inherent or present in something else. The verb for making, עשה (*'sh*) that begins on the second day, is the purposeful manufacture, giving a particular aptitude and character to something (Moltmann 1993b:73). “The world was created neither out of pre-existent matter, not out of the divine Being itself” (Moltmann 1993b:75), creation is called into existence by God’s free will, what Moltmann terms *creatio e libertate Dei*, out of love. God creates the world out of freedom, therefore out of love – any apparent arbitrariness is thereby done away with, “In his free love God confers his goodness: that is the work of his creation” (1993b:76). Moltmann also indicates that throughout history the completed creation and the conservation thereof through God’s providence have been stressed. Both the coming future of creation and God’s continuing creative process has been overlooked (2012s:122-123). Moltmann emphasises that in “God’s

creative world process, where the beginning is concerned it is a matter of preservation, but in respect of the goal it is a matter of innovation” (2012a:223). This continuous creation is not creation out of nothing, but creation anew out of that which is old, both regeneration and amplification, giving new form to what already exists. For this reason, God’s creative process can be described with the dual character of both preservation and renewal (Moltmann 2012a:223).

Without the concept of creation as the forth going process of continuous creation, God becomes simply the preserver of the world. As Moltmann accuses Schleiermacher of:

For if the creation of the world is reduced to God’s general and present rule over that world, the world will once more cease to be a finite creation, and will be turned into a world without a beginning, eternal as God is eternal ... if there is no creation in the beginning there cannot be a new creation either.

(Moltmann 1993b:79)

Understanding creation in light of the Creator Spirit who also dwells in creation, God employs inner, divine life in creative activity. As a result, God’s love is communicated to the creatures of that love. “This gives human beings a share, not merely in the productivity of his will, but also in his ‘nature’ ... suggests a fellowship with God which really does go beyond mere creatureliness...” (Moltmann 1993b:85).

A doctrine of creation that is specifically Christian is trinitarian. In view of the messianic orientation of Christianity, the protological concepts regarding creation passed down by the Old Testament is defined further by the eschatological creation. In addition, the Christian understanding of the Creator is as the Father of Jesus Christ, developing the Old Testament monotheism in a trinitarian manner; the Father created through the Son in the Spirit (Moltmann 1993b:94).

Christian theology arrives at this conclusion by two very important concepts, that of the Cosmic Christ and the Spirit as Creator.

In the first instance, if the ground for the whole creation's salvation is Christ, it follows that Christ is also the ground for creation's existence, as the "discernment of the eschatological redemption of the whole creation through Christ as the premise which led to the deduction that the protological creation had its foundation in Christ". The eschatological experience of salvation leads Christians to confess that God's eternal wisdom and ever creative word have been finally and fully revealed in Jesus, the Father of Christ have created the world and sustains it through the Son. The revelation of Jesus as the Son of the Father determines the trinitarian doctrine of creation. The outpouring of the Spirit forms part of this eschatological experience. The powers of the Spirit are the powers of new creation, given that it is the guarantee of future glory (II Corinthians 1:22; 5:5; Ephesians 1:14). The power of the Spirit is the creative power of God that gives life to the dead; eternal life is therefore the gift of the Holy Spirit. Through the powers and gift of the Spirit, the new divine presence, the indwelling of God, is in creation. "In the operation and indwelling of the Spirit, the creation of the Father through the Son, and the reconciliation of the world with God through Christ, arrive at their goal" (Moltmann 1993b:94-98).

The Spirit is not simply the powers and attributes of God, but also acts as an independent subject and acts not only on creation, but on the Father and Son as well. "Creation exists in the Spirit, is moulded by the Son and is created by the Father. It is therefore from God, through God and in God". In this manner the trinitarian concept of creation binds the transcendence and immanence of God together (Moltmann 1993b:98).

The Cosmic Spirit operates in nature in four principles, that Moltmann defines as a) the principle of creativity, creating new possibilities, b) the holistic principle, c) the principle of individuation, and d) that "all creations in the Spirit are in intention 'open'. They are directed towards their common future ... aligned towards their potentialities" (1993b:100).

The goal of the history of creation is not to return to the beginning, to a paradisaal primordial condition, but the revelation of God's glory. The new creation surpasses everything that can possibly be said about creation in the beginning (Moltmann 1993b:207).

#### **4.4.3 The Incarnation of the Son**

When examining the incarnation of the Son, Moltmann is once again confronted with the question whether the incarnation was necessary or merely fortuitous. In dogmatic tradition there have been two answers, of which the first is that the incarnation was made necessary by human sin; it was merely an emergency measure, the only functioning presupposition for the cross and Christ's atoning sacrifice. In this perspective, it is an expression merely of God's saving will outwards. God's nature remains untouched, and God does not suffer or gain anything and the Incarnate Son of God becomes superfluous once reconciliation has been achieved (1993a:114-115).

The second answer, namely that God intended the incarnation of the Son from the beginning of eternity and that creation represents the eternal framework and preparation for the incarnation of the Son, views the incarnation as part of the eternally self-communicative love of God. Only the incarnation completes creation by the new bond between God and humanity as made manifests in Christ and the brother- and sisterhood into which the Son receives believers. Christ becomes the foundation of the new creation (Moltmann 1993a:114-115).

Moltmann describes the incarnation as the perfected self-communication of the triune God to the world God has created. The Son has to take the form of a servant because of the reality of sin and death, becoming human for the sake of perfecting, consummating creation. Whether the incarnation would have occurred even if humanity had remained without sin cannot be answered without falling into empty speculation (1993a:116).

Moltmann also further defines the trinitarian concept of creation by stating that the "Son is that image of God for which God destined human beings". Initial creation is open because it waits

for the appearance of the true human being that corresponds to God. This is part of the eternal destiny of the Son, preceding the history of the world; therefore creation and the incarnation intervene deeply in the inner-trinitarian relationship of God. God is love and part of God's self-communication is to communicate Godself in love to the 'like' but also to the 'other; through the 'other' God becomes fulfilled when this love is returned – the Son becomes man, the image of God and communicative responsive love to those destined to be the image of God and gathers them into relationship with the Father (1993a:117). The Son communicates his own liberty to human beings (Moltmann 1993a:118).

God's self-humiliation is fulfilled in the incarnation through divine kenosis. "In the incarnation of the Son the triune God enters into the limited, finite situation" (Moltmann 1993a:118). God enters also, through passion and death, into the situation of sin and Godforsakenness, making it part of God's eternal life. Kenosis is realised on the cross as reconciliation of humanity, but also in God identifying with human beings to the point of death and beyond (Moltmann 1993a:119).

The traditional doctrine of kenosis looks only at the aspects of God's self-limitation, self-emptying, and self-humiliation. All of these features are present, but although inwards they are limitations, outwards they are de-limitations, as Moltmann highlights: "God is nowhere greater than in his humiliation. God is nowhere more glorious than in his impotence. God is nowhere more divine than when he becomes man" (1993a:119).

#### **4.4.4 The Transfiguration of the Holy Spirit**

In the gospels, the Spirit is confined to Christ's activity before the Easter-events; the Spirit is the divine power that gives life to the dead and resurrects Jesus, the divine energy of the new creation. Christ is raised *by* the Spirit, *in* the Spirit. Jesus Christ, the object of the activity of the Spirit, then becomes the subject of the sending of the Spirit to the church (Moltmann 1993a:122-123).

The resurrection is the first eschatological work of the Spirit; Christ is raised from the dead into the eternal life of God and at the same time, transfigured from the humiliated and crucified Jesus into the glory of God (Moltmann 1993a:123). God the Father glorifies the Son through the resurrection; the Son glorifies the Father through obedience and self-surrender; and their mutual glorification is the work of the Holy Spirit (Moltmann 1993a:124).

The general pouring out of the Holy Spirit 'on all flesh' begins with the messianic era, with Christ's resurrection, transfiguration, transformation and glorification. This experience is interpreted eschatologically; in the Spirit, there is already the experience of what is to come. The experience of the Spirit is simultaneously the presence in its complete form and the presence of the future glory. It is always a physical experience, as "distinct from human forms of spiritualization and sublimation" (Moltmann 1993a:124-125). As Moltmann further states: "The experience of the Spirit begins the completion and perfecting of the creation of human beings and all things, which makes them the home of the triune God" (1993a:125).

Given that the Spirit acts as the subject in glorifying God, and is the unifying God, the Holy Spirit is a Person, not just an energy or power with the Father of Son as subject (Moltmann 1993a:125-126).

