For the Benefit of Current and Future Generations:

Prospects for Intergenerational Equity in South Africa

SARAH-JANE LITTLEFORD

Thesis submitted to the University of Oxford

for the degree of *Doctor of Philosophy*

in *Geography and the Environment*

Brasenose College

Trinity Term, 2014

For the Benefit of Current and Future Generations: Prospects for Intergenerational Equity in South Africa

SARAH-JANE LITTLEFORD
Brasenose College, University of Oxford
Trinity Term 2014
A thesis submitted for the degree of Doctor of Philosophy

ABSTRACT

This thesis examines a crisis of governance in the Republic of South Africa (RSA), a crisis which threatens Constitutionally guaranteed intergenerational rights to water, meaning these rights are unlikely to be upheld. RSA's post-1994 Constitution incorporated a number of historically unparalleled human rights, based on fundamental principles of human dignity and equality. This includes the right to water resources for current and future generations – making RSA one of a few countries to enshrine intergenerational rights in law. Under law, Government acts as fiduciary trustee with duties to protect the water resources for current and future generations of citizens. The thesis asserts that influences of Emmanuel Kant, John Rawls and Edith Brown Weiss are reflected in the Constitution and subsequent laws.

However, historical and on-going impacts from extractive industries in the province of Gauteng are negatively impacting upon intergenerational water rights. Acid mine drainage is an acidic wastewater produced as a by-product of mineral extraction – particularly gold. It is polluting ground- and surface-waters across the province. A lack of effective government response to this issue has meant that AMD is acting as a catalyst accelerating the country's already problematic governance processes to a crisis level. As it has no long-term management plan, the government is neglecting its intergenerational responsibilities and abrogating Constitutional purpose. This situation is exacerbated by multiple, often conflicting, understandings in different sectors of society of the significance of intergenerational equity, further reinforcing the governance crisis.

Due to lack of government response, non-State agents, specifically the mining and financial sectors, are becoming increasingly involved in political decision-making and governance. This has positive short-term effects in ensuring that the rights of communities that were previously affected by water shortages and pollution are upheld. Yet there are potential serious long-term repercussions for democracy in RSA as a result: non-State actors are not best equipped to determine outcomes of governance, and this may result in procedures of deliberative democracy being contravened. Robert Dahl's theories inform this thesis's understanding of deliberative democracy.

Consequently, although RSA's Constitution guarantees intergenerational equity in theory, it is hard to achieve in practice. This is due to the governance crisis that has been precipitated by acid mine drainage, so that intergenerational rights to water are an unlikely long-term outcome for this developing nation.

ACKNOWLEDGEMENTS

I would like to express a deep gratitude to my supervisor, Dr Gordon Clark, whose help and patience in preparing and writing this thesis were invaluable – both through the two years of the MPhil and the subsequent two years of the DPhil. His guidance, particularly in the theoretical sections of the thesis, generated several important revisions; I would have produced a much weaker document without his sage advice. Thanks are also due to my Confirmation examiners, Dr Richard Powell and Dr Adam Dixon, for their perspicacious comments on how to improve my writings – as well as for their encouraging remarks about the content.

I would like to thank all of my interviewees across RSA who generously gave me their time and thoughts. I very much appreciate their willingness to speak with me, and their candidness in sharing their thoughts on the country's current environmental and political circumstances. This allowed me to gain a much deeper understanding of the country than could have been gleaned simply from from documented sources.

My years at Oxford would not have been possible without financial support from the Rhodes Trust, to whom I owe an extensive debt of gratitude. Rhodes House and its entire staff, especially Mary Eaton and the two Wardens, Professor Don Markwell and Charles Conn, have provided extensive guidance and enthusiastic encouragement. Along with the community of Rhodes Scholars in Oxford, they have all made my time at Oxford more enjoyable and trouble-free.
I also had the good fortune of being assigned to Brasenose College as I embarked upon the Oxford adventure, and would like to thank the College for its financial support – fieldwork trips would not have been possible without funding through its graduate grants. As well, the Brasenose College Boat Club provided much-needed diversion and exercise in my first two years at Oxford.

My final year at the University was galvanised through my involvement with Oxford University Women's Lightweight Rowing Club (OUWLRC). I was pushed beyond my limits, and made to realise that I am capable of much more than I had thought. Particular recognition must go to Ally Bridges, Joanna Green, and honorary member, Jolyon Ford. Thank you for the dinners, the discussions, the moral support, and the inspiration that each one of you gave me.

Friends and family were invaluable over the past four years. Friends throughout the University community – from Rhodes Scholars, Brasenose College, Geography, and the Junior Dean community – have given me a rich source of support and refreshment. I would like to make particular mention of classmates in my first year MSc course in Nature, Society and Environmental Policy for opening my eyes to the wide range of theory possible in geographical research. I am also grateful to my friend and erstwhile writing partner, Amir Sokolowski, with whom I spoke at length about my research and who proofread large parts of the thesis. I would also like to thank Moira and Allan Gaw for copyediting so perceptively.
I am very grateful for the company and advice of DPhil Room 10.05, especially Alex Money, Chloe Choi, Heather Hachigian, Michael Dangerfield, and Toru Kobu. You all have provided me with fresh eyes on my work, astute commentary, and a reason to come in to the office each day. Not to mention the many delicious lunches, and the opportunity to eat (even more) cake.

I am thankful for on-going support from Stephen, with whom I learnt about magnets, and who in turn has had to learn about environmental policy. Finally, my parents, whose unequivocal support is so very gratefully received – thank you for allowing me to pursue my search for knowledge as it takes me to the far corners of the world, but providing a place of refuge to which I can always return.

SJ Littleford,
University of Oxford
24 September 2014

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

AMD	Acid mine drainage
ANC	African National Congress party
BECSA	BHP Billiton Energy Coal South Africa
CSR	Corporate social responsibility
DA	Democratic Alliance party
DEA	Department of Environmental Affairs
DMR	Department of Mineral Resources
DWA	Department of Water Affairs
EIA	Environmental impact assessment
EMP	Environmental management plan
EPs	Equator Principles
GDP	Gross Domestic Product
IGE	Intergenerational equity
IP&WM	Integrated Pollution and Waste Management White Paper
KOSH	Klerksdorp-Orkney-Stilfontein-Hartebeespoort basin
LUPO	Land Use Planning Ordinance
MLG	Multi-level governance
MPRDA	Mineral and Petroleum Resources Development Act
NEMA	National Environmental Management Act
NTSF	National Science and Technology Forum
NWA	National Water Act
RSA	Republic of South Africa
SLO	Social licence to operate
UN	The United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USA	United States of America
WESSA	Wildlife and Environment Society of South Africa

TABLE OF CASES

All cases used in the thesis are listed here, along with a brief description of the significant findings and implications. Cases are often cited in more than one chapter, but each is listed and explained here only in the chapter in which it is first introduced.

CHAPTER II:

1. *Minors Oposa v. Secretary of the Department of Environmental and Natural Resources, 33 ILM 173 (1994), Supreme Court of the Philippines*

   First explicit recognition by a national Court of rights of future generations, and the ability of current generations to represent them.

CHAPTER III:

1. *Residents of Bon Vista Mansions v. Southern Metropolitan Local Council*, *Case No. 01/12312 (2001) (2001), RSA Gauteng High Court*

   Outlined State's duty to protect the right of access to water, and guaranteed that each citizen has equal rights. Ruled that municipality violated rights by denying water to those unable to afford basic services.

2. *Mazibuko v. City of Johannesburg 2009, CCT 39/09 (2009), ZACC 28 (2009), RSA Constitutional Court*

   Court ruled that government is not constitutionally required to supply more than the legally-specified water needs. Court held that the Free Basic Water policy and use of water meters was reasonable and lawful under legislation.

3. *The State v. Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya, (RN126/13) (2014), RSA* Magistrates Court for Regional Division of Limpopo Province, The State v Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya (RN126/13) (2014).

   First instance of personal liability applied by Courts to a corporate director, for the polluting activities of his corporation.

CHAPTER IV:

1. *BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs, (03/16337) [2004] ZAGPHC 18 (31 March 2004), RSA Gauteng High Court*

Environment was defined by Courts, incorporating natural, economic, and social surroundings.

2. *HTF Developers v Minister of Environmental Affairs and Tourism and Others (2007), (337/06) ZASCA 37; [2007] SCA 37 (RSA); [2007] 4 All SA 1108 (SCA) (28 March 2007), RSA Supreme Court of Appeal.*

Court defined wellbeing to encompasses aesthetics, environmental integrity, and a conviction that the environment should be used in a morally responsible manner.

3. *Harmony Gold Mining Co Ltd v Regional Director: Free State Department of Water Affairs and Forestry, (68161/2008) [2012] ZAGPPHC 127 (2012), RSA Constitutional Court.*

Court interrogated Section 19 of NWA and set a precedent that 'reasonable measures' required to preclude pollution are not restricted to the specific parcels of land owned by a party, but can be widened to include lands owned, controlled, or used by another.

4. *BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs, (03/16337) [2004] ZAGPHC 18 (31 March 2004), RSA Gauteng High Court*

Court ruled that environmental concerns should be considered on parity with socioeconomic concerns, including rights to trade.

CHAPTER VI:

1. *Santa Clara County v. Southern Pacific Railroad Company, 118 U.S. 394, 1886, USA Supreme Court*

Court decreed that corporations should be regarded as 'natural persons' under the Fourteenth Amendment of the Constitution, and had the right to equal protection under the law.

2. *Federation for a Sustainable Environment and Others v Minister for Water Affairs and Others, (35672/12) [2012] ZAGPPHC 128 (2012), RSA North Gauteng High Court*

Water in a particular area was recognised by the Court to be contaminated with AMD. Court ruled that this was contrary to national standards, and directed government to address long-term water supply.

3. *Maccsand (Pty) Ltd v City of Cape Town and Others, (CCT103/11) (CC) [2012] ZACC 7; 2012 (4) SA 181 (CC); 2012 (7) BCLR 690 (CC) (2012), RSA Constitutional Court.*

Court looked at interplay among three sets of legislation: MPRDA, LUPO, and NEMA. Court found that multiple regulations serve distinct but complementary purposes for mining, so that multiple authorisations are not contrary to the law.

4. *Nokotyana and Others v Ekurhuleni Metropolitan Municipality and Others 2009, (CCT 31/09) [2009] ZACC 33; 2010 (4) BCLR 312 (CC) (2009),* RSA Constitutional Court, Nokotyana and Others v Ekurhuleni Metropolitan Municipality and Others (CCT 31/09) [2009] ZACC 33; 2010 (4) BCLR 312 (CC) (2009).

Court ordered upgrade of informal settlement to formal status, entitling inhabitants to all services that satisfy RSA's social and economic rights.

CHAPTER VII(b):

1. *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal and Others, [ZACC 11] (RSA, 2010), RSA Constitutional Court*

Court found that decision-making autonomy of municipalities should be free from interference by national and provincial spheres.

2. *Bareki NO and Another v Gencor Ltd and Others (2006), (19895/03) [2005] ZAGPHC 109 (19 October 2005), RSA Gauteng High Court*

Court found that NEMA did not apply retrospectively, as retrospective legislation in addition to strict liability would prove overly burdensome.

CHAPTER VIII:

1. *Citizens United v. Federal Election Commission, 130 S. Ct. 876, 558 U.S. 310, 175 L. Ed. 2d 753 (2010), USA Supreme Court*

This case allows corporations unrestricted political expenditures, which the Federal government cannot limit, under First Amendment rights. This is an extension of the rights of natural persons to juristic (corporate) persons.

2. *Hyundai Motor Distributors (Pty) Ltd & Others v Smit NO & Others, (CCT1/00) [2000] ZACC 12; 2000 (10) BCLR 1079; 2001 (1) SA 545 (CC), 2001, RSA Constitutional Court.*

Court decided that corporations, as juridical persons, could not be bearers of the right to human dignity.

3. *AP Smith Manufacturing Co v Barlow, (13 N.J. 145, 98 A.2d 581) (1953), USA Supreme Court of New Jersey*

Court ruled that juridical persons such as corporations are able to give to charity in the same way as natural persons. Court acknowledged that corporate actions could have the same effect as natural person actions.

CHAPTER I: INTRODUCTION

"A crisis is a point of rupture, when the present asserts itself in the face of the past … suddenly the future is on the line."

- David Runciman[1]

1 Research Rationale

The Republic of South Africa (hereafter RSA) was founded on principles of dignity, equality and freedom, with historically-unparalleled human rights included in its national Constitution[2]. RSA's progressive Constitution was promulgated in 1996; its enumerated catalogue of socioeconomic rights is based upon ethics formerly disregarded by the apartheid government, and designed to redress previous deprivation[3]. It is a prospective document, presenting exemplary conduct as an aspiration for society. The Bill of Rights is guided by human dignity and fairness, requiring government to undertake affirmative action programmes. It incorporates the third generation of human rights to a healthy environment, which encompasses water resources for current and future generations[4]. Inclusion of rights for future citizens makes RSA's Constitution one of only eleven globally to have intergenerational equity (IGE) as a fundamental principle[5].

This thesis makes the argument that there is a crisis of governance in RSA, which is increasingly making citizens' intergenerational rights to water unlikely to be fulfilled. At the heart of this crisis of intergenerational water rights are two issues:

[1] David Runciman, *The Confidence Trap: A History of Democracy in Crisis from World War I to the Present* (Princeton, New Jersey: Princeton University Press, 2013).
[2] N. Friedman, "Apartheid Now: The Private Lives Of Others," *Unpublished MPhil Thesis, University of Oxford* (2010).
[3] M.S. Kende, "The South African Constitutional Court's Embrace of Socio-Economic Rights: A Comparative Perspective," *Chapman Law Review* 6, no. 13 (2003).
[4] "Constitution of the Republic of South Africa," 1996, http://www.gov.za/documents/constitution/1996/a108-96.pdf.
[5] Catarina de Albuquerque, *U.N. General Assembly, 18th Session, Report of the Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation (A/HCR/18/33/Add.1)*, 2011.

mining and acid mine drainage (AMD). As will be explained in the following chapters, both of these issues threaten the fulfilment of environmental legislation, making attainment of IGE more difficult. In short, mining activities, predominantly through AMD, are polluting large volumes of water in RSA; this is not being effectively addressed, meaning intergenerational rights to water are being abrogated.

Mining is a historically very significant industry in the southern Africa region, and particularly for RSA. Even before colonisation of the area under British rule in the early 1800s, contract employment at mines brought remittances to countries as far removed as Tanzania[6]. Mining continues to be an economically-decisive industry to the present day. Complicating this positive economic narrative is AMD, a highly acidic wastewater resulting from extraction activities. It is characterised by elevated levels of dissolved metals, salts, and radioactive metals. It is principally associated with historic and abandoned mines, where shafts create new flowpaths for water that have significant potential to then contaminate ground- and surface-water sources with this pollutant. However it is important to note that although AMD is a serious problem in itself, its more significant contribution is as a catalyst that prompts serious concerns about RSA's governance situation.

There are four interwoven strands to this governance predicament, each of which is slowly unravelling the bright tapestry created by the country's visionary Constitution. Governance gaps originating in four issues have grown quite large, without being threaded back into place, leaving a governance garb that is imperfect and progressively coming apart at the seams. All four will be explored in detail in the chapters that follow, but a summary of each will be given.

The first is that government lacks the technical knowledge necessary to

[6] Anthony Lemon, "Beyond Apartheid: New Directions in Southern Africa," *Tijdschrift Voor Economische En Sociale Geografie* 98, no. 4 (September 2007): 419–420.

implement the specialised regulations in the country's legislation[7]. The writers of the National Environmental Management Act (NEMA) and National Water Act (NWA) were technical experts and had as their objective high standards of environmental quality. However, the Acts have to be enforced by civil servants with a layperson's proficiency. Exacerbating this issue is brain drain from government positions in RSA; skilled workers are able to find higher-paid positions in other countries and in the private sector, and they are eagerly hired away due to their insider knowledge of government departments.

The second is a lack of government will to deal with long-term environmental resource implications, which has two aspects[8]. Government agents operate on short-term election deadlines – in RSA, this is five years for both national and provincial elections – and feel most answerable to the short-term requirements of their electorate, which means housing, employment, corruption, and economic development. It does not include long-term sustainable development of water resources. This means that intergenerational aspects of legislation are given little attention by government agents, who prefer to work on interim issues with greater re-election potential. Compounding this, there is an unofficial hierarchy in government departments, which generates unofficial hierarchies in political decision-making. In RSA, the Department for Mineral Resources has priority over both the Department for Water Affairs and the Department of Environmental Affairs – giving mining development precedence over preservation of resources.

The third thread to the governance crisis is the increasing failure of deliberative democracy due to non-participation by civil society. Citizens of RSA are progressively more disaffected by what they regard as government incompetence and

[7] Information from in-person interviews carried out in January 2012 and June 2013 (See Appendix)
[8] Information from in-person interviews carried out in January 2012 and June 2013 (See Appendix)

corruption, and do not believe that voting is an effective way to address this[9]. Successful engagement with government is hampered so that critical questions are not being asked of government, and environmental issues are not being discussed in a deliberative forum, with input by all sectors of society in decision-making.

The fourth and final issue is the escalating involvement of industry in provision of social services and upholding of intergenerational rights to water may have some negative consequences for the future of democracy in RSA[10]. Industry has no means by which deliberative democracy can be upheld, and the Constitution did not envision its significant participation in political decision-making, so there are no rules for how to move forward as a democracy from this point.

As a result, multiple objectives compete in a highly contested environment. The considerable difficulty facing governance in RSA is how to achieve these objectives without sacrificing intergenerational outcomes. The future of democracy in the country is vulnerable as governance breaks down, leaving RSA in a fragile position, which this thesis will investigate.

1.1 Theory Utilised in the Thesis

The theoretical framework to analyse the depth of the foundations of human rights in RSA makes significant use of the writings of Immanuel Kant. Kantian theory regards human dignity as paramount concern for a system of law, and proposes that members of society can achieve dignity through moral behaviour and rational action[11]. Legal structures should systematise equality of opportunity for all members

[9] Richard Calland & Smita Nakhooda, "Participatory Democracy Meets the Hard Rock of Energy Policy: South Africa's National Integrated Resource Plan," *Democratization* 19, no. 5 (2012): 912–931.
[10] David Gindis, "Some Building Blocks for a Theory of the Firm as a Real Entity," in *The Firm as an Entity: Implications for Economics, Accounting and the Law*, ed. Yuri Biondi, Arnaldo Canziani, and Thierry Kirat (Oxford UK: Routledge, 2007).
[11] M. Rosen, *Dignity: Its History and Meaning* (Rhode Island, USA: Harvard University Press, 2012).

of society; this will allow citizens to pursue their free will based on moral duties[12]. The role of the State is to enforce this legislation and protect rights and dignity form erosion by another party. The thesis will draw out the significant similarities between these theories and RSA's Constitution, and will make the claim that legislation Kantian theory could have influenced the writers of the Constitution.

To inform the applied basis of intergenerational equity in RSA, the theoretical framework was built up through John Rawls and Edith Brown Weiss. Rawlsian theory relies on the concept of justice as fairness, with positive discrimination for the worst-off citizens and otherwise undifferentiated rights. Decision-makers at the head of society are expected to make laws that have the most just outcomes[13]. Connections between this theory and RSA legislation are highlighted, with similar claims made by the author that Rawlsian thought could conceivably have influenced Constitutional writers. Brown Weiss, a more contemporary philosopher, utilises the legal device of a public trust to inform intergenerational equity. Through the trust, global citizens are obligated to convey the planet to future generations in no worse – and perhaps better – condition to that in which we received it form previous generations[14]. This will be applied to the South African situation in the thesis, and will indicate that citizen-owners are able to use and enjoy resources. Government is in the position of fiduciary trustee, obligated to act to ensure that current and future generations are able to use and enjoy a similar quantity and quality of natural resources.

The author drew on the theories at the start of the project, to mould what was investigated, how it was researched, and questions asked during fieldwork. Understanding these theories and applying them to the situation in RSA allowed for a

[12] E. J. Weinrib, "Law as a Kantian Idea of Reason," *Columbia Law Review* 87, no. 3 (1987): 472–508.
[13] J. Rawls, *A Theory of Justice: Revised Edition*, *1999* (Massachusetts, USA: Belknap Press of Harvard University Press, n.d.).
[14] Edith Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity," *Ecology Law Quarterly* 11 (1984): 495–582.brown

more complex understanding of current behaviours. They also provided a lens through which potential opportunities for change could be discerned.

2 Research Questions

To investigate the governance crisis occurring in RSA, this thesis poses five questions that were used to guide research and fieldwork, each dealing with a particular aspect of the philosophy or application of IGE. The forthcoming chapters will review these questions to create a narrative explaining the precarious position in which RSA finds itself. A multi-disciplinary approach is taken: legal analysis is employed to evaluate RSA's Constitution and associated legislation, philosophical inquiry to determine substructures reinforcing legislation, and empirical research to establish perceptions of society, the current state of water policy in the country, and novel applications of IGE. Drawing upon diverse disciplines reinforces the thesis, ensuring the topic is studied from multiple angles – just as it is by actors in society, who consider IGE decision-making from divergent points of view and purposes. A multiplicity of approaches is important in studying AMD, as it is a social, practical, and academic problem requiring an interdisciplinary action; interdisciplinarity bridges communication gaps and enhances management of natural resources.

The first question examines how IGE fits into RSA legislation, with the aim of understanding how intergenerational concepts have been put into action. To answer this question, this thesis begins by examining the philosophical background to IGE, in order to analyse its utilisation in legislation. IGE, the minimising of current and future inequalities, is a central principle of sustainable development. Future generations will have needs to meet, just as the current generation does. Care has to be taken not to reduce the ability of future people to meet their needs, through preserving the quality and quantity of natural resources. This thesis takes a 'strong sustainability' view –

wealth creation for future generations through current exploitation of natural resources is not sufficient for IGE[15]. Instead, resources themselves should be conserved, as the environment offers more potential than can be replaced by economic wealth, and future people may have natural resource needs not currently anticipated. Since there is scientific uncertainty surrounding IGE and natural resource depletion, the precautionary principle should be followed: prevention of threatened environmental degradation should take precedence over any other policy or action[16].

Once enacted in legislation, this research question asks how this is put into action in RSA. This is an important consideration in understanding how far the philosophy has been assimilated, and how complicated it would be to enact laws. The non-specific conditions laid out in the RSA Constitution and Bill of Rights were made definite primarily through the NWA, NEMA, and the Mineral and Petroleum Resources Development Act (MPRDA). All proclaim undifferentiated rights for all citizens, and government as fiduciary trustee of environmental resources on behalf of all citizens to preserve and improve resources' quality and quantity. These regulations have created high-level third-generation human rights that are no longer soft law, but instead incorporated into legally-binding documents.

The second question asks what the impediments are to upholding IGE. This is asked in order to understand the challenges facing this newly-independent nation in enacting the aspirational requirements of the Constitution, and to attempt to understand the obstacles faced. It was important to approach this question with the appreciation that it is not simply human error or bias that prevents achievement of

[15] S. Beder, "Costing the Earth: Equity, Sustainable Development and Environmental Economics," *New Zealand Journal of Environmental Law* 4 (2000): 227–243.
[16] Preston B.J. (The Hon. Justice), "Principles of Ecologically Sustainable Development," *Speech given in the Land and Environment Court, New South Wales, Australia* November (2006), http://www.lec.justice.nsw.gov.au/agdbasev7wr/_assets/lec/m4203011721754/preston_principles of ecologically sustainable development.pdf.

intergenerational outcomes, but that often reasons beyond human control may be detrimental. The conclusion is reached that there are limitations inherent to the philosophical foundations of IGE within the Constitution that debilitate empirical implementation. Philosophies tend to assume ideal models of human behaviour and thought, as well as adherence to laws simply because they are morally grounded. Yet humans are indubitably more complicated than these assumptions, leading to an inherently flawed application of aspirational laws.

Philosophical shortcomings are exacerbated by poor interactions in society that has led to divergent understandings of intergenerational legislation. This situation has been both exposed and exacerbated by the burgeoning AMD crisis. Fieldwork uncovered that society interacts very poorly. Utilising a model called the Pentalogue Model, society is divided into five clusters: science, civil society, government, media and industry[17]. When the five clusters are equally balanced, the result is a functioning deliberative democracy; however they interact inadequately in the reality of political decision-making in RSA. Miscommunications among clusters have undermined enactment of long-term strategies, and deliberative democratic governance is disregarded. Therefore, citizens and government have not mutually committed to including future generations in policy-making for environmental resources. The majority of society regards government as abrogating their responsibilities to IGE, particularly through ineffective management of AMD. The central claim of this research question is that IGE, although legally mandatory, is unlikely to be upheld in RSA for these reasons.

The third question asks why government is viewed by society as failing to uphold IGE. This question was prompted by a finding from the previous question, that

[17] See Chapter V, Model created by S.M. Gaw, (30/07/11)

society perceived government to be disregarding their responsibilities. The goal of this question was to understand more clearly what moral norms society regards the government to be contravening. This is an important consideration, as it aims to establish norms of behaviour and moral frameworks for action of RSA citizens, and to understand how these were created and have been sustained since majority rule in 1994. These norms are ultimately used by society to judge the government's success or failure.

The thesis proposes that there is a national metanarrative that guides decision-making and action in RSA. This has been informed by processes of deliberation as well as more immediate heuristics to result in a conceptualisation of virtuous and morally wrong actions in society[18,19]. Being a good citizen means conforming to the national metanarrative – and this means treating all citizens as equals and with dignity, and working to uphold rights claims. By disregarding the spread of AMD through Gauteng province, where it is polluting ground- and surface-water supplies, government is not acting in accordance with the metanarrative. It is therefore judged to be abrogating Constitutional purpose and disregarding its duties.

The fourth question asks what other options exist to uphold IGE in the face of government failure. This question is posed because, in the face of presumed failure of government realise its duties under the Constitution, environmental standards are actually being followed and maintained without government enforcement. This research direction aims to uncover how this is taking place, and what agents are taking the initiative over government inaction. This thesis will provide evidence to support the hypothesis that laws in RSA have a Kantian influence through the focus

[18] Susan James, "VII-Rights as Enforceable Claims," *Proceedings of the Aristotelian Society (Hardback)* 103, no. 1 (June 2003): 133–147.
[19] A. Tversky & D. Kahneman, "Judgement Under Uncertainty: Heuristics and Biases," *Science* 185, no. 4157 (1974): 1124–1131.

on the intrinsic dignity of every citizen, and on rational, moral discussion[20]. Yet the discussion space required for citizens to communally participate in political decision-making does not exist, as the aspirational Constitution was created too quickly for this to happen organically. Through use of fieldwork to inform the Pentalogue Model developed in the second research question, the thesis demonstrates that there is no centralised space under governance as usual – clusters do not interact productively.

This thesis therefore posits that the way in which Kantian laws are upheld in reality in RSA is through multi-level governance (MLG), allowing cross-boundary exchanges to occur in a level over and above the usual governance by government. With ancillary, non-government groups involved in governance and political decision-making, market forces have greater control over outcomes. However they have also taken on greater responsibility for the provision of social services such as water supply, and the upholding of intergenerational rights to water. The Pentalogue Model is refined to reflect further fieldwork, and called the Applied Pentalogue Model. Through this, it is demonstrated that MLG allows for high-level discussions to occur, and for intergenerational rights to water to be debated by multiple clusters of society. That this takes place outside of the typical realm of governance means that novel processes are being generated for the moral purpose of preserving water resources – particularly through involvement of mining and financial industry actors.

The final research question is, "Where next for democracy and IGE in RSA?" This is of great consequence, as the last research question indicated that there was multiplying market involvement in upholding intergenerational rights to water and decreasing government involvement; this will certainly have an impact on democracy. The traditional role of corporations has them very separate from government, and this

[20] Weinrib, "Law as a Kantian Idea of Reason."

is legislated through the limited liability doctrine that separates the company from the people who operate within it and from government[21]. Corporations are viewed as having overarching profit-making motives, and as juristic persons under the RSA Company Act they do not have the full set of rights and duties given to natural persons[22]. Therefore, their adoption of responsibilities normally accorded to government is surprising, as it is not motivated by the transactional frameworks that conventionally guide corporate decision-making. This thesis suggests that the country's metanarrative guides the behaviour of corporations in this regard – they, alongside individuals, abide by social norms of the priority of human dignity and upholding intergenerational rights to water.

Nonetheless, even given this adherence to the metanarrative, it is proposed that corporations are not best-placed to take on this fundamentally democratic behaviour. They are juristic persons, not natural persons, so are not able to carry out deliberative discussions with the rest of civil society. Moreover, particular industries cannot deliberate with society across the country, as they operate in limited geographic regions – and neither can they supply the entire country with potable water, again due to geographic operational limitations. It must also be pointed out that the communal decision-making space displayed in the original Pentalogue Model will still not exist. Instead, the industry cluster will simply grow larger while the government cluster shrinks; there will be no fundamental change in the layout of the Applied Pentalogue Model. Therefore, growing industry power over human rights will be to the detriment of civil society, as they will have less input into environmental and political decision-making for the long term.

[21] Gindis, "Some Building Blocks for a Theory of the Firm as a Real Entity."
[22] Republic of South Africa, "Companies Act (No. 71 of 2008)," *Companies Act 2008.*, 2008, http://www.justice.gov.za/legislation/acts/2008-071amended.pdf.

3 Review of Chapters

3.1 Chapter II: Intergenerational Equity and Water Rights

The literature review appraises three distinct philosophical understandings of IGE. Although variously defined, all rely on distributive justice between generations, an objective that is strongly linked with human rights. John Rawls develops IGE from undifferentiated rights for all citizens and positive discrimination for society's most needy[23]. Rawls utilises the theoretical veil of ignorance, behind which rational, self-interested decision-makers are found and create policies beneficial for past, present and future citizens with equitable distribution of resources. Ernest Partridge believes Rawls does not go far enough to guarantee IGE, suggesting current generations owe substantial duties to the future satisfied only when morally-responsible decisions are consciously made[24]. This allows current citizens to impact on society beyond their own lifetimes, which Partridge refers to as self-transcendence. This makes the future less abstract as citizens can act for the advantage of their particular concerns.

Edith Brown Weiss expands upon such human approaches and realises them with a legal interpretation of IGE. Brown Weiss coined the term 'planetary trust' to describe duties of current generations to protect the environment for future generations[25]. Under this fiduciary trust, humans are beneficiaries of planetary resource largesse, but also have duties to facilitate future welfare. Government can enact this theory through the public trust doctrine; in RSA, government acts as trustee for resources owned collectively by citizens[26]. Government is required to protect resources over development, and is accountable to citizens for this. Recommendations

[23] J. Rawls, *Justice as Fairness: A Restatement* (Cambridge, MA: Harvard University Press, 2001).
[24] E. Partridge, "Introduction," in *Responsibilities to Future Generations* (Buffalo, NY, USA: Prometheus Books, 1981).
[25] Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity."
[26] E. van der Schyff & G. Viljoen, "Water and the Public Trust Doctrine – A South African Perspective," *TD: The Journal for Transdiciplinary Research in Southern Africa* 4, no. 2 (2008): 339–354.

are made for a new framework of global decision-making with IGE as central tenet, to transform IGE from philosophical concept to normative obligation. This chapter also presents an introduction to human rights and focuses on Kantian and Rawlsian interpretations, given their significance to RSA's Constitution.

3.2 Chapter III: Environmental Legislation in RSA

This chapter reviews development of RSA's environmental legislation, particularly for water resources, clarifying how IGE constitutes a central legal principle. It also introduces and explained AMD. The Constitution guarantees sufficient daily water and a healthy environment for current and future generations through the Bill of Rights. This is a particularly progressive right accorded RSA citizens, considering expanding population and water demands.

Rawlsian justice as fairness informs legislation, to redress apartheid inequities. It is also influenced by Brown Weiss' theories: government acts as trustee, protecting natural resources that are the collective property of citizens. Government also redistributes resources among current citizens for more equitable outcomes. This has required a fundamental shift in RSA's legal system – in Roman-Dutch law, ownership of resources is associated with legal personage, which 'all citizens' of the Constitution does not fulfil. Thus the Anglo-American public trust doctrine was authorised, and resources became public property with government as caretaker. Through this, citizens have *locus standi* to challenge government to uphold trustee duties[27]. NEMA defines the environment to include water resources, and is guided by long-term sustainability[28]. The National Water Act is water-specific legislation regarding water

[27] G.J. Pienaar & E. van der Schyff, "The Reform of Water Rights in South Africa," *Law Environment and Development Journal* 3, no. 2 (2007): 179–194.
[28] "Number 107 of 1998, The National Environmental Management Act," 1998, http://www.environment.gov.za/polleg/legislation/natenvmgmtact/natenvmgmtact.htm.

as an indivisible collective asset, sufficient supplies of which are a right[29]. Various court cases cemented legislative principles and highlight government's obligations, thereby bonding citizens to government in a trust relationship.

Fiduciary duties do however result in government balancing demands of being a water user with safeguarding it, creating conflicts of interest most clearly exhibited through mining. A detailed history of mining in Gauteng province provides greater context to the situation, alongside a review of current mining legislation. Under the MPRDA, government is obligated to promote sustainable mining to protect the environment[30]. A more in-depth explanation of AMD is also given, demonstrating how it is both a waste product from mining and a catalyst for conflict in government. The possible geographic spread of AMD is established, as well as negative effects already engendered by it. This chapter surmises that government regards mining more leniently than legislation permits, thus contravening responsibilities and abrogating Constitutional purpose.

3.3 Chapter IV: Philosophy of the RSA Constitution

Here threads of the other chapters are woven together, proposing that IGE may not be a viable outcome for RSA if the distribution of duties and current government application of the Constitution continue unchecked. Kantian influences on the Constitution are apparent through the importance accorded to human dignity and the emphasis placed on morality in legislation[31]. Limitations of Kantian jurisprudence are explored, including the disregard of moral laws for personal incentives. Moreover, hegemony is a potential outcome from government possession of the perfect

[29] "Number 36 of 1998, The National Water Act," 1998, www.info.gov.za/view/DownloadFileAction?id=70693.
[30] Government Gazette 23922, *Mineral and Petroleum Resources Development Act (Act 28 of 2002)* (Department of Minerals and Energy, 2002), http://www.saflii.org/za/legis/consol_act/maprda2002452/.
[31] G.P. Fletcher, "Law And Morality: A Kantian Perspective," *Columbia Law Review* 87 (1987): 533–558.

information for policy-making required by Kantian theory. As well, conflicts of interest may result between current demand for goods and the Constitutionally-required trust for the future, that may lead to non-observance of environmental laws[32].

Brown Weiss' theories also have shortcomings in application, particularly in navigating the demands of the short-term against long-term pressures – particularly in a developing country context. This is the case in RSA where the government is increasingly unable to evaluate competing rights, particularly as mining and economic interests are balanced against AMD and environmental preservation. The chapter conjectures that IGE may not happen in RSA as philosophies informing environmental and other legislation are found limiting when put into practice.

The role of the judiciary in mediating this conflict through their independent position is explored through a Supreme Court case, *Harmony Gold Mining Co Ltd v Regional Director: Free State*[33]. In this case, the Court ruled that liability for remediation of AMD-affected areas could be extended beyond landowners to those operating on the land. This is notable because the Court ruled that water was a national asset, and its protection should be prioritised over economic concerns. Governance and decision-making are thus negotiated between government and Courts, in a counterbalancing of environment and economics.

3.4 Chapter V(a): Methodology

This short chapter reviews the methodology utilised to carry out fieldwork for the thesis. Purposive sampling was used, to avoid issues associated with a smaller sample size, as well as the diverse method of sampling, to ensure that the full range of values identified in the larger population group (based on the Pentalogue Model) were

[32] G.L. Clark, "Making Moral Landscapes: John Rawls' Original Position," *Political Geography Quarterly, Supplement to Vol. 5* no. 4 (1986): 147–S162.
[33] The Supreme Court of Appeal of South Africa, Harmony Gold Mining Company Ltd v Regional Director: Free State Department of Water Affairs and Others (971/12) [2013] ZASCA 206; [2014] 1 All SA 553 (SCA); 2014 (3) SA 149 (SCA) (4 December 2013) (2013).

represented. The sample was populated through snowballing techniques, and enhanced by access to a gatekeeper, who initially introduced me to a number of key interviewees. Over forty agents were interviewed in total, and the adequacy of this is dealt with in the chapter.

Interviews were semi-structured and flexible in design, and included probes in both question and non-verbal form. Most interviewees requested that information they provided was kept confidential, but did consent to recording of the interview. Interviews were coded through Descriptive Coding techniques, where category labels are applied to refine the data and allow commonalities and patterns to be found. In doing fieldwork, I was conscious of my positionality – my identity is white, female, Zimbabwean and academic. I thus utilised a feminist methodological approach in interviewing the predominantly male, South African, political and business elites. Potential problems, including ethics, the methodology itself, and case selection, are also acknowledged in the chapter.

3.5 Chapter V(b): Community Experience of Water Laws

This empirical chapter attempts to understand IGE in society, and in drawing on issues from previous chapters, reasons that AMD is the herald indicating that IGE is unlikely to happen in RSA. Society is divided into five clusters under the Pentalogue Model, which is created and introduced in this chapter. The Pentalogue is based on Robert Dahl's theory of interest group politics, in which democracy results from active participation in the decision-making processes by all sectors of society[34]. The model enables analysis participation in governance, and determines how involved each cluster is in decision-making processes. Deliberative democracy is displayed in the model in this way, with deliberation among clusters serving a consequential role.