In addition, Moltmann explicates the twofold trinitarian order in the activity of the Spirit. In the first instance, the Spirit comes from the Father, through the Son in the outpouring. The Son begs for the sending and mediates the Spirit while the Father does the sending. In the second place, this order is reversed in the glorification through the Spirit; praise and unity proceeds from the Spirit, through the Son to the Father. The Spirit is also the maker of the new creation (1993a:126-127).

Where the sending of the Spirit is an act of opening the Trinity up, an outwards act towards the world, in the second instance it is an inwards movement, a gathering of the whole of creation into the Trinity, assembled under Christ as Lord to the glory of the Father, partaking in the trinitarian life of God (Moltmann 1993a:127).

“Just as it is the same Jesus who was crucified and raised, so God’s promise is not for *another* world, but for the new creation of *this world*” (Bauckham 1995:35). In Moltmann’s thought, Bauckham further indicates, it is not some ‘aspect’ of our world that will survive into another, but the entire creation will be transformed in God’s new creation. This gives the resurrection of Christ its cosmic significance and the present significance for the world, in so far as the world is already transformable in the direction its future eschatological transformation (1995:35). “In Moltmann’s view, the eschatological hope kindled by the resurrection of Christ may not function as a substitute for action in the present, but rather motivates and directs action in pursuit of righteousness now” (Bauckham 1995:36-37). Believers suffer the contradiction between the present reality and the transformed reality that is promised. This critical distance enables them to seek and activate the present possibilities of the world history that lead in the direction of the eschatological future (Bauckham 1995:38). In Moltmann’s later work, he also stresses the extent to which the activity of the Holy Spirit in the church, but also throughout creation and history, created ‘provisional expectations’ of the new creation (Bauckham 1995:43).

#### 4.4.5 Human Beings made *imago Dei*<sup>101</sup>

Humanity is created not by God’s creative word, but by a special resolve, by God proclaiming “Let us make...” (Moltmann 1993b:217).

---

<sup>101</sup> In the first creation narrative in Genesis, we read of God creating humanity “in his image”. Christianity has long confessed the assertion that we are made *imago Dei*, in the image of God. Daniel Migliore indicates this evocative concept has been interpreted in a great many ways throughout the history of Christian theology. Some interpreters have focused on human beings in their upright stature bearing some sort of *physical* resemblance to God. However, Migliore then points out that with “its more characteristic emphasis on the transcendence and hiddenness of God, the Old Testament lends little support to the notion of a physical resemblance between God and humanity” (2004:140). John Calvin also viewed this approach with concern for the excessive anthropomorphism of this notion. The dominant Western interpretation has focused on the *rational nature* of humanity as being created in the image of God, as was also clear in the thought of Aquinas. This interpretation views reason as a vehicle for transcending the physical and emotional dimensions of humanity. Closely related to this view is the perspective of humanity’s *dominion over the earth* as corresponding to God, and interpretation that often associated itself to a view of the world in which all relationships are hierarchical (Migliore 2004:140). Jürgen Moltmann’s perspective does not correlate with any of these interpretations, however, the second two approaches that Migliore outlines are both present in his view. In the first instance, some interpreters have highlighted *human freedom* as related to the image of God, indicating that human beings are “both self-creators and creators of a world of culture that they superimpose upon the order of nature. In this free creative activity humans reflect the free creativity of God and thus become the image of God” (2004:141). Another point of view and one that is also visible in Moltmann’s theology, is the perspective that the concept of humanity created in the image of God describes *human life in relationship*, with God, with each other and with the rest of creation (Migliore 2004:141).

“What distinguishes human beings is that they are ordained to be the image of God” (Moltmann 1993b:77)<sup>102</sup>; in creation God want to recognise Godself. The image of God corresponds to the relationship of God to humanity and the entire creation, but also to the inner trinitarian relationships. Moltmann also states that this at-oneness of the Father, Son and Holy Spirit corresponds to human fellowship where there is no subordination (1993a:157).

Moltmann, Bauckham points out, grounds the human dignity of all of humanity in their creation by God. This precedes all forms of society and government, leaving no doubt as to the common humanity of all people and the God-given dignity of every person. It also makes the fulfilment of this dignity a task to which every human being is called (1995:115).

God created human beings in God’s own image, presupposing that there is in God a pattern on which human beings are modelled, but also the Christology of the New Testament, that Jesus Christ is the image of God through whom all human beings are created (Colossians 1:15f; Hebrews 1:3). It can also be interpreted in a way where human beings are created in the direction of the image of God, as found in Jesus Christ. The designation of humanity as the image of God is expressed in two different Hebrew words, צלם (*sālm*) and דְמוּת (*dēmût*). The first indicates a concrete representation, an outward depiction, while the second signifies a similarity, an inward relationship (Moltmann 1993b:218-219).

Humanity created in the image of God is first of all a theological term that says something about the God who creates an image of Godself and enters into a relationship with this image. The nature of human beings springs from this relationship to God. Human beings have three fundamental relationships as God’s image on earth: to rule over the rest of creation as representative of God; God’s counterpart on earth with whom God wants to talk and is intended to respond to God; and the appearance of God’s glory on earth (Moltmann 1993b:220-221).

In addition, Moltmann describes human beings as made in the image of God with regards to the human being “in allen seinen Lebensbezügen” (1984:169). In other words, the economic,

---

<sup>102</sup> See also Moltmann (2012a:72-73).

social, political and personal dimensions all are meant to reflect the declaration that we are created in the image of God.

In the messianic light of the gospel, human beings as the image of God “appears as a historic process with an eschatological termination; it is not a static condition. *Being* human means *becoming* human in this process” (Moltmann 1993b:227). “A person is only God’s image in fellowship with other people ... men and women can only become persons in relation to other men and women” (Moltmann 1993a:155-156)<sup>103</sup>. Moltmann also further emphasises this point, that it is only in community with others that human beings are the image of God: “Ebenbild Gottes ist der Mensch mit den Menschen” (1984:170).

Moltmann pronounces that it is only when we become aware of the things which human beings have in common with other creatures, and the things that differentiate them, that we can understand what the human being’s designation to be the image of God really means” (1993b:188).

Human beings, Moltmann indicates, are created last and, as such, are the climax of created things, but not the ‘crown of creation’ – God crowns the creation that God beholds as good with the Sabbath. Given that human beings are created last, they are also dependent on the rest of creation and cannot exist without the other created things. This dependency is expressed in four aspects that human beings have in common with animals: In the first instance, human beings being are taken from the earth and return to it when we die. “This earthly creature therefore remains bound up with the earth” (Moltmann 1993b:187), which is also true of animals, even if it is not stressed that animals are also “earthly” in this manner. Secondly, human beings are “living souls” as communicated in Genesis 2:7, indicating, in Moltmann’s opinion, that we are animated bodies, not souls that have taken on flesh. This animated embodiment also relates humanity to animals that are also described in Genesis 1:30 as “living souls”. In the third place, human beings, together with animals, are dependent on the food that

---

<sup>103</sup> See also Moltmann (2012a:86).

comes from the earth to survive. Fourthly, like animals, human beings are given bi-sexuality and fertility so that we might reproduce ourselves (1993b:187-188).<sup>104</sup>

Humanity, however, is also distinct from animals and the rest of creation, given that God commands the human beings to subdue the earth and also, to name the animals. Moltmann stresses that this is not only an act of rule; it also “brings animals into a community of language with human beings”. In the creation narrative it is then also stressed that, different from the rest of creation, human beings are social beings who are dependent on the help of others (1993b:188)<sup>105</sup>. Being created in the image of God, Moltmann indicates:

Human beings are God’s proxy in his creation, and represent him. As God’s image, human beings are for God himself a counterpart, in whom he desires to see himself as if in a mirror. As God’s image, finally, human beings are created for the sabbath, to reflect and praise the glory of God which enters into creation, and takes up its dwelling there.

(Moltmann 1993b:188)

Moltmann also grounds human dignity in the statement that all human beings are made in the image of God<sup>106</sup>, as was discussed extensively in chapter three. Human beings, it was indicated, are intended to live in this relation to God and it is this factor that gives human existence its “inalienable, transcendent depth dimension” (1999:122). It is in their relationship to the triune God that human beings become beings whose dignity must not be violated. It was also stressed in chapter three, as well as previously in this chapter, that human dignity in Moltmann’s thought is not the elevation of human beings above over living things, being upheld at nature’s expense.

The responsibility of humanity to not only be accountable in the present, but also to those that will come after us is also stressed by Moltmann, when he indicates that: “Ebenbildlichkeit

---

<sup>104</sup> See also Moltmann (1971:15-18).

<sup>105</sup> See also Moltmann (1971:18-23).

<sup>106</sup> See also Moltmann (1971:24-28).

Gottes begründet das Recht des Menschen auf seine Zukunft und seine Verantwortung für seine Nachkommen” (1984:173).

#### **4.5 Criticism against Moltmann’s theology**

It is hard to imagine any theologian of note not being subject to criticism, at least on some of his or her perspectives. Moltmann is no different, except perhaps for the fact that he frequently and visibly responds to his critics, not in a defensive way upholding his previous position, but explaining it perhaps more clearly and actively engaging with those that differ from him. Various points of critique have been raised and this section will examine the matter of dispute most widely assessed and commented on, namely the way in which Moltmann utilises the biblical texts, and some other aspects of his theology.

I will only engage with those that have direct bearing to his theology as discussed in this chapter, the accusation that his theology is purely theoretical and without praxis and his methodology. In addition, the aim is not in the first instance to respond to his critics, but rather to obtain greater clarity on his positions by examining his own responses to criticism.

##### **4.5.1 Moltmann’s use of Scripture**

Bauckham critiques Moltmann’s hermeneutical methodology and utilisation of the biblical text, stating that “what little exegesis he offers tends to be remarkably ignorant and incompetent” and that Moltmann’s interpretation of Scripture “requires an exegesis that no hermeneutic, however pre-modern or post-modern, could conceivably support” (2001:179). Moltmann responds to this critique in an essay later published in the same volume, communicating his relationship to the biblical text clearly:

Theology is not subject to the dictation of the texts, or the dictatorship of the exegetes. Questioning as to whether the theology is ‘in conformity with Scripture’ seem to me to be a remnant left over from the old doctrine of verbal inspiration ... Richard Bauckham has taken me to be an exegete, and I am not one. I am a theological partner in dialogue with the texts which I cite, not their exegete.

(Moltmann 2001:230-231)

From this citation, it is clear that Moltmann distinguishes between the task of theology and exegesis. This is also apparent in his quotation in *Experiences in Theology*, where he indicates that: “a quotation from the Bible is not enough to guarantee the truth of what is said” (2000:139). It has also been suggested that Moltmann understands Scripture not as “an absolute authority external to the reader as it is typically considered in conservative evangelical Christianity, but as a resource for the theologian to stimulate creative thinking...”<sup>107</sup>

In his later works, Moltmann has also been criticised for undisciplined speculation and the use of biblical material in a manner that ignores historic-critical interpretations (Bauckham 1995:25-26). His previous response also holds true for this point of critique.

#### 4.5.2 Moltmann’s theology

Critics of Moltmann’s early work, Bauckham indicates, frequently complained of one-sided emphasis on some theological themes at the expense of others. In retrospect, however, “this one-sidedness can be seen to be a result of Moltmann’s method, in the early works, of taking up *in turn* a number of complementary perspectives on theology” (1995:23). Moltmann himself also indicated this plan in the foreword of *The Trinity and the Kingdom*, where he states: “I have conceived and planned these ‘contributions to theology’ in a certain order, whose logic will emerge in the course of the series itself” (1993a:xii).

Concerning Moltmann’s relational ontology of the Trinity and the repercussions that it carries for the relationship of God with the created order, as well as the concept of divine and human freedom, Sallie McFague challenges his trinitarian theology. She does this both on “epistemological and moral grounds”, protesting against Moltmann’s profession of knowledge about the nature of the life of the Trinity. She contends that this surpasses the limitations of human experience and the witness of Scripture. In addition, McFague also criticises Moltmann’s theology on the grounds that, in his desire to safeguard God from any reliance on the world, he has proposed an immanent Trinity that “dangerously separates and distances God from the world”. She describes Moltmann’s trinitarian theology as “a picture of the divine

---

<sup>107</sup> <http://diglotting.com/2013/01/28/moltmanns-use-of-the-bible> Accessed 19 July 2013

nature as self-absorbed and narcissistic” and pits “divine freedom against that of human creation” (McDougall 2005:8).

Molnar critiques Moltmann’s reconciliation of God’s freedom and necessity in relation to the Trinity and creation. Moltmann, as mentioned previously, argues that in loving the world, God is “entirely himself”, following his presupposition that “the eternal origin of God’s creative and suffering love” must include “God’s free self-determination, and at the same time the overflowing of his goodness, which belong to his essential nature” (1993b:83). It is the phrase “at the same time” that is problematic for Molnar, who sees in it the heartbeat of all pantheism. He refers to the proposition of Meister Eckhart<sup>108</sup> that God created the world “at the same time and once and for all, when God existed and when He generated His Son, God coeternal, and coequal to Himself in all things”, that was rejected in 1329 based on the principle of *creatio ex nihilo*, which excluded the idea that both creation and God were eternal (1990:679).

While Moltmann’s failure to qualify his utilisation of a terms such as *perichoresis* in describing the indwelling presence of God in the world, his insistence on the complete fellowship of the Trinity and the dialectical character of the presence of the Spirit counters any understanding of his theology as pantheistic.

Moltmann’s doctrine of God has also been criticised, with critics claiming that he falls into the Hegelian mistake of making world history the process whereby God reveals and realises Godself. This point of critique has led Moltmann to clarify his view, indicating that God is not dissolved into world history in his theology, but that a real interaction between God and the world is rather what is intended (Bauckham 1995:24-25).

Another subject where he has been sometimes harshly criticised is the matter of what is viewed as his letting go of God’s transcendence. Alan Torrance asserts that by maintaining the importance of Jesus’ crucifixion and the overpowering presence of the Holy Trinity, Moltmann “ties God’s being too closely to the progress of human history, and ... compromises the transcendence and sovereignty of the triune God” (McDougall 2003:180). Specifically,

---

<sup>108</sup> For a full discussion of Eckhart’s thought, see Bernard McGinn’s *The Mystical Thought of Meister Eckhart* (2001) or the brief description in William Placer’s *The Triune God: An Essay in Postliberal Theology* (2007:18-21).

Torrance asserts that Moltmann's theology contains "Pelagian tendencies" in his descriptions of doxology and that the doxological involvement of the believer in the transcendent life of the Trinity is perceived to be more "a task to be achieved than 'an event of grace'" (McDougall 2005:8).

I agree that critics have a right to argue for God's transcendence, given that the God as Creator of all life and the love and power of the God who created all things is at the very heart of Christianity. Nevertheless, it is also true that using personal associations as a figure of speech can be more important in helping people to understand something of God's love and to follow that in their own lives. It is my opinion that Moltmann's illustration of how the Persons of the Trinity are related to history of the world, and also of human beings, adds to his theology more than it diminishes.

Moltmann's perspective on creation has also been criticised as being panentheistic. In the preface to the paperback edition, he writes:

The title expresses the book's intention: not to go on distinguishing between God and the world, so as then to surrender the world, as godless, to its scientific 'disenchantment' and to its technical exploitation by human beings, but instead to discover God in all the beings he has created and to find his life-giving Spirit in the community of creation they share. This view – which has also been called panentheistic (in contrast to pantheistic) – requires us to bring reverence for the life of every living thing into the adoration of God.

(Moltmann 1993b:xi-xii)<sup>109</sup>

---

<sup>109</sup> In this, Sally McFague agrees with Moltmann, as is evidenced by her works on the world as the body of God and her models is *Life Abundant: Rethinking Theology and Economy for a Planet in Peril* (2001). The metaphor of the world as God's body suggests that, in the first place, God is not a distant being, but the One we live and move in – not only spiritually, but also bodily. In the second instance, using the metaphor of God's body for the world overcomes dualism. Thirdly, in imagining the world as God's body, God becomes, in some sense, at risk. In an earlier article, she states: "The monarchical model encourages militarism, dualism and escapism; it condones control through violence and oppression; it has nothing to say about the nonhuman world. The model of the world as God's body encourages responsibility and care for the vulnerable and oppressed; it is a nonhierarchical image

He described this panentheism by indicating that in the trinitarian doctrine of creation, the work of the Father and the work of the Son is linked: “God does not just stand outside and over against his creation. Through the Spirit he enters into it and already ‘dwells’ in it” (Moltmann 2012b:67).