[34] R.A. Dahl, *A Preface to Economic Democracy* (California, USA: University of California Press, 1992).

In RSA, clusters have self-bounded responsibilities, and there is not enough integration across cluster boundaries, limiting problem-solving and knowledge exchange. Each cluster has strong views on AMD, but there is little action taken to address pollution. Underlying the chapter is the assumption that laws are created through social interactions; correspondingly IGE will be created through improving communications across cluster boundaries. Recommendations are given for repairing cluster deficiencies. Without improvements, AMD pollution is expected to rapidly undermine efforts to sustain IGE. The chapter concludes that present governance processes are unsatisfactory, engendering poor IGE outcomes: most concerned groups inadequately contribute to policy-making, giving precedence to short-term issues.

3.6 Chapter VI: Development of the National Metanarrative

Given that RSA citizens believe the government to be failing in its duties to uphold intergenerational rights to water, this chapter attempts to explain why this is, and determine what standards that citizens hold, in which they perceive government to be deficient. The chapter is a representation of reality in RSA, given the theoretical framework of the thesis. It introduces the idea of a national metanarrative, and suggests how this concept may have been developed. The national metanarrative determines what comprises good and bad actions in society, thereby defining 'good citizenship.' Government is deemed to be neglecting moral and legislative duties based on the principles underlying this metanarrative.

Rights are regarded as both moral and legal claims that are socially created through processes of community deliberation[35]. This is informed by Susan James' theory that rights are vested in social processes, and the role of government is to

[35] Ronald Dworkin, *Taking Rights Seriously* (London UK: Duckworth, 1978).
This is in contradiction to theories of legal positivism, espoused by H.L.A. Hart, which suggest that there is no conceptual connection between moral and legal norms.

protect rights equally for all people[36]. This is accomplished through government institutions that are created expressly to protect rights and pluralism. This leads to development of social norms. It is reinforced in RSA through court cases that focus on rights claims and through supporting legislation that benchmark rights claims.

Tversky and Kahneman's theories of heuristics are employed to show how people make quick judgements based on existing rights and social norms, and this leads to development of behavioural rules[37]. These together generate a social moral theory that guides individuals and institutions that holds both answerable to upholding rights and acting in accordance with norms. Social conventions are passed through society and down generations, reinforcing socially-established rights and rules – and this is RSA's national metanarrative. This is demonstrated through a case study of a change in legislation post-1994 that could have been interpreted as a 'takings' of private land by government[38] – but no one questioned this change due to its correspondence with the metanarrative.

However, government is regarded as failing to fulfil the requirements and follow the social norms established in the metanarrative, and public opinion has been shifting against government. In not effectively dealing with AMD, government is failing to uphold intergenerational water rights claims. Through various court cases and examination of widespread media coverage, this thesis explored how government is deemed to be overlooking its established moral responsibilities by citizens, and thus disregarding the country's metanarrative.

[36] James, "VII-Rights as Enforceable Claims."
[37] Tversky and Kahneman, "Judgement Under Uncertainty: Heuristics and Biases."
[38] This concept will be further explained in the thesis; briefly, a 'takings' is the exercise of power by government to take possession of private property for public use

3.7 Chapter VII(a): Preamble: Governance in Practice in RSA

This section functions as a theoretical preamble, informing the empirical chapter that follows. It proposes that although RSA law is Kantian (as first proposed in Chapter IV), certain laws exist in the county without inherent obedience by citizens – counter to what Kantian theory would require. Kant proposed that laws are created through rational discussion and cooperative decision-making, thus citizens will comply with laws because they correlate with citizens' personal beliefs and behaviours[39]. However, RSA's aspirational Constitution developed moral laws without creating the necessary discussion space within which laws can be processed and formulated. Nonetheless, laws are upheld as the previous chapter demonstrated in the case study of the 'takings of land,' and this chapter suggests that MLG is the method by which moral laws are upheld.

MLG is a form of institutional cross-boundary governance, rather than command-and-control by government[40]. It has increased contributions from ancillary organisations and more complex systems of decision-making, as well as altered role of the State. This allows flexibility in scale and resource mobilisation in addressing complex issues, with decision-making increasingly taking place outside of the realm of government and government power increasingly diffused among other groups.

Regulation theory is explored, to better understand the claim that IGE was created in RSA to enforce aspirational goals, overcome unjust status quos, and specifically to tackle the issue of irreversibility by taking social rights of future generations into account[41]. However, given that government is not implementing

[39] Frederick Rauscher, "Kant's Social and Political Philosophy," *The Stanford Encyclopedia of Philosophy (Summer 2012 Edition) (ed. Edward N. Zalta)*, 2012, http://plato.stanford.edu/archives/sum2012/entries/kant-social-political/.
[40] Ian Bache & Matthew V. Flinders, "Themes and Issues in Multi-Level Governance," in *Multi-Level Governance*, ed. Ian Bache and Matthew V. Flinders (Oxford UK: Oxford University Press, 2004).
[41] C.R. Sunstein, *After the Rights Revolution: Reconceiving the Regulatory State* (USA: Cambridge University Press, 1990).

regulation as required, market forces – particularly industry groups – have come to the fore to fill the vacuum, taking on the role of regulation enforcers.

3.8 Chapter VII(b): Governance in Practice in RSA

The preamble established that MLG is crucial for upholding regulation in RSA, and thus upholding intergenerational outcomes. For this reason, it proposes that MLG is a possible solution for problems inherent to the Constitution. The chapter uses fieldwork to explore empirical application of legislation in the country, and employs the Pentalogue Model introduced in Chapter V.

The Model is edited from its theoretical structure to reflect actual interactions in society, with disproportionate influence by and lack of interaction among some clusters. The Applied Model elucidates the problems in the governance system. It shows that there is no central area in which society can come together to discuss environmental decision-making. Fieldwork uncovered increasing political disorder in RSA that has been prompted by AMD, and as a result non-State actors are participating more and more in regulatory decision-making. Decisions are increasingly taking place in what is referred to in this chapter as a meta-space of governance – a space between governance and lawlessness where government does not perform effective governance, but where nonetheless RSA functions as a democracy without lawlessness. This is outside of the governance space envisioned by Kant, and is separate from government. In this way, it is superimposed over the Pentalogue Model structure, operating outside of the boundaries that the strictures of the model impose. This space improves the existing impaired communications among clusters, allowing them to generate new connections across cluster boundaries and producing novel areas in which environment can be discussed among actors.

In this meta-space of governance, non-State agents supervise compliance with laws in accordance with government objectives – yet of their own accord and lacking any actual supervision or guidance. Particularly of interest to this thesis are financial and mining agents from the industry cluster. Modified obligations for all actors in this space has entailed financial and mining industries taking on greater responsibility for maintaining intergenerational rights to water. Agents involved in these processes are however guided by the country's national metanarrative, rather than profit motives. This means that they work toward upholding human rights as the major objective. Industry is progressively taking on government functions in the provision of water and upkeep of water resources, creating order from the existing disordered situation, and upholding rights using market forces for moral purposes.

3.9 Chapter VIII: Prospects for Democracy in RSA

This chapter looks at the implications of growing industry involvement in the provision of social services and upholding of human rights, and attempts to determine what this might mean for the future of democracy in the country. It suggests that the traditional role of institutions is changing as they take on new regulatory functions.

Corporations are already in a position where they have some effect on human rights through their actions involving and impacting upon the country's water resources. Legally, institutions are considered juristic persons under the Constitution, with some rights and duties accorded to natural persons[42]. Moreover, subsequent legislation placed personal liability clauses on corporate directors for environmental harms caused by their companies. In addition, non-legislative corporate governance regulations define corporate social responsibility as an indispensable component of economic governance – a stakeholder-oriented approach to business.

[42] "Constitution of the Republic of South Africa." *Chapter 8, Section 4*

Traditionally, corporations operate under limited liability – but strict liability applied to corporate directors disrupts this by preventing the separation of individual and corporate entities in the cases to which it applies. This distorts democratic practice, as, while corporations become more involved with and responsible for environmental resources in order to avoid liability, their position as the only powerful institution to do so relinquishes democratic control to them. The political space is undergoing re-scaling as relationships shift, and this change in competencies could be negatively affecting regulation – laws are socially constructed, so are in flux as social processes are reformed. Thus, corporations are both in a position to preferentially influence the norms held by citizens of the country, as well as having an undesirable control over national legislation. This re-scaling has not, however, changed the situation explained in the Applied Pentalogue Model – there is still no way for society to come together to collaboratively discuss intergenerational rights to water.

Corporations are coming to take the place of government in provision of water services, both politically and in the minds of the country's citizens. Democracy is of an increasingly doubtful quality in RSA, with poor support for it from the citizenry and a growing assumption that government is inept and illegitimate. For these reasons, citizens are steadily turning to corporations to discharge government responsibilities to uphold water rights. Corporations are in turn expanding in the MLG framework as government shrinks – but this has not expanded the decision-making space. Instead, industry has more control over decision-making than before, and civil society has less input. It also has to be considered that ethics-based approaches to business could be infeasible given the fiduciary obligations of corporations to maximise profits for shareholders[43]. Thus, how could it be possible for a corporation

[43] Milton Friedman, *Capitalism and Freedom* (Chigaco, USA: University of Chicago Press, 1962).

to uphold intergenerational moral rights? For these reasons, growing corporate control in this sphere could be detrimental for maintaining democratic principles in RSA.

4 Deficiencies in this Research

This thesis is a still-life slice through an inconstant situation in RSA, and suffers limitations because of that. The most important of these limitations is that I only carried out two separate month-long fieldwork trips to the country, allowing for only entry questions and the creation of a framework. This length of time cannot provide the necessary data for an in-depth, longitudinal investigation due to both time and manpower constraints. Moreover, the work of a single researcher is more prone to cultural bias influencing the understanding of findings, which would be offset in a larger, diverse group of researchers. In generating my own borders for the research project I was necessarily informed by my attitude as an environmentally-concerned geographer to think of AMD as a major concern for the future of RSA. I attempted to counter this bias by fully considering findings from the point of view of industry and government, rather than only academia.

Moreover, the timings of my fieldwork may have affected results. During the first trip in January 2012, there had been a great deal of media coverage and civil society concern about AMD; during my second trip in June 2013, the clamour had abated. Nevertheless, although there was less forceful urging from civil society to manage AMD, it was still a considerable concern for the industry and government agents with whom I spoke, who were concerned that it was handled appropriately.

The final concern is my sampling method in fieldwork: snowball sampling has inherent sampling bias, as it is reliant on interviewees knowing each other – and

therefore likely sharing similar views[44]. I had little overall control over the sample, relying on previous interviewees to introduce me to further decision-making agents. However, given that qualitative research relies less on probability sampling techniques, this was not particularly limiting in practice.

There were also some assumptions with which I approached research. In particular, I assumed that interviewees were truthful with me, and did not have a hidden agenda in deciding what information to share. There was little I could do in practice to ensure candidness, but I did not at any point believe that interviewees were dishonest or sharing anything with an obvious agenda. I undertook this qualitative research with the assumption of trust, in order to preserve the relationship between my interviewees and myself. Additionally, I assumed that the views of interviewees were representative of the whole of RSA society. Given that I did manage to find and interview a wide range of agents from all five clusters of society, I am confident that I managed to cover as wide a range of outlooks and backgrounds as possible.

My final significant assumption was that AMD is a serious problem facing RSA, and could have significant and long-term negative consequences for the environment and water resources if uncontrolled decant is allowed. This has been challenged by some researchers, who suggest that it acts as a distraction from more serious water quality issues[45]. However I proceeded with the acceptance that AMD requires critical and prompt management to avoid serious repercussions, given the consensus by the majority of RSA's scientific community that this is the case.

[44] Patrick Biernacki & Dan Waldorf, "Snowball Sampling: Problems and Techniques of Chain Referral Sampling," *Sociological Methods Research* 10, no. 2 (November 1, 1981): 141–163.
[45] Staff Reporter, "Water Expert Warns of Crisis by 2020," *Mail and Guardian*, February 19, 2011, http://mg.co.za/article/2011-02-19-water-expert-warns-of-crisis-by-2020.

5 Final Remarks

This thesis contributes to the on-going academic debate about governance and democracy with regards to IGE in natural resource wealth. That IGE is a chief concern in RSA is significant, as RSA legislation has informed many decisions made by Courts worldwide, including the Maldivian Bill of Rights, reversal of homosexuality laws in India, and the UN's analysis of the death penalty[46]. Other countries are closely observing the practical application of IGE legislation in RSA, since similarly progressive laws have not been actualised in many other nations globally. With the almost seamless transition from apartheid under Nelson Mandela, RSA is acting as a beacon for other developing nations to demonstrate that human rights-focused legislation can be successful.

The country's 1996 Constitution brought into being multiple positive socioeconomic rights for citizens, as well as legal channels through which to demand government action to uphold these rights. Post-apartheid RSA aimed to transform the country into a deliberative democracy, with policy-making motivated by reasoned discussions by all members of society. Through review of what IGE entails in the literature, how it is guaranteed in legislation, and how it is enacted through regulatory bodies, this thesis demonstrates the significance of the concept for RSA.

However, the expansion of AMD through Gauteng province undermines these long-term objectives, through government abrogation of responsibilities, which is further exacerbated by dysfunctional societal interactions. With a government that is increasingly regarded by its citizens as immoral, other non-State actors are progressively taking control of upholding rights in its place. Although the acceptance of these responsibilities by industry agents has provided short-term benefits for water

[46] J. Faull, "In Praise of the South African Constitution," *"Africa Is A Country" News Blog* February (2012), http://africasacountry.com/2012/02/16/praising-the-south-african-constitution/.

supply, this could have grave long-term consequences for RSA's democracy. This thesis contends that corporations do not have the same ability as the government to govern, nor do they have the required motivation to uphold human dignity or maintain democratic standards and practices.

The theme of each chapter will construct the portrayal of a country on a water governance precipice – IGE could remain a guiding tenet for decision-making, or it could be disregarded. A host of reasons has been assembled to demonstrate that AMD has been the catalyst that has created a critical juncture for IGE legislation and for the long-term success of RSA. This thesis determines that the current crisis of governance in the country makes it improbable that citizens' intergenerational rights to water will be achieved. As the quote at the start of the chapter suggests, with the crisis that has been prompted by AMD, the long-term success of the country is indeed on the line.

CHAPTER II:
TOWARD AN UNDERSTANDING OF INTERGENERATIONAL EQUITY & WATER RIGHTS

> *"The purpose of human society must be to realize and protect the welfare and well-being of every generation."*
>
> *- Edith Brown Weiss*[1]

1 Introduction

The concept of intergenerational equity (IGE) advocates for a complete overhaul of the political system. A transformation is proposed, from short-term thinking focused on current gains, to a long-term structure with the utility of future generations as the basis for policy-making[2]. Proponents believe this will create better conditions for human life both for the present generation and for generations to come, while also ensuring that natural resources are employed in a responsible and sustainable manner. IGE has been variously defined: a way to balance current and future interests in decision-making[3], a principle of distributive justice with sharing of the benefits and burdens of social cooperation[4], and simply as sustainability[5]. Edith Brown Weiss, an influential practitioner in the field, defines it as "an obligation [of current generations] to future generations to pass on the natural and cultural resources of the planet in no worse condition than received and to provide reasonable access to

[1] Edith Brown Weiss, "Our Rights and Obligations to Future Generations for the Environment," *The American Journal of International Law* 84, no. 1 (1990): 198–207.
[2] *See for example:* Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity."; Edith Brown Weiss, "In Fairness to Future Generations," *Environment: Science and Policy for Sustainable Development*, 1990.
[3] C. Woods, "The Environment, Intergenerational Equity and Long-Term Investment," *Unpublished DPhil Thesis, University of Oxford* (2011).
[4] B.M. Frischmann, "Some Thoughts on Shortsightedness and Intergenerational Equity," *Loyola University of Chicago Law Journal* 36 (2004): 457–467.
[5] T. Page, "On the Problem of Achieving Efficiency and Equity, Intergenerationally," *Land Economics* 73, no. 4 (1997): 580–596.

the legacy for the present generation[6].” Also debated in the literature is the type of justice involved, and concepts of rights, responsibilities, and obligations.

Detractors of IGE, of whom there are a small number, do not believe that basing current political decision-making on benefits for future generations is possible, given specific moral and philosophical constructs that will be explored below. However, solutions to their counter-arguments have been proposed, and it is not disputed that IGE is becoming a more significant global environmental philosophy. Moreover, with increased use of and reference to IGE in international law, it can be surmised that IGE has growing importance in international environmental decision-making and policy creation. Although many influential international documents mention future generations as crucial to their theoretical underpinning[7], the concept is still regarded as more of a guiding principle than a binding norm[8]. A growing number of nations, too, mention the importance of future generations in their Constitution – including RSA, which promulgated its progressive Constitution in 1996[9]. In this case, the national government and judiciary aim to transform the moral concept of IGE into a normative obligation for government and for citizens. The question explored in this chapter is how this transformation takes place.

This chapter examines the development of the concept of IGE by prominent academics, the obligations and responsibilities constituting the concept, and the arguments for and against its utilisation as a guide for policy. Three academics will be reviewed; each supports their standpoint on IGE through distributive justice – the equitable allocation of goods through society – and develops their theories from

[6] Brown Weiss, “In Fairness to Future Generations.” *(pp.37-8)*
[7] *Some of the most important include: the United Nations Charter, the Universal Declaration on Human Rights, the International Covenant on Civil and Political Rights, and the Rio Declaration on Environment and Development.*
[8] C. Redgwell, *Intergenerational Trusts and Environmental Protection* (Manchester, UK: Manchester University Press, 1991).
[9] “Constitution of the Republic of South Africa.”

foundations of comprehensive human rights. The chapter also attempts to establish where IGE is situated in the political landscape, and proposals are made for future utilisation, with the ultimate aim as transforming IGE from moral concept into normative obligation. This will ensure that government and citizens include future generations in decision-making, and forge a new framework for decision-making to guide national legislation, with IGE as central premise.

The chapter departs slightly from reviewing IGE to present and expound upon the concept of human rights, with the aim of more deeply appreciating how IGE has been incorporated into RSA's Bill of Rights. Theories of Kant and Rawls, both of whom are proponents of the conception of human rights as dignity, are reviewed. Their hypotheses are expanded through the works of Dworkin and Waldron, contemporary legal philosophers who regard human rights as based in more than simply human dignity. Finally, this chapter will introduce acid mine drainage (AMD), a legacy of mining and extraction activities in RSA that is negatively affecting water resources in the province of Gauteng. The contamination engendered by AMD is reviewed, and an evaluation of the geographic spread of the pollutant is presented in order to better understand the threat it presents to RSA's environmental resources.

2 Toward an Understanding of IGE

2.1 John Rawls and IGE

The philosopher John Rawls was one of the first academics to write about IGE in policy-making, in the seminal book, "A Theory Of Justice"[10]. His highly influential theory of justice as fairness emphasises undifferentiated rights for all citizens and positive discrimination for the worst-off in society. He suggested that people who are

[10] Rawls, *A Theory of Justice: Revised Edition*. *John Rawls (1921-2002) was an American liberal political philosopher who held Professorships at Harvard University and MIT.*

in the 'original position' make the most just decisions, as they are behind a theoretical veil of ignorance where they have no knowledge of personal attributes or circumstances. Thus, rational decisions will be constructed from equal basic rights and liberties for everyone. When applied to IGE, the original position means that no generation knows where it will be in the temporal spectrum of human existence, but since each generation would want to inhabit an Earth that fully satisfies all human needs, each should opt to enact policies and fulfil responsibilities that would transfer forward the Earth in as good a condition as that in which it was received

According to Rawls, there are three cardinal features of the political philosophy of any nation that considers itself democratic: citizens are free, citizens are equal, and society is a fair system of cooperation. Especially significant is the Just Savings Principle, whereby the welfare of least-advantaged groups is improved over succeeding generations[11]. Rawls suggested that the rights of future generations could be ascertained by recognising what intellectual, cultural and natural resources current generations believe that they have a right to obtain from their predecessors, and applying this forward[12]. Rawls posits that those in the original position have significant altruism regarding their descendants – and this encompasses intergenerational reasoning. He suggested that decision-makers have to be viewed as family lines: rational self-interest will generally prevail, but altruism will take over where their own future generations are considered[13]. The influence of Rawls on legislation in RSA will be further considered in Chapters III and IV.

Nevertheless, it must be pointed out that even with the addition of altruism, Rawls' decision-makers will only act to gain greatest benefit for one or two

[11] Ibid.
[12] J. Thompson, *Intergenerational Justice: Rights and Responsibilities in an Intergenerational Polity* (New York, NY, USA: Routledge, 1990).
[13] H.S. Richardson & P.J. Weithman, *Development and Main Outlines of Rawls's Theory of Justice* (New York, USA: Garland Publishing Inc., 1999).

subsequent generations – those with whom they feels kinship ties. This has led scholars to suggest that Rawls' theories are not sufficient for long-term intergenerational thinking[14]. Two subsequent academics – Ernest Partridge and Edith Brown Weiss – have used and developed Rawlsian justice as fairness into two separate but connected doctrines based on the existence of future generations' rights. Partridge and Brown Weiss were writing in the context of expanding interest in the global environment after the 1962 publication in the United States of Rachel Carson's groundbreaking "Silent Spring"[15]. The background to their ideology was an increasingly informed public who were progressively less willing to accept environmental pollution, governmental inaction in addressing degradation, and deficient legislative environmental and planning controls. It was from this time onwards that the public trust doctrine evolved, as a way of ensuring that citizens could use existing property rights to enforce environmental protection for communal interest[16]. This is of particular importance for Brown Weiss, for whom the doctrine of public trust was highly influential, but less so for Partridge, for whom the discourse of morals and rights plays a greater role.

2.2 Ernest Partridge and IGE

Partridge does not believe that Rawls goes far enough to ensure the greatest benefit for future generations[17] – he suggests that Rawls' arguments are limited in both temporal and procedural magnitude in provision for the future[18]. He also asserts that the assumptions Rawls introduces into the original position for intergenerational

[14] E. Aguis, "Obligations of Justice Towards Future Generations: A Revolution in Social and Legal Thought," in *Future Generations & International Law*, ed. E. Agius et al. (London UK: Earthscan Publications Ltd, 1998).
[15] Rachel Carson, *Silent Spring* (New York, USA: Houghton Mifflin Harcourt, 2002).
[16] Redgwell, *Intergenerational Trusts and Environmental Protection*.
[17] Ernest Partridge is a philosopher of environmental ethics, and is a Professor at Northland College and the University of California. He is also a member of the Board of Editors of the Intergenerational Justice Review (Germany).
[18] E. Partridge, "Rawls and the Duty to Posterity," *Doctoral Dissertation: University of Utah* (1976), http://gadfly.igc.org/Rawls/RDP.htm.

justice violates the standard of universality[19]. Partridge was likely influenced by the environmental activism of American citizens during the 1970s, the first Earth Day in 1970, the creation of the US Environmental Protection Agency in the same year, the passing of the Clean Air Act (1970), Clean Water Act (1972) and Endangered Species Act (1973). These Acts were the first environmentally protective endeavours by the USA government, and conveyed the developing realisation of the importance of preservation of natural resources.

Partridge suggests that the current generation owes a moral duty to future generations, with a responsibility to act when faced with decisions that affect the welfare of future humans[20]. Under the influence of modern technology, an action, its creator, and its effect no longer have to occur in the same temporal dimension – thus a new theory of ethics that will regulate our power to act under new technology is required[21]. Such ethics should take the form of according rights to future generations, with duties for the current generation to respect these rights. The combination of current duties with future rights carries greater moral weight, intensifying urgency while ensuring that new policies better serve future interests. In Partridge's philosophy, duties are not necessarily the passing of endowments to future generations, but rather exercising of restraint to ensure that future people have a selection of choices and a satisfactory standard of living[22].

Interestingly, Partridge uses the phrases 'moral duty' and 'moral responsibility' interchangeably, thus conflating moral obligation with voluntary commitment. This marks Partridge out as particularly influenced by human rights

[19] Universality states that universal rights can be discovered. In the context of intergenerational rights, it suggests that all human have particular rights that are associated with their humanity.
[20] Partridge, "Introduction."
[21] H. Jonas, "Technology and Responsibility: The Ethics of an Endangered Future," in *Responsibilities to Future Generations*, ed. E. Partridge (Buffalo, NY, USA: Prometheus Books, 1981).
[22] E. Partridge, "On The Rights of Future Generations," in *Upstream / Downstream: Issues in Environmental Ethics*, ed. D. Scherer (Philadelphia PA, USA: Temple University Press, 1990).

discourse, as he does not differentiate between a moral or legal commitment in 'duty,' and the ability to act according to one's will in 'responsibility'[23] – just as the United Nations "Declaration Of Responsibilities And Human Duties" combines the two concepts into one fluid requirement[24]. Moreover, Partridge does not support economic cost-benefit analysis and discounting to value the future – since morality is factored out of such decisions, they are descriptive rather than normative recommendations. Thus they cannot reflect community values and cannot be beneficial to future generations[25].

The descriptive term that Partridge utilises to determine behaviour with respect to future generations is "self-transcendence." This is the idea that humans have a need to connect with communities, ideas, and values beyond their own lifetime. Human beings are part of a longer on-going process of humanity, and it is human nature to want to connect and base self-conception around relatable social circles. Self-transcendence is motivated by two beliefs: first, an awareness of mortality and a desire to extend influence beyond death, second, the law of import transference, which suggests that if a place or person matters to an individual, he or she will assume it matters objectively in a wider context. These beliefs make the future tangible by allowing individuals to act for good of people or places about which they care. To achieve self-transcendence, Partridge proposes that current generations need to improve policies for the future in order to create a better present, as with a long-term outlook an equitable current situation is more achievable[26].

---

[23] Lynda Margaret Collins, "Revisiting the Doctrine of Intergenerational Equity in Global Environmental Governance (Forthcoming)," *The Dalhousie Law Journal* (2010).
[24] R.J. Goldstone, "Declaration Of Responsibilities And Human Duties," *Valencia Third Millennium Foundation*, 2002, http://globalization.icaap.org/content/v2.2/declare.html.
[25] E. Partridge, "Future Generations," in *Companion to Environmental Ethics*, ed. D. Jamieson (Oxford, UK: Blackwell Publishing Ltd, 2001).
[26] E. Partridge, "Why Care About the Future?," in *Responsibilities to Future Generations* (Buffalo, NY, USA: Prometheus Books, 1981).

2.3 Edith Brown Weiss and IGE

Deviating from an individual emotional connection to the future, Edith Brown Weiss utilises the legal mechanism of public trust to determine resource management for the benefit of future generations[27]. Writing to a backdrop of increasing awareness of nuclear power, her theories were likely influenced by citizen challenges to governments for environmental mismanagement disasters that received global censure, such as Bhopal (1984) and Chernobyl (1986). Humans, Brown Weiss suggests, hold a singular responsibility for the protection of Earth's resources as the most conscious and capable beings on the planet; our relationship with other humans and to natural systems will determine our policies toward IGE[28].

This is the concept of the 'planetary trust,' whereby current generations are obligated to convey the planet to future generations in no worse condition than it was received from preceding generations. This will maximise social welfare for three generational groups: current, immediate descendants, and remote generations[29]. Accordingly, all humans are both beneficiaries with rights to use the Earth's resources, and administrators of the planetary trust with obligations to protect these resources, along with concurrent fiduciary duties to sustain the welfare of future generations. There are three normative principles guiding the planetary trust: to conserve options in the diversity of the natural and cultural resource base obtainable, to conserve the quality of the planet and ensure environmentally sustainable growth, and to conserve access to the resource legacy of past generations for current and

[27] Edith Brown Weiss is a University of Georgetown Law professor, whose areas of expertise are environmental and international law. She was Chairperson of the Inspection Panel of the World Bank and currently serves on IMF's Administrative Tribunal and UNEP's International Advisory Council.
[28] Brown Weiss, "Our Rights and Obligations to Future Generations for the Environment."
[29] Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity."

future generations[30]. These three principles make up what Brown Weiss refers to as the planetary rights and correlative obligations for each generation.

Principles of the conservation of options and the conservation of quality were identified at the 1987 World Commission on Environment and Development as requirements to be fulfilled by national State bodies to ensure that future generations would be able to access sufficient resources. Thus the State acts as guarantor of these responsibilities as the representative of its citizens[31]. These three planetary duties were tested in the Supreme Court of the Philippines with *Minors Oposa v. Secretary of the Department of Environmental and Natural Resources (1994)*[32]. This case is consequential because it is the first explicit recognition by a national Court of rights of future generations, and the ability of current generations to represent them.

A lawsuit was brought by a group of minors and the Philippine Ecological Network against the Secretary of the Department of Environment and Natural Resources of the Philippines, in order to stop extensive logging of old-growth forests in the country. The base of their claims was twofold: the Constitution guaranteed the right to a healthy environment, and both current and future citizens should be able to access the country's natural resource bank. The Philippine Supreme Court ruled for the plaintiffs, and three significant proclamations emerged, first, the government was obligated to promote the health of its citizens, second, future generations have a fundamental right to a clean environment, and third, a clean environment should be maintained intergenerationally. The abstract concept of IGE was made a normative reality in the political sphere of the Philippines, and Brown Weiss' three duties to conserve options, conserve quality, and conserve access were upheld in law.

[30] Brown Weiss, "In Fairness to Future Generations."
[31] Redgwell, *Intergenerational Trusts and Environmental Protection*.
[32] Supreme Court of the Philippines, Minors Oposa v. Secretary of the Department of Environmental and Natural Resources 33 ILM 173 (1994) (1994).

Brown Weiss's IGE ideology is flexible and adaptable to different cultures and political systems, as it is based upon a fundamental belief in the dignity of all humans[33]. It has deep foundations in global religious traditions, as Judeo-Christian and Islamic writings, African traditional practices, and philosophy of South-East Asian cultures all give credence to the concept that the future will be a better place[34]. Furthermore, there is an *intra*generational aspect to Brown Weiss' principles, especially by means of the principle of conservation of access[35]. She recommends that if sectors of the current generation are too poor to be capable of gaining the greatest utility from their planetary legacy, then other wealthier global constituencies are obliged to provide assistance. This effects an intragenerational transfer of wealth that will bring about greater security for intergenerational wellbeing.

Brown Weiss relies heavily on the Rawlsian original position, a theoretical standpoint from which to make fair and impartial decisions about allocations of the public good. Under this doctrine, all generations are viewed equally in relation to Earth's resources, with no rationale for preferring the past, present, or future in policy decisions[36]. However, Brown Weiss departs from Rawlsian theory in regarding intergenerational rights as group rights that exist in one generation only as they relate to other generations, regardless of the number and identity of future individuals[37]. Rights and responsibilities are asserted by the group as a whole, and cannot be applied more or less to any one individual. Contrastingly, Rawls focused on individual rights and obligations, thus creating a requirement for specific knowledge of individuals to

[33] Edith Brown Weiss, "A Reply to Barresi's 'Beyond Fairness to Future Generations,'" *Tulane Environmental Law Journal* 11 (1997): 89–97.
[34] Edith Brown Weiss, "Intergenerational Equity: A Legal Framework for Global Environmental Change," in *Environmental Change and International Law: New Challenges and Dimensions*, ed. Edith Brown Weiss (Tokyo: United Nations University Press, 1992).
[35] Ibid.
[36] Brown Weiss, "In Fairness to Future Generations."
[37] Ibid.

whom rights applied. Brown Weiss wanted to avoid this in order to subject both current and future people to the same obligations and responsibilities of environmental behaviour.

Brown Weiss' most major departure from Rawlsian theory is in her focus on fiduciary duties, as opposed to Rawls' justice-based approach. This stems from the public trust doctrine, and creates a relationship whereby current generations (and de facto their governments) act as trustees to protect environmental resources for the advantage of future generations, who are the beneficiaries[38]. The use of trust doctrine is more explicit than a call for justice, as it allows citizens to utilise existing property rights and regulations in communal interest, claiming the environment as a form of property and thereby enforcing government and legislative action to protect it[39]. With the absence of an international doctrine of environmental rights, economic and development rights often trump calls for environmental justice[40]; the concept of a trust is an internationally recognised legal tenet that will grant environmental issues greater significance, through allowing governments and other polluters to be challenged in court.

Three major benefits of the trust doctrine make it well suited to contemporary environmental challenges: it allows for intertemporal approaches to environmental problems, it gives current standing to future generations, and it provides legal procedures for addressing intergenerational concerns in current institutional contexts[41]. Brown Weiss goes so far as to suggest that sustainability will only be attainable when current generations come to view Earth's resources as elements of a

[38] Further explanation of the public trust doctrine will be given in the following chapter
[39] Redgwell, *Intergenerational Trusts and Environmental Protection*.
[40] A. Boyle, "Human Rights And The Environment, Where Next?," *Amnesty Lecture Series: Oxford United Kingdom* May (2012).
[41] Redgwell, *Intergenerational Trusts and Environmental Protection*.

trust that is passed on through succeeding generations[42]. IGE as a trust relationship has already been employed in international legal decisions, originating with the *Bering Sea Arbitration* of 1892, which put restrictions on pelagic fishing of fur seals in the Bering Sea by Canada, Britain, and the United States[43]. Under the Arbitration's ruling, seals were placed into trust for the common benefit of mankind, removing them from the control of any single state, and preventing overhunting to extinction of this public environmental resource[44].

The fiduciary trust relationship has been influential in global environmental accords. It has been suggested that the growing limitations placed on State powers after the 1992 Earth Summit in Rio de Janeiro, Brazil, shifted government's role regarding resources from proprietary to fiduciary[45]. Global agreements have progressively more been reclassifying certain resources from national or private to global and public ownership. Government bodies have in this way been designated to protect access to and quality of resources, taking on the role of a trustee[46]. Governments have become increasingly accountable to their citizens for resource management, and are challenged in courts of law more often, so that judges too are appraising national policies for their intergenerational qualities[47].

---

[42] Brown Weiss, "Intergenerational Equity: A Legal Framework for Global Environmental Change."
[43] "Fur Seal Arbitration: Proceedings," *Internet Archive, University of Toronto Library*, 1895, http://archive.org/details/fursealarbitrat02beri.
[44] M. Fitzmaurice, *Contemporary Issues in International Environmental Law* (Cheltenham, UK: Edward Elgar Publishing Limited, 2009).
[45] This includes international agreements as the Convention on Biological Diversity (1992), the United Nations Convention on the Law of the Sea (1994) and the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1992). All limit government powers and increase their obligations toward environmental protection.
[46] P.H. Sand, "Sovereignty Bounded: Public Trusteeship for Common Pool Resources," *Global Environmental Politics* 4, no. 1 (2004): 47–71.
[47] O. De Schutter, "Climate Change And Human Rights," *Oxford Amnesty Lecture, University of Oxford* 26 April (2012).

2.4 Obligations, Responsibilities, and Justice

Although Partridge conflates 'duty' and 'responsibility' into a single requirement, there is an on-going academic debate over how these issues relate to future generations. Obligations are regarded as moral or legal requirements, from which one cannot withdraw without significant repercussions. This differs from the commitments of a duty, and from responsibilities, which are wilful decisions to take certain actions. Which of these concepts best serves future interests is contested[48]. The argument for obligations is based upon the sharing of a polity, or intergenerational community, with both contemporaries and future generations[49]. The polity has intrinsic future-oriented interests in individual wellbeing and in issues transcending individual lifetimes – be that immediate descendants or more wide-reaching ideological concepts. Thus, constituents of a polity have certain obligations to the time ahead – sharing a common good implies requirements to regulate consumption of resources to share with the same polity as it expands in the future[50]. Known as Obligation Theory, this suggests that it is morally wrong to prevent the existence of persons with reasonable prospects for happiness. Accordingly, the current generation is obligated not to prevent or curtail the existence of future generations through the misuse or misapplication of environmental resources[51].

Other academics echo this, suggesting that if current generations believe in the possibility of a future, there has to be a concomitant belief that there will be people to whom obligations for a healthy environment are owed[52]. Additionally, it has been proposed that caring about future generations, the future "We", is an adaptive norm,

[48] Collins, "Revisiting the Doctrine of Intergenerational Equity in Global Environmental Governance (Forthcoming)."
[49] Thompson, *Intergenerational Justice: Rights and Responsibilities in an Intergenerational Polity*.
[50] J.C. Tremmel, *Handbook of Intergenerational Justice* (Cheltenham UK: Edward Elgar Publishing Ltd, 2006).
[51] R.I. Sikora, "Is It Wrong to Prevent the Existence of Future Generations?," in *Obligations to Future Generations*, ed. R.I. Sikora and B. Barry (Cambridge, UK: The White Horse Press, 1996).
[52] E. Delattre, "Rights, Responsibilities, and Future Persons," *Ethics* 82, no. 3 (1972): 254–258.

and our primary normative obligation is to expedite the advancement of the future "We"[53]. Obligations to future generations are stronger than duties, and stronger yet than responsibilities, indicating that communities or governments can be at fault if they do not follow through with these. Rawls, Partridge and Brown Weiss all apply the concept that current generations owe future generations the right to exist favourably, through legal or moral means, in their theories of IGE.

Responsibility has both legal and moral components: moral because of human concern for the future, legal because it is too complex an issue to be dealt with solely in the sphere of morality[54]. Morals-based arguments, including the predominant justification that Earth should be passed on in no worse condition than that in which it was received[55], suggest that people are accorded moral rights because they are sentient beings. Potential people – those who will exist in the future – should therefore have these rights currently[56]. Present and future persons should be accorded equal moral status and hence have equal claim to the planetary resources available to the current generation[57]. This falls under the ambit of a 'moral community,' a group of people with whom a reciprocal relationship is shared, extending to all people everywhere, notwithstanding temporal and spatial separations[58].

Legal aspects of responsibility should be assumed by the State, as regulatory protection of the environment should be the remit of national authorities. The principal function of a government is to provide security for citizens in supporting

[53] T.P. Seto, "Intergenerational Decision Making: An Evolutionary Perspective," *Loyola of Los Angeles Law Review* 35 (2001): 235–276.
[54] L. Gundling, "Our Responsibility to Future Generations," *The American Journal of International Law* 84, no. 1 (1990): 207–212.
[55] Fitzmaurice, *Contemporary Issues in International Environmental Law*.
[56] M. Warren, "Do Potential People Have Moral Rights," in *Obligations to Future Generations*, ed. R.I. Sikora and B. Barry (Cambridge, UK: White Horse Press, 1978).
[57] G. Kavka, "The Futurity Problem," in *Obligations to Future Generations*, ed. R.I. Sikora and B. Barry (Cambridge, UK: White Horse Press, 1978).
[58] C. Dierksmeier, "Rawls on the Rights of Future Generations," in *Handbook of Intergenerational Justice*, ed. J.C. Tremmel (Cheltenham, UK: Edward Elgar Publishing Ltd, 2006).

their efforts to establish a successful future; accordingly government support is indispensable to ensure that society is able to follow through on collective responsibilities[59]. The most important way in which a government can provide support is through creation of policies compliant with IGE at national and international levels. Generation and application of laws to regularise responsibilities to the future will ensure international collaboration to this end is strengthened[60]. Ideally, the creation of a regulatory structure for IGE would be a common task for all nations, through a global treaty for the future. Although no such convention currently exists, it is an ideal toward which international bodies and governments could aim.

The category of justice most applicable to IGE is another important aspect of the academic debate, with the two predominant fields as social justice and distributive justice. Social justice focuses on attaining strictly equal rights in all aspects for all members of society, while distributive justice emphasises allocation of goods and services to members of society who are most in need[61]. Social justice requires each community member to contribute to the common good, but in application, can prevent current generations from taking advantage of their position of control, and leave future generations with exhausted resources[62]. Conversely, distributive justice – the equitable distribution of goods in society championed by Rawls – suggests that humans are tied to future generations through moral imperatives of fairness[63]. Benefits and burdens of social cooperation are apportioned to provide equal resources for all generations, but also to ensure that those most at risk in the current generation

[59] R. Driss, "The Responsibility of the State Towards Future Generations," in *Future Generations & International Law*, ed. E. Agius et al. (London UK: Earthscan Publications Ltd, 1998).
[60] Gundling, "Our Responsibility to Future Generations."
[61] Julian Lamont & Christi Favor, "Distributive Justice," *The Stanford Encyclopedia of Philosophy (Fall 2014 Edition) (ed. Edward N. Zalta)*, 2014, http://plato.stanford.edu/archives/fall2014/entries/justice-distributive/.
[62] Tremmel, *Handbook of Intergenerational Justice*.
[63] R.M. Green, "Intergenerational Distributive Justice and Environmental Responsibility," in *Responsibilities to Future Generations*, ed. E. Partridge (Buffalo, NY, USA: Prometheus Books, 1981).

have guaranteed rights to use and enjoy resources, and that policies for protection of the future do not fall incommensurately on the currently worst-off[64]. Partridge and Brown Weiss also both favour distributive justice as it allows intragenerational justice to be considered alongside intergenerational concerns, thus enhancing the existence of all generations.

2.5 Arguments Against IGE

Some academics have advocated for IGE policy-making based on exceptionally long strategy timelines, such as one thousand years, to ensure inclusion of resource peaks, biodiversity evolution, and major earth catastrophes[65]. The majority of academics do not take this extreme view, advocating instead that basic preparations for the future should be incorporated into current policy dimensions. Even so, critical questions have been raised about the willingness of current generations to forego short-term satisfactions in aid of future people they will never meet. Five major arguments have been raised against IGE, reinforcing the debate over the utility of policy-making in long-term timescales. Refutations against each are also presented.

The first, known as Parfit's Paradox, suggests that future generations cannot have rights because rights can only pertain to those people who have identifiable interests to protect[66]. Without knowing who future people are or what their concerns may be, rights cannot be accorded in the current period. However, Brown Weiss overcomes this disputation by arguing for IGE rights as group rights – individual preferences are not regarded as important in allocating group entitlements[67]. Moreover, although hobbies and concerns of future generations cannot be known,

[64] Frischmann, "Some Thoughts on Shortsightedness and Intergenerational Equity."
[65] B.E. Tonn, "Integrated 1000-Year Planning," *Futures* 36 (2004): 91–108.
[66] J. Davidson, "Parfit's Paradox," *University of Oregon's Intergenerational Justice Database*, 2010, http://ijdb.auzigog.com/concept/parfit's-paradox.
[67] Brown Weiss, "In Fairness to Future Generations."

they will need to breathe, eat and drink utilising Earth's resources. The precautionary principle should thus be observed, with good care taken of currently available resources to preserve the ability of future people to perform these basic functions[68].

A second related argument is that future generations don't exist presently, so simply cannot have present rights – their rights will transpire only in their time. Partridge refutes this argument of non-actuality by suggesting that future generations are not an imaginary concept, as they will come to pass. Consequently, we should act with our available knowledge to safeguard a future healthy environment[69]. Accordingly, current generations owe obligations to the future, even if it is not accepted that future people have contemporary rights[70].

A third argument against IGE is the future persons paradox: improving current environmental conditions to improve future lives will completely alter the eventuality of those future lives, and would perhaps deny some future persons the opportunity to be born. This argument too has been discredited – disregarding current conservation of the environment will affect future lives in any case[71]. Moreover, since IGE focuses on group rights, current generations have no obligations to specific individuals for life, and can instead focus on improving overall conditions for future lives[72].

Fourth is the no-claims argument, which contends that since future generations are potential, they do not have a present-day representative to claim their rights[73]. Yet existing legal systems accept those who are not yet born to be beneficiaries, such as in legal wills for forthcoming grandchildren, and moreover confer rights to those unable

[68] Collins, "Revisiting the Doctrine of Intergenerational Equity in Global Environmental Governance (Forthcoming)."
[69] Partridge, "On The Rights of Future Generations."
[70] Collins, "Revisiting the Doctrine of Intergenerational Equity in Global Environmental Governance (Forthcoming)."
[71] Ibid.
[72] Partridge, "On The Rights of Future Generations."
[73] E. Partridge, "Environmental Ethics Without Philosophy," in *Human Ecology: A Gathering of Perspectives*, ed. Borden R.J. (Society for Human Ecology, 1986), 136–149.

to claim such entitlements for themselves, such as in the prevention of cruelty to animals[74]. Thus, future generations have an indisputable claim to rights through mechanisms already in place in current legal systems.

The fifth argument criticises the way in which IGE has been framed. This line of reasoning advocates that policy changes incorporating IGE are more likely to be accepted by the current generation if structured as an appeal to an individual's genetic descendants, rather than as a moral responsibility to a nebulous future[75]. This suggests that Brown Weiss' justification of IGE based on religious and cultural ideology is flawed, as the relationship between the world's major religions and the environment has been historically antagonistic – therefore felling a crucial support strut for her theories. Biology is an alternative, in the connection of IGE with the present generation's interest in those with related genetics. Improving the chances of reproductive success is genetically hardwired into society, and can account for many common cultural practices. Current generations are primed to care about future generations through genetic kinships, which is both intra- and intergenerational, transcends national boundaries, and finds its basis in human morality. However, Brown Weiss has responded with two refutations[76]. First, comparable court rulings from jurisdictions across the world suggest that the principle of IGE is derived from the dominant religious and cultural ideology of that region, thus is culturally grounded. Second, IGE cannot be restricted to relationships between individuals with kinship ties, because the use of non-State actors and wide-ranging governance

[74] A. Malhotra, "A Commentary on the Status of Future Generations as a Subject of International Law," in *Future Generations & International Law*, ed. E. Agius et al. (London UK: Earthscan Publications Ltd, 1998).
[75] P.A. Barresi, "Beyond Fairness to Future Generations: An Intragenerational Alternative to Intergenerational Equity in the International Environmental Arena," *Tulane Environmental Law Journal* 11 (1997): 59–88.
[76] Brown Weiss, "A Reply to Barresi's 'Beyond Fairness to Future Generations.'"

networks increasingly deployed in international legal systems require expansion of moral boundaries beyond blood relationships.

Tempering the above debates is the advice that unwarranted significance is given to the question of rights of future people, as this does not markedly change the responsibilities owed by current generations[77]. Since it is widely accepted that current generations have claims to minimum conditions of environmental health and a productive life, it must also be acceded that there is a responsibility to future generations to ensure matching rights can be claimed following Brown Weiss' definition of IGE. This issue could be re-examined thus: the question of whether it is permissible for future persons to be provided with an improved future is the question of whether they should be denied an improved future[78]. If responsibilities to future generations are ignored, there is the risk that the rights of one particular generation will be regarded as exclusive and final, which is a morally repugnant conclusion.

The chapter uses three theorists reviewed here build up a coherent understanding of IGE. Rawls is the base of this construction, his suggested moral responsibilities are stretched in time and space by Partridge, and they are then translated into governable, legislative principles by Brown Weiss. This chapter now moves on to discussing human rights. Through attempting to better comprehend this concept, the way in which IGE conforms to it will be made clearer.

[77] Delattre, "Rights, Responsibilities, and Future Persons."
[78] Warren, "Do Potential People Have Moral Rights."

3 Toward an Understanding of Human Rights

3.1 Frame of Reference

As has been suggested, IGE is a theoretical, moral concept that philosophers have speculated would make an appreciable difference to human life if it were to be implemented in national legislation. In order to better appreciate how this moral concept of IGE is applied empirically in RSA, it will be useful to review the concept of human rights. Human rights exist at the international level most prominently in the UN's Universal Declaration of Human Rights, which recognises the fundamental dignity of humans in its preamble as intrinsic to the concept of human rights; it also defines human rights as universal, inalienable, and equally applicable to everyone[79].

Human rights are the principal concern for the UN; the first recognition in a UN document of the right to a healthy environment was in the 1972 Stockholm Declaration on the Human Environment. This was, however, six years after the right to life was first recognised in the International Covenant on Civil and Political Rights in 1966. Nonetheless, these two concepts have become increasingly inseparable, and co-exist as the most fundamental of rights for the continued existence of human beings[80]. The right to a healthy environment was first recognized on the African continent by the Organisation for African Unity, in the 1981 African Charter on Human and Peoples' Rights[81]. This document recognised that the environment was a right for all people – a group right as well as an individual right.

---

[79] United Nations, "Human Rights 50th Anniversary / Universal Declaration," *United Nations Department of Public Information*, 1998, http://www.un.org/rights/50/decla.htm.
[80] B.T. Mekete & J.B Ojwang, "The Right to a Healthy Environment: Possible Juridical Bases," *The South African Journal of Environmental Law and Policy* 3, no. 2 (1996).
[81] Organisation of African Unity, "African Charter on Human and Peoples' Rights," *African Commission on Human and Peoples' Rights*, 1981, http://www.achpr.org/instruments/achpr/.

The extent of the acceptance of human rights depends upon their recognition in national legal institutions, either at constitutional, statutory, or dispute settlement levels[82]. The constitutional level will be demonstrated in subsequent chapters through the 1996 RSA Constitution. Although third generation human rights include civil, political, social and other conceptions, the content of this thesis focuses on environmental rights – particularly to water resources, and with an intergenerational outlook. The aim of this section is to provide a more comprehensive understanding of what it means to claim a right, to inform research that follows. It particularly focuses on Kantian and Rawlsian interpretations of human rights, given the importance of these two philosophers for the RSA Constitution[83]. However, material from other academics is also included, in order to broaden the understanding of what claiming a human right entails.

Human rights define just and unjust actions and institutions in a society. In this way, they shape what is perceived as ethical, and protect people from abuses[84]. Rights are protections of humans' normative agency, in safeguarding the potential to work towards a life believed to be worthwhile[85]. However, human rights are not only entitlements but include duties as well, to ensure a harmonious, collaborative society ensues[86]. They set requirements but also limits for action in society, both by citizens and by the State[87]. What is considered a human right is culturally determined, through historical and social changes and negotiations[88]. Creating and entrenching a right therefore requires communication and deliberation among all sectors of society. In

[82] Mekete and Ojwang, "The Right to a Healthy Environment: Possible Juridical Bases."
[83] *The influence of Kant on legislation in RSA will be examined in Chapter III*
[84] James Nickel, "Human Rights," *The Stanford Encyclopedia of Philosophy (Spring 2014 Edition) (ed. Edward N. Zalta)* (2014), <http://plato.stanford.edu/archives/spr2014/entries/rights-human/>.
[85] James Griffin, *On Human Rights* (Oxford UK: Oxford University Press, 2008).
[86] J. Rawls, *The Law of the Peoples* (Rhode Island, USA: Harvard University Press, 2001).
[87] Jack Donnelly, *Universal Human Rights in Theory and Practice* (Ithaca, NY: Cornell University Press, 2013).
[88] B. Morgan & F. Trentman, "Introduction: The Politics of Necessity," *Journal of Consumer Policy* 29 (2006): 345–353.

this way, human rights act as a framework for action, with an associated set of necessary practices – and so shape and are shaped by the society and political conventions in which they are practised[89]. They apply to all humans generally, and persist even in situations undergoing a shift, as they represent the unchanging nature of human values and human civilisation[90].

3.2 Kant and Rawls

In order to better appreciate what the right to water might mean to citizens, it would be valuable to review the philosophers whose work informs IGE literature – and whose work this thesis will assume to inform the national Constitution and associated legislation. Immanuel Kant believes that dignity is the cornerstone of human rights. He associates dignity with morality, and with the human capability to use rational choice in granting value to objects and activities[91]. Equality is regarded as equality of opportunity, which legal structures should systemise and normalise throughout a community[92]. Freedom therefore originates in adherence to moral laws. Once legislation protecting dignity and equality of opportunity exists, Kant concludes that citizens will have absorbed these regulatory concepts into their personal code of ethics, and will be able to pursue their own free will and interests based on ubiquitous moral duties[93]. Thus, dignity is not an inalienable right, but can be interfered with or removed – and it follows, so can human rights. In this way, Kant's human rights are negative rights, and the State is required to act as an unbiased institution to decide and enforce, and to protect rights from erosion by another party.

[89] Donnelly, *Universal Human Rights in Theory and Practice*.
[90] Andrew Clapham & Joseph Weiler, "Human Rights and the European Community: A Critical Overview," *Nomos* 1 (1991).
[91] Rosen, *Dignity: Its History and Meaning*.
[92] Sean Coyle, "The Intellectual Commitments of Modern Juridical Thought," *Canadian Journal of Law & Jurisprudence* 23, no. 2 (2010): 461–482.
[93] Weinrib, "Law as a Kantian Idea of Reason."

John Rawls regards human rights as common standards of legitimacy that are equally acceptable to all members of society. Each citizen is entitled to the same basic liberties, and society should function as a fair system of cooperation[94]. Included are liberties such as the right to live, personal liberty, personal property, and equal treatment under the law; Rawls calls these 'urgent' rights, the violation of which would be condemned by all members of a society[95]. Human rights do however also include duties for citizens, requiring action for a peaceful and cooperative society for the common good of all[96]. Similarly to Kantian rights, having a rights claim under Rawls also means that government use of force is justified to rectify persistent violation of any right[97].

Both Kant and Rawls rely on the perspective that finding common principles in society leads to rights creation[98]. The difficulty with this is that shared principles have to be identified, which can be a demanding task. This is especially pertinent for RSA, which experienced deep societal divides during apartheid that were not easily overcome post 1994. Furthermore, rights are dependent on institutions to fulfil them and defend against their compromise[99]. If citizens lose trust in State institutions, then the very concept of rights itself may be threatened. This concern will become more pertinent in Chapters VII(a), VII(b) and VIII, where the growing distrust of government and participation of non-State institutions in upholding human rights in RSA will be discussed.

[94] Rawls, *A Theory of Justice: Revised Edition*.
[95] Rawls, *The Law of the Peoples*.
[96] Claude Dierksmeier, "John Rawls on the Rights of Future Generations," in *Handbook of Intergenerational Justice*, vol. 1 (Cheltenham UK: Edward Elgar Publishing, 2006).
[97] Rawls, *The Law of the Peoples*.
[98] Griffin, *On Human Rights*.
[99] Rauscher, "Kant's Social and Political Philosophy."

3.3 Dworkin and Waldron

Two contemporary philosophers have utilised the human dignity approach of Kant and Rawls, but expanded upon it to encompass a wider view of human rights. Ronald Dworkin[100], a natural law philosopher, created a theory of rights that is political and conditional on application[101]. He believed that the dignity of humans should be protected even when protecting it creates inconvenience or risks for the general public[102]. His "rights as trumps" maxim advocates that equal rights for all should be the paramount consideration in political decision-making[103]. It has its basis in two cardinal principles: the first is Jeremy Bentham's principle of utility, which suggests that collective welfare should be maximised, the second is the principle of equal respect, under which all humans should be accorded equal concern and respect in political decisions about the distribution of goods and services[104].

Dworkin asserted that citizens have moral rights against their government, but this includes a moral duty to obey the laws of a country, even if a citizen would like to see some of those laws altered[105]. The role of the government is then to define the extent of moral rights in law using statutes and Court verdicts, and furthermore to draw distinctions among competing rights and limit some as necessary. Consequently, a government can be regarded as legitimate when it protects the dignity of its citizens with equal respect and concern for all[106].

---

[100] Ronald Dworkin (1931-2013) was an American legal philosopher, and Professor of Law at New York University, University College London, Yale Law School, and the University of Oxford. He is one of the most-cited American legal scholars of the Twentieth Century.
[101] George Letsas, "Dworkin on Human Rights (Forthcoming)," *Jurisprudence (Hart Publishing)* (2013).
[102] Ronald Dworkin, "You Cannot Calculate Human Rights Based on Cost," *The Guardian*, May 24, 2006, http://www.theguardian.com/commentisfree/2006/may/24/comment.politics.
[103] Ronald Dworkin, "Rights As Trumps," in *Theories of Rights*, ed. Waldron J (Oxford UK: Oxford University Press, 1984), 153–167.
[104] Dworkin, *Taking Rights Seriously*.
[105] Ronald Dworkin, "A Special Supplement: Taking Rights Seriously by Ronald Dworkin," *The New York Review of Books*, December 1970, http://www.nybooks.com/articles/archives/1970/dec/17/a-special-supplement-taking-rights-seriously/.
[106] Letsas, "Dworkin on Human Rights (Forthcoming)."

Dworkin believed that there is an unavoidable connection between law and morality, contradicting the legal positivism of other legal philosophers such as H.L.A. Hart[107]. Judges, he suggested, will of necessity rely upon moral considerations in coming to a verdict, and that what the law is, is ineluctably linked with what it should be. Principles and morals behind law and human rights are thus able to steer judgements of difficult decisions that existing laws do not fully cover.

Jeremy Waldron has a subtly different take on dignity[108], regarding it as a status-concept rather than a value-concept – which means that dignity encompasses a set of rights, rather than defines the ultimate significance of those rights (Waldron argues that Kant utilises dignity as a value-concept) [109]. With no precise definition of the term 'human dignity' in any of the rights charters in which it is invoked, its meaning has been left to an intuitive understanding of the concept. Waldron suggests that this is not satisfactory, given the value placed on it by governments, and by philosophers such as Kant. Instead, dignity should be conceived of as associated with the standing of citizens in a country, and in dealings with other citizens. Laws can then be enacted to protect dignity through enforcement of specific norms that prohibit violations[110].

However, even given this society-specific standing, Waldron emphasizes that human rights are those that are possessed by all humans by virtue of their humanity, and they do not differ, like legal or constitutional rights, from country to country[111]. There are two perspectives on this conception of human rights: first, the human bearer

[107] Dworkin, *Taking Rights Seriously*.
[108] Jeremy Waldron is a legal philosopher from New Zealand. He is a Professor of Law at New York University School of Law and at the University of Oxford. He studied under Dworkin at Oxford, and his theories are classified as normative legal positivism.
[109] Jeremy Waldron, "Is Dignity the Foundation of Human Rights?," *NYU School of Law, Public Law Research Paper No. 12-73* January (2013).
[110] Jeremy Waldron, "How Law Protects Dignity," *NYU School of Law: Public Law and Legal Theory Research Paper Series, Working Paper No.11-83* December (2011).
[111] Jeremy Waldron, "Human Rights: A Critique of the Raz/Rawls Approach," *NYU School of Law, Public Law Research Paper No. 13-32* June (2013).

approach, which suggests that all humans hold rights because of their humanity. Second is the human concern approach, which proposes that human rights are those for which any contravention is the concern of all humans – and may prompt a reaction from the rest of humanity against the transgressor[112]. The latter is a particularly Rawlsian approach.

3.4 Summation

The United Nations' Declaration of Human Rights identifies human dignity as the foundation of all other rights. It promotes the protection of human rights through law, and includes socioeconomic considerations alongside more traditional entitlements[113]. It has influenced over eighty further international human rights declarations, constitutional provisions, and national rights bills[114]. Therefore the idea of universal and inalienable basic rights for all people has received global affirmation – even if, as Waldron claims, the interpretation of what human dignity represents varies across regions.

Human rights are particularly challenging to pin down, given that highly conceptualised human rights charters means that they are capable of being given a wide range of interpretations. Although this adaptability does allow for integration of human rights in numerous decision-making situations, it also generates indecision and inconstancy across differing contexts[115]. Moreover, human rights increasingly have to be considered through the lens of the global movement toward greater use of private entities to provide social services. Usually governments take on the responsibilities imposed by human rights charters – private companies may not be willing to take on

[112] Ibid.
[113] United Nations General Assembly, "The Universal Declaration of Human Rights," 1948, http://www.un.org/en/documents/udhr/.
[114] Ibid.
[115] Stephanie Palmer, "Human Rights: Implications for Labour Law," *The Cambridge Law Journal* 59, no. 1 (2000): 168 – 200.

these duties, or only at higher cost[116]. It is critical that in the intermingled public/private sphere, private bodies continue to deliver essential human needs, and are not afforded the space to diminish or disregard human rights values. This final consideration will become more pertinent in ensuing chapters of this thesis. The ultimate issue to be reviewed is AMD, which is a threat to IGE in RSA. this chapter explores its history and spread through Gauteng.

4 Conclusion

Alongside IGE, this chapter analysed human rights and introduced AMD. While the former is the focus of the chapter and underlies the thesis as a whole, the latter two topics are central to ascertaining a greater appreciation for IGE in RSA. The concept of human rights has been reviewed, with an appreciation for Kantian rights through dignity and Rawlsian rights as common standards of legitimacy. Human rights define what actions society authorises or prohibits, and are shaped through deliberative discussions in society and upheld by institutions created for that specific purpose. Human rights charters and declarations all agree that human rights should be based fundamentally in human dignity[117]. Even though this concept does not have a legal definition, its intrinsic values are assumed to be sufficient to guide nations through upholding these rights in their national legislation and constitutional rights. AMD is a legacy of historical mining operations in RSA that is proving highly problematic to manage, and has the potential to contaminate large volumes of ground- and surface-water across Gauteng province. It is a very toxic pollutant that will have

[116] Stephanie Palmer, "Public Functions and Private Services: A Gap in Human Rights Protection," *International Journal of Constitutional Law* 6, no. 3–4 (2008): 585–604.
[117] United Nations, "Human Rights 50th Anniversary / Universal Declaration."

implications for both current and future generations in its containment and decontamination[118].

Given arguments raised against IGE, the average citizen could be forgiven for being unable to make a decision on the advantages of applying IGE to political decision-making. However, uncertainties about the future cannot justify irresponsible present action toward environmental resources; any conservation or mitigation that current generations undertake will indubitably have favourable knock-on effects on the natural environment of the future[119]. Several writers use the word "irresponsible" to describe behaviour that does not consider the effects of current actions on future generations[120]. This responsibility has four major moral characteristics: current generations have the aptitude to carry out certain actions, the effect of actions is known, there is the ability to make choices about whether or not to engage in actions, and actions will affect future people's wellbeing[121]. In essence, IGE is a decision by current generations to select either utility or equity as the instrument through which to make policy decisions – ideally, priority would be given to equity rather than profiting from interim control over resources[122]. This moral reasoning is a feature of the distributive justice approach favoured by the academics reviewed in this chapter.

Three approaches have been recommended. The first, Rawls' Just Savings Principle, advocates for current generations to save sufficient capital (natural, intellectual and cultural) to maintain just institutions for future generations. The

[118] CSIR, *Acid Mine Drainage in South Africa, Briefing Note 2009/02*, 2009, www.csir.co.za/nre/docs/BriefingNote2009_2_AMD_draft.pdf.
[119] J. Passmore, "Conservation," in *Responsibilities to Future Generations*, ed. E. Partridge (Buffalo, NY, USA: Prometheus Books, 1981).
[120] *See for example:* D. Callahan, "What Obligations Do We Have to Future Generations?," in *Responsibilities to Future Generations* (Buffalo, NY, USA: Prometheus Books, 1981).; Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity."
[121] E. Partridge, "Posterity and the 'Strains of Commitment,'" in *Creating a New History for Future Generations*, ed. Kim & Dator (Kyoto, Japan: Institute for the Integrated Study of Future Generations, 1994), http://gadfly.igc.org/papers/strains.htm.
[122] N. Choucri, *Global Accord: Environmental Challenges and International Responses* (Cambridge, MA: MIT Press, 1993).

second, Partridge's self-transcendence, suggests that humans inherently want to connect with communities, ideas and values beyond their own lifetimes. The third and final, Brown Weiss' public trust doctrine, requires that governments take control of common pool natural resources to ensure their preservation for future generations. Surrounding these approaches is a compendium of disputes about obligations versus responsibilities, how to ensure maximum participation in IGE policy creation, and about the forms of justice underpinning IGE philosophy.

A new framework for decision-making is required, with the primary objective as just allocation of goods based on human rights. Earth's resources are fixed, and the current generation lives off expanded access to resources enabled by improved technology. Once exhausted, however, much of the resource base cannot be manufactured. Ultimately, the objective is transformation of IGE from moral concept into a normative obligation guiding policy-making; this responsibility falls to the current generation. A collective political will is required to guarantee that political leaders count future generations as valid members of their constituencies - both in national legislation and in pursuing the principles of that legislation.

The next chapter will introduce existing environmental legislation in RSA, informed by the philosophical background to IGE explored in this chapter. The most pertinent canon is included in the national Constitution's Bill of Rights, from which all other relevant laws have developed. Reviewing legislation with an appreciation for the development of IGE will contribute to a more thorough evaluation of its inclusion in law.

CHAPTER III: ENVIRONMENTAL LEGISLATION IN RSA

> *"'Sustainable development' means the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations."*
>
> - *The National Environmental Management Act* [1]

1 Introduction

The previous chapter established that intergenerational equity (IGE) is pivotal for the development of effective, long-term policy. Yet in developing economies, this long-term outlook is limited by government and civil society negligence. This chapter will explore IGE through the lens of water rights in RSA, and determine how the Constitution guarantees IGE through the Bill of Rights, and how it creates a framework for IGE that government and citizens can observe. In reviewing the implementation of IGE in regulatory bodies, the chapter will show how its realisation is impeded by a particular issue – acid mine drainage (AMD) – that is currently confronting the government. The chapter begins by applying the philosophy of IGE to water rights. Water is a finite resource, and the majority of developing nations experience physical or economic water scarcity[2]. An intergenerational framework of water would suggest that a duty exists to conserve the diversity of the resource base, as well as to preserve its quality, to ensure conservation of options for future generations to meet their multiple needs.

[1] "Number 107 of 1998, The National Environmental Management Act." *Section 1(1)-xxix. (Underline added for emphasis*)
[2] "Vital Water Graphics," *United Nations Environmental Program Graphics Website*, accessed February 11, 2012, http://www.unep.org/dewa/vitalwater/article69.html.

To counteract the brutality and discrimination of apartheid, RSA's new Constitution was constructed from principles of equity, with redistributive potential built into the Bill of Rights. The Bill of Rights declares that every citizen has the right to sufficient water and an environment conducive to health, both of which are to be protected for the benefit of present and future generations. As RSA's legal foundation is the Roman-Dutch system, lawmakers had to create a means by which 'all people' could have legal standing as owners of the natural resource of water. To this end, government was authorised to act on citizens' behalf as fiduciary trustee with a duty of care to ensure that environmental resources are protected. This is evident in use of the phrase "… for present and future generations" in the Bill of Rights – it places government in a fiduciary relationship with multi-temporal citizens, giving IGE predominance in the hierarchy of water policy strategy.

An industry utilising a significant percentage of water in RSA is mining – and indeed much natural resource development is related to this industry. Johannesburg, RSA's economic hub, was founded on gold mining activities; Gauteng province is densely populated with both operating and abandoned mines. Research has shown that water resources are being polluted at rapid rates by AMD, which has contaminated surface- and groundwater supplies. Abandoned and closed mines fall under government ownership – it holds sole responsibility for mitigating adverse impacts. In the absence of a definitive stand from government or explicit framework for AMD management, pollution is continuing apace, and the rights to water resources enshrined in the Constitution are disregarded.

Potable water is a basic facet of citizenship under RSA's progressive human rights. Given that this right is guaranteed for present and future generations, AMD pollution is creating an administrative and policy crisis for the government. As

fiduciary trustee, the government is obligated to ensure that resources are held in optimum condition, based on the Constitution's IGE framework, whereby a duty exists to conserve the diversity and quality of water resources. The chapter will demonstrate that the failure of government duties to uphold IGE is due to leniency toward mining operations – and this is a failure that will provoke detrimental long-term policy outcomes. This chapter will chart the following contention: with mounting pollution and no legislative action against its cause, AMD, the government is failing to fulfil its responsibilities through abrogation of legislative purpose.

1.1 Broader Environmental Issues in RSA

RSA is one of the top five hard coal producers globally, along with China, the USA, India and Australia, and much of this coal is destined for use within the country. Coal is in fact the top revenue earner for the mining industry, and the electricity sector is heavily reliant on it for use in thermoelectric power plants[3]. Approximately 95 per cent of the country's electricity supply is generated through coal, in 13 currently-operating power stations. However, there have been rolling black-outs since 2007, due to lack of capacity in these plants to satisfy the demand for electricity; Eskom, the national power utility, is a number of years behind schedule in bringing two new coal-fired plants on line[4]. This has created a serious challenge for the country, dampening development and expansion plans.

Such a reliance on coal means that RSA's carbon emissions are high – it was the thirteenth largest emitting country globally in 2011, and largest emitter in Africa. Only four African countries have emissions higher than the global

[3] World Coal Association, "Coal Mining," 2015, http://www.worldcoal.org/coal/coal-mining/.
[4] M. Cohen & P. Burkhardt, "Once-Lauded Eskom Now Derided Over South African Power Cuts," *Bloomberg Business*, June 7, 2015, http://www.bloomberg.com/news/articles/2015-06-07/once-lauded-eskom-now-derided-over-south-african-power-outages.

average of 1.3 metric ton of carbon per year – RSA is at 2.39. Of this, 85 per cent is from coal, the remainder is from oil and natural gas consumption and cement manufacture[5]. Moreover, the two new power stations that are being constructed will be the third and fourth largest in the world, with just one of them consuming 17 million tons of coal every year. Not only will this add to the carbon emissions, but will also require vast amounts of water for cooling and purification. Eskom currently uses 10,000 litres of water per second, which will increase significantly with the new power plants, with very serious implications for water quality and quantity in RSA[6].

RSA is also planning to expand its nuclear capacity. There are two reactors currently operating, generating 5 per cent of the country's electricity. The government's 2011 Electricity Resource Plan confirmed that 23 per cent of electricity is planned to come from nuclear sources by 2030. Partnership agreements for six new reactors were signed in 2014 with Russia, China and France, with construction expected to start in 2016, to be online by 2023[7]. This again will put stress on water resources, given water requirements for cooling nuclear reactors, as well as expanding RSA's uranium mining and enrichment facilities.

The government is also looking to expand its renewable energy portfolio, through solar, biomass and wind generated electricity. From 1 per cent in 2012, the contribution of renewable energy to the energy mix is expected to reach 12

[5] T.A. Boden, G. Marland, & R.J. Andres, *Global, Regional, and National Fossil-Fuel CO2 Emissions (Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy)* (Oak Ridge, Tennessee, USA, 2011).
[6] Najia Bounaim, "Africa Faces Some Serious Environmental Problems: Greenpeace," *SABC News*, June 6, 2013, http://www.sabc.co.za/news/a/ef45eb804fe3d1dab97cfb0b5d39e4bb/Africa-facessome-serious-environmental-problems:-Greenpeace-20130606.
[7] World Nuclear Assocation, "Nuclear Power in South Africa," 2015, http://www.world-nuclear.org/info/Country-Profiles/Countries-O-S/South-Africa/.

per cent by 2020. If achieved, this would place RSA in the top fifteen countries globally. This would have positive impacts on water, allowing scarce resources to be utilised for other projects. However, given the emphasis placed by the government on expanding coal-powered thermoelectric plants, and the major deals recently signed for nuclear reactors, any expansion of renewable sources will likely rely on private companies[8].

2 IGE and Water

In 2010, the United Nations General Assembly recognised the human right to water, and the Human Rights Council declared access to safe and clean drinking water to be an indispensable human right[9]. Though not a legally enforceable declaration, this has put the onus on governments across the world to make potable water supply a national priority. Given the "chronic, pernicious crisis"[10] in which we now find global water resources, and with almost 900 million people globally unable to access clean water, future allocation of water is under threat[11]. This crisis has been generated by exponential global demands for water, which have increased by a factor of six, while population has only tripled. Reduced water supplies will prompt the proliferation of diseases, decreased agricultural and industrial output, reduced social equity, and will likely instigate transboundary conflicts[12]. These circumstances are especially serious for RSA as a developing nation, given that it is already one of the twenty most water scarce nations in the world, and has high climactic variability and

[8] "South Africa to Procure Still More Renewable Energy," *South Africa Info*, April 15, 2014, http://www.southafrica.info/business/economy/infrastructure/energy-150414.htm#.VZUf_-1Viko.
[9] United Nations General Assembly 10967, *General Assembly Adopts Resolution Recognizing Access To Clean Water, Sanitation*, 2010, http://www.un.org/News/Press/docs/2010/ga10967.doc.htm.
[10] W.J. Cosgrove, *World Water Vision: Making Water Everybody's Business* (London UK: Earthscan Publications Ltd, 2000). *(pp. xii)*
[11] United Nations General Assembly 10967, *General Assembly Adopts Resolution Recognizing Access To Clean Water, Sanitation*.
[12] "Water Crisis," *World Water Council*, 2012, http://www.worldwatercouncil.org/index.php?id=25.

intensive water use[13,14]. Resolving water supply issues will require addressing domestic and industrial water demands, in order to evaluate the stakes of current and future generations in water access.

It has been suggested that water is in fact not an issue of intergenerational concern, since it is a renewable resource with a constant volume on Earth over time, thus is readily available now and in the future[15]. However this is a shortsighted judgement, as water is finite, unevenly distributed globally, and under increasing pollution pressure that is often irreversible with current technology. The UN Environmental Programme regards water ecosystems as capital assets – which means they depreciate with time as they are used, and eventually wear out[16]. Over-extraction of groundwater increases physical scarcity while poor management, pollution, and declining infrastructure intensify economic scarcity. Water is accordingly not an unending resource, and its use has to be viewed with long-term consequences in mind. Lack of long-term vision is a major constraint on water services, as water authorities tend to simply address immediate issues rather than prepare for numerous years of national provision[17]. Stopgap arrangements hinder communities from formulating decisions with a long-term outlook, thus handicapping future success and growth.

Half the world's population will live under severe water stress by 2030 – subsequent generations are likely to face harsher water scarcity, with water as the decisive limiting factor to economic growth and social prosperity. Current global

[13] Pienaar and van der Schyff, "The Reform of Water Rights in South Africa."
[14] M. Muller, "Free Basic Water – a Sustainable Instrument for a Sustainable Future in South Africa," *Environment and Urbanisation* 20 (2008): 67–87.
[15] Personal communication with Mr Mike Muller: Visiting Adjunct Professor at the Graduate School of Public and Development Management at University of the Witwatersrand, RSA.
[16] United Nations Environmental Program, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, 2011, http://www.unep.org/greeneconomy/Portals/88/documents/ger/ger_final_dec_2011/GreenEconomyReport_Final_Dec2011.pdf.
[17] C.M Figueres, C. Tortajada, & J. Rockstrom, *Rethinking Water Management* (London UK: Earthscan Publications Ltd, 2003).

demands on water resources are a triumvirate: seventy per cent agriculture, twenty per cent industry, and ten per cent human consumption[18]. With climate change reducing agricultural productivity, water pollution leaving less water for industrial use, and on-going population increases alongside rises in the standard of living leading to higher human consumption requirements, future demands will be jeopardised if the prevailing short-term status quo continues.