Another point of critique has been the unification of all things in and with God in Moltmann’s theology, including the special activity of the Spirit. It becomes difficult to view the Spirit as one of the divine Trinity whose fellowship we seek to reflect when, in relation to the Father and the Son, the Spirit is conceived only as a “bare, colourless subject” while the very terms ‘Father’ and ‘Son’ refer to mutual relationship (Bauckham 1995:162). Moltmann stresses the differences in relationships and characters, but the distinctiveness of the Spirit is hard to give content to personal relations, given that the biblical and traditional language is mostly impersonal. The mistake that Moltmann makes, Bauckham indicates, is to abstract the Trinity from God’s trinitarian history with the world, providing not just the conceptual basis for it, but to make the Trinity itself the model for human life. The remedy, however, is also in Moltmann’s own work, which states that the relationships of the three Persons of the Trinity “as we know them and as they are relevant to us are the relationships of the Persons *in their relationships with the world*” (1995:63-64). The indwelling of the Spirit in creation and human beings are thus the Spirit’s distinctiveness and distinguishing characteristic.

The political implications of *Theology of Hope* in particular has been criticised, both by liberation theologians, who contend that “the eschatological transcendence of the kingdom beyond all its present anticipations sanctions the typical European theologian’s detachment from concrete political movements and objectives”, and by conservative theologians, who argue that it reduces eschatology to human achievements (Bauckham 1995:24). Bauckham contends that while Moltmann carefully locates the eschatological kingdom to its anticipations

---

that acts through persuasion and attraction; it has a great deal to say about the body and nature. Both are pictures: which distortion is more true to the world in which we live and to the good news of Christianity?” (1998:673). While McFague’s offers a nontrinitarian approach to divine love, in her threefold model of ‘mother’, ‘lover’ and ‘friend’ she moves a step closer to formulating a trinitarian doctrine (McDougall 2005:4).

in history, it is valid criticism that he lacks concrete proposals (1995:24). This point of criticism will be discussed in the next section.

#### **4.5.3 Moltmann's lack of praxis**

Moltmann has also been criticised, as has been indicated previously, for his lack of praxis, that he lacks concrete ethical suggestions. This, he denotes in the foreword to Joy Ann McDougall's *Pilgrimage of Love: Moltmann on the Trinity and Christian Life* (2005), is a misplaced point of critique, asking in the first place "for whom and where shall I become 'concrete'?" He explains that he tries to write in a way that stimulates readers to imagine their own situations and the appropriate or necessary action. In the second place, he shows how he frequently and concretely commented about his own political context in Germany, more specifically regarding the issues of human rights, "the right to work, the right to resistance, the social function of ownership, nuclear disarmament, the debate on abortion, and questions on medical ethics and so forth." Moltmann also repeatedly referred to the immorality of racism, sexism and capitalism (McDougall 2005:x111-xiv).

In addition, Moltmann also indicated, already in the publication of *The Crucified God* that the dimension of the relational should be highlighted in any attempt to draw up a theology to be in connection with the surrounding world, warning:

Otherwise the value of the ready-made attributes applied to these theologies is rightly called into question. What is Christian in these new theological perspective, which are meant to characterize some particular relationship of theology to the surrounding world? Does not theology lose its Christian identity if it still determined to do nothing more than adapt itself to the constantly changing 'spirit of the time'? Does it not become a chameleon, always taking on the colours of its environment, in order to adapt itself to it and remain unnoticed?

(Moltmann 1993c:11)

It is for this reason that Moltmann proclaims: “A Christian theology which see its problem and its task in knowing God in the crucified Christ, cannot be *pure theory* ... pure contemplation indirectly bestows participation in, and likeness to, what is contemplated” (1993c:68). In Moltmann’s opinion, Christian political engagement is also not a substitution for Christian faith, but rather a form of faith in action, therefore it cannot be detached from dogmatic theology where faith is rooted in (Bauckham 1995:99).

Another related aspect of criticism has been Moltmann’s style or methodology. Again in the foreword to McDougall’s *Pilgrimage of Love*, he defends his own method by narrating how, before each book or chapter, he constructs a graphic diagram of the concepts and connections involved. He also at times uses poetic expressions rather than logical or rational deductions, in an attempt to make his work accessible to a wider audience. Moltmann states that this point of critique comes from those who “have failed to recognize its underlying scheme” (McDougall 2005:xiii).

It is curious to note that Moltmann has also been criticised on exactly the opposite, with David Cunningham challenges Moltmann by indicating that in his (Cunningham’s) opinion, Moltmann’s theology has turned contemporary theological discourse on the Trinity into a political and social concern. On the other hand, Cunningham also charges Moltmann of falling short of realising his objective of formulating a practical and concrete theology of the Trinity (McDougall 2005:8).

There are also other theologians who accuse Moltmann of being far too concrete and applying notions to the relationship of human beings that are usually reserved for discussion on the Trinity, such as Werner Jeanrond and Karen Kilby (McDougall 2005:8-9).

#### **4.6 Conclusion: Moltmann’s doctrine of trinitarian creation in conversation with PGD and GM**

In this chapter, Moltmann’s trinitarian doctrine of creation was discussed. The Trinity in his theology was examined with special attention paid to the suffering of God, the freedom of God

and the confession that God is love, as well as to the respective roles of the Son and the Spirit in his trinitarian thought. Thereafter, his doctrine of creation was discussed as being explicitly trinitarian. Moltmann's trinitarian doctrine of creation was constructed by referring to knowledge of creation, the role of God the Creator, the Incarnation of the Son, the Transfiguration of the Holy Spirit and the confession of human beings created *imago Dei*.

I also discussed some criticism levelled against Moltmann's theology, particularly that pertaining to the Trinity and creation as set out previously.

In the conclusion, the movement from doctrine to ethics will be practically carried out by the formulation of some Christian responses to PGD and GM based on the trinitarian doctrine of creation in Moltmann's theology set out in this chapter.

## **CHAPTER FIVE**

### **CONCLUSION**

In the second chapter, I indicated how every point of criticism or commendation against PGD and GM stems from a particular perspective on creation. For this reason, it was argued that in an attempt to respond to the ethical challenges that these types of technology raises from a Christian ethical point of view, it makes sense to examine the doctrine of creation. In this study, I have considered the trinitarian doctrine of creation of Jürgen Moltmann.

The discussion on this doctrine have throughout referred to the value that it holds for the ethical debate, and in bringing these two in conversation with one another, I shall discuss in conclusion the various perspectives that have been raised throughout this chapter as being of particular relevance to this discussion. These can be summarised in two main headings: In the first instance, human beings as created in the image of God; and secondly, human freedom and the mastering of nature through science and technology, and the openness of creation and the participation of human beings therein as part of their integration into the history of God and the mutuality of God's relationships to creation and its consummation.

#### **5.1 Human Beings Created in the Image of God and Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation**

As stated previously, confessing that human beings are created in the image of God is in the first instance a theological term, saying something about the God who decides to create and enter into relationship with creation. The image of God relates to the relationship of God to humanity and the whole of entire creation, but also to the relationships within the Trinity, where there is no subordination.

In addition, declaring that human beings are created in God's own image, presumes either that in some way, human beings are modelled on God, be it as a tangible symbol or an inner relationship, or that humanity is created to become the image of God, as found completely in Jesus Christ.

Moltmann also grounds human dignity in the statement that all human beings are made in the image of God, as was discussed in chapter three and chapter four. Human beings, it was indicated, are intended to live in this relation to God. It is this feature that gives human existence its indisputable, awe-inspiring dimension of depth. It is in their relationship to the triune God that human beings become beings whose dignity must not be violated. It was also stressed previously in chapter three and chapter four, that human dignity in Moltmann's thought is not the elevation of human beings above over living things, being upheld at nature's expense.

For the Christian ethical discussion on PGD and GM, this would mean that human dignity, as humanity created *imago Dei* must be respected, and that this dignity should not infringe on the created dignity of nature and other living things. Respecting human dignity could be interpreted in some circles as respecting the human genome as it exists in nature and that any interference would be a violation of the human dignity of the individual involved, as was indicated in chapter two.

I disagree with this type of discourse, however, and instead deem it a breach of the human dignity of the affected individual when the technology exists that is able to repair genetic defects or heal a crippling hereditary disease. Respecting the human dignity of that individual, which includes the right to a life of dignity may very well rather mean offering him or her every chance at a life of dignity, even when that should be materialised through biotechnological intervention.

It is unclear why healing hereditary ailments and genetic defects would threaten the notion of human dignity. What reasonable person would not want the inherent human right to dignity exercised on their behalf, when the alternative is lifelong suffering from the affliction of a genetic disorder that would otherwise have been preventable?