Considering these pressures, RSA is in an unfavourable position, as it experiences low annual precipitation and its principal cities are located on watersheds and marked by remoteness from water sources and downstream flow[19]. Rural demands on groundwater are already sizable due to use for livestock, irrigation, and domestic needs – yet groundwater is limited across the country due to disadvantageous underlying geological structures. Thus RSA is presently mostly reliant on surface-water for urban and industrial needs. However there is an anticipated substantial growth in surface-water requirements in the north of the country as mining expands and population increases. This will likely require an augmentation of technical engineering ventures such as the existing pipeline transporting water to Gauteng from the Highlands of Lesotho[20]. Since water in the country is managed for present and future generations, water scarcity will restrict development in RSA if not managed effectively.

Appraisal of existing requirements, while taking into account estimated future demands, means that reform in water policy is required. An IGE framework of water

[18] United Nations Environmental Program, *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*.
[19] A.R. Turton, "Three Strategic Water Quality Challenges That Decision-Makers Need to Know About and How the CSIR Should Respond," *Keynote Address: A Clean South Africa, Presented at the CSIR Conference "Science Real and Relevant,"* November 18, 2008.
[20] RSA Department of Water Affairs and Forestry, "National Water Resource Strategy: First Edition. Appendix F: Public Consultation," n.d., http://www.dwaf.gov.za/Documents/Policies/NWRS/Sep2004/pdf/AppendixF.pdf.

would consist of three principles: preservation of water resources, improved efficiency of use, and attainment of equitable use[21]. These three factors can ensure conservation of options for use by future generations, who may have water needs that the current generation cannot conceptualise. The framework would serve the most benefit if wholly incorporated into national legislation, since governments are primarily responsible for facilitating the accomplishment of the human right to water[22], and because water pollution is most effectively managed through government regulation – there can be no national response without a national plan[23]. Such incorporation would demonstrate the commitment of the political leadership to securing long-term environmental outcomes. A clear regulatory directive for IGE would establish specific roles for government departments and streamline water management. Establishing a legislatively-backed duty of care toward water resources will formalise intergenerational concerns, and make unambiguous the implicit long-term responsibilities of the government toward its citizens.

To this end, RSA's Constitution is next examined. It is a progressive document founded upon principles of equity and justice through redistribution, and the three principles of an IGE framework of water management can be identified within it. Thus it can be assumed that IGE is fundamental to legislation in RSA, and forms the backbone to political decision-making. How this incorporation was achieved is reviewed below.

---

[21] "The Dublin Statement on Water and Sustainable Development," in *International Conference on Water and the Environment*, 1992, http://www.wmo.int/pages/prog/hwrp/documents/english/icwedece.html.

[22] C. Dubreuil, *The Right to Water: From Concept to Implementation* (France: World Water Council, 2006).

[23] N. Faruqui, "Balancing Between the Eternal Yesterday and the Eternal Tomorrow: Economic Globalisation, Water, and Equity," in *Rethinking Water Management: Innovative Approaches to Contemporary Issues*, ed. C. Figuères, J. Rockstrom, and C. Tortajada (London UK: Earthscan Publications Ltd, 2003).

3 RSA Water Rights

3.1 Constitutional Design

From 1948 until 1994, RSA was under apartheid rule with a minority-white government, the National Party, in control of legislation and political decision-making[24]. Through apartheid, racial segregation was legitimised and institutionalised; Coloured, Indian and black Africans were treated as second-class citizens to the white population. The segregation had economic and political dimensions, as well as spatial, that were far-reaching and impacted upon all aspects of life. Voting rights were either limited or non-existent for non-whites, mixed marriage was prohibited, and there were separate living, amenity and educational facilities for non-white citizens. Even though repercussions from this era are still experienced in independent RSA, the overarching objective of new legislation is to reverse apartheid trends and transform both the country's economy and citizens' expectations and outlook.

RSA moved to majority rule from white apartheid rule with a general election in 1994 that the African National Congress (ANC) party won. The Constitution was promulgated in 1996, and has been described as "the most admirable constitution in the history of the world"[25]. It was created to guarantee that no citizens would be discriminated against under any conditions, and established a complete break from the apartheid policies of the previous administration. It is knitted together with threads of transparency, equality, and accountability, and defines significant new socio-

[24] *All information in this paragraph taken from:* J. Battersby-Lennard, "Apartheid/Post-Apartheid," in *International Encyclopaedia of Human Geography* (Elsevier, 2009), 167–173, http://www.sciencedirect.com/science/article/pii/B9780080449104009202#a0005.
[25] C.R. Sunstein, *Designing Democracy: What Constitutions Do* (New York, USA: Oxford University Press, 2001). *(pp.261)*

economic rights for the country. The Constitution relies significantly on positive social rights – morality is an integral focus of legal philosophy post-1996[26].

RSA's legal system is founded on comparative law, and is highly influenced by the Canadian Charter of Rights & Freedoms, but also draws upon aspects of the American, German, and Malaysian Constitutions[27]. This is partly because strict deadlines placed on Constitutional writers resulted in an inevitable dependence on the legal philosophy of more established countries[28], but also because RSA pre-1994 had rejected human rights as a "principle of the devil" and thus there was no historical acknowledgement of a moral code or legal embedding of human rights[29]. Both the American and German Constitutions were written after a period of schismatic violence, and reveal attempts to rebuild a coherent nation-state – it is likely that RSA lawyers looked to these documents to ensure the restoration these countries experienced as foundation of RSA's legal philosophy[30].

It was modelled to avoid the pitfalls of the USA Constitution, with more extensive and detailed equality, with freedom of expression not as an absolute right, and with more government control over property rights[31]. It also differs substantially in the pre-eminence given to group social and economic rights – the US Constitution views individual rights as paramount. Upon signing the Constitution, then-President, Nelson Mandela, spoke of the necessity of assuring that respect for human life, liberty

---

[26] J. Dugard, "Human Rights and the Rule of Law in Postapartheid South Africa," in *South Africa's Crisis of Constitutional Democracy: Can the U.S. Constitution Help?*, ed. R.A. Licht and B. de Villiers (Washington DC, USA: The AEI Press, 1994). *(pp.141)*

[27] F. Michelman, "The Constitution, Social Rights and Reason: A Tribute to Etienne Mureinik," *Southern African Journal on Human Rights* 14 (1998): 499–507.

[28] Ibid.

[29] Dugard, "Human Rights and the Rule of Law in Postapartheid South Africa."

[30] D. Davis, "Liberty, Commerce, and Prosperity - and a Bill of Rights," in *South Africa's Crisis of Constitutional Democracy: Can the U.S. Constitution Help?*, ed. R.A. Licht and B. de Villiers (Washington DC, USA: The AEI Press, 1994).

[31] T. Pangle, "South Africa, Viewed Through the Eyes of the American Constitution," in *South Africa's Crisis of Constitutional Democracy: Can the U.S. Constitution Help?*, ed. R.A Licht and B. de Villiers (Washington DC, USA: The AEI Press, 1994).

and wellbeing was enshrined in legislation[32]. This has been accomplished through the Bill of Rights, which contains thirty-one sections of inalienable rights for citizens. The Bill not only safeguards basic human needs, but also allows for the potential to redistribute resources so that there is equality and freedom of access. The two most pertinent sections of the Bill of Rights for this thesis are[33]:

> ***24. Environment***
>
> *Everyone has the right*
>
> ***a.*** *To an environment that is not harmful to their health or well-being;*
>
> ***b.*** *To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that*
>
> ***i.*** *Prevent pollution and ecological degradation;*
>
> ***ii.*** *Promote conservation; and*
>
> ***iii.*** *Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.*
>
> *…*
>
> ***27. Health care, food, water and social security***
>
> ***1.*** *Everyone has the right to have access to (…)*
>
> ***b****. Sufficient food and water; and (…)*
>
> ***2.*** *The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights.*

RSA is one of eleven nations globally that recognise the right to water in their Constitution[34]. The inclusion of the phrase "for the benefit of current and future generations" in Section 24 is significant, as this is accepted in international law as a proxy for IGE[35]. Given that water is a component of the 'environment' in Section 24, it can be extrapolated that water too is viewed through an IGE framework. The three factors that make up a proposed IGE framework of water, as explored in the preceding section, are preservation, improved efficiency of use, and attainment of

[32] P. de Vos, "Lest We Forget," *Constitutionally Speaking (blog)*, 2011, http://constitutionallyspeaking.co.za/lest-we-forget/.
[33] "Constitution of the Republic of South Africa." *(Sections 24 and 27)*
[34] United Nations General Assembly 10967, *General Assembly Adopts Resolution Recognizing Access To Clean Water, Sanitation*.
[35] Information from interview with Mr Ramin Pejan, staff lawyer at AWARD South Africa

equity of use. All of these are contained within legislation through government's positive duty to protect water resources against pollution and overuse, and the assurance that all citizens are able to access an adequate supply for daily needs.

That RSA legislation is so closely aligned with IGE suggests the drafters of the Constitution may have been significantly impacted by the writings of influential environmental and legal scholar, Edith Brown Weiss. Chapter II explained Brown Weiss' concept of the "planetary trust," though which each generation is obligated to preserve a diverse natural resource base to ensure that future generations are able to experience a high-quality environment[36]. This trust has been employed in RSA's legislative context: the natural environment has been placed in a trust, with government as fiduciary trustee obligated to guarantee that future citizens experience an environment of similar or higher standard as present citizens. Brown Weiss suggested that there are two relationships shaping IGE – relationships with other humans, and the relationship with Earth's natural systems[37]. RSA takes on both of these in the Bill of Rights, protecting natural systems and redistributing wealth and resources among citizens.

The overarching legal relevance of IGE has created a unique opportunity for RSA to be one of the first countries to extend the temporal authority of legislation, utilising it as a tool to empower and improve future lives. In many developing nations, environmental concerns are subsumed under economic growth considerations, entailing increased energy inputs, greater material resource use, and intensified pollution outputs. Therefore, the predictable outlook for a developing nation would be progression toward an improved environment in some indeterminate future, with more immediate environmental degradation. However, since RSA's

[36] Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity."
[37] Brown Weiss, "In Fairness to Future Generations."

Constitution frames all action with an IGE outlook, the country is poised to achieve a beneficial environmental future from the outset of the industrialisation process.

The redistributive potential of the Constitution is particularly important for RSA's water resources because there were sixteen million people – forty per cent of the population – without access to potable water when the Constitution was promulgated in 1996[38]. Historically, RSA water law was rooted in riparianism: water sources were owned and operated by those upon whose land they were located. Black citizens were forced under apartheid law to move onto reservations known as '*Bantustans*.' These were areas of fair rainfall and farming potential, but subsistence farmers forced onto these lands came with little knowledge of large-scale farming methods, and with no infrastructure[39]. Although rainfall was favourable, there were few storage options, and little to no irrigation. White commercial farmers consumed ninety-five per cent of irrigation water, and only five per cent was accessible by black smallholders[40].

Additionally, the Bantustans deprived the black population of freehold rights, further disallowing their claims to water. In contrast, property rights and ownership took precedence and public ownership and benefits were discounted[41]. The 1996 Constitution shifted the property concept of water from private ownership to public resource, and gave greater importance to serving common public concerns.

In the processes of drafting the Constitution, this property clause was a major contention – the ANC wanted productive lands to be redistributed to the black

[38] A. du Plessis, "A Government in Deep Water? Some Thoughts on the State's Duties in Relation to Water Arising from South Africa's Bill of Rights," *Review of European Community and International Environmental Law* 19, no. 3 (2010): 316–327.
[39] D. Hobart Houghton, "The Significance of the Tomlinson Report," *Africa South* 1, no. 2 (1957): 14–21.
[40] S. Movik, *The Dynamics and Discourses of Water Allocation Reform in South Africa (STEPS Working Paper 21)* (Brighton, UK: STEPS Centre, 2009).
[41] Pienaar and van der Schyff, "The Reform of Water Rights in South Africa."

population, while the Afrikaner National Party wanted the land rights of white commercial farmers to be protected. Ultimately, Constitutional drafters consulted outside legal philosophy to resolve this issue: the Malaysian Constitution[42]. This document advises that the taking of land by government is allowed on specific occasions, but only if it is to serve the public good. Comparative law has been employed comprehensively in RSA jurisprudence, and in this case, the Malaysian philosophy of discreet government authority over property was extended into RSA. it has been promulgated through the National Environmental Management Act (NEMA) and the National Water Act (NWA), which will be reviewed below.

3.2 National Environmental Management Act

NEMA defines the environment to include water resources, and mandates that development projects be carried out with long-term resource sustainability as the principle consideration[43]. The Act is intended to ensure the incorporation of environmental management into all development schemes, and it holds the environment in trust for all citizens, protecting it as part of a common public heritage. IGE is a critical component of NEMA, with social, environmental, and economic affairs given equal priority. The Anglo-American polluter-pays-principle has been employed[44], and its scope extended to hold corporate directors personally liable if they fail to take what is deemed as reasonable action to prevent and remediate pollution[45]. This duty of care does not only fall on potentially polluting industries, but also on government, who are obligated to act on behalf of any citizen to protect high environmental quality standards. Completion of an environmental impact assessment (EIA) has been made mandatory for any new project, and this includes a period of

[42] Davis, "Liberty, Commerce, and Prosperity - and a Bill of Rights."
[43] "Number 107 of 1998, The National Environmental Management Act."
[44] *Under this principle, the perpetrator of a polluting action bears the cost of remediation.*
[45] "Number 107 of 1998, The National Environmental Management Act". *(Sections 19 & 28)*

public participation to permit citizen commentary on proposals. These environmental principles apply to all industries, including the mining sector, and this is a volte-face from apartheid government regulations, under which mining operations were specifically exempted from EIA requirements[46].

3.3 National Water Act

NWA is water sector-specific legislation under the NEMA framework. Principles of sustainability and equity, and a formal acknowledgement of the needs of present and future generations, form the backbone of this Act[47]. It echoes the conviction of Section 24 of the Bill of Rights, builds on intergenerational concepts of NEMA, and frees RSA from restrictive apartheid water policies. The vernacular slogan of the Act is "Some, For All, Forever," which indicates that long-term outlook is primary consideration in water policy decisions. The Act has three principles guiding water policy: water is considered an indivisible national asset, water to meet basic needs as well as environmental sustainability is a right for all citizens, and water management is decentralised to the local level[48]. These three benchmarks bring to fruition the principles of the IGE framework of water described in the previous section.

The Minister of the Department of Water Affairs (DWA) was appointed in the Act to hold the final responsibility for ensuring unprejudiced allocation and fair use of water – and via the Minister, the government has authority to manage the use and movement of water across RSA. The NWA established that all citizens should have access to sufficient water for daily requirements, a policy known as Free Basic Water,

[46] J. Ridl & E. Couzens, "Misplacing NEMA? A Consideration Of Some Problematic Aspects Of South Africa's New EIA Regulations," *Potchefstroom Electronic Law Journal* 13, no. 5 (2010), http://www.ajol.info/index.php/pelj/article/viewFile/65052/52758.
[47] "Number 36 of 1998, The National Water Act."
[48] Department of Water Affairs and Forestry, "National Water Resource Strategy: First Edition. Appendix F: Public Consultation."

determined to be twenty-five litres of potable water per person daily available within two-hundred metres of the homestead[49]. Responsibility for this provision was devolved to the municipal level so that local conditions could be considered, and thus varying prices for cost recovery could be set[50]. The right to an assured volume of water was confirmed by two cases that came before RSA's Courts: *Residents of Bon Vista Mansions v. Southern Metropolitan Local Council*, and *Mazibuko v. City of Johannesburg*.

Residents of Bon Vista Mansions (2001) highlighted the State's duty to protect the right of access to water[51]. The Southern Metropolitan local municipality disconnected water supply to particular housing estate due to prolonged non-payment. The inhabitants of the estate took the municipality to Court, citing violation of their Constitutional rights to water. The High Court held that the municipality did violate rights by denying water to those unable to afford basic services, and ruled that water supplies should be reconnected and the Free Basic Water supply renewed.

Mazibuko (2009) upheld this government responsibility for basic water supplies, but also then emphasised that government is not constitutionally required to supply more than the NWA-specified water needs[52]. Residents of Phiri Township in Soweto charged as unconstitutional the government policy known locally as *Operation Gcin'amanzi*, or "Save Water." This involved the metering of water use that exceeded the free daily supply of twenty-five litres per person with prepaid meters. Residents contended that this policy violated Section 27 of the Bill of Rights,

[49] RSA Department of Water Affairs and Forestry, "Regulations Relating To Compulsory National Standards And Measures To Conserve Water," *GN R509 In Government Gazette 22355* June (2001), http://cer.org.za/wp-content/uploads/2011/10/Regulations-relating-to-compulsory-national-standards-and-measures-to-conserve-water.pdf.
[50] Water prices vary across RSA, as local Water Boards determine the appropriate consumer charge based upon the cost to obtain water and the technical and administrative capacity in a locality
[51] South Africa Gauteng High Court, Residents of Bon Vista Mansions v. Southern Metropolitan Local Council, Case No. 01/12312 (2001) (2001).
[52] RSA Constitutional Court, Mazibuko v. City of Johannesburg, CCT 39/09 (2009), ZACC 28 (2009).

which guarantees the right to sufficient water. However, the Constitutional Court held that the Free Basic Water policy was reasonable under Section 27, and deployment of prepaid water meters to protect this policy was lawful. As well, utilising the concept of reasonableness, the Court ruled that the Free Basic Water policy should be regarded as a progressive realisation right, and government's duty to provide water to citizens would occur accumulatively. The Court recognised that it would take time before all citizens had access to the stipulated volume of water, but that government was working incrementally towards this objective.

The legitimacy of the NWA has very seldom been challenged in court aside from these two cases. Since the Act marked a step change in water management, it is worthwhile to explore why it was so readily accepted in RSA society. This chapter contends that lawfulness is conferred on the NWA through epistemic proceduralism – the legitimacy of the Act is not grounded in the correctness of its decisions, but in the procedures that produced them[53]. Decisions are made through principled adjudication, and aim at achieving the greatest public benefit. The NWA is regarded as legitimate because the conduct resulting from its policies produced justifiable and fair results; citizens accept policy outcomes of the NWA due to this[54]. This confers a moral status on all outcomes from NWA as a consequence. The Act was accepted as democratic and just when it was promulgated in 1998, and its actions or inactions since have remained relatively unchallenged.

3.4 Fiduciary Duty

RSA's water policy is in line with international standards, and has already surpassed targets set in the UN's Millennium Development Goals for water, with a

[53] D. Estlund, *Democratic Authority: A Philosophical Framework* (Princeton NJ, USA: Princeton University Press, 2008).
[54] D. Estlund, "Beyond Fairness and Deliberation: The Epistemic Dimension of Democratic Authority," in *Deliberative Democracy: Essays on Reason and Politics*, ed. J. Bohman and W. Rehg (Cambridge, USA: MIT Press, 1997), 173–204.

little over ninety-two per cent of citizens able to access potable water by 2009[55]. Yet this legislative success was not achieved without difficulty. RSA's legal system is based on Roman-Dutch law, established by the Dutch East India Company and codified by subsequent English settlers[56]. Under this system, ownership of natural resources is associated with a physical legal entity – however, the NWA's preamble states that water is a resource belonging to all people. Under RSA law at the time, only natural persons could own property, and "all people" was not considered to be a legal entity for purposes of resource ownership[57].

This introduced a unique category of jurisprudence into RSA law: the Anglo-American public trust doctrine, which is public ownership of property with emphasis on the State as fiduciary trustee[58]. Citizens, as generic owners, can use and enjoy water resources, while government through the DWA Minister holds dominium with duty to uphold the quality of water resources on their behalf. Citizens then have *locus standi* to challenge government if NWA commitments are not effectively discharged. Based on this doctrine, the State has to consider the long-term public good in water allocation policy.

Fiduciary duty in a trust requires an agent to act in the best interests of the other party – in this case, citizens of RSA. Two core responsibilities comprise fiduciary duty – the duty of care and the duty of loyalty. Taken together, these require the agent, in this case the RSA government, to be benevolent and reasonable in all

[55] J. Mthembu, *African National Congress: Press Statements*, 2011, http://www.anc.org.za/show.php?id=7682.
[56] N. Funke et al., "The Evolution of Water Governance in South Africa: Lessons from a Resilience Theory-Based Analysis of the Khoian and Gold Mining Social-Ecological Systems," in *Exploring Sustainability Science: A Southern African Perspective*, ed. A. Weaver and M. Burns (Stellenbosch, RSA: SUN Press, 2008).
[57] van der Schyff and Viljoen, "Water and the Public Trust Doctrine – A South African Perspective."
[58] Pienaar and van der Schyff, "The Reform of Water Rights in South Africa."

actions[59]. Government, through NEMA and NWA, has created an obligation for itself where none existed before to protect the environment and water resources for current and future generations; government contracted itself as a trustee to fulfil legislative stipulations. This contract involves an enforceable set of promises that the government is legally and morally obligated to bring to completion[60]. It has signalled its commitment to resource preservation in multiple pieces of legislation, and citizens have faith in the binding nature of this promise that natural resources will indeed be protected. Citizens are thus bonded to government in a trust relationship – laws enable citizens to entrust their rights to government in confidence and continue with their socio-economic transactions[61]. Accordingly, government's fiduciary duty secures citizen confidence in government to follow through on commitments to protect water resources.

One complicating factor is the question of sole interest, which is a protocol advising that a trustee should act solely in the interest of the beneficiary, and never in the interest of the trustee[62]. This is a fundamental rule of trust law, derived from the belief that, in the majority of cases, fraud is likely to be undetectable both by the beneficiary and Courts. Accordingly, citizens trust that government will manage resources exclusively for the wellbeing of citizens. However, government is certain to face conflicts of interest, where environmental protection encounters economic development – and this is particularly pertinent with regards mining operations.

[59] R.H. Sitkoff, "The Economic Structure of Fiduciary Law," *Boston University Law Review* 91 (2011): 1039–1049.
[60] C. Fried, *Contract as Promise* (Cambridge, MA: Harvard University Press, 1981).
[61] The concept of citizens' trust in government is theoretically grounded in the works of Thomas Hobbs and John Locke. These political philosophers suggested that a society's laws enable people to transfer power to the government and carry out their commercial and social relationships with a high level of security and confidence.
[62] Tamar Frankel, *Fiduciary Law* (Oxford, UK: Oxford University Press, 2011).

However, recent scholarship suggests that in the current global climate of elevated accountability, it is not necessary to over-emphasise the sole interest rule. Instead, the 'best interest' rule should be given prominence, whereby conflicts are allowed if better outcomes can be achieved[63]. For government, tasked with the precarious tightrope of double responsibilities of achieving economic advancement and environmental conservation, conflicts of interest are inevitable in administering the natural resource trust. A case in point is mining, which substantially contributes to RSA's growth strategy. AMD from mining operations, which is extensively polluting water sources, is disregarded by government in support of continued extraction. It seems that a focus on the sole interest rule may result in detrimental outcomes for natural resources, as government treats mining corporations more leniently to favour economic earnings. This is a failure of government responsibility to IGE through abrogation of the purpose of legislation. The question that RSA society has to address, as AMD becomes a more pressing danger, is whether shifting to best interest rule will produce better outcomes for the environment.

3.5 Philosophical Foundations

Through the Bill of Rights, NEMA, and NWA, water rights have been converted into a positive obligation for the government, requiring positive action to maintain the quality and quantity of resources in trust for future generations. The foundational philosophy of NEMA and NWA will be given deeper consideration in the subsequent chapter, but an overview is provided here. It is conceivable that legislation is based on Rawls' Theory of Justice[64]. Two Rawlsian doctrines are identified in the Constitution: the liberty principle under which citizens are free and equal and each person is entitled to the same intractable basic rights and liberties, and

[63] J.H. Langbein, "Questioning the Trust Law Duty of Loyalty: Sole Interest or Best Interest?," *Yale Law School, Faculty Scholarship Series* 495 (2005).
[64] Rawls, *Justice as Fairness: A Restatement*.

the difference principle under which economic inequalities are designed to materially benefit the least advantaged. These principles are realised in policy through NEMA and NWA, which ensure that all citizens have access to water and ownership of water resources is no longer in the hands of a private landowner but is redistributed to all citizens.

In addition, IGE has been granted predominance in the hierarchy of water policy decision-making through another aspect of Rawlsian philosophy, the Just Savings principle. This is the comprehension that all generations should bear an equal burden in realising and maintaining a fair society and institutions for the future. Rawls further suggests that the welfare of least advantaged groups can only be improved over succeeding generations by ameliorating the situation of worst-off individuals in the current generation. This can be seen in RSA's focus on intergenerational rights to water, and through the Free Basic Water policy that ensures all citizens have at least a minimum volume of water available. The Rawlsian association of justice with fairness pervades the Constitution, based as it is on redistribution of resources after the discrimination of apartheid. This moral backing to the legislation is reflected in the philosophy of another academic, Edith Brown Weiss. Her writings give prominence to the planetary trust for natural resources; this reflects the faith that Constitutional drafters placed in government to carry out fiduciary duties toward environment and water resources for current and future generations.

Although the shift from the riparian principle of water management to the public trust principle was substantial, the changeover in society was not so disruptive – there are no court cases in which the legitimacy of the public trust doctrine has been challenged as an expropriation of private land and pre-existing water rights[65]. This is

[65] Pienaar and van der Schyff, "The Reform of Water Rights in South Africa."

likely because of epistemic proceduralism, examined previously. For a concept to be considered valid it should be based upon a template for decision-making that has wide community support – and the moral foundations of the NWA were in the just fight against apartheid-era discrimination. Few citizens wanted to be seen to argue against the morality of NWA in 1998, only a few years after promulgation of the Constitution and Bill of Rights[66]. Thus the validity of the NWA – even given that it might conceivably constitute a legal takings of land – has not been disputed.

4 Mining in RSA

4.1 Historical Context

RSA is a major mineral-producing and processing country; 2012 figures show that it produced over 50 per cent of global supply of four metals, platinum, refined rhodium, refined platinum, and kyanite. This accounted for 8.3 per cent of GDP[67]. The mineral industry is majority privately owned, with few artisanal miners – in contrast to many other countries across the continent. Although expansion of operations are planned for many mining sites, these may be hampered by ongoing power shortages in RSA, and by constrained transport capacity on the rail networks[68]. Until 2006, RSA was the world's largest producer of gold, but it is now only the fifth largest – a decrease from 64 at its highest to six per cent of global output[69]. However, it still accounts for the largest income from exports, at US$ 8.41 billion in 2012[70].

The country was predominantly agricultural until the 1860s, when diamond deposits were discovered in the Northern Cape. When the Witwatersrand goldfields

[66] Estlund, *Democratic Authority: A Philosophical Framework*.
[67] Thomas R. Yager, "The Mineral Industry of South Africa," *USGS 2012 Minerals Yearbook: South Africa* December (2014): 38.1 – 38.26.
[68] Ibid.
[69] Alex Létourneau, "World's Largest Gold Producing Countries: South Africa," *Forbes*, June 20, 2014.
[70] Yager, "The Mineral Industry of South Africa."

were unearthed in 1886, RSA rapidly emerged as an industrial state. Capital started to flow into the country, and infrastructure was hastily modernised to cope with the demands of large-scale extraction[71]. The mining houses established at this point became very powerful conglomerates, and include the predecessors of Anglo American and BHP Billiton. They have dominated the unskilled labour market since the 1890s, and still do. The industry has also played a vital role in contributing tax revenues to government. These revenues have propped up other industries, particularly agriculture and manufacturing, through government subsidies and loans[72].

Thus successive governments have become increasingly dependent on the mining industry. This is particularly true of the apartheid government, whose policies were impossible to separate from mining activities due to the labour system. RSA's Truth and Reconciliation Commission went so far as to suggest that the blueprint for apartheid was created by the mining houses, and not by the Afrikaner state[73].

In post-apartheid RSA, this reliance on capital input from mines has continued, though to a lesser degree. Over the last decade, the sector has contributed an average eight per cent to GDP – but including all downstream beneficiations, enlarges this to eighteen per cent. As well, it provides over 1.3 million jobs, and for every salary paid by the mining industry, there are ten people dependent upon it[74]. The foreign currency earnings, tax earnings, and labour holdings of the mining sector means that government can be reluctant to act in ways that may be detrimental to the industry; this will be explored further through fieldwork, in Chapter V.

---

[71] Daniel Antin, "The South African Mining Sector: An Industry at a Crossroads," *Hanns-Seidel-Foundation: Economy Report South Africa* December (2013).
[72] C. H. Feinstein, *An Economic History of South Africa: Conquest, Discrimination, and Development* (Cambridge UK: Cambridge University Press, 2005).
[73] Truth and Reconciliation Commission of South Africa, "Truth and Reconciliation Commission of South Africa Report (Volume 6, Section 2, Chapter 6)" 21 March (2003), http://www.gov.za/reports/2003/trc/index.html.
[74] Antin, "The South African Mining Sector: An Industry at a Crossroads."

4.2 Current Mining Legislation

The Mineral and Petroleum Resources Development Act 2002 (MPRDA) is the most important mining-sector specific legislation[75]. Through it, the government has custodianship of the common pool resource of minerals, similar to the philosophy on water effected through the NWA. This again makes use of the public trust doctrine, as Roman-Dutch law had previously suggested that private land ownership extended downwards to include underground mineral resources as well[76]. Government therefore has sovereignty over mineral resources through the Minister of the Department of Mineral Resources (DMR), and the responsibility to make the final decision on permission to prospect or mine. The MPRDA rules that the State is obligated to promote sustainable mining operations to protect the environment – including water resources – for current and future generations, again echoing the ethos of the NWA. Environmental principles of the MPRDA suggest that holders of mining rights should make a financial provision for rehabilitation of the environment before extractive operations are even commenced, and once mining has ceased, should rehabilitate surrounding resources as far as possible.

This issue is also treated in NEMA and NWA, which stipulate that mining operations should take 'all reasonable measures' to forestall pollution and environmental degradation. The MPRDA evaluates this with more force, prescribing a responsibility to rehabilitate the mining site to its original state before the DMR Minister will issue a closure certificate[77]. If rehabilitation has not been satisfactorily completed, the Minister is enabled to requisition the initial financial provision set aside for this purpose. Moreover, corporate directors and the possessor of the

[75] Government Gazette 23922, *Mineral and Petroleum Resources Development Act (Act 28 of 2002). (Section 37)*
[76] M. O. Dale, "South Africa: Development of a New Mineral Policy," *Resources Policy* 23, no. 1 (1997): 15–25.
[77] Government Gazette 23922, *Mineral and Petroleum Resources Development Act (Act 28 of 2002). (Section 43)*

prospecting or mining permit can be held personally liable under RSA law for deleterious environmental impacts. Outside of RSA, only the USA has also applied personal liability for corporate pollution acts. Under CERCLA (the Superfund Act), strict liability has been interpreted by some Courts to entail liability for company directors[78]. However, the USA does not have commensurate laws that specifically stipulate implementation of individual liability through incarceration and fines.

Importantly, under Section 46 of MPRDA, a mine that has been abandoned and for whom no owners can be traced is classified as derelict and ownerless, and responsibility for funding environmental rehabilitation is taken on by government. This includes historically abandoned mines, and those that have been granted closure certificates. The public trust doctrine suggests that government is obligated to protect environmental resources for current and future generations; it is therefore government's responsibility to manage the shafts and on-going environmental rehabilitation around such mines. This is particularly consequential as AMD becomes a more pressing issue – it is predominantly generated in non-functioning mines in which pumping out of ground-waters from shaft voids has ceased.

Unfortunately, MPRDA regulations have been blunted by the 2009 NEMA Amendment Act, which specifically concerns mining operations[79]. The Amendment promulgated that the DMR Minister holds final responsibility for approval of mining EIAs, not the Minister of the Department of Environmental Affairs (DEA). Consequently there are two authorising bodies for environmental clearance – one for mining-related issues, and one for all other affairs. Given that mining operations

[78] *For application of strict liability under CERCLA, see* United States v. Milwaukee Refrigerator Transit Co., 142 F. 247, 255 (7th Cir. 1905) *and* United States v. Bestfoods, 118 S.Ct. 1876 (1998).
[79] Government Gazette 31789, *National Environmental Management Amendment Act, No. 62 of 2008 (GN 22/GG 31789/09-01-2009)*, 2009, http://us-cdn.creamermedia.co.za/assets/articles/attachments/18939_ac62-08.pdf.

demand a significant percentage of RSA's total water availability, this could make the achievement of IGE significantly more challenging[80].

Another critical piece of legislation concerns mining waste. Mining is RSA's most prodigious polluter; it contributes 88 per cent of total waste per annum, with gold mining alone contributing 47 per cent[81]. The creation of wastes that pollute natural resources is considered in the White Paper on Integrated Pollution and Waste Management (IP&WM)[82]. Under the previous administration, waste management was inconsistent in implementation and lax in enforcement – the new IP&WM legislation was adopted to ensure an improved framework for environmental management and protection. A paradigm shift from pollution control to pollution prevention has ensued, through persecution of non-compliant actors and the duty of care principle[83]. Wastes – surplus or discarded materials for which there is no further productive use – are recognised as the primary source of pollution in RSA; this is important in the case of mining operations, which are the largest contributors to RSA's total waste production[84]. Water is acknowledged in law as requiring crucial protection to assure long-term sustainability and ecological functioning. Accordingly, waste prevention should be accorded paramount importance, then in declining order of precedence, the government should act to minimise pollution at source, manage impacts, and remediate.

---

[80] M. Claassen, "How Much Water Do We Have? A CSIR Perspective on Water in South Africa," *CSIR Report No. CSIR/NRE/PW/IR/2011/0012/A* (2010).
[81] R.A. Adler et al., "Water, Mining, and Waste: An Historical and Economic Perspective on Conflict Management in South Africa," *The Economics of Peace and Security Journal* 2, no. 2 (2007): 33–41.
[82] Government Gazette 17 March 2000, "White Paper on Integrated Pollution and Waste Management for South Africa: A Policy on Pollution Prevention, Waste Minimisation, Impact Management and Remediation," *Government Notice No. 227* (2000), www.info.gov.za/view/DownloadFileAction?id=68787.
[83] In this context, the duty of care suggests that those who generate waste are held accountable for its management and proper disposal – and they can be penalized for any violations
[84] Adler et al., "Water, Mining, and Waste: An Historical and Economic Perspective on Conflict Management in South Africa."

Under the IP&WM, the DMR is directed to consult with the DEA to set standards for the mining industry, and to confer with the DWA to control water pollution – thus dealing with two departments for what is in actuality an integrated issue. Segregation of water pollution from control of waste production is a consequential oversight in the IP&WM, as it could allow the government to treat resource degradation by mining operations more leniently than otherwise Constitutionally permissible.

4.3 Case Study: Blue Platinum Ventures Pty Ltd

Since promulgation of NEMA and NWA in 1998, there has only been a single court case regarding criminal personal liability of corporate directors for environmental harms caused by the actions of their corporation. *The State v. Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya*, was decided in a regional magistrates court, with the ruling not challenged by the defendants[85]. It is a very recent case, and has made media headlines in the country as possibly paving the way to further such rulings[86]. Matome Maponya, the Managing Director of Blue Platinum Ventures Pty Ltd (hereafter 'Blue Platinum'), was sentenced to five years in prison for environmental damage caused by his company over a period of seven years. This sentence was conditionally suspended for five years if the damage were to be rehabilitated within three months.

Blue Platinum is a clay mining company based in Limpopo, a province to the north of Gauteng. The community surrounding the mining operations alleged that none of the rehabilitation required by law had been carried out by the corporation since extraction operations began. Represented by the non-profit legal support

[85] Magistrates Court for Regional Division of Limpopo Province, The State v Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya (RN126/13) (2014).
[86] Londiwe Buthelezi, "Director Gets Jail for Land Damage," *IOL Business Report*, February 10, 2014, http://www.iol.co.za/business/companies/director-gets-jail-for-land-damage-1.1644299.

organisation, the Centre for Environmental Rights, the community convinced the National Prosecuting Authority to lay criminal charges against Blue Platinum. Both the corporation and its Managing Director were convicted of contravening NEMA, NWA and the MPRDA – particularly Section 24F of NEMA, which prohibits certain activities without environmental authorisation from a competent authority. The Court ruled that Blue Platinum was operating in areas where they were not authorised to extract clay, and moreover that the corporation had caused extensive damage to the water and environmental resources without the necessary rehabilitation, to the estimated cost of ZAR6.8 million[87].

The most significant concern with this case is that the DMR did not bring Blue Platinum and Maponya to court itself. Instead, after a number of years, the community had to compel the National Prosecuting Authority to challenge the corporation's activities. The DMR is in fact mandated to enforce mining legislation – including the implementation of environmental commitments. That it did not do so has unsettling implications for the future of environmental rehabilitation. Moreover, the community had appealed to the DMR to take action against Blue Platinum multiple times prior to this case, without success[88]. That the DMR did not take any decisive action against the mining corporation suggests that it placed emphasis on economic outcomes over environmental outcomes. This is likely because short-term concerns such as employment and economic development have greater significance for politicians than long-term intergenerational rights to the environment. A final major concern is that it took sixteen years after promulgation of NEMA and NWA for

[87] University of the Witwatersrand Centre for Applied Legal Studies, "CEOs Are Liable for Enviro Damage," *Wits Media Centre*, February 7, 2014, http://www.wits.ac.za/newsroom/newsitems/201402/22873/news_item_22873.html.
[88] Centre for Environmental Rights, "Breaking News: Mining Company Director Convicted of Environmental Offences, Suspended Sentence Linked to Cleanup," *CER News*, February 4, 2014, http://cer.org.za/news/breaking-news-mining-company-director-convicted-of-environmental-offences-suspended-sentence-linked-to-cleanup.

a corporate director to be charged with environmental damage. The reluctance of the government to do so before 2014 exposes that it is still grappling with the challenge of moving away from the apartheid system in which mining was unrestricted, due to its significant contribution to the economy.