In arguing that the concept of human beings created in the image of God does not have to rule out all forms of PGD and GM, I would like to emphasise the difference between healing and enhancement. This distinction was discussed at the end of chapter two and should also be taken

into account here. In claiming that PGD and GM can be utilised and sanctioned as compatible with the Christian view of human beings created *imago Dei*, it is the utilisation of these types of technology for the purposes of curing hereditary diseases and repair genetic defects that is being referred to.

For Moltmann, as indicated in chapter three, these core set of traits that human dignity requires respect for, is found in the relationship of human beings to the triune God. This relationship is not the one-sided relationship of Lord and subjects, but by God's entering into the finite creation in a way that causes the participation of God in creation, but also of creation in God. In addition, the way that the sonship of Jesus is communicated absorbs believers into this sonship and into fellowship with God, the relationship between Jesus Christ and the one who sent him becoming inclusive at the same time as exclusive. Through the experience of the Spirit in faith, baptism and fellowship, humanity becomes integrated into the history of the Trinity, becoming participators in the eschatological history of the new creation. In the next section, this aspect of humanity's participation in creation and human freedom and mastery of nature will be discussed with regard to the ethical challenges posed by PGD and GM.

## **5.2 The Participation of Human Beings in Creation and its Consummation and Human Freedom and Mastery of Nature, and PGD and GM**

As stated previously, Moltmann affirms that the first step into the realm of freedom is the mastery of nature through science and technology, given that the distinct history of humanity with nature begins with the progressive freedom of human beings from their dependency on nature and their progressive self-determination. The attaining of power, however, is not yet the determination of how that power will be utilised (1993a:213). In addition, Moltmann also grounded human rights in the rule of humanity over the earth and in community with the non-human dimension of creation as indicated in chapter four.

Through friendship with God in the Spirit, human beings can influence God and participate in God's rule (Moltmann 1993a:221). This openness of creation and the ability of human beings to partake in it that is stressed continuously in Moltmann's trinitarian doctrine of creation have

far-reaching implications for applying this doctrine to the ethical debate surrounding PGD and GM.

In effect, this would mean that arguments that state that humankind has no right to interfere in creation and that decisions regarding it, such as, for example, what kind of people there should be, should be solely left to God, is, from this perspective of Moltmann, not valid. Arguing that it is God's prerogative and that biotechnology such as PGD and GM usurp this prerogative is made invalid from different starting points. In the first instance, by the opening of the divine relationships to include the world therein, whereby all of the created reality is taken up into God's trinitarian love. Secondly, by Moltmann's argument that the activity of human beings should aim to realise something of the promised future, the future that we await with anticipation, having its source in the Christian hope.

If it was noted previously that the present state of the world, which is obviously incomplete and imperfect, is ascribed to God's continuous creation and that we eagerly anticipate the future in God's kingdom, as well as that human beings are drawn into creation in fellowship and community with God, why would it then be immoral to suggest that we might have a hand in this continuous creation?

I hold that part of this attempt to realise something of God's future of promise that we await with eager expectation in the present could be accomplished by embracing the technological development of treatments such as PGD and GM. By this, I am by no means advocating that our human attempts to improve creation is similar to the future kingdom of heaven or even that that is what we are moving towards by our futile human efforts. Indeed, as it has been stressed throughout this chapter, Moltmann reminds us that the future of promise is not simply the betterment of this current creation, but a complete transformation, an entire new creation. He also stresses that the eschatological hope we have for the future is much more than simply a belief in human progress and the advancement and improvement of our present situation through technology and other means of moving forwards, as has also been indicated in this chapter.

For this reason, in embracing the possibilities offered to us by PGD and GM to cure hereditary

diseases and genetic defects, thereby improving people's lives, it is simply an attempt to take our responsibility in the fellowship and community of creation seriously.

### **5.3 Jürgen Moltmann's Trinitarian Doctrine of Creation in Service of a Christian Bioethical Perspective on Pre-Implantation Genetic Diagnosis and Human Genetic Manipulation**

I not only attempt to address bio-ethical questions that PGD and GM raises directly from Moltmann's work, but also infer parameters from his theology that can help and be of service to a Christian bio-ethical perspective on PGD and GM.

When dealing with the criticism against Moltmann's theology in the last section of the previous chapter, I indicated that he attempts to write in a way that stimulates readers to imagine their own situations and the necessary or appropriate action. Although Moltmann does not give detailed directions for action concerning every ethical aspect of PGD and GM that was raised in the second and third chapters of this study, he does give broad guidelines that help in the reflection on specific ethical issues with regards to PGD and GM. In addition, as indicated previously, his trinitarian doctrine of creation is of immense value in the formulation of a Christian bioethical perspective that is grounded on a so-called thicker theological foundation.

The ethos of learning to live with brokenness, imperfection and vulnerability that Moltmann propagates, also by referring to the suffering of and vulnerability of God, is of immense value to the discourse of PGD and GM. Moltmann especially referred to the reality that God is seen most clearly in God's broken and vulnerable humanity. In his understanding the whole of creation through the event of the cross, this also becomes especially applicable. Moltmann's trinitarian doctrine of creation helps the Christian bioethical discussion on PGD and GM in explicitly campaigning for the utilisation of available biotechnologies to heal and cure, thereby enhancing human dignity and equal opportunity as part also of the human rights discourse. In addition, Moltmann's theology also helps Christian bio-ethical discourse by resisting a culture or ethos that cannot live with vulnerability. Moltmann looks at creation and human beings through the lens of God who suffers in and through Jesus Christ. Although I derive from his theology a theological mandate in favour of PGD and GM, I by no means infer from him a

flight from vulnerability, brokenness and suffering that aims to become ‘transhuman’. I do not infer from his position an idealisation and even idolisation of medical technology. His theological perspectives do indeed encourage us to support medical, scientific and technological progress. It supports the quest for health and health care, but also acknowledges the limitations in the best that we can achieve as human beings.

Moltmann’s public theological, human dignity and human rights focus helps us to address bio-ethical challenges in the context of inequality, specifically in a country like South Africa and helps us to build a life of dignity also for the socio-eluded ones in society and therefore, to work for socio-economic conditions that make this technology accessible to all.

Jürgen Moltmann firmly believes that no one theologian can create a finished theological system, but stresses instead the provisionality of all theological work. One theologian is only able to contribute to the continuing discussion within the ecumenical community, which, in turn, must be linked to the even wider life and thinking of churches and the world and its sufferings and hopes (Bauckham1995:7). This, then, is also the aim of this study; to make a contribution to the Christian bioethical debate surrounding the utilisation of HGM and PGD. In the spirit of Moltmann, I am acutely aware that this study is by no means the final word and that it only sheds lights on one aspect of the debate and from only one perspective, namely Moltmann’s trinitarian doctrine of creation. I acknowledge that numerous other points of departure would be possible and perhaps even more rewarding; however, given that the ethical issues that HGM and PGD raised are, at the very heart of it, stemming from particular point of view on creation, as was indicated in chapter two, I found the doctrine of creation the most logical and best equipped perspective to address the issues raised.

It was indicated previously that Moltmann explicitly states that genetic intervention are permissible when the aim is to heal or cure. In this he is in agreement with numerous other scholars discussed in chapter two, who are of the same opinion. He also states, however, that when the purpose of PGD or GM is the creation of “so-called supermen”, the essential nature of human beings, and the inherent human dignity of all people becomes threatened (Moltmann 1999:126). Based on the discussion previously, the notion of human dignity as found in Moltmann’s theology, the preferential option for the weak and suffering discussed in chapter three, and the



## BIBLIOGRAPHY

- Andrews, L.B., 2001. *Future Perfect: Confronting Decisions about Genetics*, New York Chichester: Columbia University Press.
- Agar, N., 2010. *Humanity's End: Why We Should Reject Radical Enhancement*. Cambridge, Massachusetts: MIT Press.
- Barth, K., 1957. *Church Dogmatics* Volume III/4, T&T Clark.
- Bauckham, R., 2001. *God will be All in All: The Eschatology of Jürgen Moltmann*. Minneapolis: Fortress Press.
- Bauckham, R. 1995. *The Theology of Jürgen Moltmann*. London: T&T Clark.
- Bauckham, R. 1987. *Moltmann: Messianic Theology in the Making*. London: Marshall Pickering.
- Beauchamp, T.L. & Faden, R.R., 1979, "The Right to Health and the Right to Health Care", *Journal of Medicine and Philosophy*, 4, pp. 118-131.
- Beracochea, E., Evans, D.P. & Weinstein, C., 2011, "Introduction: Why do rights-based approaches to health matter?" in *Rights-Based Approaches to Public Health*, Beracochea, E., Weinstein, C. & Evans, D.P. (eds), New York: Springer Publishing Company, pp. 3-18.
- Birch, B.C. & Rasmussen, L.L., 1989, *Bible and Ethics in the Christian Life*, Minneapolis: Augsburg Fortress.
- Bradley, A., 2012, "Positive rights, negative rights and health care," in *Journal of Medical Ethics* 36, pp. 838-841
- Brock, B. 2010. *Christian Ethics in a Technological Age*. Grand Rapids, Michigan: William B Eerdmans.
- Brock, B. & Brock, S., 2007, "Being Disabled in the New World of Genetic Testing: A Snapshot of Shifting Landscapes," in *Theology, Disability and the New Genetics: Why*

- Science Needs the Church*, J. Swinton & B. Brock (eds.), London: T&T Clark, pp. 29-43.
- Brock, B., Doerfler, W. & Ulrich, H., 2007, "Genetics, Conversation and Conversion: A Discourse at the Interface of Molecular Biology and Christian Ethics," in *Theology, Disability and the New Genetics: Why Science Needs the Church*, J. Swinton & B. Brock (eds.), London: T&T Clark, pp. 146 – 160.
- Brock, D.W., 2000, "Broadening the Bioethics Agenda," *Kennedy Institute of Ethics Journal*, 10, pp. 21-38.
- Brown, R.G., 1995, "Clones, Chimeras and the Image of God: Lessons from Barthian Bioethics," in *Bioethics and the Future of Medicine: A Christian Appraisal*, J.F. Kilner, N.M. de S Cameron & D.L. Schiedermayer, (eds.), Grand Rapids, Michigan: William B. Eerdmans, pp. 238-249
- Bryant, J., Baggot la Velle, L. & Searle, J.F., 2005. *Introduction to Bioethics*. Chichester, England: Wiley.
- Buchanan, A., 2011, *Beyond humanity? The Ethics of Biomedical Enhancement*. Oxford: Oxford University Press.
- Callahan, D., 1987, "Science: Limits and Prohibitions," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, S.E. Lammers & A.D. Verhey (eds.), Grand Rapids, Michigan: William B. Eerdmans, pp. 227-230
- Cameron, N.M. de S., 1995, "The Christian State in Bioethics: The State of the Question," in *Bioethics and the Future of Medicine: A Christian Appraisal*, J.F. Kilner, N.M. de S Cameron & D.L. Schiedermayer, (eds.), Grand Rapids, Michigan: William B. Eerdmans, pp. 3-13
- Chadwick, R., 2001, "Gene Therapy," in *A Companion to Bioethics*, H. Kuhse & P. Singer, (eds.), Oxford: Blackwell.
- Chapman, A.R., 1999, *Unprecedented Choices: Religious Ethics at the Frontiers of Genetic Science*, Minneapolis: Fortress Press.
- Cook, R.J., 1995, Gender, Health and Human Rights, *Health and Human Rights*, 1, pp. 350-366.

- Coppedge, A., 2007, *The God who is Triune: Revisioning the Christian Doctrine of God*. Downers Grove: Inter Varsity Press.
- Curran, C.E., 1987, "Moral Theology and Genetics," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 373-383
- Dalferth, I.U. 1995, "The Eschatological Roots of the Doctrine of the Trinity," in *Trinitarian Theology Today: Essays on Divine Being and Act*, C. Schwöbel ed., Edinburgh: T&T Clark, pp. 147-170
- Daniels, N., 2001, "Is there a right to health care and, if so, what does it encompass?" in *A Companion to Bioethics*, Kuhse, H. & Singer, P. (eds.), Oxford, Blackwell Publishing, pp. 316-325.
- Dean-Drummond, C. 1997. *Theology and Biotechnology: Implications for a New Science*. London: Geoffrey Chapman
- De Villiers, E., 1993, "Appropriate Health Care as Human Right: A Theological Perspective," in *Health Care as Human Right*, A.A. Van Niekerk ed., Stellenbosch: University of Stellenbosch, pp.100-115.
- Douma, J. 2003, *Responsible Conduct: Principles of Christian Ethics*, Phillipsburg: P&R Publishing.
- Durand, J.J.F. 1976, *Die Lewende God*, Pretoria: NG Kerkboekhandel
- Eberl, J.T., Kinney, E.D. & Williams, M.J., 2011, "Foundation to a Natural Right to Health Care," in *Journal of Medicine and Philosophy*, 36, pp. 537–557
- Farmer, P., 2012, "Health, Healing, and Social Justice: Insights from Liberation Theology," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, M.T. Lysaught, J.J. Kotva Jr., S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 139-152.
- Fletcher, J., 1987, "The Ethics of Genetic Control: Some Answers," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 348-362

- Fletcher, J., 1966, *Situation Ethics: The New Morality*, Philadelphia: Westminster Press
- Fourie, W., 2013, "Social ethics in South Africa: Initiating a dialogue between its relevance and current status," *HTS Teologiese Studies/Theological Studies* 69(1), Art. # 1978, 9 pages. doi: 10.4102/hts.v69i1.1978.
- Fourie, W., 2011, 'Het kerke 'n publieke rol in 'n pluralistiese Suid-Afrika?', *Verbum et Ecclesia* 32(1), Art. #503, 6 pages. [doi:10.4102/ve.v32i1.503](https://doi.org/10.4102/ve.v32i1.503)
- Fried, C., 1976, Equality and Rights in Medical Care, *Hastings Centre Report*, 6, pp. 29-34.
- Fritsche, O. 2013. *Die Neue Schöpfung: Wie Gen-Ingenieure unser Leben Revolutionieren*, Hamburg: Rowohlt Verlag GmbH.
- Gavaghan, C. 2007. *Defending the Genetic Supermarket: The Law and Ethics of Selecting the Next Generation*. Abingdon: Routledge-Cavendish.
- Glannon, W., 2001. *Genes and Future People: Philosophical Issues in Human Genetics*, Oxford: Westview Press.
- Glover, J., 2006. *Choosing children: Genes, Disability and Design*. Oxford: Clarendon Press.
- Grenz, S.J. 2004. *Rediscovering the Triune God: The Trinity in Contemporary Theology*. Philadelphia: Fortress Press.
- Grenz, S.J. 2001. *The Social God and the Relational Self: A Trinitarian Theology of the Image Dei*. Louisville: WJK
- Gunderson, M. 2008, "Enhancing Human Rights: How the Use of Human Rights Treaties to Prohibit Genetic Engineering Weakens Human Rights," *Journal of Evolution and Technology* 18(1), pp. 27-34
- Gustafson, J.M., 1987a, "Theology Confronts Technology and the Life Sciences," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 35-41
- Gustafson, J.M., 1987b, "The Transcendence of God and the Value of Human Life," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 121-126

- Guthrie, S., 1994, *Christian Doctrine*, Louisville: Westminster John Knox Press.
- Hall, A.L., 2007, "To Form a More Perfect Union: Mainline Protestantism and the Popularization of Eugenics," in *Theology, Disability and the New Genetics: Why Science Needs the Church*, J. Swinton & B. Brock eds., London: T&T Clark, pp. 75-95.
- Hanford, J., 2002. *Bioethics from a Faith Perspective: Ethics in Health Care for the Twenty-first Century*. New York: Haworth Pastoral Press.
- Harris, J., 2007, *Enhancing Evolution: The Critical Case for Making Better People*. Princeton: Princeton University Press.
- Harris, J., 1998, *Clones, Genes, and Immortality: Ethics and the Genetic Revolution*. New York: Oxford University Press.
- Herold, E., 2006, *Stem Cell Wars: Inside Stories from the Frontlines*, New York: Palgrave Macmillan
- Holder-Franz, M., 2007, "Life as Being in Relationship: Moving Beyond a Deficiency-orientated View of Human Life," in *Theology, Disability and the New Genetics: Why Science Needs the Church*, J. Swinton & B. Brock eds., London: T&T Clark, pp. 57-66.
- Hollenbach, D., 2003, *The Global Face of Public Faith: Politics, Human Rights, and Christian Ethics*, Washington: Georgetown University Press.
- Hunsinger, G., 2011, "Karl Barth's Doctrine of the Trinity, and Some Protestant Doctrines after Barth," in *The Oxford Handbook of the Trinity*, G. Emery & M. Levering eds., Oxford: Oxford University Press, pp. 294-313
- Jenson, R., 1997, "Karl Barth," in *Modern Theologians: An Introduction to Christian Theology in the Twentieth Century*, D. Ford ed., Oxford: Blackwell Publishing.
- Jenson, R., 1989, "The Christian Doctrine of God," in *Keeping the Faith*, G. Wainwright (ed.), London: SPCK Press.