This is regarded as a landmark judgement in RSA for a number of reasons. The Court did not give Maponya the option of a fine, but only imprisonment. This speaks to the seriousness with which the Court regarded the actions of the managing director, and set a far-reaching standard for future similar prosecutions. It is notable also that the suspended sentence was tied directly to successful and timely rehabilitation of the land, as this speaks to the weight that the Court placed on rectifying the damage done, and intergenerational concerns for the environment. Legal practitioners have assumed that this case will lead to greater accountability in the mining sector, particularly for corporate directors, given the heavy sentence handed down by the Court[89,90]. It is hoped that executives will pay more attention to the environmental risk posed by their operations, with more emphasis placed on implementing environmental management systems to avoid damage, and more resources allocated to environmental compliance measures.

It is clear that Courts are determined to uphold intergenerational environmental rights for citizens, given this strict sentencing. Corporate directors are reasonably assumed to have extensive knowledge of the actions of their organisation – and when these are detrimental for surrounding environmental resources, the Court has shown that non-compliance with legislation will not be treated leniently. This is a positive development for RSA, and gives some hope that the DMR may in the future

[89] Justin Truter, "Environmental Law Compliance - the Noose Is Tightening," *Werksmans Attorneys Legal Briefs*, 2014, http://www.werksmans.com/legal-briefs-view/environmental-law-compliance-noose-tightening/.
[90] Centre for Environmental Rights, "Breaking News: Mining Company Director Convicted of Environmental Offences, Suspended Sentence Linked to Cleanup."

prosecute offending mining companies without frequent prompting by citizens. It also gives hope that corporations may improve their own self-monitoring, and that this ruling might become an effective deterrent against a hitherto-prevailing culture of disregard for environmental resources and intergenerational rights to them in the mining sector.

It must however be emphasised that mining is not the only situation in which government has been found inadequate at compelling a move away from apartheid policies. Education has continued to experience widespread segregation, even though reducing racial division in this sphere was a key policy for the pre-independence ANC party[91]. Unfortunately, the share of the national budget assigned to education has been decreasing since 1994, with central government relying on localised and municipal efforts to ensure that schooling is affordable for all students[92]. Moreover, the extent of desegregation is largely a result of parental urging, rather than explicit government advocation; this has meant that the inequalities of apartheid have, to a great extent, been perpetuated into post-apartheid RSA political circumstances. On-going inequality in education manifestly reflects the imbalances that also still exist in the domain of mining.

5 Acid Mine Drainage

5.1 History

Discovery of gold in 1886 in what was then the sovereign Boer Republic of Transvaal precipitated the Witwatersrand Gold Rush – three thousand people moved on to a site that was later named Johannesburg. Four years after this initial discovery, there had been a ten-fold growth in population in the area, all of whom were seeking

[91] Anthony Lemon & Jane Battersby-Lennard, "Emerging Geographies of School Provision in Cape Town, South Africa," *Geography* 94, no. 2 (2009): 79–87.
[92] Anthony Lemon & Jane Battersby-Lennard, "Overcoming the Apartheid Legacy in Cape Town Schools," *Geographical Review* 99, no. 4 (2009): 517–538.

their fortunes in the extensive goldfields that had been uncovered[93]. Although the geology of the formation of these goldfields is disputed[94], what is not disputed is the major contribution they have made to the economic development of RSA. This has continued into present day, with mining contributing eighteen per cent of the country's GDP and employing over one million people in 2013[95]. The area, now known as the province of Gauteng, is one of the most intensively mined in the world, with 6 billion tons of ore milled since the 1880s[96].

However the legacy of historic gold mining in Gauteng has not had such productive results, as explained previously in this chapter. Predominant among polluters, however, is AMD, which is an issue that is particularly associated with historic and abandoned mineshafts. AMD is highly acidic wastewater characterised by elevated levels of dissolved metals including sulphides, salts and radioactive materials, as well as a very low (acidic) pH. The USA's Environmental Protection Agency assessed that AMD is comparable to global warming and stratospheric ozone depletion in terms of ecological risk[97], and it has been classed as one of the most important environmental problems currently facing RSA[98].

5.2 Effects in RSA

The reason AMD is particularly associated with historic and abandoned mines is a consequence of Gauteng's geology: porous dolomitic strata layered with

[93] "Discovery of the Gold in 1884," *South African History Online*, 2010, http://www.sahistory.org.za/discovery-gold-1884.
[94] H. E. Frimmel, "Genesis of the World's Largest Gold Deposits," *Science* 297 (2002): 1815–1816.
[95] Carel Smit, "The Role of Mining in the South African Economy," *KPMG South Africa Blog*, 2013, http://www.sablog.kpmg.co.za/2013/12/role-mining-south-african-economy/.
[96] Peter Rose, "Long-Term Sustainability in the Management of Acid Mine Drainage Wastewaters – Development of the Rhodes BioSURE Process," *Water SA* 39, no. 5 (2013): 583–592.
[97] S. Oelofse, "Mine Water Pollution – Acid Mine Decant, Effluent and Treatment: A Consideration of Key Emerging Issues That May Impact the State of the Environment," *Emerging Issues Paper: Mine Water Pollution (DEAT South Africa)* (2008).
[98] S. Diop, S. Ekolu, & F. Azene, "Acid Mine Drainage Research in Gauteng, Highlighting Impacts on Infrastructure and Innovation of Concrete-Based Remedial Systems," *American Geophysical Union, Fall Meeting* (2013).

impermeable gold-bearing strata[99]. There is a substantial karst aquifer system underlying these strata – and the permeability of karst systems means that there are fewer opportunities for contaminants to be filtered out before entering underground water sources[100]. Extracting the gold-bearing layers leaves a void in between the porous dolomitic rocks, so that water from underground aquifers can then rise up and begin to flood the now-empty mine shafts. Moreover, the absorbent dolomite is susceptible to chemical weathering, and the increased permeability will expedite the flushing of any contaminants, including heavy metals and acids, into surface- and ground-waters[101].

This is avoided during active mining because pumps are used by mining corporations to withdraw water in order to access the mineral seams. It is treated before discharge back into underground sources. However once mining has stopped, pumping also ceases, and voids become new flowpaths for groundwater[102]. Water and oxygen undergo complex chemical reactions with sulphide minerals left exposed in the mineshafts, creating a toxic sludge. This seeps into the surrounding bedrock and pollutes ground-water sources. Furthermore, gold is often located near uranium deposits – so decant often contains radioactive uranium as well[103]. It also rises up through the porous dolomitic karst system and contaminates surface-water sources in

[99] P.J. Hobbs & J.E. Cobbing, "Hydrogeological Assessment of Acid Mine Drainage Impacts in the West Rand Basin, Gauteng Province," *CSIR Report No. CSIR/NRE/WR/ER/2007/0097/C* August (2007), http://hdl.handle.net/10204/3348.
[100] Frank Winde & EJ Stoch, "Threats and Opportunities for Post-Closure Development in Dolomitic Gold Mining Areas of the West Rand and Far West Rand (South Africa) - a Hydraulic View Part 1: Mining Legacy and Future Threats," *Water SA* 36, no. 1 (2010): 69–74.
[101] E.S. van Eeden, M. Liefferink, & E. Tempelhoff, "Environmental Ethics and Crime in the Water Affairs of the Wonderfontein Spruit Catchment, Gauteng, South Africa," *TD: The Journal for Transdisciplinary Research in South Africa* 4, no. 1 (2008): 31–58.
[102] The International Network for Acid Prevention, "Sources of Acid Rock Drainage, Neutral Mine Drainage, and Saline Drainage," *GARD Guide*, 2012, http://www.gardguide.com/index.php/Chapter_4#4.3_Sources_of_Acid_Rock_Drainage.2C_Neutral_Mine_Drainage.2C_and_Saline_Drainage.
[103] A.R. Turton, "Can Water Governance Deepen Democracy in South Africa? Towards a New Social Charter for Mining," *International Journal of Water Governance* 1 (2013): 65–87.

a process known as 'decant'[104]. The first decant of acid mine water was recorded in 2002 from abandoned mine shafts near the town of Randfontein, forty-five kilometres west of Johannesburg. It flowed northwards into the Wonderfonteinspruit catchment and then into a dam in the Krugersdorp Game Reserve where it killed a sizeable volume of aquatic life[105].

AMD occurs extensively in Gauteng due to the substantial gold seams that span the area. Gold exports amount to one-third of RSA's foreign-exchange earnings, making Johannesburg the country's economic capital[106] and also producing ten per cent of the GDP of the African continent[107]. Although RSA is still the third largest producer of gold globally, gold mining is in decline[108]. With a seventy-five year history, there are numerous abandoned mining works across the province, with more to come as mines reach the end of their productive life and close down. Consequently, groundwater has become progressively contaminated[109,110].

Research has suggested that flow from Gauteng goldfields could potentially flood the Cradle of Humankind UNESCO World Heritage Site, and pollute water in Kruger National Game-park; it has already contaminated Robinson Lake in Krugersdorp to pH2, and tainted soil profiles in specific catchment areas with heavy

[104] Oelofse, "Mine Water Pollution – Acid Mine Decant, Effluent and Treatment: A Consideration of Key Emerging Issues That May Impact the State of the Environment."
[105] Lindsay Bremner, "The Political Life of Rising Acid Mine Water," *Urban Forum* 24 (2013): 463–483.
[106] RSA Office of the Auditor-General, *Report of the Auditor-General to Parliament on A Performance Audit Of The Rehabilitation Of Abandoned Mines At The Department of Minerals and Energy*, 2009, http://afrosai-e.org.za/sites/afrosai-e.org.za/files/reports/rehabilitation_of_abandoned_mines_at_the_dme.pdf.
[107] C. Schultz et al., "Gold, Scorched Earth and Water: The Hydropolitics of Johannesburg," *Water Resources Development* 22, no. 2 (2006): 313–335.
[108] Winde and Stoch, "Threats and Opportunities for Post-Closure Development in Dolomitic Gold Mining Areas of the West Rand and Far West Rand (South Africa) - a Hydraulic View Part 1: Mining Legacy and Future Threats."
[109] P. Oberholster, "The Current Status of Water Quality in South Africa," *A CSIR Perspective on Water in South Africa (Report No. CSIR/NRE/PW/IR/2011/0012/A)* (2010).
[110] van Eeden, Liefferink, and Tempelhoff, "Environmental Ethics and Crime in the Water Affairs of the Wonderfontein Spruit Catchment, Gauteng, South Africa."

metals[111]. There is the potential for 350 megalitres of daily discharge of AMD in the province – far more than current treatment plants can effectively manage[112]. More alarmingly, in early 2014 a major mining company operating in RSA revealed that AMD flows have breached what are considered to be environmentally critical levels in the Western Basin catchment area of Gauteng. Site visits exposed uncontrolled decant of AMD from abandoned mine works in the area, the flow from which is moving toward the Cradle of Humankind[113].

5.3 Geographical Spread

Figure 1 below exposes the potential extent of the area of AMD spread in Gauteng, which is throughout the Witwatersrand goldfield shown in the figure[114]. It displays the location of the goldfields in Gauteng as well as position of the goldfields within RSA. While the map shows only currently viable goldfields, the area is also littered with historic and abandoned mines. This suggests that the entirety of the Witwatersrand Goldfields, located within the heart of RSA, is at risk from unchecked spread of the pollutant through ground- and surface-waters.

[111] Oelofse, "Mine Water Pollution – Acid Mine Decant, Effluent and Treatment: A Consideration of Key Emerging Issues That May Impact the State of the Environment."
[112] Oberholster, "The Current Status of Water Quality in South Africa,."
[113] "Western Basin Is an AMD Disaster Area, Says Mintails," *Mining News*, April 15, 2014, http://www.miningne.ws/2014/04/15/western-basin-is-an-amd-disaster-area-says-mintails/.
[114] Great Basin Gold Ltd. Canada, "Great Basin Gold Ltd. Annual Report," *US Securities and Exchange Commission*, 2002, http://yahoo.brand.edgar-online.com/EFX_dll/EDGARpro.dll?FetchFilingHTML1?ID=2366559&SessionID=s7Vc6jaFdFYPiT7.

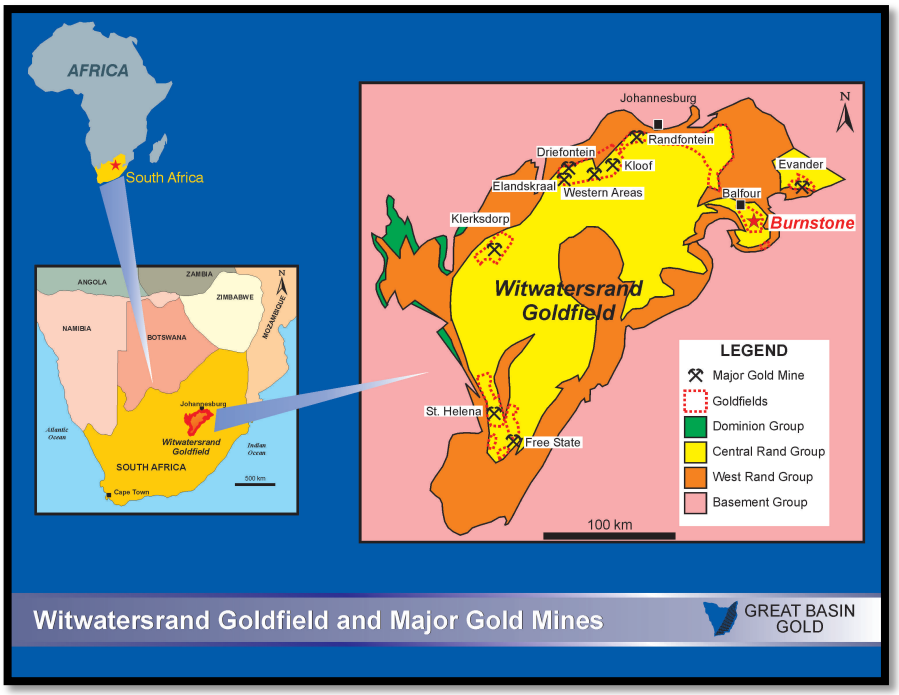

Figure 1: Possible Extent of AMD Spread in RSA

This figure demonstrates that there is an extensive area of the country that could potentially be affected by AMD, with significant implications for water quality. Since AMD is an exceptionally toxic pollutant, this has ramifications not only for use of water by current citizens, but for future generations as well. Action taken by government, civil society, and non-State actors to manage AMD will be introduced and explored in the forthcoming chapters.

Although legislation is clear on culpability for harm, there has only been a single court case in which a mining corporate director has been personally indicted for pollution, even though there have been other situations in which the government could arguably have brought offenders to court [115]. This case will be explored further in the subsequent section. Government unwillingness to prosecute has been an obstacle to avoiding long-term water pollution, particularly with AMD – research

[115] Personal communication, Gareth Morgan (DA Shadow Minister for Water and the Environment) 11/01/12. Also see Mail & Guardian newspaper article suggesting environmental harm is being caused at a particular mine, while the government has not taken any action to deal with it: http://mg.co.za/article/2010-06-11-aurora-mines-toxic-water-crisis (Accessed 15/02/12)

suggests that some polluted sites may never be restored to pristine state, as the toxins are ineradicable[116]. AMD, explained in Chapter II, is highly acidic water resulting from extractive activities. It has been determined to be as serious an ecological risk as global warming and stratospheric ozone depletion[117]. Due to extensive historical and current gold mining in Gauteng, is facing growing volumes of irreversibly contaminated groundwater[118].

That such damage has materialised without more proactive undertakings by the government to address and check expansion of AMD is an obvious violation of Constitutional water and environmental rights. In the absence of a definitive stand from the government or an explicit framework for management, contamination is continuing apace. Given the lack of a national vision on managing and reducing AMD impact[119], it could be posited that the government is failing its fiduciary duty to uphold environmental quality for all citizens. This failing is threefold: negative externalities of mining operations are being passed onto citizens, government is not taking punitive action against polluting mines, and abandoned mines – designated as government responsibility under MPRDA – are not treated and restored as prescribed.

The first failing, that negative externalities are passed onto citizens, can be seen in the degradation of surface and groundwater quality. This has been significant since 2002 due to effluent flow from mines, thus putting citizens at risk from water of indeterminate and unacceptable quality[120]. Not upholding environmental quality for current and future generations violates Section 24 of the Bill of Rights.

---

[116] CSIR, *Acid Mine Drainage in South Africa, Briefing Note 2009/02*.
[117] Oelofse, "Mine Water Pollution – Acid Mine Decant, Effluent and Treatment: A Consideration of Key Emerging Issues That May Impact the State of the Environment."
[118] Oberholster, "The Current Status of Water Quality in South Africa,."
[119] CSIR, *Acid Mine Drainage in South Africa, Briefing Note 2009/02*.
[120] van Eeden, Liefferink, and Tempelhoff, "Environmental Ethics and Crime in the Water Affairs of the Wonderfontein Spruit Catchment, Gauteng, South Africa."

The second failing is that government is not taking action against polluting mines. Legislation enabling government to act does exist: NEMA compels mining operations to take all reasonable measures to prevent degradation of environmental resources, the context of the NWA suggests that polluters have to clean up pollution on both their own and others' property, and the MPRDA enables government to prosecute holders of mining permits for failure to utilise corporate funds for rehabilitation. However, these Acts are not being fulfilled. Lack of government effort violates Section 27 of the Bill of Rights, as government is not taking "reasonable legislative and other measures, … to achieve the progressive realisation of rights"[121].

The third failing, that abandoned mines are not rehabilitated by government, is considered in a 2009 report by the Council for Geosciences[122]. This indicated that there were 5,906 abandoned mines in RSA at end of May 2008, all of which pose health risks to surrounding communities because of AMD. However, as of October 2009, the government had only rehabilitated five of the nearly 6,000 mines under their purview[123]. Moreover, independent research found that there are 2,000 more derelict mines than the government has classified in the Report, which are, estimated to take eight hundred years to rehabilitate, at a cost of ZAR100 billion[124]. Inadequate government response to ensure rehabilitation is a contravention of both Sections 24 and 27 of the Bill of Rights – the environment is not protected for citizens, and reasonable measures to guarantee clean water into the future are not taken.

---

[121] "Constitution of the Republic of South Africa - Chapter 2: Bill of Rights," 1996, http://www.gov.za/documents/constitution/1996/96cons2.htm. *(Section 27)*

[122] RSA Office of the Auditor-General, *Report of the Auditor-General to Parliament on A Performance Audit Of The Rehabilitation Of Abandoned Mines At The Department of Minerals and Energy*.

[123] Ibid.

[124] E.S. van Eeden, M. Liefferink, & J.F. Durand, "Legal Issues Concerning Mine Closure and Social Responsibility on the West Rand," *TD: The Journal for Transdisciplinary Research in Southern Africa* 5, no. 1 (2009): 51–71.

Government has completed some steps against AMD – but these have been ineffectual and lacked follow-through. A Team of Experts was assembled by the government in 2010, and reported back to Parliament in December of that year with recommendations for AMD management, to be implemented as a matter of urgency. Yet by January 2012 these operations had still not commenced, and they have only just stared recently, in part[125]. With no action plan and without government censure, mines continue to operate unsuitably, AMD contamination proceeds rapidly, and IGE concerns are disregarded. Since environmental impacts and the spread of AMD are likely to persist for years, there will be far-reaching implications for intergenerational policy-making. The government's fiduciary duty to protect natural resources for current and future citizens is not observed, and the bond between government and citizens is eroded by exploitation of this trust.

6 Conclusion

The Dublin Statement on Water and Sustainable Development, adopted by the UN in 1992, included guiding principles for the reform of water law: water should be managed holistically, valued as an economic good as well as a basic human right, and stakeholders should be fully involved in policy formation[126]. The Statement officially acknowledged growing global water scarcity and the finite nature of water resources. These principles were upheld in the creation of RSA's water policy, with the right to daily access of a basic volume of potable water recognised as paramount. These principles are enabled through the Constitution's redistributive potential, and the establishment of the public trust doctrine for management of water resources. They are also enabled through the NWA's principles of equity and efficiency, which

[125] Information from interview with Dr Jo Burgess, Research Manager for Mine Water Treatment and Management at the Water Research Council
[126] "The Dublin Statement on Water and Sustainable Development."

guarantee access to information and open political decision-making to public consultation. Moreover, and as the quote at the start of the chapter showed, NEMA also requires that environmental issues (including water) be considered equally with and alongside social and economic factors, for present and future generations.

Axioms of IGE bind together the Constitution and all subsequently-enacted legislation; concern for future generations is mentioned not only in the Bill of Rights, but also in NWA, NEMA, MPRDA, and IP&WM legislation. Government is obligated to consider the public good in water allocation and make policy decisions not as a political party, but for the benefit of current and future citizens. However, RSA's progressive legislation is complex to bring to completion, accordingly IGE is not necessarily accorded pre-eminence in implementation of legislation, as will be examined in Chapter V.

Although the MPRDA has a similar guiding philosophy to NEMA and NWA in the government's trust relationship with resources, the mining sector is treated with a level of partisanship that gives it more latitude than the Constitution strictly allows. Neither the government nor mining corporations are made to internalise the negative externalities of extractive operations, therefore citizens are obligated to take on waste production and water pollution and defray current and future costs. That damage to water resources has materialised without action by government is an incomprehensible oversight of its Constitutional duties to uphold environmental rights. Moreover, government negligence of NWA requirements has not been challenged by citizens – based on epistemic proceduralism, the NWA is a highly regarded piece of legislation. Since its promulgation, the Act has been judged on prescribed procedures, rather than the outcomes of those procedures, culminating in lack of focus on after-effects of the Act.

The Constitutional IGE framework gives the government opportunities to extend the temporal authority of legislation, through utilizing IGE as a tool for empowering and improving the lives of current and future citizens. However, two issues make this less attainable: first, AMD is a complex issue and places pressure on the government's financial and technical resources, and second, as mining policy becomes more permissive, water policy is transformed from equity-focused to economic productivity-centred[127]. The government has not accomplished its regulatory role, leaving industry in a position of self-regulation. This duplicates the apartheid government's stance, under which the lucrative mining industry was exempted from governmental oversight[128]. Four Acts and three departments currently manage AMD, while management of mining waste requires two pieces of legislation and nine departments – all making regulation increasingly ineffective through excessive bureaucratization[129].

This chapter made the following assertions: water, a scarce resource in RSA, is a right for current and future citizens. The government is enlisted as fiduciary trustee to protect water resources for citizens and safeguard quality standards. Mining has complicated this duty, firstly through legislation that places more minimal requirements on mining operations than on other development undertakings, and secondly by allowing unchecked expansion of AMD in Gauteng, thus generating water pollution throughout the most economically vibrant region of RSA. The government has not formulated a management plan to deal with AMD, nor has it challenged polluting mining industries – and this violates citizens' water rights. The

[127] Movik, *The Dynamics and Discourses of Water Allocation Reform in South Africa (STEPS Working Paper 21)*.
[128] Adler et al., "Water, Mining, and Waste: An Historical and Economic Perspective on Conflict Management in South Africa."
[129] Ibid.

purpose of legislation is abrogated as the government fails to fulfil responsibilities to long-term environmental decision-making.

The next chapter will move from reviewing what legislation is, to exploring why legislation was generated and developed in this way. It will propose that the Constitution and associated legislation reflects a particular philosophical background. The chapter will explore why regulatory difficulties exist, with focus on congruencies between the foundational philosophies of RSA's regulations and of IGE principles.

CHAPTER IV: PHILOSOPHY OF THE RSA CONSTITUTION

> *"The United Nations Conference on the Human Environment (1972) declared the 'right to environment' to be a right no less important than the right to life itself."*
>
> *- B.T. Mekete & J.B. Ojwang*[1]

1 Introduction

The Preamble of RSA's progressive Constitution explicitly recognizes the injustices of apartheid, and aspires to alter these, creating a new society based on social justice and equal rights for all[2]:

> *We, the people of South Africa,*
>
> *Recognise the injustices of our past;*
>
> *...*
>
> *We therefore, through our freely elected representatives, adopt this Constitution as the supreme law of the Republic so as to –*
>
> *Heal the divisions of the past and establish a society based on democratic values, social justice and fundamental human rights.*

The previous chapter suggested that government is abrogating this Constitutional purpose; this chapter will analyse the philosophical foundations of RSA's jurisprudence, to appreciate the background to debates on intergenerational equity (IGE) in application. Principles guiding the National Environmental Management Act (NEMA), National Water Act (NWA), and Mineral and Petroleum Resources Development Act (MPRDA) are drawn both from international environmental law and from the Constitution, thus their fundamental philosophies will include IGE as a

[1] Mekete and Ojwang, "The Right to a Healthy Environment: Possible Juridical Bases." *(pp.155)*
[2] "Constitution of the Republic of South Africa." *(Preamble, pp.1243)*

keystone for policy[3]. The purpose guiding IGE philosophy is the creation of a new framework for legislative decision-making that has as its primary objective the minimisation of misapplication and waste of natural resources. In the current global political discourse, IGE is a moral concept that is highly theoretical – the challenge is to transform it into a normative obligation to which citizens and the government can be held accountable. This chapter reviews how IGE is regarded in RSA jurisprudence, based on the philosophies that are assumed to have influenced drafters of the Constitution.

Through the 1996 Constitution, IGE was established as crucial guiding principle, granting RSA the opportunity to become one of a few nations globally granting equal rights to all generations. However, observance of intergenerational policies is on a precipice. The chapter proposes that IGE is an implausible outcome in RSA, due to government inability – under the pressure of AMD – to balance the competing interests of environment and economics. This proceeds from inherent shortcomings of the philosophies that inform legislation when put into action. These limit full implementation of regulations for the benefit of current and future citizens.

2 Kantian Principles In The Constitution

As was first suggested in Chapter II, the philosophies of Kant and Rawls are influential in philosophy of IGE. Immanuel Kant regarded dignity as the cornerstone of human rights, and believed that equality was achieved through equal opportunity[4]. He believed that people should act only insofar as their chosen action would not

[3] M. van der Linde & E. Basson, "Environment," in *Constitutional Law of South Africa (2nd Edition), Volume 3*, ed. W. Woolman, M. Bishop, and J. Brickhill (South Africa: Juta Legal and Academic Publishers, 2002).
[4] Coyle, "The Intellectual Commitments of Modern Juridical Thought."

interfere with the freedom of others[5]. This is a concept of duty that extends beyond the personal, emphasising a general, societal obligation to moral conduct. It is the opinion of the author that there are some similarities between Kantian theory and RSA's Constitution, particularly in dignity and human rights. This chapter sets out not so much to prove this assertion as to illustrate it, which shall be explained below.

Universal Law of Freedom

The essential principle of Kant's theory is the existence of a universal law of freedom to act on one's choices, as a person endowed with reason and capable of moral action[6]. Thus, laws are valid only if they warrant those actions that an honourable person would nevertheless have chosen to undertake[7]. Arguably, a Constitution is itself Kantian, as Kant contented that in absence of legal dictates, individuals would disagree about justice – possibly inducing violent conflict. To avoid dissent, legislators should create recognised and definitive laws[8]. Laws make up a social contract wherein citizens give up some individual freedoms in order to achieve a more advantageous communal freedom[9]. Under such a Constitution, the rights of citizens derive from interactions with the social group to which they belong, while community rights proceed from actions of individuals[10]. Objects in the surrounding environment are regarded as common possessions, with rights to private use guided by moral laws[11]. This is especially applicable to water rights in RSA: water was reclassified through the Constitution as a common-pool resource available

[5] Immanuel Kant, *Critique of Practical Reason and Other Works on the Theory, (Translator T. K. Abbott), 6th Revised Edition* (London UK: Longmans, Green And Co., 1909).
[6] Fletcher, "Law And Morality: A Kantian Perspective."
[7] E. Caird, *The Critical Philosophy of Immanuel Kant (Volume II)* (Glasgow UK: James Maclehose & Sons Publishers, 1889).
[8] Jeremy Waldron, "Kant's Legal Positivism," *Harvard Law Review* 109, no. 7 (1996): 1535–1566.
[9] Caird, *The Critical Philosophy of Immanuel Kant (Volume II)*.
[10] Ibid.
[11] Ibid.

for the benefit of all citizens, based on reasonable use, and with obligations for the current generation to ensure its availability for future generations.

Kant's concept of morals has a fundamentally legal basis, as he posits that morals do not depend on human experience, but are universal and independent of human unpredictability[12]. RSA's Constitution similarly considers regulations to have an inherently moral nature – the country's laws follow universal moral principles of dignity, and gain validity on this basis. In particular, the Founding Provisions of the Constitution list human dignity as one of the most important values upon which the new State would establish itself, mirroring Kant's stance on dignity. The Constitution gives priority to remedying the injustices of apartheid through enactment of moral regulation in a Kantian interpretation of human dignity – Kant believed freedom to be an innate human attribute, signifying equality among all people[13].

There are two particular Kantian principles that are significant to consider in the context of RSA: a price cannot be set on the attainment of human dignity, and human dignity may not be commoditised. These beliefs encompass individual rights, enabling citizens to act in certain ways. They equally impose limits on permissible actions – thus citizens should be seen not only as beings whose humanity should be respected, but also as beings whose bodies should not be utilised in counter-purposive actions that could lessen that humanity[14].

Human dignity rights integrate with environmental rights when dignity is diminished through environmental degradation[15]. Accordingly, the NWA applied such moral rights as would require positive action by government in their defence,

[12] Coyle, "The Intellectual Commitments of Modern Juridical Thought."
[13] Caird, *The Critical Philosophy of Immanuel Kant (Volume II)*.
[14] S.M. Shell, "Chapter 13: Kant's Concept of Human Dignity as a Resource for Bioethics," *Human Dignity and Bioethics: Essays Commissioned by the President's Council on Bioethics* (2008), http://bioethics.georgetown.edu/pcbe/reports/human_dignity/chapter13.html.
[15] This idea is abstracted from: van der Linde and Basson, "Environment."

while also generating policies restricting action that could engender social harm. Preventing citizens from engaging in counter-purposive action includes disallowing degradation of the shared environment, misuse of water and other natural resources, and use and enjoyment of resources without thought to the corresponding rights of future generations to do the same. Human dignity is thereby realised through the capacity for moral action in dealings with other citizens and with the natural environment.

Duties Over Rights

Another significant Kantian principle is a focus on duties over rights[16]. Jurisprudence based on principles of human solidarity and morality generates obligations owed by the government to its citizens[17]. These obligations impose on the government to enact laws that will ensure the self-worth of each citizen is uplifted, and citizens are able to experience lives of value and moral worth. A further duty of the government, and corollary to their obligation to uphold citizens' dignity, is to treat citizens as responsible beings who are culpable for the impacts of their actions. This is particularly demonstrated in RSA through holding corporate directors personally liable for polluting activities arising from the actions of their corporation. This principle can be assumed to significantly influence RSA's jurisprudence[18]. The Constitution was written in such a way that the dignity of human self-determination in moral matters is respected, but also to guide action to assure morally commendable conduct and to restrict dishonourable desires.

---

[16] G.P. Fletcher, "Human Dignity as a Constitutional Value," *University of Western Ontario Law Review* 171 (1984).

[17] These include: protection of water environments against pollution and overuse, and ensuring that all citizens are able to access an adequate supply of water for daily needs; preservation of a high standard of environmental quality; and promotion of environmentally-sustainable mining operations. All were explored in Chapter III.

[18] P. Guyer, "The Cambridge Companion to Kant" (Cambridge UK: Cambridge University Press, 1992).

Chapter II suggested that IGE is becoming a more significant global environmental philosophy and that more countries are adopting this principle into national legislation. This is demonstrated in RSA by recurrent mention in the Constitution of the phrase "for current and future generations." Particularly important in this regard are Sections 24 and 27 of the Bill of Rights, first introduced in Chapter III. Both declare that present and subsequent generations have the right to services from the government that will protect and ensure continued and future access to environmental resources. In a Kantian light, these rights demonstrate that the government has significant duties toward citizens, based on concepts of social cooperation and moral community values. The obligation of the government to protect the environment from pollution, degradation, and unsustainable development, and to ensure that each citizen has access to sufficient daily water, indicates the focus on human dignity as both a vital ethical guide and a respected legal objective. That significant protection of environmental resources is included in the Bill of Rights indicates an overarching Kantian influence in two ways. First, a price cannot be set on achievement of human dignity, and attempts to lessen it through environmental degradation must be halted. Second, establishing moral action by government and citizens should be the objective of the Constitution, which establishes the duties of both in the fulfilment of environmental protections.

The 2004 case, *BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs,* was significant in that it defined the precise legal meaning of the word 'environment.' It was defined by Courts as "all conditions and influences affecting the life and habits of man," and thereby incorporated natural, economic, and social surroundings of citizens into this concept

of the environment [19]. According to Kant, interference with the material objects surrounding individuals is akin to interference with their freedom[20] – thus the quality of life experienced by citizens is impacted by environmental conditions.

Courts have also considered the term 'well-being' in Section 24 of the Bill of Rights, which states that citizens have a right to an environment not harmful to wellbeing. They concluded that the term has an open-ended interpretation through the 2007 case, *HTF Developers v Minister of Environmental Affairs and Tourism and Others.* This defined wellbeing to encompass aesthetics, environmental integrity, and a conviction that the environment should be used in a morally responsible manner[21]. Kantian influence can also be appreciated in this interpretation in the restriction of actions that could negatively affect citizen wellbeing by negatively affecting environmental quality.

Critique of Kantian Jurisprudence

Yet, this apparent reliance of lawmakers on Kantian jurisprudence has three important limitations when transforming laws into action. The first is that Kant does not directly address questions of environmental quality and IGE. Consequently, creating a theoretical framework for environmental legislation is problematic; differing interpretations of Kant's body of work may lead to divergent objectives in the resultant body of laws.

The second limitation centres on the concept that valid laws have to be moral laws. This concept suggests there are no exceptions to moral law, even when the alternative is the realisation of human happiness, as Kant believed that failing to

[19] RSA Gauteng High Court, BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs (03/16337) [2004] ZAGPHC 18 (31 March 2004) (2004).
[20] Caird, *The Critical Philosophy of Immanuel Kant (Volume II)*.
[21] The Supreme Court of Appeal of South Africa, HTF Developers v Minister of Environmental Affairs and Tourism and Others (337/06) ZASCA 37; [2007] SCA 37 (RSA); [2007] 4 All SA 1108 (SCA) (28 March 2007) (2007).

uphold the priority of moral laws could produce unjust outcomes[22]. However, this presumes that all citizens have the same ideas of what makes up human happiness – or indeed, that human happiness does not matter as much as the attainment of moral justice. This is a utopian conception, unlikely to be achieved in a nation as complex as post-apartheid RSA, and end results could leave constituents dissatisfied.

The third limitation is that for an action to be considered moral by Kantian standards, it should be carried out with the simple motive of wanting to do the right thing – not out of fear of compulsion or to increase happiness, but out of basic respect for the law[23]. Yet the motivation of citizens to act is unlikely to be prompted purely by deference to legislation – and in fact moral laws could then be disregarded in favour of other incentives. This chapter argues that this latter point is amply demonstrated through the acid mine drainage (AMD) crisis in RSA, as government agents are guided by inducements other than adherence to moral laws[24]. Consequently, responsibilities to uphold environmental quality for current and future generations are spurned, and Kantian moral laws are disregarded by the agents tasked with fulfilling them.

3 Interpretations of IGE in RSA

The author has tried to show how far the philosophical filament weaving RSA's Constitution into a coherent ensemble is Kantian. Yet there is additional, more contemporary legal philosophy that the author believes has also influenced development of RSA's jurisprudence; the subsequent sections attempt to demonstrate how this has also been knitted into legislation. John Rawls, a 21st Century

[22] M.J. Sandel, *Liberalism and the Limits of Justice (Second Edition)* (Cambridge UK: Cambridge University Press, 1998).
[23] Friedman, "Apartheid Now: The Private Lives Of Others."
[24] This will be further developed with examples in Chapter V

philosopher, prioritises liberty, followed by the need to remedy inequalities to provide the greatest benefit to the least advantaged. The overarching objective of the ANC government is to improve the quality of life of all South Africans, and to achieve this through focusing on bettering the most marginalised in the population. The author proposes that this reflects of the spirit of Rawls – and is supported in this assertion by a number of academic sources[25,26,27]. The format of this section follows the logic of Chapter II, to examine how theories introduced there function in application, based on legislation reviewed in Chapter III.

3.1 IGE As Fairness

IGE through Rawlsian justice as fairness can be seen to underpin much of RSA's legislation. This ideology recommends that all citizens are privy to the same undifferentiated rights, and there is positive discrimination for society's worst-off. As suggested in Chapter II, all of Rawls' requirements for a democratic society can be found in RSA's Constitution[28]. Rawls' liberal egalitarianism theories fit well as opposition to apartheid, given that he believed that natural attributes – such as race – and socio-economic circumstances that result from them are morally arbitrary, and that race itself should not be any sort of moral punishment. Rather, he gave precedence to equality of opportunity and wide-reaching liberties[29]. This was particularly important for the new nation, as the ethos of apartheid was separation and privilege based solely on race; the principles of Rawlsian liberty give a structure through which material disadvantages can be eliminated[30]. Moreover, his approach is

[25] David M. Smith, "Social Justice Revisited," *Environment and Planning A* 32 (2000): 1149–1162.
[26] David M. Smith, "Social Justice And The (South African) City: Retrospect And Prospect," *South African Geographical Journal* 86, no. 1 (2012): 1–6.
[27] David M. Smith, "Social Justice and the Ethics of Development in Post-Apartheid South Africa," *Philosophy & Geography* 2, no. 2 (1999): 157–177.
[28] Rawls, *A Theory of Justice: Revised Edition*.
[29] Smith, "Social Justice And The (South African) City: Retrospect And Prospect."
[30] Smith, "Social Justice and the Ethics of Development in Post-Apartheid South Africa."

clearly political, rather than theoretical and abstract – making it straightforward to adapt to the reality of building a new nation[31].

Specifically looking at Rawls' principles: first is the Liberty Principle, by which all people are empowered through identical basic rights. The ANC's 1994 Reconstruction and Development Programme policy framework established that it wanted to achieve the improvement of the life of all South Africans[32]; this includes intergenerational rights to water. Second is the Difference Principle, by which the least advantaged receive greater benefit from policies aimed at the more advantaged. In RSA, this means that inequality is justified insofar as it benefits the poor, black population, and can be seen in the redistribution of water from private to public ownership through NEMA and NWA. Third is the Just Savings Principle, by which all generations bear an equal burden in maintaining the fair society established through the Constitution. The new society, and new citizenship, established through these Rawlsian principles should go beyond ethnicity, so that citizenship allies with the state, rather than having racial connotations[33].

Looking particularly at water, the Free Basic Water Policy guarantees that each citizen has daily access to twenty-five litres of potable water per person, and all citizens are assured identical rights of water procurement[34]. Equal rights to this were entrenched in law through *Residents of Bon Vista Mansions* (Chapter III) [35]. Government's legal obligation to provide water for citizens was tested when a local

[31] David M. Smith, "Back to the Good Life: Towards an Enlarged Conception of Social Justice," *Environment and Planning D: Society and Space* 15 (1997): 19–35.
[32] ANC, "The Reconstruction and Development Programme (RDP)," *The Nelson Mandela Centre of Memory*, 1994, https://www.nelsonmandela.org/omalley/index.php/site/q/03lv02039/04lv02103/05lv02120/06lv02126.htm.
[33] Smith, "Social Justice and the Ethics of Development in Post-Apartheid South Africa."
[34] Department of Water Affairs and Forestry, "Regulations Relating To Compulsory National Standards And Measures To Conserve Water."
[35] Gauteng High Court, Residents of Bon Vista Mansions v. Southern Metropolitan Local Council, Case No. 01/12312 (2001) (2001).

municipality disconnected water supply to an area due to non-payment; the Supreme Court ruled that this constituted a prima facie breach of the government duty to secure the right to water for all. This actualises the conceptual Rawlsian principle that all citizens are free and equal, and society is a fair system of cooperation[36]. It is characteristic of other Court interpretations of the NWA as well.

The Just Savings principle enables a long-term outlook to Rawlsian theory. It advocates that current generations should put aside sufficient capital in order to maintain just institutions for future generations[37]. It further proposes that decision-makers in the theoretical original position will act preferentially toward their own descendants, rather than making decisions based upon generalised good will toward all generations[38]. This is reflected in the RSA Constitution through progressive realisation rights to water – the welfare of disadvantaged citizens is improved over successive generations as water access points are more widely distributed across the country.

The shift of water resources from private property to public resource could also be interpreted as having Rawlsian influence. Under apartheid, ownership of water resources was associated with property ownership by a legal person; this was converted under the 1996 Constitution to public possession of natural resources, with government acting as custodian to preserve them and uphold resource quality[39]. This follows Rawlsian principles of democracy by assuring all citizens are regarded equally under law, with parity of resource rights, and that there is positive discrimination for those who previously had no water access or private property rights. Furthermore, the intention of the Constitution to conserve natural capital into

[36] Rawls, *A Theory of Justice: Revised Edition*.
[37] Richardson and Weithman, *Development and Main Outlines of Rawls's Theory of Justice*.
[38] Thompson, *Intergenerational Justice: Rights and Responsibilities in an Intergenerational Polity*.
[39] Pienaar and van der Schyff, "The Reform of Water Rights in South Africa."

the future, and to respect human life can be seen to have its basis in the maintenance of just institutions for future generations, substantiating the Just Savings Principle.

The slogan of NWA, "Some, For All, Forever" appears particularly Rawlsian in the pre-eminence it gives to establishing a fair society that collaborates for the advantage of all[40]. It recognises through 'Some' that water is finite and demand may outstrip supply; through 'For all' that there is a responsibility to ensure equitable use for the benefit of all citizens; and through 'Forever' that committed sustainable management is required, through assessment of long-term resource conservation alongside short-term development requirements.

An interesting speculation to consider is that the Rawlsian decision-maker in the original position has been assimilated into the RSA Constitution through the Ministers of the Department of Water Affairs (DWA) and the Department of Mineral Resources (DMR), as both hold overall responsibility for making decisions on environmental protection for the benefit of all generations. The DWA Minister makes final decisions on use and allocation of water; the DMR Minister gives final approvals for mining permit allocation. Both are authorised to make legislative commitments that are advantageous for RSA – ideally from the simulated position behind the veil of ignorance – thereby impartially and justly allocating social benefits.

Critique of IGE as Fairness

While Rawlsian political philosophy intends to improve citizens' lives, it has limitations that could detrimentally affect the rule of law in RSA. The original position has been called "implausible" due to its dependency on highly-aware individuals[41]. Those in this position – including government ministers – are assumed

[40] Department of Water Affairs and Forestry, "National Water Resource Strategy: First Edition. Appendix F: Public Consultation."
[41] Clark, "Making Moral Landscapes: John Rawls' Original Position."

to be completely rational, strongly moral, and to have the ability to disregard personal interests to create the best possible communal outcomes for society. This supposed mutual regard is an unlikely idealisation of human nature in a nation that was rent apart by apartheid corruption and discrimination. Many post-1994 government agents were incorporated from the ranks of freedom fighters, and may be guided by a combative and distrustful ethos that could be difficult to put aside for social cooperation.

Moreover, the veil of ignorance, behind which this thesis posited that government agents sit, assumes perfect information. This is impossible to achieve in most developed countries, but even more unrealistic in a developing nation[42]. Without perfect information, can decisions made by government be regarded as fair allocation of social benefits? The final major complication develops from this: government agents behind the veil have privileged access to information – and this promotes the possibility of dictatorship. If government agents are the only ones with full information, they may choose to only partially share this with other agents in society. The government can therefore preferentially mould public opinion, and in this way, legitimise certain uses of power and coercion. Consequently, with regards AMD, citizens could take as irrefutable truth statements by the government that problems are exaggerated and statements by civil society groups are alarmist, and not question the extent of the situation. Such domineering control over information provision and political decision-making would be destructive for RSA's long-term prospects for democracy.

[42] Ibid.

3.2 IGE As Self-Transcendence

A second major set of theories that are reflected in RSA jurisprudence involve the instinctive human desire to identify with and relate to communities, ideas, and values extending beyond their lifetimes, in order to prolong personal influence beyond death. This theory, developed by Ernest Partridge, is known as self-transcendence[43]. This philosophy can be seen in RSA's Constitution in the positive duty accorded to the government to prevent contamination and overutilization of water resources, and in the assurance of sufficient access to potable water for current and subsequent generations. When the government is faced with morally significant decisions affecting the welfare of future citizens, the Constitution requires that it safeguard the sustainable use of natural resources above all, and allow only for reasonable economic and social development[44]. Echoing Partridge's doctrine, the government is given a moral duty to ensure that future generations are able to enjoy the same rights as current citizens, thus to permit development only insofar as it is not detrimental to environmental resources.

This duty is challenged by AMD, which is creating a policy and administrative crisis in RSA. Government has not taken action to address the continued expansion of AMD through Gauteng, so have failed doubly in their obligations. First is in not executing morally significant decisions, due to a lack of national vision to manage AMD and reduce its long-term impact[45]. Second is in not taking positive action to protect water – notably, high-priority recommendations made by a Parliament-appointed 'Team of Experts' in 2010 have not been discharged[46]. Thus government is

[43] Partridge, "Introduction."
[44] "Constitution of the Republic of South Africa - Chapter 2: Bill of Rights." *(Sections 24 & 27)*
[45] CSIR, *Acid Mine Drainage in South Africa, Briefing Note 2009/02*.
[46] Information from interview with Dr. Jo Burgess, Research Manager for Mine Water Treatment and Management at the Water Research Council, South Africa

breaching duties written into the Constitution, and disregarding principles of self-transcendence.

It is possible that Constitutional drafters had some vision of reaching beyond their individual, transient lives to acknowledge and respect the rights of future generations in post-apartheid RSA. Writers did make provision for moral duties that could be owed by the current generation to future generations in formulating positive obligations for the government to protect water resources. This ethos has been carried through into consequent Acts: NEMA places personal liability on corporate directors for environmental harms done by their corporations, and also places a duty on the government to act on behalf of citizens to protect environmental quality[47]. The NWA regards water as an indivisible national asset, which is self-transcendent in the recognition of the value and significance of water resources extending beyond a single generation[48]. The MPRDA vests custodianship of all minerals to the State as a common-pool resource; this obligates the government to promote sustainable mining operations to preserve multi-generational rights, again giving consequence to theories of self-transcendence[49].

Although it is not overtly referenced, the concept of self-transcendence could be deemed to be a fundamental ethic of RSA's Constitution. Connecting current citizens with future generations through sharing in the use and enjoyment of natural resources was an important goal for Constitutional drafters, to guarantee that citizens would not again experience the discrimination and lack of transparency and accountability that characterised apartheid[50].

---

[47] Government Gazette 31789, *National Environmental Management Amendment Act, No. 62 of 2008 (GN 22/GG 31789/09-01-2009)*.
[48] "Number 36 of 1998, The National Water Act."
[49] Government Gazette 23922, *Mineral and Petroleum Resources Development Act (Act 28 of 2002)*.
[50] Dugard, "Human Rights and the Rule of Law in Postapartheid South Africa."

3.3 IGE As Fiduciary Trust

Government committed itself to ostensibly Rawlsian moral obligations to conserve water resources for all citizens, while also utilizing the self-transcendent model of ensuring resources could be used and enjoyed by many generations. There is yet a third IGE philosophy that is reflected in RSA jurisprudence – the planetary trust for environmental resources. Legal practitioner Edith Brown Weiss has written comprehensively about environmental trusts, under which humans are both beneficiaries and guardians of natural resources (see Chapter II)[51]. This involves placing the natural environment in a trust, with the government acting as fiduciary trustee to ensure that future generations experience similar environmental quality standards to present. Constitutional drafters in RSA took this approach, adopting the Anglo-American public trust doctrine to create a new form of water ownership: water belonging to 'all people'.

There are three principles of Brown Weiss' planetary trust: conservation of options, conservation of quality, and conservation of access; all three can be seen to be embedded in RSA legislation[52]. Conservation of options is the protection of the diversity of the natural resource base to ensure that future generations have a selection of choices to satisfy their needs – and this is found in both NEMA and NWA. One of the four guiding principles of NEMA claims that disturbance or loss of biodiversity should be avoided in the first instance[53], while a major objective of the NWA is protection of biological diversity of aquatic ecosystems[54].

---

[51] *See for example*: Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity." *and* Brown Weiss, "Our Rights and Obligations to Future Generations for the Environment."

[52] Edith Brown Weiss, "Global Environmental Change and International Law," *Global Environmental Change* 2 (1992): 250–256.

[53] "Number 107 of 1998, The National Environmental Management Act." "*That the disturbance of ecosystems and loss of biological diversity are avoided, or, where they cannot be altogether avoided, are minimised and remedied" (Section 4:1)*

[54] "Number 36 of 1998, The National Water Act." *"The purpose of this Act is to ensure that the nation's water resources are protected … protecting aquatic and associated ecosystems and their biological diversity" (Section 2)*

Conservation of quality, the transfer on the planet's resources to the future in no worse condition than they were originally received, is seen particularly in Section 24 of the Bill of Rights with the phrase, "to have the environment protected, for the benefit of present and future generations[55]." Moreover the concept of resource sustainability is a critical moral guide for both NEMA and the NWA through the acknowledgement that the ultimate aim of both is achieving sustainable resource use[56].

Conservation of access is the facilitation of intragenerational and intergenerational benefits from the inheritance of natural resources. This is found in the Constitution through the assurance that all citizens will have uninterrupted and unbiased access rights to use and enjoy resources. This is considered fundamental to the operation of NEMA and NWA, particularly given their mandate to reverse the discriminatory policies of apartheid.

These three principles make up the 'planetary trust' – the rights and responsibilities of present citizens to harness and preserve environmental resources[57]. The current generation experiences advantages as a beneficiary of this, but also has duties associated with a trustee role to safeguard the same resources. The duty of citizens to refrain from actions that may result in environment harm is an aspect of civil rights included in Section 24 of the Bill of Rights, as is the duty of the government to prevent environmental degradation and fulfil water access rights[58]. Under NEMA, the government has a duty of care to pre-empt and rehabilitate pollution; under the NWA, the duty of care falls on potential polluters and land users

[55] "Constitution of the Republic of South Africa - Chapter 2: Bill of Rights."
[56] *For example, in The National Water Act's Preamble, "Recognising that the ultimate aim of water resource management is to achieve the sustainable use of water for the benefit of all users"*
[57] Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity."
[58] van der Linde and Basson, "Environment."

to prevent degradation of water resources[59]. This latter point was reinforced in Court, through *Harmony Gold Mining Co Ltd v Regional Director: Free State Department of Water Affairs and Forestry*[60], where Harmony mining corporation was found to have legal duties to prevent contamination of underground aquifers by toxic wastes – including those wastes produced by defunct mines not operated by Harmony Gold. This case will be explored in greater depth subsequently in this chapter.

The architects of RSA's Constitution appear to have been considerably influenced by Brown Weiss, incorporating much of her philosophical counsel into statute. Thus, the duty of the government to uphold fiduciary trust obligations is paramount to the rule of law. Planetary trust rights are exercised collectively, just as individual citizens collectively exercise rights to a healthful environment and water resources. Groups can enforce their environmental rights through standing to take the government to Court that is enshrined in the Constitution[61].

Brown Weiss' concept of intragenerational equity can also be found in the Constitution, through the facilitation of transfers from wealthier members of society to those too poor to take advantage of their planetary legacy[62]. This is effected in RSA through alterations to laws of ownership, reclassifying water resources for the benefit of all citizens. This thesis suggested that the shift in property ownership and water laws followed a Rawlsian notion of democracy by ensuring equal access rights for all, but as Brown Weiss' theories developed from and utilise Rawlsian concepts, there is an apt continuity of theory being put into practice in legislation in this situation[63].

---

[59] Ibid.
[60] Africa, Harmony Gold Mining Company Ltd v Regional Director: Free State Department of Water Affairs and Others (971/12) [2013] ZASCA 206; [2014] 1 All SA 553 (SCA); 2014 (3) SA 149 (SCA) (4 December 2013) (2013).
[61] I. Currie & J. de Waal, *The Bill of Rights Handbook (5th Edition)* (South Africa: Juta & Company Ltd, 2005).
[62] Brown Weiss, "Intergenerational Equity: A Legal Framework for Global Environmental Change."
[63] Edith Brown Weiss, "Climate Change, Intergenerational Equity, And International Law," *Vermont International Law Journal* 9 (2008): 615–627. *Brown Weiss cites Rawls:"... it is important to define*

Brown Weiss' planetary trust has not only been utilised in RSA legal philosophy, but has informed case law elsewhere in the world. Chapter II explored the Philippine Supreme Court case, *Minors Oposa v. Secretary of the Department of Environmental and Natural Resources*, in which the three IGE principles of conservation of options, quality, and access were relied upon to make a legal ruling[64]. Plaintiffs asserted that the logging of virgin rainforests with State-allocated permits caused irreparable damage to current and future generations' environmental heritage; the Court ruled on behalf of the plaintiffs in favour of a case for IGE. The Justices concurred in advising that environmental protection should be respected above development concerns by government, and ruled that the logging licences should be withdrawn on the basis of public welfare. Despite this initial victory, however, *Minors Oposa* has had limited cogency since it was decided in 1994, being cited in only eight cases until 2011. Logging of virgin forests continues apace in the Philippines, and this aspirational Court decision has not been incorporated in more consequential ways in subsequent national legislation[65].

Although RSA's Courts have not yet faced a similar case, this thesis assumes that a similar outcome would be effected if such a dispute were to come before them, since RSA legislation is particularly thorough in safeguarding a healthy environment and water rights for the long-term. Despite this, and as suggested in Chapter III, government action to manage AMD has been lacking, which is a failure by government to uphold its Constitutionally-imparted fiduciary duty. Not only is there

---

our obligations to future generations. For this, we adopt the perspective of a generation which is placed somewhere on the spectrum of time, but does not know in advance where. (See J. Rawls, A Theory of Justice (1971).)"

[64] Supreme Court of the Philippines, Minors Oposa v. Secretary of the Department of Environmental and Natural Resources 33 ILM 173 (1994) (1994).

[65] O. A. Houck, *Taking Back Eden: Eight Environmental Cases That Changed the World* (USA: Island Press, 2011).

an absence of a national management vision[66], but also there is also no action being taken against those agents discharging polluting activities[67]. This has prompted the transfer of negative externalities from mining corporations to current and future citizens – some contaminated sites are so degraded that they may never be restored[68]. Both the duty to conservation of quality and to conservation of options are progressively contravened through government inaction, while the duty to conservation of access will be extensively infringed upon in the next few years if AMD water pollution continues to be neglected by the government.

Critique of IGE as Fiduciary Trust

This thesis has proposed that RSA legislation relies heavily on the trust concept. However, this dependency is likely to lead to strains, as the urgency of current needs begin to surpass those of future generations. RSA has a young population, with median age of twenty-five, so there are significant benefits to planning for future generations. However, with persistently high unemployment rates of 20-25% over the past decade[69], compounded by on-going electricity shortages, high inflation rates, and escalating commodity prices[70], RSA is decidedly poised for conflicts of interest between current demands for goods and services, and what is Constitutionally required for the future. Brown Weiss' theory that people naturally make decisions with the future in mind is as idealistic as Kant's view that the only laws are moral ones. In RSA, politicians tend to be myopically focused on the next electoral cycle, and citizens thus share this short-term perspective; it is probable that

[66] CSIR, *Acid Mine Drainage in South Africa, Briefing Note 2009/02*.
[67] Y. Groenewald, "Aurora Mine's Toxic Water Crisis," *Mail and Guardian, South Africa*, June 11, 2010, http://mg.co.za/article/2010-06-11-aurora-mines-toxic-water-crisis.
[68] CSIR, *Acid Mine Drainage in South Africa, Briefing Note 2009/02*.
[69] Statistics South Africa, "People | Statistics South Africa," 2013, http://beta2.statssa.gov.za/?page_id=737&id=1.
[70] Abebe Aemro Selassie, "What Ails South Africa," *International Monetary Fund, Finance and Development Publication* December (2011), http://www.imf.org/external/pubs/ft/fandd/2011/12/selassie.htm.

commitments to future citizens will be neglected in favour of the insistent voices of currently unemployed and dissatisfied citizens.

Theoretical high-level concepts such as IGE seem workable on paper and in the abstract, however when executed in empirical situations, fail to live up to that promise. Instead, the theory displays a distinct deficiency in pragmatic operation. Laws that are challenging to implement in this way are often overlooked by implementing bodies. Through persistent disregard, the foundations of environmental law are inevitably undermined – as will be RSA's Constitution. The government is at a boundary line of temporal decision-making, and could remain in this backward-looking status quo with economic development as major concern – or it could advance to a global futurity with resource availability for future citizens as priority.

3.4 Obligations And Responsibilities

In IGE literature, some academics draw a distinction between obligations and responsibilities, suggesting that the former is a moral or legal requirement, while the latter is a wilful decision for a certain action[71]. However, Partridge and Brown Weiss do not differentiate between these two concepts, conflating obligation and responsibility into one single construct – an imperative to future generations is analogous with responsibilities of parent to child[72]. The RSA Constitution observes this edict, with one of the chief principles of NEMA being the government's responsibility to maintain, fulfil and ensure respect for the social and economic rights in the Bill of Rights. Moreover, the preamble to the NWA gives the Minister of the DWA the ultimate responsibility for guaranteeing that water rights are upheld for all citizens. These interpretations fuse the legal requirements of obligations with the

[71] Collins, "Revisiting the Doctrine of Intergenerational Equity in Global Environmental Governance (Forthcoming)."
[72] Martin P. Golding, "Obligations to Future Generations," in *Responsibility to Future Generations*, ed. E. Partridge (Buffalo, NY, USA: Prometheus Books, 1981), 61–72.

deliberate selection of responsibilities, thus giving the government both legal and moral duties to maintain a healthy environment for current and future generations. Evident here is the blending of Rawlsian moral theories with Brown Weiss's legal theories into a single coherent action plan.

Integration of legal and moral requirements in this way transforms the government from a simple system by which RSA is administered, into a moral agent evaluating reasons for action based on a set of shared values. Accordingly, the government is capable of right and wrong actions, since it is afforded the potentiality to perceive right and wrong[73]. Moreover, in operating based on a particular set of values, the government is endowed with a conscience that determines the extent to which it follows through with 'right' actions[74]. In this way, the Constitution has refashioned the administration as a government of the mind rather than a government of matter: moral considerations are more important than use of force and enforcement. This comes full circle to the Kantian philosophy that this thesis has presumed informed Constitution drafters, in which human dignity is valued highly and regarded as being beyond commodification.

This also leaves government open to appraisals by citizens of the magnitude of its moral responsibility – government is held responsible through the Constitution for resource protection, and therefore citizens are permitted to evaluate government decisions. Thus government is accountable twice over, holding itself to standards of 'right' conduct and also answering to citizens for moral behaviour. In this way, citizens are accorded legal standing to challenge the government in Court through Section 38 of the Constitution[75]:

---

[73] A. Eshleman, "Moral Responsibility," *The Stanford Encyclopedia of Philosophy (Winter 2009 Edition) (ed. Edward N. Zalta)*, 2009, http://plato.stanford.edu/entries/moral-responsibility.
[74] C.G. Finney, *The Heart of Truth* (Michigan, USA: Bethany House Publishers, 1976).
[75] "Constitution of the Republic of South Africa." *(Section 38)*

> ***38. Enforcement of Rights:***
>
> *Anyone listed in this section has the right to approach a competent court, alleging that a right in the Bill of Rights has been infringed or threatened, and the court may grant appropriate relief, including a declaration of rights.*

Citizens have secured access to the justice system and enhanced means by which to hold government accountable for its responsibilities. Theoretically, this double accountability should make preservation of rights and achievement of social justice easier to realise.

Given the Constitution makes what is morally right also legal, the long-established conflict between morals and law should not exist in RSA legal arena; citizens should not have to make a choice between following moral convictions or the law. This echoes the ethos of Dworkin, introduced in Chapter II, who proposed that there is an unavoidable connection between law and morality[76]. Laws that exist are founded upon the content of existing moral laws. However, this system of being both moral guide and rule enforcer does leave the government open to conflicts of interest in ranking competing moral claims[77], as seen in the 2004 case, *BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs*[78]. The plaintiff, BP Southern Africa, alleged that the government was prosecuting the corporation on economic grounds, using environmental concerns as a smokescreen for discrimination. The Court ruled that environmental concerns, including the right to water, should be considered as on parity with socioeconomic concerns, such as rights to trade. This decision places government in an uncertain position, negotiating equivalent and equally pressing requirements that necessitate different inputs and have very divergent long-term outputs.

---

[76] Dworkin, *Taking Rights Seriously*.
[77] K. Greenawalt, *Conflicts of Law and Morality* (Oxford UK: Oxford University Press, 1989).
[78] Gauteng High Court, BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs (03/16337) [2004] ZAGPHC 18 (31 March 2004) (2004).

Acknowledging law as a system of rules guiding daily action and relationships with others and with the State, the RSA legal system can be regarded as a blueprint for moral education of current and future generations[79]. All citizens will develop a deep understanding of the morals regarded as valuable in society, and this should guide national behaviour (this will be further explored in Chapter VI). In the best possible scenario, this would engender a society in which Kantian human dignity is respected, Rawlsian democracy as equality for all is standardised, and respect for and preservation of the rights of future generations in a Brown Weiss public trust form is respected. Yet, if the government is not able to effectively balance these many parallel rights, it is likely that none of these will be given their full due. It is likely that, in the end, economic development will be accorded greater priority than environmental rights as a less politically-fraught option.

3.5 Case Study: Harmony Gold Mining Co. Ltd.

The 2014 Supreme Court case, *Harmony Gold Mining Co Ltd v Regional Director: Free State, Department Water Affairs and Forestry*, clarifies IGE principles and their interpretation in RSA law[80]. It is one of the few cases to interrogate Section 19 of NWA, "Prevention And Remedying Effects Of Pollution," and sets a precedent that the 'reasonable measures' required to preclude pollution are not restricted to the specific parcels of land owned by a party, but can be widened to include lands owned, controlled, or used by another. The case has direct bearing on the AMD situation, as it enlarges corporate liability for remediation.

The appellant, Harmony Gold Mining Company Ltd. (hereafter "Harmony"), was one of five mining corporations operating in the Klerksdorp-Orkney-Stilfontein-

[79] J. Holland & J. Webb, *Learning Legal Rules: A Student's Guide to Legal Method and Reasoning (3rd Edition)* (London UK: Blackstone Press, 1996).
[80] Africa, Harmony Gold Mining Company Ltd v Regional Director: Free State Department of Water Affairs and Others (971/12) [2013] ZASCA 206; [2014] 1 All SA 553 (SCA); 2014 (3) SA 149 (SCA) (4 December 2013) (2013).

Hartebeespoort (KOSH) basin in Witwatersrand goldfields. Harmony operated in the south of the basin and was surrounded by defunct shafts from historical operations. Sixty years of mining in KOSH basin meant that a network of underground shafts and tunnels existed, linking the northern and southern flanks and creating new paths for flows of groundwater. Water from aquifers in dolomitic subsurfaces seeped into tunnels, and was exposed to acids, salts, iron and heavy metals left exposed in shafts. This produced AMD, which then polluted ground-waters in the KOSH basin.

This case came to Court because the Buffelsfontein mine, undergoing liquidation, was unable to pay for continued pumping of groundwater from shafts to prevent the generation of AMD. The Regional Director of Water Affairs for the Free State, acting on behalf of the DWA Minister, addressed a directive to Harmony and two other mining corporations currently operating, instructing them to share the cost of pumping and treating water in KOSH basin. This included an obligation to deal with pumping from and maintaining defunct shafts and tunnels not on their official property. The directive stated that Harmony was the owner of land on which there was mining activity that was likely to generate pollution, but was not itself taking reasonable measures to prevent pollution from occurring, continuing, or recurring.

Harmony's application in 2012 to Johannesburg High Court to set aside the directive was dismissed, and the case went to the Supreme Court of Appeal in 2013. The appellant's argument in the higher court was that the body on whom the obligation for remediation measures recommended in Section 19 of NWA should fall is the landowner where pollution is occurring. Therefore, since AMD was generated in defunct shafts not actually controlled by the appellant, measures of Section 19 could not become the appellant's obligation to fulfil, being outside of their territorial domain. Crucial to this case was the interpretation of Section 19, extending territorial

limits of pollution measures. Section 19(1) of NWA states that preventing pollution is the responsibility specifically of the landowner[81]:

> ***19 (1)*** *An owner of land, a person in control of land or a person who occupies or uses the land on which –*
>
> ***(a)*** *Any activity or process is or was performed or undertaken; or*
>
> ***(b)*** *Any other situation exists,*
>
> *Which causes, has caused or is likely to cause pollution of a water resource, must take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.*

While Section 19(3) suggests that a government agency can direct the landowner to undertake actions specified in Section 19(1):

> ***19 (3)*** *A catchment management agency may direct any person who fails to take the measures required under subsection (1) to –*
>
> ***(a)*** *Commence taking specific measures before a given date;*
>
> ***(b)*** *Diligently continue with those measures; and*
>
> ***(c)*** *Complete them before a given date.*

Harmony's argument centred on the Act's geographical interpretation. However, the Supreme Court of Appeals again found on behalf of the government, declaring that there was no territorial limit to Section 19; the Court ruled that to interpret 'reasonable measures' as confined to specific parcels of land created a level of inflexibility that was not intended by the writers of the legislation. Instead, the Court advised that interpretation should be dependent on conditions of the individual case. With regards Harmony, 'reasonable' action against pollution would be preventing contamination of groundwater in both active and defunct shafts and tunnels – especially since mines still operating in KOSH basin could share the pumping costs. The Court dismissed the appeal, and ruled that the obligation to take 'reasonable measures' under the NWA cannot be confined to one's own land, but can be extended to lands owned, controlled, or used by another if this is necessary to ensure optimal protection of environmental resources.

[81] "Number 36 of 1998, The National Water Act." *(Section 19)*

In 2014, the case went to the Constitutional Court, where judges dismissed Harmony's application for leave to appeal against the decision of the Supreme Court of Appeals. The Constitutional Court upheld the lower Court's decision that liability for remediation of pollution falls onto landowners. Thus Harmony was required to comply with government directives to continue pumping in the KOSH basin, and to remediate water resources polluted by AMD from operating and defunct mine shafts.

Judges in all Court levels in RSA are informed by Constitutional philosophy, and make findings based upon doctrines informing it. Rawlsian principles can be seen in this case through the importance accorded to mining corporation collaboration in pumping water – in a Rawlsian democracy, society functions as a fair system of cooperation, with all citizens bearing equal burden in maintaining a just society[82]. This has been applied on a micro-scale to mining corporations operating in KOSH basin, which the Court believed should share responsibilities to maintain water resources. Consideration of future generations played a significant role in the Court's decision-making, with Justices making decisions from a theoretical original position, and aiming to improve overall welfare of all of the country's citizens.

The Courts defined water as an indivisible national asset that should be given preference over economic development. This conforms to ideals of self-transcendence, whereby the current generation owes moral duties to future generations, with a responsibility to respect their rights. Making a morally significant decision that will affect future welfare, Courts ruled that mining activity was allowed only insofar as sustainable use and protection of water resources took precedence. Self-transcendence also proposes that humans have an innate need to connect with communities and values beyond a single lifetime – by valuing aquifer resources

[82] Rawls, *Justice as Fairness: A Restatement*.

higher than the economic costs of pumping, Courts acknowledged that use and enjoyment of natural resources should extend beyond a single generation.

The case was decided with reference to Section 24 of the Bill of Rights, under which each citizen has rights to an environment not harmful to health, enforced through appropriate legislative measures and fulfilled through government's fiduciary trust. The Court found that pristine underground aquifers would be irrevocably polluted if Harmony did not take action to pump mine shafts in the area. The three principles of Brown Weiss' planetary trust are also realised in this decision by ensuring that a wide choice of water resources are preserved, maintained in good condition, and fair access to the benefits of underground aquifers is guaranteed among multiple generations.

Section 19 of NWA establishes a positive duty of care for citizens utilising water resources to avoid pollution and degradation, and licences government to issue remediation directives ensuring that these duties are upheld. This case augments the validity of Section 19, and bestows upon the government an increased authority to hold other corporations to similarly high standards of operation. This case is one of the few concerning AMD that has been brought to higher Courts for review; it demonstrates that the Court system does not demur at upholding Constitutional IGE requirements. This indicates a potentially more significant role for Courts as AMD begins to gain criticality on the national political stage. However, since the first Court decision in 2012, this case has not been relied upon by the government to force remediation by other mining corporations. This could be seen as indicating that the government is not upholding its fiduciary role, likely as a result of being unable to resolve the conflicting interests of environment and economic development.

4 Conclusion

Evidence provided in this chapter indicates that IGE may be implausible in RSA due to shortcomings in the philosophies informing environmental and other legislation, which has complicated putting intergenerational laws into practice. RSA's legislation emphasises conservation and protection of natural resources, and guarantees equal rights to resources for all citizens. This has been recognised by Courts, with *BP Southern Africa (Pty) Limited v MEC for Agriculture, Conservation, Environment & Land Affairs* highlighting that Constitutional rights to a water resources are on par with rights to freedom of trade and of occupation[83]. This recognition, while progressive compared to legislation in many other countries, could generate tension between environmental and other rights[84].

Influencing this recognition is Brown Weiss' fiduciary trust, which reflects the concept of water as national asset belonging to all citizens in RSA's Constitution[85]. Water preservation should be considered as an important government goal, with long-term pollution impacts given prominence. Yet this goal encounters obstacles through the growing number of low-income and dissatisfied citizens, who would rather see present improvement in standards of living than holding back of resources for some indistinct future. Thus political figures are induced to disregard their fiduciary trust duties for the environment in favour of immediate results for economic development. Brown Weiss suggests that both public will and political resolve are required to change existing short-termist political systems – but achieving this will be challenging in still-developing RSA.

Rawlsian philosophy reflected in the Constitution also risks shaping public

[83] Gauteng High Court, BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs (03/16337) [2004] ZAGPHC 18 (31 March 2004) (2004).
[84] van der Linde and Basson, "Environment."
[85] Brown Weiss, "Our Rights and Obligations to Future Generations for the Environment."

consciousness in directions other than intended. The original position, from which decisions about the welfare of current and future generations should be made, requires an unreasonable level of moral consciousness from participants, and assumes that they have access to perfect information[86]. This is improbable in a developing nation, and more so in RSA as it endeavours to recover from years of partisan government. Moreover, it is plausible that the current government, required to make political decisions from the original position, could become authoritarian in doing so, relying on coercion to control citizens.

It is the author's contention that it is highly likely that Kantian jurisprudential theory influenced the writers of the Constitution, given the similarities between Kantian theory and South African laws, particularly through the inclusion of moral laws and rights that are realised in the relation of citizens to each other and to their surroundings[87]. Human dignity plays a significant role in ensuring forward progression from the injustices of apartheid. Legislation attempts to achieve ethicality through a social contract wherein citizens forgo certain freedoms to attain a liberty that is cooperative and constructed from moral laws. Under Kantian jurisprudence, judges have full discretion to change the law and act as responsible agents creating moral laws[88]. The Kantian Court institutionalises moral reasoning, with judges devising universal moral principles to guide behaviour[89]. This is amply found in RSA, with judges having the discretion to view Constitutional water rights as progressive realisation rights in *Mazibuko v. City of Johannesburg*[90] (Chapter III), and defining the extent of reasonable remediation measures in *Harmony Gold Mining Co Ltd v*

[86] Clark, "Making Moral Landscapes: John Rawls' Original Position."
[87] Caird, *The Critical Philosophy of Immanuel Kant (Volume II)*.
[88] Coyle, "The Intellectual Commitments of Modern Juridical Thought."
[89] Weinrib, "Law as a Kantian Idea of Reason."
[90] Constitutional Court, Mazibuko v. City of Johannesburg, CCT 39/09 (2009), ZACC 28 (2009).

Regional Director[91].

However, although judges are enabled to interpret the Constitution, they cannot assume the full Kantian juridical role of generating wholly novel laws. This capacity lies with RSA's Parliament and with elected officials who, previous chapters have asserted, have abrogated responsibilities to intergenerationally-equitable outcomes. Since laws are weakly enforced through government agencies, pressure increases on Courts to interpret the law as was Constitutionally intended. This could lead to Court/government conflict, as each increasingly operates with divergent guiding rationales. In turn, this could weaken RSA's progressive regulations, and diminish citizens' belief in moral governance guiding their nation.

There are limitations to Kantian jurisprudential reasoning, and strains in the legal system may result from incompatible interpretations of environmental responsibility. In addition, the Kantian concept that an action cannot be moral unless motivated by wanting to do the right thing may lead to actions by both government and citizens being considered unlawful. This could engender a culture where laws are not respected due to the arduousness of adherence to them. In this way, the limits of Kantian theory determine the deontological confines of the Constitution, and the ability and desire of citizens to act in accordance with legislation. If persistently disregarded, the foundations of environmental law are compromised, and this will have detrimental knock-on effects on the Constitution; the right to a healthful environment may be treated as insignificant with regards the right to life, in contrast to the opening quote. However, if the government does manage to uphold environmental laws to the full extent required by law, then the country will likely be

[91] Africa, Harmony Gold Mining Company Ltd v Regional Director: Free State Department of Water Affairs and Others (971/12) [2013] ZASCA 206; [2014] 1 All SA 553 (SCA); 2014 (3) SA 149 (SCA) (4 December 2013) (2013).

able to progress forward with future citizens as a priority in political decision-making, in an enlightened and revolutionary political culture.

The following chapter progresses from discussing laws and their philosophical underpinning to try to understand how these laws are experienced. Utilising fieldwork findings, individual interpretations of legislation will be investigated, as will the impact of divergent interpretations of IGE on the country.