- Jones, G., 2001, "The Authority of Scripture and Christian Ethics," in *The Cambridge Companion to Christian Ethics*, R. Gill ed., Cambridge: Cambridge University Press, Tydskrif vir Geestewetenskappe (53:1) pp. 89-108
- Joubert, F. & Rossouw, J. 2013, „Lewensstandaard: ‘n Ekonomiese perspektief op lewensgehalte in Suid-Afrika,“ *Tydskrif vir Geesteswetenskappe* 53 (1).
- Kärkkäinen, V., 2007, *The Trinity: Global Perspectives*, Louisville: Westminster John Knox Press.
- Kass, L., 2004, "Implications of Prenatal Diagnosis for the Human Right to Life," in *Intervention and Reflection: Basic Issues in Medical Ethics*, R. Munson, ed., Belmont: Thomson Wadsworth.
- Kelsey, D.H., 1975, *The uses of Scripture in recent theology*, Philadelphia: Fortress Press.
- Koopman, N., 2013, "Hope, vulnerability and disability? A theological perspective," in *Searching for Dignity: Conversations on human dignity, theology and disability*. J. Claasens, L. Swartz & L. Hansen eds, Stellenbosch: Sun Media, pp. 43-53.
- Kuhse, H. & Singer, P. (eds.) 2001. *A Companion to Bioethics*. Blackwell Companions to Philosophy. Chichester: Blackwell Publishing.
- Landman, W.A., 1993, "Appropriate Health Care as a Human Right: A Philosophical Perspective," in *Health Care as Human Right*, A.A. Van Niekerk ed., Stellenbosch: University of Stellenbosch, pp. 36-71.
- Leith, J.H., 1993. *Basic Christian Doctrine*, Louisville: Westminster John Knox.
- Lombard, C., 2011, "Church, God, and Civil Society: A Namibian Case Study," in *A World for All? Global Civil Society in Political Theory and Trinitarian Theology*, W.F. Storrar, P.J. Casarella & P.L. Metzger eds., Grand Rapids: William B. Eerdmans.
- Louw, D.J., 2008, *Cura Vitae: Illness and the healing of life*. Wellington: Lux Verbi.
- Mahowald, M.B., 2007, Aren't We All Eugenicists Anyway? in *Theology, Disability and the New Genetics: Why Science Needs the Church*, J. Swinton & B. Brock eds., London: T&T Clark, pp. 96-113.

- Mann, J.M., 1997, Medicine and Public Health, Ethics and Human Rights, *Hastings Centre Report*, 27, p. 6-13.
- Marsh, T., 1994, *The Triune God: A Biblical, Historical and Theological Study*, Mystic: Twenty-Third Publications.
- McDougal, J.A., 2005, *Pilgrimage of Live: Moltmann on the Trinity and Christian Life*, Oxford: Oxford University Press.
- McDougall, J.A., 2003, "The Return of Trinitarian Praxis? Moltmann on the Trinity and the Christian Life." *The Journal of Religion* (April 2003) 177-203.
- McFague, S., 1998, *The World as God's Body*, The Christian Century, July 20-27, 1998, pp. 671-673.
- McGrath, A.E., 2007, *Christian Theology: An Introduction*. Chichester: Blackwell Publishing.
- McKenny, G., 1997, *To Relieve the Human Condition*, SUNY Press: Albany New York.
- McQuiod-Mason, D. & Dhai, A., 2011, "Heath and Human Rights," in *Bioethics, Human Rights and Health Law*, Dhai, A. & McQuiod-Mason, D. (eds.), Claremont: Juta, pp. 35-47
- Meier, B.M., Gable, L., Getgen, J.E. & London, L., 2011, "Rights-based approaches to public health", in *Rights-Based Approaches to Public Health*, Beracochea, E., Weinstein, C. & Evans, D.P. (eds), New York: Springer Publishing Company, pp. 19-30
- Migliore, D.L., 2004, *Faith seeking Understanding: An Introduction to Christian Theology*, Grand Rapids: Eerdmans.
- Moltmann, J., 2012a, *Ethics of Hope*, Minneapolis: Fortress Press.
- Moltmann, J., 2012b, "The Spirit of Life," in *The Spirit in Creation and New Creation Science and Theology in Western and Orthodox Realms*, M. Welker ed., Cambridge: William B. Eerdmans, pp. 65-78.
- Moltmann, J., 2011, "On a culture of life in the dangers of this time," in *Living Theology: Essays presented to Dirk J. Smit on his sixtieth birthday*, L. Hansen, N. Koopman & R. Vosloo eds., Wellington: Bybelmedia, pp.607-613

- Moltmann, J. 2010, *Sun of Righteousness, Arise! God's Future for Humanity and the Earth*, Minneapolis: Fortress Press.
- Moltmann, J. 2007, *A Broad Place: An Autobiography*, London: SCM Press.
- Moltmann, J., 2001, "The Bible, the Exegete and the Theologian: Response to Richard Bauckham," in *God will be All in All: The Eschatology of Jürgen Moltmann*. Bauckham, R. ed. Minneapolis: Fortress Press
- Moltmann, J., 2000, *Experiences in Theology: Ways and Forms of Christian Theology*. Minneapolis: Fortress Press.
- Moltmann, J. 1999, *God for a Secular Society: The Public Relevance of Theology*, Minneapolis: Fortress Press.
- Moltmann, J. 1997, *Theologie der Hoffnung: Untersuchungen zur Begründung und zu den Konsequenzen einer christlichen Eschatologie*. Munich: Gütersloher Verlagshaus.
- Moltmann, J. 1993a, *The Trinity and the Kingdom*, Minneapolis: Fortress Press.
- Moltmann, J. 1993b, *God in Creation*, Minneapolis: Fortress Press.
- Moltmann, J. 1993c, *The Crucified God*, Minneapolis: Fortress Press.
- Moltmann, J. 1993d, *The Church in the Power of the Spirit*, Minneapolis: Fortress Press.
- Moltmann, J. 1991, *History and the Triune God: Contributions to Trinitarian Theology*, London: SCM Press.
- Moltmann, Jürgen. 1991, *In der Geschichte des dreieinigen Gottes: Beiträge zur trinitarischer Theologie*, Munich: Kaiser Press.
- Moltmann, Jürgen. 1985, *Gott in der Schöpfung: Ökologische Schöpfungslehre*, Munich: Kaiser Press.
- Moltmann, J. 1984, *Politische Theologie – Politische Ethik*, Munich: Kaiser Press.
- Moltmann, J., 1971, *De mens: Christelijke antropologie in de conflicten van deze tijd*, Bilthoven: Ambo boeken.

- Molnar, P.D., 1990, "The Function of the Trinity in Moltmann's Ecological Doctrine of Creation", *Theological Studies* (51) pp. 673-697
- Mouw, R.J., 1987, "Biblical Revelation and Medical Decisions," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 55-64
- Newell, C., 2007, 'What's Wrong with You?' Disability and Genes as Ethics, in *Theology, Disability and the New Genetics: Why Science Needs the Church*, J. Swinton & B. Brock eds., London: T&T Clark, pp. 44-56.
- Olson, R.E. & Hall, C.A., 2002. *The Trinity*, Grand Rapids, Michigan: William B. Eerdmans.
- Pannenberg, W. 1991., *Systematic Theology Volume 2*. Grand Rapids, Michigan: William B. Eerdmans.
- Peters, T. 1998. "Genes, Theology, and Social Ethics: Are We Playing God?" in *Genetics: Issues of Social Justice*, T. Peters ed., Cleveland: The Pilgrim Press, pp.1-45.
- Peters, T. 1993. *God as Trinity: Relationality and Temporality in Divine Life*. Louisville: Westminster John Knox Press.
- Peterson, J.C., 2012, "Ethical Standards for Genetic Intervention", in *On Moral Medicine: Theological Perspectives in Medical Ethics*, M.T. Lysaught, J.J. Kotva Jr., S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 969-973.
- Placher, W.C., 2007. *The Triune God: An Essay in Postliberal Theology*. Louisville: Westminster John Knox.
- Powell, R. & Buchanan, A., 2011, "Breaking Evolution's Chains: The Promise of Enhancement by Design," in *Enhancing Human Capacities*, J. Savulescu, R. ter Meulen & G. Kahane (eds.), Oxford: Wiley-Blackwell
- Powell, S.M., 2001. *The Trinity in German Thought*. Cambridge: Cambridge University Press.
- Purdy, L.M., 2004, "Genetics and Reproductive Risk: Can Having Children Be Immoral?" in *Intervention and Reflection: Basic Issues in Medical Ethics*, R. Munson, ed., Belmont: Thomson Wadsworth, p.p. 338-344.

- Rahner, K., 1987a, "The Experiment with Man", in *On Moral Medicine: Theological Perspectives in Medical Ethics*, S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 230-237
- Rahner, K., 1987b, "The Problem of Genetic Manipulation," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 384-388
- Rahner, K., 1970, *The Trinity*, New York: Herder & Herder.
- Ramsey, P., 1987, "Moral and Religious Implications of Genetic Control," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 362-372
- Rasmussen, A. 1995, *The Church as Polis: From Political Theology to Theological Politics as Exemplified by Jürgen Moltmann and Stanley Hauerwas*. Notre Dame, Indiana: University of Notre Dame Press.
- Reichenbach, B.R. & Anderson, V.E., 1995, *On Behalf of God: A Christian Ethic for Biology*, Grand Rapids, Michigan: William B. Eerdmans
- Reinders, H., 2013, "Theology and disability: What is the question?" in *Searching for Dignity: Conversations on human dignity, theology and disability*. J. Claasens, L. Swartz & L. Hansen eds, Stellenbosch: Sun Media, pp. 31-41.
- Rogerson, J., 2001, "The Old Testament and Christian Ethics", in *The Cambridge Companion to Christian Ethics*, R. Gill ed., Cambridge: Cambridge University Press
- Rogerson, J., 1995, "Discourse Ethics and Biblical Ethics", in *Journal for the Study of the Old Testament Supplement Series 207*, pp. 17-26
- Roux, A., 2005, *Everyone's Guide to the South African Economy*. Paarl: Zebra Press.
- Ryan, M., 2012, "Justice and Genetics: Whose Holy Grail?" in *On Moral Medicine: Theological Perspectives in Medical Ethics*, M.T. Lysaught, J.J. Kotva Jr., S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 973-980.

- Sandel, M.J. 2007, *The Case against Perfection: Ethics in the Age of Genetic Engineering*, Cambridge, Massachusetts: Harvard University Press.
- Shakespeare, T., 2007, "Arguing about Genetics and Disability," in *Theology, Disability and the New Genetics: Why Science Needs the Church*, J. Swinton & B. Brock eds., London: T&T Clark, pp. 67-71.
- Shannon, T.A., 2000, *Made in Whose Image? Genetic Engineering and Christian Ethics*, New York: Humanity Books.
- Shinn, R.L., 1998, *Genetics, Ethics, and Theology: The Ecumenical Discussion*, in *Genetics: Issues of Social Justice*, T. Peters ed., Cleveland: The Pilgrim Press, pp. 122-143.
- Shuman, J., 2012, "Desperately Seeking Perfection: Christian Discipleship and Medical Genetics," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, M.T. Lysaught, J.J. Kotva Jr., S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 1009-1016.
- Smit, D.J., 2009, "The Trinity in the Reformed tradition," *Journal of Reformed Theology* 9
- Smit, D.J., 2006, *Neem, lees! Hoe ons die Bybel hoor en verstaan*, Wellington: Lux Verbi BM
- Smit, D.J., 1996, "Oor die unieke openbare rol van die kerk," *Tydskrif vir Geesteswetenskappe*, pp. 119-129.
- Song, R. 2012, "The Human Genome Project as Soteriological Project," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, M.T. Lysaught, J.J. Kotva Jr., S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 995-1002.
- Stückelberger, C., 2002, *Global Trade Ethics*. Geneva: World Council of Churches.
- Sukys, P. 2006, *Lifting the Veil: Scientific Appreciation for the Nonscientist*. Lanham: Rowman & Littlefield.
- Swinton, J., 2007, "Introduction: Re-imagining Genetics and Disability", in *Theology, Disability and the New Genetics: Why Science Needs the Church*, J. Swinton & B. Brock eds., London: T&T Clark, pp. 1-25.

- Szerszynski, B., 2012, "That Deep Surface: The Human Genome Project and the Death of the Human," in *On Moral Medicine: Theological Perspectives in Medical Ethics*, M.T. Lysaught, J.J. Kotva Jr., S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 1003-1009.
- Terreblanche, S.J., 2002, *A History of Inequality in South Africa: 1652-2002*, Pietermaritzburg: University of Natal Press.
- Torrance, T.F., 1996, *The Christian Doctrine of God: One Being, Three Persons*. London: T & T Clark.
- Van de Beek, A. 1996. *Schepping: De Wereld als Voorspel van de Eeuwigheid*. Creation Theology Workgroup, Reformed Church in America.
- Van Niekerk, A.A., 2013. "Disability and biomedical enhancement: Conflict or co-existence?" in *Searching for Dignity: Conversations on human dignity, theology and disability*. J. Claasens, L. Swartz & L. Hansen eds, Stellenbosch: Sun Media, pp. 103-115
- Van Niekerk, A.A., 1993, "Introduction: Health care, ethics and human rights," in *Health Care as Human Right*, A.A. Van Niekerk ed., Stellenbosch: University of Stellenbosch, pp. 1-14.
- Verhey, A.D., 2012a, "'Playing God' and Invoking a Perspective", in *On Moral Medicine: Theological Perspectives in Medical Ethics*, M.T. Lysaught, J.J. Kotva Jr., S.E. Lammers & A.D. Verhey eds., Grand Rapids, Michigan: William B. Eerdmans, pp. 1016-1023.
- Verhey, A.D., 2012b, *Nature and Altering It*, Grand Rapids, Michigan: Eerdmans.
- Verhey, A.D., 2003, *Reading the Bible in the Strange World of Medicine*, Grand Rapids, Michigan: Eerdmans.
- Verhey, A.D., 2002, *Remembering Jesus: Christian Community, Scripture, and the Moral Life*, Grand Rapids, Michigan: Eerdmans.
- Verhey, A.D., 1995, "Luther's 'Freedom of a Christian' and a Patient's Autonomy," in *Bioethics and the Future of Medicine: A Christian Appraisal*, J.F. Kilner, N.M. de S Cameron & D.L. Schiedermayer, (eds.), Grand Rapids, Michigan: William B. Eerdmans, pp. 81-92

- Waite Willis, W. Jr. 1987. *Theism, Atheism and the Doctrine of the Trinity: The Trinitarian Theologies of Karl Barth and Jürgen Moltmann in Response to Protest Atheism*, US: Oxford University Press
- Wikler, D. & Marchand, S., 2001, “Macro-allocation: Dividing up the health care budget,” in *A Companion to Bioethics*, Kuhse, H. & Singer, P. (eds.), Oxford: Blackwell Publishing, pp. 306-315
- Wilson, F., 2011, “Historical Roots of Inequality in South Africa,” in *Economic History of Developing Regions* 26 (1), pp. 1-15
- Young, S., 2006, *Designer Evolution: A Transhumanist Manifesto*, Amherst, New York: Prometheus Books

### **Internet Sources**

<http://www.bostonglobe.com/business/2013/06/01/after-disappointments-time-now-for-gene-therapy/wMIbxUe3Fc6szlLHccmYMJ/story.html>

<http://diglotting.com/2013/01/28/moltmanns-use-of-the-bible>

<http://diglotting.com/2013/01/23/Moltmann-his-writings/>

<http://www.ekd.de/1731-2371.html>

[http://www.ekd.de/1685-bulletin\\_2\\_2002\\_7.html](http://www.ekd.de/1685-bulletin_2_2002_7.html)

[http://www.ekd.de/presse/pm40\\_2011\\_verbot\\_pid.htm](http://www.ekd.de/presse/pm40_2011_verbot_pid.htm)

<http://www.linkedin.com/pub/norbert-gleicher/16/19/881>

<http://medical-dictionary.thefreedictionary.com/health+care>

<http://www.theguardian.com/science/2013/jul/17/downs-syndrome-cells-fixed-chromosome-therapy>

<http://www.unique.com/news/178/182/uniQure-announces-start-of-Parkinson-s-disease-gene-therapy-Phase-I-trial-by-UCSF-NIH-to-test-its-GDNF-gene-in-patients.html>

<http://www.who.int/about/definition/en/print.html>