CHAPTER V(a): METHODOLOGY

1 Introduction

In this chapter I will explore the above issues through the lens of fieldwork, and review the methods I used. I travelled to RSA twice to carry out fieldwork for this thesis, first in January 2012 and second in July 2013. For both periods, I was in the country for just under a month, and carried out interviews with stakeholders throughout Gauteng province. I approached fieldwork from a qualitative perspective, with the aim of gaining a better understanding of the complexities of society in RSA. I carried out in-depth interviews with multiple agents across the range of society, aimed at collecting personal opinions and perspectives – which is the preferred technique for collecting information on a sensitive topic[1]. All data were therefore textual, based on audio-recordings and field notes.

The first fieldwork trip in January 2012, the subject of this particular chapter, focused on gathering the views of agents from the five clusters of the Pentalogue Model in order to elaborate on the views of RSA society as a whole. The Pentalogue Model will be explained further in subsequent sections of this chapter, but for this section, suffice to say that it divides society into five distinct groups, or clusters, based on occupation and livelihood: these are science, government, civil society, media and industry. In January 2012, I met with five people from the science cluster, three members of the civil society cluster, five government agents, four members of industry, and four media cluster representatives.

[1] Family Health International, "Qualitative Research Methods Overview," *Qualitative Research Methods: A Data Collector's Field Guide* (2012), http://www.ccs.neu.edu/course/is4800sp12/resources/qualmethods.pdf.

The second fieldwork trip in July 2013 concentrated on agents from the industry cluster. The objective was to add detail to this cluster's opinions on the environmental crisis in RSA, as well as determine what actions this cluster was taking to manage AMD itself. I met with seven people from mining and related industries, seven people from finance and related industries, four people from other industries, and two people from government. This second set of fieldwork will be explored in Chapter VII(b), and does not inform the findings of the current chapter.

2 Sampling Procedures

2.1 Method

I employed a purposive sampling method, given that I was interviewing a smaller number of agents. I planned that this would help me to avoid the most obvious challenges inherent to a small sample size: selection bias and problems of precision due to high levels of variance from random sampling. Employing case-selection techniques, I aimed to choose representative cases that could provide insight into the wider population. I utilised the 'diverse' method of sampling, which uses a selection of cases that are intended to represent a full range of values identified in the larger population group – and in this research, division of society into distinct clusters achieved this aim[2]. The diverse method allows for both exploratory and confirmatory research, to postulate a hypothesis and then test it[3]. This was beneficial for me, as I both constructed and then corroborated numerous assumptions during fieldwork. In this way, high and low values (and in this case, extreme sides of opinions) were covered in the fieldwork, while attentively selecting cases in this way means that any

[2] Jason Seawright & John Gerring, "Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options," *Political Research Quarterly* 61 (2008): 294–308.
[3] John Gerring,"Case Selection for Case-Study Analysis: Qualitative and Quantitative Techniques," in *The Oxford Handbook of Political Methodology*, ed. J.M. Box-Steffensmeier, H.E. Brady, and D. Collier (Oxford, UK: Oxford University Press, 2008).

case within a category should be typical of that category[4]. Research has suggested that the diverse case method is the most convincing, in terms of representativeness, of all methods utilising a small sample number[5].

2.2 Choice of interviewees

To populate the diverse case method, I applied the snowballing method of sampling[6]. I began by interviewing a few agents across the Pentalogue Model's five clusters; this allowed me to work up to a larger number of interviews from a few key contacts at the start of fieldwork. As my first fieldwork visit focused on engaging with a wide range of agents across society, it was more challenging to snowball. Therefore finding a wide diversity of agents to interview took longer than originally expected. Through friends and colleagues at Oxford University, I was given contact details or introductions were made to approximately five key interviewees.

These initial contacts put me in touch with a wider group, and in this way, I built up the number of interviews I carried out. I made it very clear to my interviewees that I wanted to be put in touch with people who both concurred and disagreed with their point of view, to ensure that I was not locked in to a single way of thinking about any particular issue. It has to be said that luck also played some part in my interviews: the host family with whom I stayed in Johannesburg lived next door to a television presenter whose programme – *Carte Blanche* – had recently aired an episode on acid mine drainage in the city. I had not anticipated being able to meet anyone from the television programme, but was fortunate in gaining access to a number of key contacts through the presenter.

---

[4] John Gerring, *Case Study Research: Principles and Practices* (Cambridge, UK: Cambridge University Press, 2006).
[5] Seawright and Gerring, "Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options."
[6] Leo A. Goodman, "Snowball Sampling," *The Annals of Mathematical Statistics* 32, no. 1 (March 1, 1961): 148–170.

The second fieldwork visit proved less challenging in gaining access to key interviews, as I was assisted significantly by a gatekeeper who was well-connected in the mining and financial industries. This gatekeeper was very enthusiastic about introducing me to suitable agents for my research, and put me in email contact with a great many of the people I later interviewed. His position as a high-ranking executive in a respected corporation meant that his email introductions held significance and I was more likely to receive affirmative responses to meeting requests. It also meant that I came into the meeting from a position of some authority, based on my association with this gatekeeper. Since elite interviewees often have restricted access[7], I was fortunate in being acquainted with a gatekeeper who could open these doors.

My association with the gatekeeper was founded through colleagues at the University of Oxford. The gatekeeper had studied at the School of Geography and the Environment before moving to RSA to take up an environmental position at a major financial corporation. He was eager to assist my research as he had done similar work for his thesis some years previously. Moreover he was intrigued by my research topic, and wanted to understand more about my findings. For these reasons, he was willing to reach out to colleagues in corporations across RSA to introduce me.

I had to be very open when selecting people to interview, given that I had to be able to change course as I was collecting the data, and have the capacity to react to responses from interviewees. I reached out to all of the suggested people that previous interviewees thought would be pertinent, and interviewed all of those who responded affirmatively. They provided further contacts, and the process continued in this way. Unfortunately, there were some who did not respond to repeated interview requests, and I endeavoured to replace these people with other similar interviewees.

[7] Beverley Mullings, "Insider or Outsider, Both or Neither: Some Dilemmas of Interviewing in a Cross-Cultural Setting," *Geoforum* 30, no. 4 (November 1999): 337–350.

2.3 Adequacy of Sample

Over the course of the two fieldwork visits, I carried out interviews with over forty agents. This could be viewed as a limited number, given that I have assumed a province-wide point of view from them. The adequacy of a sample can be determined by four elements: representativeness, sample size, variability in the population, and desired precision[8]. To demonstrate that I carried out sufficient interviews, each attribute will be reviewed. As explained previously, I used diverse case-selection methodology that focused on representative cases intended to be archetypical of the diverse values identified in the population at large. I believe that this ensured that interviews I carried out were representative of views and desires of society at large, keeping in mind the limited resources that will be explained in the subsequent section, "Potential Problems". With regards sample size, I found the criteria of saturation very beneficial. When no new insights were coming out from my interviews and I was beginning to hear repetition of information, this was a useful cue that I was coming to the close of useful qualitative sampling[9].

To deal with the question of variability in the population, the interviews were carried out purposefully – I made sure to speak with agents from each side of the argument, as well as neutral agents such as academics. This meant that a diversity of responses was collected, including those in opposition to each other. I tried as far as possible as well to get similar numbers of interviews from each sector of society interviewed, in order to ensure that no one voice had precedence over others. This should have resulted in informationally representative samples, rather than simply statistically representative.

[8] NIST/SEMATECH, "Populations and Sampling," in *Engineering Statistics E-Handbook of Statistical Methods*, 2012, http://www.itl.nist.gov/div898/handbook/.
[9] S.E. Baker & R. Edwards, "How Many Qualitative Interviews Is Enough?," *National Centre for Research Methods Review Paper* (2012).

The desired precision was determined to some extent by practical considerations of resource budget and time availability. This meant that I did not require a very high level of precision. Moreover, as I was gathering qualitative information, the precision requirements that are applied to qualitative data were not relevant for my work. The precision that I had planned to achieve was, instead, a breadth of knowledge surrounding views on acid mine drainage and water policy in RSA from a number of different professions and sectors of society. Given the wide variety of agents with whom I held discussions, I believe that I achieved this goal.

Overall, the two key issues I considered for sample adequacy were, first, my own confidence in shared features identified across all interviews, and second, cross-referencing these identified shared patterns with what I had previously researched and uncovered about the larger issue[10]. I am certain that the commonalities and cluster viewpoints I identified were real signal rather than simply noise, and therefore are generalizable for the population at large.

2.4 Interview Design and Coding

All interviews were semi-structured, with a set of basic questions put to each interviewee. The study design was iterative, with research questions adjusted based on what was learned in previous interviews. The design was flexible, with responses from interviewees determining which questions were posed next. I was mindful of including probes, both in question form and in non-verbal cues, to encourage interviewees to share additional details and elaborate on their answers[11]. Questions for the first fieldwork visit focused on views of the interviewee on politics in RSA and on the AMD crisis. For the second visit, my questions centred on water risks to

[10] *This idea was developed from:* Ibid.
[11] H.R. Bernard, *Research Methods in Anthropology, Second Edition* (London UK: Sage Publications, 1995).

the industry, including, but not only from AMD, relationships with the government, and their views on policy as a whole in RSA.

Almost all interviewees requested that keep the information they were sharing with me confidential, and anonymised their responses. This had two motivations: first, interviewees knew I was talking to other similar corporations in their sector, and they did not want certain knowledge shared with their competitors. Second, it allowed them to speak more freely, given that they would not have to publically account for details attributed to their names. This has meant that my aggregated writings have not revealed the attribution of information, except for the cluster identifier. Where there are direct quotes in the following chapter, these were cleared with the interviewee ahead of submission of this work.

The majority of subjects consented to interview recording via an iPod-nano device; for the three subjects who preferred not to be recorded, I hand-wrote our dialogue on paper as the conversation was proceeding. AMD was an emotional topic for the interviewees, many of who were explicitly involved with the issue. Topics of government responsibility and societal ability to manage AMD were also contentious. I later re-listened to the recordings and wrote up summarized transcripts of the entire recorded interview[12]; this transcription took place within a few days to ensure I retained a good memory of the conversation. As a method of pre-coding, I bolded significant quotes and passages to make them easier to retrieve post-fieldwork[13].

In writing up the interview (using the MS Word programme), I created a wide right-hand margin in my dialogue notes. This allowed me to annotate the transcripts with my preliminary observations, in order to carry out a thematic analysis. I created a series of labels – employing the Descriptive Coding method – to summarize topics

[12] The Appendix contains a list of interviews, along with transcripts of two of the interviews carried out
[13] Johnny Saldaña, *The Coding Manual for Qualitative Researchers*, 2nd ed. (London UK: Sage, 2013).

discussed, and also wrote these category label in the right-hand margin space next to the discussion to which it applied[14]. I allocated colours to particular themes for ease of reference and to facilitate differentiation. I also made sure to keep track of unusual narratives and forceful or deviant arguments that had been made in specific interviews, in order not to lose the human aspects of the interviews in the coding process[15]. I had to re-code frequently in the process of refining the data; the final labels include a number of sub-categories. For example, in the second fieldwork visit I created the below codes for interviews with mines, financial organisations, and government:

- Environment
    - Acid mine drainage
    - Water
    - Environmental risks
- Relationships
    - Investors
    - Regulatory body
    - Responsibility
- Regulation
    - Capacity
    - Lending

Use of these wide-ranging themes allowed me to find commonalities and patterns among interviews, and effectively interpret our conversations. Given the "fuzzy" boundaries within this type of categorisation, I often found that multiple categories were assigned to a single sentence[16]. Grouping different interviews under these labels meant that meanings were made clearer, and patterns of behaviour could be identified right across society. It allowed me to move from the application of fieldwork, back to the abstraction of theory, through applying thematic classifications

[14] Ibid.
[15] Medecins Sans Frontieres, *A Guide to Using Qualitative Research Methodology*, 2002, http://fieldresearch.msf.org/msf/bitstream/10144/84230/1/Qualitative research methodology.pdf.
[16] R. Tesch, *Qualitative Research: Analysis Types and Software Tools* (New York, USA: Falmer, 1990). (pp.135)

to practical issues[17]. Thematic analysis was carried out for both fieldwork trips, but was done separately for each, given the divergent themes of interest that emerged. The methodological approach I utilised permitted me to find common themes and concerns across society, and to begin to pull together a rendering of RSA society.

3 Positionality in Research

Of great consequence to my fieldwork was positionality – in carrying out research, I was conscious of my identity as white, female, Zimbabwean, and academic[18]. I thus employed a feminist methodological approach in interviewing the predominantly male, South African, political and business elites. How this approach differs from a standard (patriarchal) approach is that the feminist perspective looks at events in an on-going context with a broad focus, rather than using predefined theories with a specialised focus. Furthermore, feminist topics of study give greater attention to socially-meaningful issues that are related to scholarly literature, rather than topics derived from scholarly literature and chosen for their contribution to it. Finally, feminist methodology relies on understanding increasing as research continues, while the standard approach relies on testing pre-made hypotheses[19].

Awareness of my positionality was particularly crucial during the second fieldwork visit, when I met with executives from financial and mining sectors, who were not concerned with academic implications. My experience mirrored that of Cornwall, in that the most successful approaches to men – where I developed a good relationship for gathering information – were when I was forthright and presented

[17] Saldaña, *The Coding Manual for Qualitative Researchers*.s
[18] Mullings, "Insider or Outsider, Both or Neither: Some Dilemmas of Interviewing in a Cross-Cultural Setting."
[19] Linda McDowell, "Women/gender/feminisms: Doing Feminist Geography," *Journal of Geography in Higher Education* 21, no. 3 (1997): 381–400.

myself as a powerful agent[20]. Overall, I was more aware of my femininity and of how I present myself in diverse interview situations.

Although I used semi-structured interview techniques, I found it was often most beneficial to let interviewees speak at liberty. I took an interpretive approach that gave prominence to human agency – which was an important topic of understanding for this thesis. It also gave prominence to the interviewee's subjective interpretation of the situation in RSA, which was again essential for a thorough comprehension of norms and beliefs that guide decision-making and action in society[21]. This may have also been helped by the fact that I was viewed as an 'outsider,' and therefore neutral, so interviewees may have felt more comfortable with sharing frank, truthful opinions with me[22]. I held an outsider position because as a Zimbabwean, I was unconnected with RSA politics; as an academic, I was unconnected with industry; and as a female, I was unconnected to the majority of male banking and mining agents with whom I spoke.

It must be assumed, however, that my success was to some extent also facilitated by my partial knowledge of the sector, built up through research before fieldwork and through successive interviews. To a limited degree, this permitted me to be an insider – which could have put interviewees more at ease, as they would have perceived that they were speaking with a person who understood the technical and political issues they faced. This was a more egalitarian and less exploitative

[20] J. Cornwall, "A Case-Study Approach to Lay Health Beliefs: Reconsidering the Research Process," in *Qualitative Methods in Human Geography*, ed. J. Eyles and D. Smith (Cambridge UK: Polity Press, 1988), 219–32.
[21] Sherry Gorelick, "Contradictions of Feminist Methodology," in *SAGE Qualitative Research Methods*, ed. Paul Atkinson and Sara Delamon (London UK: SAGE Publications, 2011).
[22] Mullings, "Insider or Outsider, Both or Neither: Some Dilemmas of Interviewing in a Cross-Cultural Setting."

relationship from which to gather information from participants[23]. As was Mullings's experience in Jamaica, my position as a "temporary insider" meant that I gained the trust of interviewees, while still maintaining an important impartial status[24].

3.1 Power Relationships

My positionality made me more sensitive to power structures within organisations and in relationships across organisations and societal clusters – and thus particularly suited to carrying out intricate qualitative case study work such as this[25]. In thinking about the power differences that existed between my interviewee and myself, I was led to a deeper understanding of power imbalances that exist across RSA society[26]. Moreover, these power imbalances were helpful in that many interviewees were more willing to share their knowledge with someone appearing less knowledgeable than them. Interviewees often appeared flattered by the fact that I was willing to listen and learn from them about an industry in which they had significantly more experience.

It was very encouraging to note that even though I was interviewing from a position of lesser power, all interviewees treated me with great respect. At no point did I wait an excessive length of time to meet with someone, and for the most part, meetings were kept without rescheduling. During interviews, agents gave me their full attention, without answering their phones, email, or being otherwise distracted. This may have been the result of three factors: first, the preponderance of interviewees were very happy to share their opinions on government policies, country politics, and

[23] Linda McDowell, "Doing Gender: Feminism, Feminists and Research Methods in Human Geography," *Transactions of the Institute of British Geographers, New Series* 17, no. 4 (1992): 399–416.
[24] Mullings, "Insider or Outsider, Both or Neither: Some Dilemmas of Interviewing in a Cross-Cultural Setting."
[25] McDowell, "Doing Gender: Feminism, Feminists and Research Methods in Human Geography."
[26] Pamela. Moss, "Taking On, Thinking About, and Doing Feminist Research in Geography," in *Feminist Geography in Practice: Research and Methods*, ed. Pamela Moss (Oxford, UK: Wiley-Blackwell, 2002), 1–17.

AMD, as these are emotional topics on which they were pleased to have a willing listener. Second, my position as a University of Oxford academic imparted reputability to my interviews – as one of the leading universities in the world, I believe that the 'Oxford' name opened some doors in RSA that otherwise may have remained closed. Finally, the gatekeeper who introduced me to the second set of interviewees was highly respected in the field, and this lent a greater air of respectability to that round of interviews.

4 Potential Problems

I was mindful of the ethics involved in fieldwork. In canvassing the opinion of industry, government, science, media, and civil society agents, I was aware of being caught in the middle of serious political disagreements, with strong opinions expressed in all five clusters. The feminist methodological approach necessitates building a relationship with the interviewee as part of the research process, as a subjective rather than objective approach; I had to make a decision about whether to share my own feelings and thoughts on the situation, in keeping with this approach[27]. I found that it was challenging to keep to a neutral position while also not lying to interviewees who expressed opinions that were either contrary to scientific evidence or were contrary to my own moral worldview.

As well as acknowledging this contention, I anticipated other problems that I possibly could have faced during fieldwork, and took steps to prevent these. My interviews took place at multiple locations across Gauteng province, to which I was obliged to drive myself, given the limited public transport available in RSA. As a newcomer to the city, I made sure to corroborate directions of each interview location both on my car's navigation system and on Google Maps. Furthermore, living in the

[27] McDowell, "Doing Gender: Feminism, Feminists and Research Methods in Human Geography."

suburbs of the city of Johannesburg meant that I had to be aware of crime, including carjacking and muggings. In travelling around and working at fieldwork sites, I made sure to be vigilant about this issue.

Additionally, I considered problems with the methodology itself. Fieldwork was primarily qualitative, with little focus given to quantitative aspects. This may have limited my comprehension of the acid mine drainage issue. However, it is my opinion that in building up from personal dialogue and beliefs, I was able to gain greater appreciation of connections across societal clusters, while still being reflexive about the particular effect of my presence on the fieldwork[28]. As well, case study work suggests unique understandings into organisations, but dishonest motives of interviewees may result in the gathering of unsound information[29]. Thus, I made sure to be sceptical about details gathered, so that my research was less susceptible to systematic inaccuracies.

For the three interviews for which recording was not consented and information had to be hand-written, there is a possibility that I missed writing down some details. Moreover, writing notes during the interview meant that my conversation with these three interviewees was not as uninhibited as was the case with recorded interviews. This potentially could have affected the information they were prepared to share with me. The types of questions I asked could have been influenced by my participation as participant and observer, and moreover could influence how I perceived and recorded the initial data, and how I structured my field notes[30]. This could then have had knock-on effects on the coding of data. It is difficult to

[28] Gordon L. Clark, "Stylized Facts and Close Dialogue: Methodology in Economic Geography," *Annals of the Association of American Geographers* 88, no. 1 (March 1998): 73–87.
[29] Ibid.
[30] Adler P.A. & Adler P., *Membership Roles in Field Research* (Newbury Park, CA: Sage Publications, 1987).a

completely avoid issues of personal involvement influencing outcomes, but awareness of this at all stages of research should have avoided significant bias.

Finally, I was cognisant of the pragmatic and logistical issues affecting case selection[31]. Choice of particular cases can be influenced – often unconsciously – by the researcher's familiarity with the language and culture of the location in which fieldwork is carried out, as well as by the way in which the researcher gained access to the data or interview. These pragmatic considerations can be very influential in the case-selection process. My expectation is that in anticipating these issues, I was more effectively able to deflect their impacts.

[31] Gerring, "Case Selection for Case-Study Analysis: Qualitative and Quantitative Techniques."

CHAPTER V(b): COMMUNITY EXPERIENCE OF WATER LAWS

> *"Truth is, nobody actually knows what will happen, and none of the other countries in similar situations know either… The only thing we know for sure is that if you let mine water decant and you don't do anything, it'll wreck large parts of the country."*
>
> *- Dr Jo Burgess*[32]

1 Introduction

Intergenerational equity (IGE) is the leitmotif of RSA's Bill of Rights, guiding legislation that was promulgated after the Constitution. Yet although affirmed through multiple institutions of government, fulfilment of IGE is impeded by acid mine drainage (AMD), which is jeopardising Gauteng's long-term water supply. Attempts to transform IGE from a philosophical concept into a normative obligation for government and citizens have faltered, with short-term motives taking precedence instead. This is a consequence of limitations in the philosophies informing the Constitution when applied to the existing political circumstances, as explored in the previous chapter. It is further exacerbated by miscommunications across society, which this chapter will consider. Thus RSA finds itself in a governance crisis as a result of AMD mishandling.

This chapter reviews the differing interpretations that citizens have of the principles of IGE in economic and social transactions, and why citizens believe that the government has abrogated its responsibilities to IGE. Given that the Constitution reflects Kantian philosophy, this chapter is based on the Kantian claim that the foundations of law are not situated in the government, but in interrelationships of

[32] Information from interview with Dr Jo Burgess, Research Manager for Mine Water Treatment and Management at the Water Research Council of RSA

people[33]. Through evidence-based analysis, the chapter reviews the confidence of citizens in their government's ability to complete its Constitutional responsibilities, and interrogates how AMD has impacted upon this confidence.

The chapter utilises a framework known as the 'Trialogue Model,' in which three distinct social clusters – government, civil society and science – are identified[34]. The model has been expanded by this author with two additional clusters – media and industry – to create the 'Pentalogue Model'. Connections among groups in the Model indicate communications, and the substantiality of interfaces between groups reveals the quality of governance experienced. Together, these allow the Model to determine how effectively IGE laws are protected. Such a division of society finds its support in the liberal democracy theories of Robert Dahl, who suggests that governance in a democratic society is dependent on constant dialogue and dispute among all members, with each cluster grouping having equal impact on decision-making[35]. This ties in closely with Kant's claim that systems of law are constructed through societal relations of self-determination and rationality[36].

A separation of social groups in this way allows for complex governance interactions to be better understood, and also demonstrates that strong communication pathways are required for productive governance to occur. In RSA, the Model shows that, unfortunately, pathways are rudimentary, thus communications are poor and members of society view the movement toward IGE contrastingly – all resulting in substandard governance. Briefly, the views of each Model cluster will be introduced: the science cluster has little confidence in the government, but is itself unable to adequately communicate its research to the government. The government cluster is

[33] Weinrib, "Law as a Kantian Idea of Reason."
[34] A.R. Turton et al., *Governance As A Trialogue: Government-Society-Science In Transition*, *The Economics of Peace and Security Journal* (Germany: Springer-Verlag, 2007).
[35] Dahl, *A Preface to Economic Democracy*.
[36] Weinrib, "Law as a Kantian Idea of Reason."

confronted by short-term concerns that are more pressing than AMD if political favour is to be kept, and schisms between political parties disrupts productivity. The civil society cluster feels isolated from more powerful clusters and powerless to exercise its Constitutional rights. The activist media cluster gives undue focus to problems over solutions. Finally, the industry cluster has detached itself from the whole grouping, feeling unfairly targeted by the other clusters.

The Model indicates that IGE will not materialise organically in RSA simply because it is in statues; accomplishing IGE will require concentrated effort to build up successful connections among groups. Clusters are in need of improved communication channels to merge their dissonant IGE views, to avoid an extended period of poor governance, and to create coherence in the implementation of legislation for IGE.

Both Kant and Dahl's theories that law is the result of social interaction with rational argument, inform this chapter. It will chart the assertion that RSA is at a critical point in AMD management: interactions among clusters are unproductive, and groups lack a common vision of IGE policy. The outcome has been poor governance and substandard enforcement of regulations, allowing AMD to continue apace. Since AMD is expected to cause widespread future environmental damage, IGE – a cornerstone of the Constitution – is not being upheld, with unpropitious prospects for the nation. In this way, impaired communications exacerbate inbuilt flaws in implementing the philosophy informing the Constitution.

2 The Trialogue Model

2.1 Democratic Framework

The Trialogue Model explores how democracy works in practice in RSA, and in order to fully understand the Model, it would be beneficial to develop a richer

understanding of democracy. As this thesis has previously suggested, democracy in RSA was founded on principles of human dignity, and the fundamental equality of all citizens under law, particularly through redistributive standards and positive socio-economic rights. In contrast to older charters and in particular the USA Constitution, the RSA Constitution gives emphasis to group rights, and has enshrined these in the Bill of Rights[37]. This has thirty-one sections of absolute rights for all citizens. Democracy in RSA has been constructed from the concepts of participatory decision-making by all members of society, and from the primacy of human dignity, which are fundamental tenets of Rawlsian and Kantian political philosophy respectively. This should result in a fair society of equal opportunity and undifferentiated rights for all. That surrounding environmental resources are common possessions is an integral part of this concept; that government should protect them is also enshrined in legislation.

This thesis assumes that this form of democracy has evolved from Aristotle's 'polis,' or political community. The word 'political' itself originates from Aristotle's conception of the political community in a city-state, based on the ancient Greek cities of Athens, Sparta, and other cohesive small units[38]. It was Aristotle's opinion that in these units, religious, cultural and political concerns were closely linked with each other. Life in the polis allowed citizens to reach their full potential, and to be capable of ethical behaviour and actions. It differs from the modern State in this, as the modern State exists to safeguard the ability of citizens to be happy, to secure

[37] This is not 'group rights' as envisioned under apartheid policy, where citizens were classified into a specific racial population group. Instead, this is group rights as envisioned by Brown Weiss and Rawls, and as contrasted with individual rights.
[38] Fred Miller, "Aristotle's Political Theory," *The Stanford Encyclopedia of Philosophy (Fall 2012 Edition) (ed. Edward N. Zalta)*, 2012, http://plato.stanford.edu/archives/fall2012/entries/aristotle-politics/.

tranquillity, defence and contracts, and to uphold justice – but not to guarantee that any one citizen achieves his or her absolute capabilities[39].

The polis is a fundamentally democratic notion, based on the idea of overarching equality – every man has identical ability and chance to rule or be ruled. Furthermore, since the polis entwines political matters with cultural and religious, a citizen is regarded as a fundamentally political being; citizens cannot but engage in political debates and actions. In this way, citizens are not able to be self-sufficient outside of the polis. They must live in political relationships with others in order to live well[40]. What this means is that humans can only achieve their full potential when living with others in a cohesive grouping, and all are pursuing the same objectives through common actions. This is reflected in the RSA Constitution through its emphasis on the equality of all citizens, and the desired outcome of identical rights for current and future citizens.

However, surveys in RSA have shown that citizens actually understand democracy to be the delivery of socioeconomic goods[41] – and since progress toward this has been protracted, especially in water services, there is dissatisfaction with democracy and with the State. These same surveys found "lukewarm" support for democracy that has not increased since 1995 when the country gained majority rule[42]. These dissatisfactions will be explored in detail in what follows, as the democratic background of the model is used to interpret fieldwork findings.

---

[39] Joseph Connole, "The Polis in Aristotle's Politics," *Federalist Publicola*, 2008, http://federalistpublicola.com/2008/03/24/the-polis-in-aristotle's-politics/.co

[40] Asher Horowitz, "'Man Is a Political Animal': The Method of Aristotle's Politics (Lecture Series)," *Department of Political Science, York University*, 2010, http://www.yorku.ca/horowitz/courses/lectures/12_political_animal.html.

[41] R.B. Mattes, "South Africa: Democracy Without the People?," *Journal of Democracy* 13, no. 1 (2002): 22–36.

[42] Ibid.

2.2 Introduction To The Model

It is assumed that the principal force affecting democratic development in RSA is political equality. This is defined as nonpartisan participation in governance processes, with no one person or group having complete sovereignty over decision-making[43]. Not only is equality necessary for a competitive political system, but is also indispensable for the spread of other moral values such as freedom, allowing citizens to self-determine societal principles[44]. Dialogue and reciprocal exchanges maintain political equality – most comprehensibly illustrated through the "Trialogue Model," first put forward in Agenda 21 at the 1992 UN Conference on Environment and Development. It was created as a means to encourage governments to participate alongside non-governmental organisations and consumer groups, in order to best maintain high environmental standards[45].

The Trialogue is made up of three clusters: government, society, and science. It is a framework for good governance, culminating from effective interactions among social groups. It was not widely used in water governance literature until the mid-2000s, when researchers developed the Trialogue and applied it to context of RSA; water research institutions in the country have since extensively employed it. It is an uncomplicated, theoretical construct defining groups involved in governance, simplifying associated processes, and defining a hierarchy of organisation. It emphasises participation of all sectors of society, a paramount concern for liberal democracies such as RSA.

[43] R.A. Dahl, *Democracy and Its Critiques* (Connecticut, USA: Yale University Press, 1989).
[44] Dahl, *A Preface to Economic Democracy*.
[45] L. Godfrey, "Ecosystem Governance And The Trialogue Debate: An Overview Of The Trialogue Relationship And The Engagement Along Interfaces," in *Governance As A Trialogue: Government-Society-Science In Transition*, ed. A.R. Turton et al. (Germany: Springer-Verlag, 2007).

This thesis posits that it is grounded in Dahl's theories of liberal democracy, regarding political equality as the apex of democratic governance[46]. The Model highlights that no agent is inherently worthier – all interests should be given equal respect. This is especially important in RSA, where apartheid created significant divisions in society, requiring wide-reaching cooperation to overcome. The public for whom the Constitution was written is clearly defined through the Model, which facilitates the creation of public policy and allows for dissent to be addressed. Dahl proposed that argument is the most legitimate instrument in a democracy, as it fosters reciprocal understanding and democratic rule – something manifestly encouraged through the model[47]. Subcultures in Dahl's liberal democracy are self-grouped, and these organic clusters can be interpreted through the model. Subgroups are unable to make viable decisions for governing society on their own, illustrated in the Model through the interlinking of all groups in a coherent ensemble for good governance processes[48]. Subgroups affected by an issue should therefore negotiate with other groups to reach reciprocally-beneficial outcomes[49].

The three clusters, government, society, and science, constitute discrete communities of practice with different norms and values. Interactions among them establish the quality of governance[50]. Good governance can precipitate a shift from short-term thinking focusing on current gains, to long-term decision-making structures informing all aspects of national policy, and will also enable the homogenisation of societal views on IGE. Although the focus on RSA could be said

[46] R.A. Dahl, *On Political Equality* (Connecticut, USA: Yale University Press, 2006).
[47] S. Fabbrini, "Bringing Robert A. Dahl's Theory of Democracy to Europe," *Annual Review of Political Science* 6 (2003): 119–137.
[48] R.A. Dahl, *Polyarchy: Participation and Opposition*, *Democratization*, vol. 54 (New Haven, USA: Yale University Press, 1971).
[49] Ibid.
[50] A.R. Turton et al., *Governance As A Trialogue: Government-Society-Science In Transition* (Germany: Springer-Verlag, 2007).

to narrow the Model's evolution since 1992, it is useful for purposes of this paper, as it has a long-documented application to RSA's governance situation. It also allows for a clearer understanding of why IGE is so difficult to realise in RSA, by enabling independent examination of each cluster's perspective, and by revealing how blockages in communication exacerbate Constitutionally-inbuilt flaws.

Figure 2 overleaf shows the Trialogue Model as it has been utilised by water researchers in RSA[51]. The interfaces among clusters are vitally important – it is here that interactions occur, prompting information exchange and building personal relationships that will result in good governance. With integrated clusters, decisions in one sector will inevitably affect processes in the two others, confirming Dahl's understanding that governance relies on reciprocal action in society[52]. The government cluster incorporates the legislative, executive, and judicial sectors of society, and those institutions involved in governing, enabling problem-solving and strengthening socio-economic development. The science cluster gathers and interprets information to create knowledge and solve problems; knowledge is then diffused into society and informs government policy. Civil society determines societal needs and political legitimacy[53].

[51] Model taken from*:* Ibid.
[52] L. Godfrey, N. Funke, & C. Mbizvo, "Bridging the Science–Policy Interface: A New Era for South African Research and the Role of Knowledge Brokering," *South African Journal of Science* 106, no. 5/6 (2010).
[53] Turton et al., *Governance As A Trialogue: Government-Society-Science In Transition*, 2007.

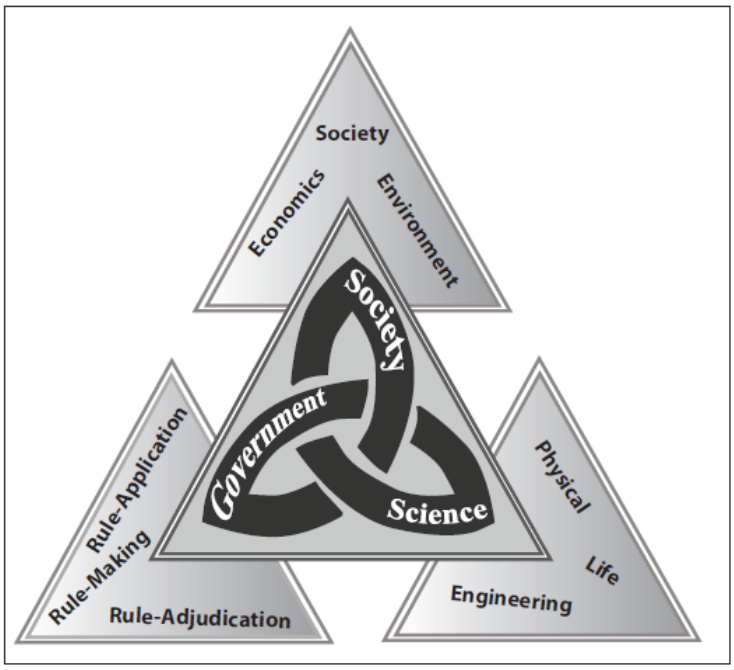

Figure 2: Trialogue Model, depicting interfaces between government, society and science clusters

These clusters are not entirely mutually exclusive: agents from one cluster are able to play a role in another cluster as well. This was reflected in my fieldwork, with two of twenty-one interviewees having roles in more than one cluster. However, such dual agents are not common, and it is more customary that agents will be situated in a single cluster. These multi-cluster agents are also not major agents across the system.

This thesis proposes, however, that two clusters are absent from this original model – so that vital linking relationships are ignored or are absorbed into other clusters. This engenders groups that are too complex to allow for full interpretation of the views on IGE and governance contribution. This follows the Rawlsian notion that not including all possible agents in decision-making is not truly fair, therefore not adhering to justice as fairness that characterises RSA's Constitution[54]. These two groups are the industry and media clusters. Thus, this thesis created a "Pentalogue Model" with an additional two spheres of influence appended, as displayed in Figure

[54] Rawls, *Justice as Fairness: A Restatement*.

3 below, and will progress to discussing the views of society utilising this more comprehensive model[55].

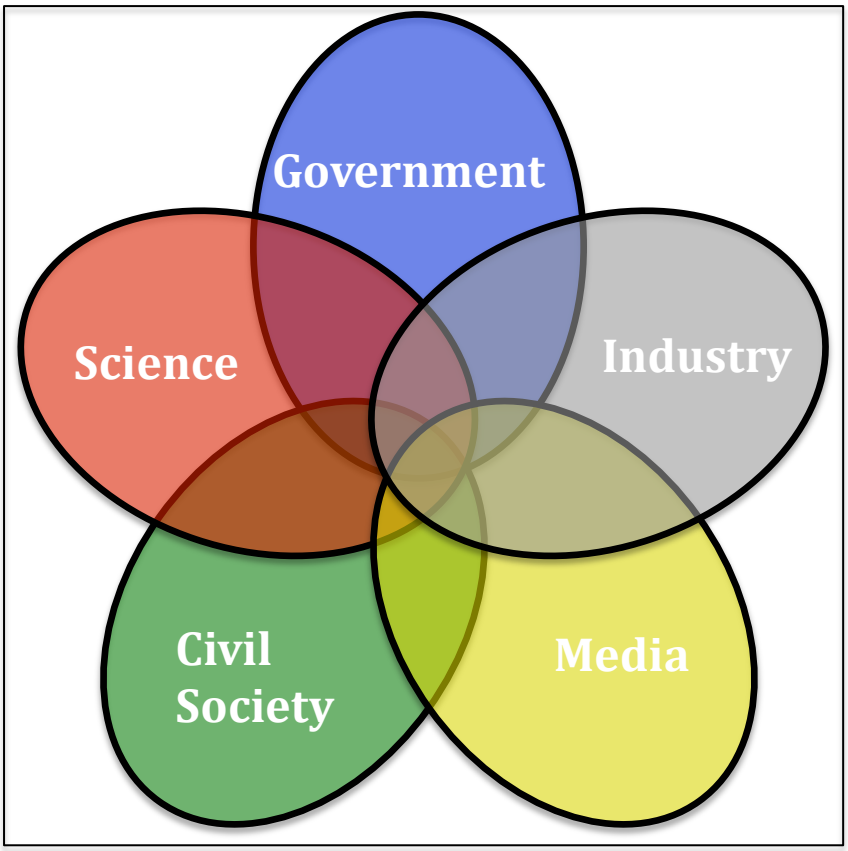

Figure 3: Pentalogue Model, depicting interfaces between government, society, civil science, industry and media clusters

The justification for the specific inclusion of these two extra clusters is that each holds distinct views on IGE in the country, and acts in ways that differentiate them from the three original clusters. The media translates scientific knowledge for wider consumption, challenges government policy, and encourages debate, thus contributing significantly to deliberative democracy. Industry determines RSA's economic success through production processes, and utilises ideas from the science cluster, regulations from the government cluster and employees from civil society. RSA water researchers assumed that media and industry were found on the interfaces

[55] Created by S.M. Gaw, on behalf of SJ Littleford, in Microsoft PowerPoint for Mac 2011 (30/07/11)

of the three original clusters[56], however this thesis judges that media and industry warrant separate consideration due to their consequential contribution to systems of governance.

These two new clusters facilitate inter-group exchanges and catalyse new discourse, knowledge and opinions on IGE, and transform deliberative democracy in this way. The inclusion of five theoretical subgroups in the Pentalogue Model allows interest group politics to be analysed in detail, with full appraisal of cluster contribution to AMD management. Broadening the range of views augments the understanding of interactions among clusters, permitting a greater appreciation for how the systems of law are operated, and prospects for fulfilling intergenerational rights to water.

2.3 Legal Philosophy Of The Model

The Model's academic plausibility is established through Dahl's interest group politics. This suggests that political equality, the objective of RSA's Constitution, is achieved through dialogue, which will cultivate high-quality governance processes and promote achievement of the public good[57]. Participation of the full spectrum of society is necessary to achieve Dahl's democracy. The Model displays the levels of contribution from each cluster, so that if one cluster dominates decision-making, this can be observed – and relationships can be altered to attain more advantageous paradigms for political decision-making.

With origins in encouraging reasoning processes in society to gain solutions beneficial for all, the Pentalogue Model is also compliant with the Kantian philosophy that law derives from citizens' reason[58]. Kantian equality is parity of opportunity, and

[56] Turton et al., *Governance As A Trialogue: Government-Society-Science In Transition*, 2007.
[57] Dahl, *On Political Equality*.
[58] Caird, *The Critical Philosophy of Immanuel Kant (Volume II)*.

is more easily achieved with all of society, represented in the five clusters, given identical chances to affect governance outcomes. Kantian freedom – self-determination through reason – also fits cleanly into the Pentalogue, with communication among all five clusters facilitating democratic negotiations and empowering control of society over political decision-making[59]. The Pentalogue enables clusters to make unforced decisions, giving voice to freedom.

The Pentalogue can also easily be conceptualised as a manifestation of the Rawlsian original position. Agents in clusters gather at a theoretical central position to discuss and decide on policies for common advantage. The Model is an accurate means by which to demonstrate the fair system of cooperation that Rawls regards as democracy, as all five clusters will utilise interfaces to participate in governance, giving rise to a balanced power infrastructure[60]. Moreover, in sharing information along interfaces, clusters are permitted access to details otherwise unknown; the participatory circle of knowledge enables agents to make better-informed decisions. Thus the Rawlsian requirement of perfect information for decision-making can be satisfied.

Given its basis in interest group politics, the Pentalogue has implications outside of RSA. Deliberative democracy as a form of politics is becoming more important due to lowered barriers for entry into policy-making, and greater access to and interaction with government[61]. With an expanding reach of those previously uninvolved in political processes, group participation has to be managed effectively to ensure maximum impact and to prevent more powerful agents from making other voices inaudible. In creating communication channels across cluster boundaries that

[59] Friedman, "Apartheid Now: The Private Lives Of Others."
[60] Richardson and Weithman, *Development and Main Outlines of Rawls's Theory of Justice*.
[61] J.M. Berry & K.E. Portney, "The Group Basis of City Politics," *Paper Delivered at the Annual Meeting of the American Political Science Association, Seattle, Washington USA.* September (2011), http://ase.tufts.edu/polsci/faculty/berry/groupBasis.pdf.

may have been previously impervious, the Pentalogue sanctions increasing the levels of deliberation in policy-making – and this should enable progression toward an integration of IGE views in national politics. The Model stimulates a shift toward long-term planning, as the five clusters share in the benefits and burdens of cooperation in seeking a means to balance current and future interests. This entrenches IGE, already a Constitutional focus, as a more immediate concern.

3 Stakeholder Interviews

For RSA to function democratically, the five segregated but highly interdependent clusters will be required to harmonise goals, allocate responsibilities, and institutionalise collaborative behaviour[62]. Trust relationships built on common objectives are vital to good governance[63]. It will require effective engagement to enable adaptation to critical environmental changes – both short-term reactive action, and long-term proactive behaviour. Fractured interfaces lead to miscommunications and reflect damaged trust relationships, leading to a dearth of cooperation, with each cluster having differing interpretations of IGE.

For all five clusters, interface dynamics were mapped and governance implications extrapolated. As will be explored below, interaction on some interfaces created lasting partnerships with a sense of shared responsibility; conversely, a lack of trust and poor communications across other interfaces impeded relationships.

3.1 Science Cluster

Science cluster agents have little respect for the government, contending there is little technical ability in government to implement the National Water Act (NWA). Although significant intellectual capital was mobilised in government in the transition

[62] N. Nyambe, C. Breen, & R. Fincham, "Organisation Culture as a Function of Adaptability and Responsiveness in Public Service Agencies," in *Governance As A Trialogue: Government-Society-Science In Transition*, ed. A.R. Turton et al. (Germany: Springer-Verlag, 2007).
[63] Godfrey L., 2007, op. cit.

to majority rule in 1994, it has since been lost to cadre employment and brain-drain[64]. Agents in this cluster asserted that the Department of Water Affairs (DWA) can "no longer be considered a functioning entity," crippled by its subordination to the Department of Mineral Resources (DMR)[65]. The science cluster does not believe the NWA's requirements match the skill set of the technocrats who are tasked with its implementation, leading to a disconnect between what is expected of the Act, and what results – environmental protection takes second place to political point-scoring. What is happening instead is that government is "paralysed" by its lack of knowledge, is almost wholly reliant on outside consultants[66].

However, this cluster is incapable of operating to the short-term deadlines of government and media, and this generates a conflict of outlooks. Water researchers in the science cluster view IGE as the apex of RSA legislation and want this to be pursued ahead of all other concerns – however this is impracticable. This thesis contends that scientists should play more active roles in society, empowering citizens in their interactions with industry and government through more effective communications. Forging closer ties with the media cluster is important, as the science/media interface has been undermined by misquotes and by the difficulty of sharing complicated scientific information[67]. This self-referential cluster is often unable to pierce its borders to reach out and share innovative research in water policy, creating a false border that restricts scientific influence and exacerbates poor AMD management.

The science cluster plays an important role in RSA as repository of unbiased

[64] 'Cadre employment' is a common usage term in RSA. It refers to appointment of political loyalists to a particular institution, as a means of reward to that appointed person in a form of economic patronage. This is not merit based, but politically based, hence its negative connotations.
[65] Quote from Dr Anthony Turton, former scientist at the Council for Scientific and Industrial Research
[66] Quote from Dr Jo Barnes, epidemiologist at Stellenbosch University
[67] Information from interview with Dr Jo Burgess: Research Manager for Mine Water Treatment and Management at the Water Research Commission

and accurate information. This is especially salient as the government urges particular interpretations of and approaches to AMD, while silencing opposing standpoints. One interviewee contended that he encountered extreme government opposition when attempting to speak out publically on AMD, and was forced out of his research position[68]. Without widespread utilisation of the extensive amount of scientific research carried out on water and AMD, uptake of the science cluster's views on IGE through the other clusters is unlikely.

3.2 Civil Society Cluster

Agents from a wide range of civil society organisations also believe that the government lacks technical capacity to maintain required environmental standards, and do not believe the government is concerned about sustainability or environmental education. Moreover, civil society's perception of government corruption in is high and has risen since 2008, with a resultant decreased trust in elected officials; in 2013, twenty-six per cent of citizens believed that government agents can and do act with impunity[69]. There has also been a decrease in the number of citizens who regard the country as a full democracy – this is a consequence of the belief that elected officials do not respond to requests from citizens[70].

There is a reduced number of civil society groups working on AMD, partly because few citizens are informed enough to participate[71]. It is also because with increasingly pessimistic views of political institutions and political leaders, citizens

[68] C. de Bruyn, "CSIR Criticised for Muzzling One of Its Scientists," *Engineering News Online*, November 25, 2008, http://www.engineeringnews.co.za/article/csir-criticised-for-muzzling-one-of-its-scientists-2008-11-25.
[69] IDASA, *Afrobarometer Summary of Results Round 5: Survey in South Africa*, 2013, http://www.afrobarometer.org/files/documents/media_briefing/saf_r5_presentation1.pdf.
[70] R. Mattes et al., *Democratic Governance in South Africa: The People's View*, AfroBarometer Working Paper, 2003.
[71] Information from interview with Mariette Liefferink, Chief Executive Officer of Federation for a Sustainable Environment (NGO)

are less likely to participate in democratic decision-making[72]. Indeed, only eleven per cent of citizens engage in frequent political discussions, and there has been a steady decline in the number of political protests since 2000[73]. The growing indifference of citizens is exacerbated by a deficiency of democratic civic education – and this cycle is building upon itself. The end result is that long-term democratic behaviour and participation in the decision-making realm could be jeopardised.

The few groups working on AMD believe the DMR to be the biggest hindrance to sustainability in the country, as DMR agents are hostile and refuse to share information. As well, the DMR blocks full enforcement of the NWA and the Mineral and Petroleum Resources Development Act (MPRDA) legislation: mines are awarded licences without the required public consultation, while recourse in the MPRDA to personal liability for corporate directors for pollution is not imposed[74]. Consequently, civil society is denied *locus standi* to challenge the renunciation of government responsibilities to IGE. However, even where cases do come to Court, civil society is inhibited: environmental precedent is undeveloped in RSA, and Courts play a smaller role in ensuring rights than may have been expected, given the strength of environmental legislation. Judges' performance has been "chequered" in environmental cases, with numerous misinterpretations of the National Environmental Management Act (NEMA) by Courts[75].

Civil society mistrusts the government and industry to manage AMD, as these three clusters have conflicting views on solutions and the urgency of implementation. Civil society agents are Rawlsian in outlook, regarding laws as just only if they are

[72]R. Mattes, Y. Derek Davids, & C. Africa, *Views Of Democracy In South Africa And The Region: Trends And Comparisons*, Afrobarometer Working Paper, 2000.
[73]IDASA, *Afrobarometer Summary of Results Round 5: Survey in South Africa*.
[74] Information from interview with Ramin Pejan, lawyer with the Association for Water and Rural Development (NGO)
[75] M. Kidd, "Greening the Judiciary," *Address at the Environmental Law Association Conference, 24 February, Cape Town: South Africa* (2006), http://hdl.handle.net/10394/1743.

fair, and believing it is most important to improve the wellbeing of society's worst-off individuals. Agents from this cluster have claimed that there are few morally-enlightened government agents, so that laws are undermined through constant non-observance[76]. Yet as a result of these misgivings, civil society has become more isolated and more detached from governance discussions.

3.3 Government Cluster

The government cluster is bifurcated along party lines, with ruling African National Congress (ANC) at variance with the opposition Democratic Alliance (DA). ANC politicians did not accept responsibility to deal with AMD, and were concerned with downplaying the situation's severity[77]. Conversely, DA members emphasized the culpability of the current government for AMD and challenges now confronting citizens. The DA suggests that the ANC could ostensibly pursue intergenerational political strategies, as it is expected to be the majority power for at least another decade – and already has been for twenty years. However, the ANC has not learned from its previous mistakes, continuing to create policies for short-term economic gain to the detriment of IGE[78].

The (ANC) government is unwilling to assign liability for pumping mine water to mining corporations, even though the law is on its side, due to the economic influence of these corporations. Government budgets are not enough to cover good research, while unfavourable reports presented by consultants are downplayed and archived without action. The DA believes that the ANC is overwhelmed and constructing patchwork fixes, rather than achieving progressive realisation of rights

[76] Information from interview with Koos Pretorius, Director of the Federation for a Sustainable Environment (NGO)
[77] Information from interview with Ishaam Abader, Member of the ANC, & Department of Environmental Affairs Deputy Director-General for Environmental Quality and Protection
[78] Information from interview with Gareth Morgan: Member of the DA, and Shadow Minister of Water and Environmental Affairs

through long-term solutions[79].

The Deputy Director-General of Environmental Quality and Protection, Ishaam Abader, suggested that the DWA – and not his department – dealt with RSA's water future, even though they share a task-team to manage AMD. This is symptomatic of a detrimental shifting of responsibility between departments and denial of responsibilities to IGE. This was also experienced in the Climate Change sub-department, where the Deputy Director-General Peter Lukey acknowledged that water is an important component of adaptation plans, as water availability in RSA is expected to decrease significantly with the impacts of climate change. Yet AMD is not included in adaptation scenarios. This could be regarded as an abrogation of Constitutional duties, as a major current threat to water supplies is not included in the government's long-term plans for water.

Members of the opposition DA were optimistic about judicial enforcement of IGE, as the judiciary are not affected by political appointment and thus can be regarded as trustworthier. If the Court could become more activist, then it could be used to secure IGE outcomes. There are unsatisfactory communications with civil society and media, engendering under-utilised interfaces. Poor communications within government, particularly between the DWA and the DMR, exacerbate this deficiency. Especially low levels of contact between government officials and civil society have been measures in RSA, which disrupts participatory democratic discussion[80]. Furthermore, the government does not adequately employ scientific research on AMD, so the government/science interface too is becoming inoperative. The government has rejected its obligations toward IGE, due to outside short-term

[79] Information from interview with Rika Kruger, Member of the DA, Caucus Chair for Social Development, Agriculture, Conservation and Environment

[80] Mattes, Derek Davids, and Africa, *Views Of Democracy In South Africa And The Region: Trends And Comparisons*.

pressures – exacerbated by group-think within. These communication shortcomings will effect poor outcomes for governance and IGE.

3.4 Industry Cluster

Industry agents believe that more information-sharing among the five clusters is required to effectively deal with AMD. Agents are concerned by the government's lack of political will to find a solution – and suggested that the issue has become paradoxically over-politicised, which is increasing short-term pressure[81]. Members of this cluster argued that technical incompetency of government has limited decision-making capacity and increased reliance on industry. This results in a lack of regulatory oversight, which has been exploited by particular businesses. The flight of human capital from government, which interviewees referred to as brain drain, compounds these perceived incompetency, hindering long-term thinking by focusing attention on immediate challenges[82]. The cluster further believes that an acute lack of government funding for water purification services increases the financial burden on taxpayers. Moreover, private bulk water suppliers such as Rand Water would like to take action against source-water polluters, but under the terms of NEMA, only the DWA can raise such issues in Court. With insufficient government political will to do so, the result is that IGE policy is disregarded.

Banks, indispensable for underwriting mining projects, confirmed that water is a concern for financing proposals, as scarcity will have significant impacts on southern Africa's economic future. Banks believe that they are acting as secondary regulators through funding decisions that they make[83]. They believe that they are forced into ameliorating the situation by deploying their own technical knowledge and

[81] Information from interview with Brent Baxter, Business Unit Leader for Environmental Services at Golder Associates Consulting (mining consultancy)
[82] Information from interview with Dr Bill Harding, founder of DHS Environmental Consulting
[83] Information from interview with Nigel Beck, Head of Environmental Investment Banking at Standard Bank

commitment to sustainable investing (this particular issue will be further explored in Chapter VII(b)).

Industry agents focus attention on the government responsibility for IGE. This is to be expected, as the public trust doctrine lays the burden on the government and frees industry from responsibility for long-term thinking for the country. However, detachment of the industry cluster from civil society and media – mostly due to confidentiality concerns – has been the cause of confrontations. Industry is uncomfortable in its forced interdependence with government, fearing civil unrest as government struggles to address civil society concerns. As well, it appeared that the views of industry agents on IGE are more pragmatic than the government's, creating discord in policy negotiation between them.

3.5 Media Cluster

Media agents see the role of the cluster as whistle blowing, expanding public knowledge, and pressuring government to take responsibility for its Constitutionally-assigned duties. Unfortunately, journalists are pushed by short-term deadlines and are unable to complete comprehensive research. They are thus regarded as irresponsible by other clusters for uncovering only the problem, and not exploring solutions[84]. The cluster believes that civil society compounds this short-termism, as citizens are consumerist and not interested in informing themselves – there is little community consciousness about water. Even so, media has been able to transform issues into publicised political contentions, forcing the government to act.

The government has proven itself to be unhelpful and obstructive, and with three different DWA Ministers since 2008, media agents have found themselves unable to maintain a connection with the department. Poor communications with the

[84] Information from interview with Hillary Erasmus, former editor of three trade magazines in the water sector

government cluster is largely the result of three factors: lack of media confidence in government, absence of clear communication pathways, and pre-eminence of short-term political desires. Dissent can also result from inherent biases – negative assumptions about government by media agents limit flexibility and impede coping with change[85]. Media regards the government as incapable of making decisions for the long-term benefit of RSA. Instead, they suspect that hidden interests of corporations drive the search for solutions to AMD, as industry hopes to profit from the water crisis[86]. Media agents all agreed that government inaction has worsened the AMD situation.

Lack of government cooperation with the media was regarded as symptomatic of the general decay of the ANC party, which has been compromised by two decades of cronyism and poor institutional memory[87]. This activism does however mean that the media cannot easily refrain from furnishing news stories with a political context. Consequently, its tendency has been to shift blame onto large mining houses as easy targets, avoiding the appreciation that civil society may have to accept some of the historical legacies of mining. Instead, media regards upholding IGE as responsibility of the government, but through poor reporting the cluster substantiates the inaccurate belief that the four other clusters do not also have accompanying responsibilities.

3.6 Discussion

In trying to move toward an ideal democracy, agents from all five clusters will have to interact and discuss issues more effectively, and come to mutually-beneficial decisions for intergenerational outcomes for water rights. In the Pentalogue, theoretically each cluster is given equal opportunity to access and influence

[85] Nyambe N. et al. 2007, op. cit.
[86] Information from interview with Joy Summers, producer for *Carte Blanche* (TV series)
[87] Information from interview with Hillary Erasmus, former editor of three trade magazines in the water sector

governance; domineering clusters can be identified and interfaces modified for greater balance. However, apartheid's legacy – power imbalances in society – is still apparent, and is reflected in current political debates over AMD. Subordination of the DWA to the DMR, itself a relic of apartheid power relations, severely restricts the DWA's ability to fulfil their mission of regulating and conserving water resources.

The government cluster appears to have set aside its obligations, becoming distorted and thus unable to accomplish intergenerational goals. This distortion is furthered by the government's inability to grasp complex environmental issues, through a reliance on non-specialist decision-making that lacks urgency. Accordingly there is intolerance for diversity of opinions and limited critical evaluation. With little conception of the science required for implementation of environmental regulations, the government is almost wholly reliant on outside consultants. Therefore it is inert, unable to respond as required at critical points and unable to fulfil its regulatory role. Moreover, the industry cluster does not feel compelled to communicate with the government to facilitate knowledge interchange and governance between the two.

In this way, interfaces are occluded by unreliability and wariness across the board. Non-egalitarian influences on decision-making means that RSA is unable to become a true democracy as Kant and Dahl had envisioned – more powerful clusters exert greater influence in decision-making, and those with greatest interest in IGE outcomes have least contribution. For equal footing to be achieved in policy creation, all clusters have to realise that intergenerational decision-making requires wide-reaching input.

Although legislatively pioneering, this thesis posits that RSA law is inferior in implementation. According to agents from science, civil society, industry and media clusters, this is largely due to cronyism in government that has sacrificed skill and

understanding for political expediency. The ubiquitous demployment that all clusters identified as detrimental is a failing of the Rawlsian original position – instead of guaranteeing fair and impartial policies of maximal utility for all generations, policy-makers have focused on short-term personal goals. A lack of technical ability destabilises the Pentalogue, as connections across interfaces are too weak to maintain effective interactions.

Cronyism is a further impediment to Kantian democracy, restricting the ability of citizens to utilise their free will to morally-endorsed ends[88]. Cronyism shifts the governance model away from equality of opportunity by providing certain interfaces with privileged access to information. A similar shortcoming is citizens' lack of knowledge about their water and environmental rights. The government, as de jure Kantian head of the family, has not taken the steps required to improve citizen welfare over successive generations through education. This has fostered deficits in all the other clusters by engendering discordant understandings of IGE, and thus reducing the ability to govern collaboratively.

Environment, held in a public trust by the government, is found in the centre of the Pentalogue where the clusters meet, as it is for the benefit of all society. However, as cluster circles distort, the space for this central issue shrinks, and long-term environmental governance is increasingly overlooked. It is important to note that environmental policy under apartheid was used as a tool of racial oppression, and has continued to be perceived in this way by significant sectors of civil society even after 1994[89]. This suggests that there is an underlying mistrust of environmental legislation, which, when compounded by the sluggish way in which the government is fulfilling

[88] Weinrib, "Law as a Kantian Idea of Reason."
[89] Nigel Rossouw & Keith Wiseman, "Learning from the Implementation of Environmental Public Policy Instruments after the First Ten Years of Democracy in South Africa," *Impact Assessment & Project Appraisal* 22, no. 2 (2004): 131–140.

many Constitutional rights, means that many citizens do not believe that environmental issues should take precedence over other pressing needs. The top three issues most important to citizens in RSA are short-term issues: unemployment, crime, and housing[90]. Seventy-six per cent of citizens in a nation-wide survey said that the most critical problem in RSA was job creation, while a slim minority of fourteen per cent said it was water issues[91]. These short-term pressures are outcompeting long-term water rights, as government officials increasingly give them priority.

On-going latent mistrust of environmental matters from the apartheid era is exacerbated by underperformance of government institutions. Academics have suggested that the major weakness of NEMA is a lack of systemic implementation procedures in the Act itself, which makes technical issues challenging to put into effect[92]. Since the provision of social goods heavily influences citizens' attitude toward government legitimacy, this slow movement toward rights fulfilment has meant that citizens regard environmental institutions and their agents as failing[93]. With little follow-up on key commitments, NEMA and the NWA are regarded as underperforming by not providing the required social goods. Indeed, ratings of service provision by government institutions have been declining since 2002[94]. Thus the institutions associated with supporting environmental Acts are increasingly viewed as illegitimate, which further inhibits intergenerational outcomes.

Two major issues appear to further undermine NEMA and the NWA. The first is that the local consultation required by the Acts is not observed, so that citizens feel

[90] IDASA, *Afrobarometer Summary of Results Round 5: Survey in South Africa*.
[91] Mattes, "South Africa: Democracy Without the People?"
[92] Rossouw and Wiseman, "Learning from the Implementation of Environmental Public Policy Instruments after the First Ten Years of Democracy in South Africa."
[93] D. Carter, *Sources Of State Legitimacy In Contemporary South Africa: A Theory Of Political Goods*, AfroBarometer Working Paper, 2011.
[94] J. Asunka, "What People Want From Government: Basic Services Performance Ratings, 34 Countries," *AfroBarometer Policy Briefing* December (2013), http://www.afrobarometer.org/files/documents/policy_brief/ab_r5_policybriefno5.pdf.

their democratic right to feed into policy decision-making is ignored. The second is that the government has not developed an overarching national strategic framework for effectively dealing with environmental rights achievement – and this particularly includes the lack of measures to control AMD.

However, the Pentalogue Model itself is not faultless. Significantly, it is difficult to disentangle the power dynamics mediating interactions along interfaces, thus disregarding a major contribution to governance[95]. The model does not uncover allies and opponents across the interfaces, so can misleadingly convey these shared spaces as egalitarian. In RSA, this is manifested in the government/media relationship: these clusters are rivals for civil society attention, and their interface experiences poor, antagonistic communications. Related to this, proficient functioning and strength of engagement of clusters is hidden in the Model, as political bargaining is disguised by the Pentalogue's symmetry. This can indicate that each cluster functions at full capacity, which is not necessarily the case as the government cluster demonstrates.

Kant concluded that judges have the discretion to act as responsible agents creating moral laws – it is therefore interesting to consider the role of judiciary in the model[96]. As judges have guardianship over IGE in the Constitution and are defenders of principled governance, this thesis proposes that judges are found in the intersection of all five clusters, sharing that space with the environment. In the Kantian court, moral reasoning is institutionalised, and behaviour is guided by the judiciary[97]. In RSA, judges do not assume full Kantian responsibilities, but do interpret existing laws with IGE as an important consideration. With government abrogating responsibilities

[95] E. Swyngedouw, "Authoritarian Governance, Power, and the Politics of Rescaling," *Environment and Planning D: Society and Space* 18 (2000): 63–76.
[96] Coyle, "The Intellectual Commitments of Modern Juridical Thought."
[97] Weinrib, "Law as a Kantian Idea of Reason."

toward IGE, judges are in a decisive position to uphold Constitutional values by holding government and industry to their duties under law. In their central location in the model, judges could be critical for safeguarding each cluster's equal influence on decision-making, and ensuring that no single cluster coerces or stifles the others.

This judicial role has already been demonstrated in the case *The State v Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya* (Chapter III), where the Court upheld personal criminal liability for a corporate director for environmentally-harmful corporate activities[98]. Jcoudges compelled action from the industry cluster after prompting by the civil society cluster, following a lack of decisive action by the government cluster. With AMD management as a critical juncture for RSA, the judiciary could be crucial to protect intergenerational rights and good governance.

4 Conclusion

The Pentalogue Model is a theoretical lens that allows for an exploration of the complex approach to decision-making required for good governance; it demonstrates whether IGE is a viable outcome in RSA. However, it also discloses how far each cluster has to expand beyond its zone of accustomed action for agents to integrate water knowledge across cluster boundaries. Kantian equality of opportunity is realised through the Pentalogue, as is Rawlsian justice as fairness – both are satisfied through the inclusion of wide latitude of societal agents and through collaboration to achieve good governance[99,100]. Thus validated as well are Dahl's contentions that interactions among societal groups construct systems of law[101]. When interactions are robust, good governance is the result; when interactions are unsteady,

[98] Magistrates Court for Regional Division of Limpopo Province, The State v Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya (RN126/13) (2014).
[99] Rauscher, "Kant's Social and Political Philosophy."
[100] Rawls, *Justice as Fairness: A Restatement*.
[101] Dahl, *Polyarchy: Participation and Opposition*.

governance processes go awry. This is demonstrated in RSA, where inadequate communications have led to poor governance processes. Substandard communal deliberation exacerbates the damaging effects of AMD, with the consequence that IGE in legislation is disregarded.

All clusters in RSA believe that the government inadequately manages environmental issues – especially AMD. Technical inability, cronyism, and substandard education all obstruct the implementation of complex NWA regulations. This is amplified by a lack of political will to make decisions that may negatively affect short-term economic growth. The Constitution was designed to segregate IGE from other government considerations, to avoid just such a politicisation of long-term environmental objectives. While there is no consensus on the locations and extent of Gauteng that will be affected by AMD decant, it is accepted by the majority of society that not managing it effectively will damage large parts of the province. Accordingly, the four other clusters expect harmful future consequences from the government cluster's short-term outlook.

The role of RSA's judiciary is significant – they are situated at the theoretical centre of society in the Pentalogue, and enforce legislation to ensure intergenerational outcomes. Accordingly, judges have a role to play in AMD management, and have done very recently in the 2014 case, *The State v Blue Platinum Ventures*[102]. The environment, held in public trust, is also found at the Model's theoretical centre, since it is for the benefit of all agents in the Pentalogue. Moreover, all agents have to come together to create effective policy for the environment, since all use and enjoy it, and can have a significant impact on it.

[102] Magistrates Court for Regional Division of Limpopo Province, The State v Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya (RN126/13) (2014).

However, discordances clog up Pentalogue interfaces. The science sector, traditional fact-finder in black box topics like AMD, does not have a direct channel to government, which has not taken action on its scientific recommendations. Yet scientific findings are often too complicated for government or civil society to understand and implement. Civil society is left without guidance, and is unsure how to interpret government silence on the safety of common water resources. However, the civil society cluster is ill-informed and reliant on too few agents to gather and disseminate knowledge. The media cluster produces reports painting a crisis-like situation, thus aggrandising issues and feeding back into civil society disquiet. Industry secrecy and unwillingness to accept any form of culpability is to its detriment, as the other four clusters do not trust it.

Consequently, problem-solving and knowledge exchange that should occur along interfaces is not transpiring. Post-1996, governance processes in RSA have become progressively more inconsistent – miscommunication and negligence is common. AMD, a problem of such severity and rapidity that has not before been encountered in governance processes[103], further snarls up interfaces, creating congestion in interactions and deeper disagreements among clusters. Ameliorating this situation will require improving on the uptake of science into policy and accessibility of scientific information by all five clusters – no solution can be found without adequate and integrated approaches utilising leading-edge research. Since an effective solution for AMD requires comprehensive cooperation across society, there is currently no action executed, and Constitutional regulations preserving IGE are

[103] CSIR, *Acid Mine Drainage in South Africa, Briefing Note 2009/02*.

becoming inoperative. The country is moving further away from the Aristotelian notion of a polis, in which all citizens are engaged in political decision-making[104].

As clusters are amalgamated to form RSA society, decisions in one will affect processes in another. Knowledge of water rights, AMD, and IGE should be strengthened across all clusters to confirm that all have the same vision for the future. Establishing and smoothing relationships will reduce communication friction and entrench positive feedback loops that mend faulty governance processes. With synchronised goals and duties in all five clusters, society will function democratically under a framework that enables both long-term proactive and short-term reactive adaptation to environmental issues. Securing good interactions in society will, following Kant, bring about effective governance processes, culminating in the establishment of a system of law that respects the dignity and undifferentiated rights of all citizens, together with due regard for the public trust in which water resources are held.

If this ensues, RSA will navigate the critical point of management where it currently stands, with AMD as the herald that IGE may not be upheld in RSA. Yet, this chapter has outlined that RSA is not heading toward an ideal governance and democratic outcome. The government cluster is deemed to be overlooking the law, and is thus losing moral authority. Fewer citizens regard the country as a full democracy, and these pessimistic views result in less participation in democratic decision-making procedures[105]. Institutions that manage environmental resources are increasingly regarded as illegitimate, as they are not providing the necessary social goods in a timely manner. These issues have had the outcome of reduced civic education, with less democratic behaviour created and learned. Accordingly, short-

[104] Miller, "Aristotle's Political Theory."
[105] IDASA, *Afrobarometer Summary of Results Round 5: Survey in South Africa*.

term concerns are given precedence and long-term environmental concerns are discounted. With the increasing realisation that the government is not discharging its responsibilities, the shape of democracy is changing, and intergenerational environmental rights are increasingly unclear. If a fully-functional democracy is to be established and developed in RSA, the five interdependent clusters will be required to integrate more constructively, in order to harmonise goals, allocate responsibilities, and institutionalise collaborative behaviour that will lead to long-term decisions being made for water resources in the country[106].

The next chapter, recognizing that civil society regards the government as abrogating their Constitutional duties, attempts to examine this judgement more closely. The question will be posed as to what standards the government is failing to reach, and how exactly these standards were established in RSA society.

[106] Nyambe, Breen, and Fincham, "Organisation Culture as a Function of Adaptability and Responsiveness in Public Service Agencies."

CHAPTER VI: DEVELOPMENT OF THE NATIONAL METANARRATIVE

> *"In the African Weltanschauung, a person is not basically an independent solitary entity. A person is a human precisely in being enveloped in the community of other human beings, in being caught up in the bundle of life. To be is to participate."*
>
> *- Archbishop Emeritus Desmond Mpilo Tutu*[1]

1 Introduction

RSA has been governed by the African National Congress (ANC) party since the nation gained black majority rule from the white apartheid government in 1994. One of the party's popular slogans is *Amandla Ngawethu,* translated from Xhosa as "Power to the People," reflecting the party's foundation in the equality of all people and popular self-government[2]. The political alignment of the ANC is defined by its "Freedom Charter" – a series of points emphasising equality of all people under law and equal access of all citizens to the country's resources[3]. As the governing political party since 1994 – almost two decades – the ANC has become synonymous with both the executive functions and the system of regulation associated with 'government'. The party is regarded as synonymous with the State and 'government,' with citizens regarding all three as a single entity[4]. Opposition parties are not regarded as serious threats to ANC ruling party dominance due to their fragmented nature and the liberation narrative claimed by the ANC[5].

---

[1] Michael J. Battle, *Reconciliation: The Ubuntu Theology of Desmond Tutu* (Ohio, USA: Pilgrim Press, 1997). p.39
[2] African National Congress Party, "What Is the African National Congress?," 2011, http://www.anc.org.za/show.php?id=172.
[3] African National Congress Party, "The Freedom Charter," 2011, http://www.anc.org.za/show.php?id=72.
[4] Mattes et al., *Democratic Governance in South Africa: The People's View*.
[5] Anthony Lemon, "Perspectives on Democratic Consolidation in Southern Africa: The Five General Elections of 2004," *Political Geography* 26, no. 7 (September 2007): 824–850.

This thesis proposes that the Constitution and associated Acts have been essential for development and perpetuation of social norms and accepted practices of behaviour in RSA. In this way, the ANC, in its role as State and government, has been instrumental in instituting and upholding the aims of the 1996 Constitution, and the Acts that proceeded from it. This occurs as a result of two factors: processes of social deliberation leading to collaborative creation of rights[6], followed by development of heuristics and behavioural rules that govern actions[7]. This has culminated in the formation of a social moral theory: a devising of morals and assignment of responsibilities in society that defines good and bad actions[8]. The existence of such a metanarrative ensures that all RSA citizens share a common conceptualisation of their country and of their role in perpetuating the nation's legacy.

The Constitution obligates the government to act as trustee of the country's natural resources, protecting them for the benefit of all citizens, as explained in Chapter III. However, precise means of protection and rationales informing implementation are not identified in the Constitution itself. This thesis has previously suggested that the complexity of environmental protection inhibits government decision-making both by creating uncertainty that prevents selection of optimal actions, and by focusing attention on selected information to the preference of a wide range of knowledge[9]. The cumulative result of uncertainty in civic social norms regarding the environment is that government has begun to espouse certain decision-making and behavioural responses to water resource custodianship – and citizens

[6] Joshua Cohen, "Deliberation and Democratic Legitimacy," in *Deliberative Democracy Essays on Reason and Politics*, ed. Alan Hamlin and Philip Pettit, vol. 47, Working Paper (MIT Press, 1997), 67–91.

7 R.A. Heiner, "The Origin of Predictable Behaviour," *The American Economic Review* 73, no. 4 (1983): 560–595.

[8] T. Nagel, *The View From Nowhere* (Oxford UK: Oxford University Press, 1986).

[9] Simon, H. A. (1978). Rationality as Process and as Product of Thought. *Papers and Proceedings of the Ninetieth Annual Meeting of the American Economic Association*, *68*(2), 1–16.

regard these as conflicting with Constitutional obligations. The Constitution embodies social norms, and government has been complicit in securing national adoption of these behavioural responses. Yet government is now acting in ways that appear to counteract moral responsibilities, with an unclear outlook for water protection policy and action to deal with acid mine drainage (AMD) in RSA. Citizens, accustomed to the social norms that have been established through the 1996 Constitution, are beginning to question what they perceive as government's failure to execute trusteeship obligations for water resources.

This chapter will begin with an exploration of the relevant theory, examining rights as a consequence of social processes, the extent of moral responsibility, and the formation and ramifications of heuristics and behavioural rules. Subsequently, the following argument will be charted. The 1996 Constitution, along with the National Water Act (NWA) and National Environmental Management Act (NEMA), constructed and institutionalised a set of new norms of decision-making and behaviour to guide society. ANC as government has been instrumental in promoting compliance with these new norms by enforcing legislation. New norms were adopted by citizens and have been increasingly entrenched in RSA society. In this way, a new metanarrative for the nation has been established that guides all decision-making and actions. This claim will be illustrated through an example from RSA's early years of black majority rule, concerning appropriation of land through water law reform. This will demonstrate how a metanarrative has been established through legal framing and government enforcement.

However, in more recent years citizens have come to regard government as neglecting its moral responsibilities to protect water resources for current and future generations. Concrete examples of these failures will be identified through further

examples, with the implication drawn that citizens are increasingly watchful and condemnatory of government disregard for the accustomed national metanarrative. They therefore see the government as failing in its responsibilities to uphold intergenerational water rights. The information presented in this chapter is a representation of reality in RSA's society, rather than empirical reality, given the theoretical framework utilised.

2 Creation Of A National Metanarrative

2.1 Rights As Socially Created

This section will outline the following: rights are both moral and legal claims that exist as a result of agents and institutions acting to fulfil them. Rights are socially created, that is, vested in social processes rather than individuals, through communal deliberation that is fundamental for democracy. The associated role of government is to protect all rights. In this way, rules created and enforced by the government make manifest the rights collectively devised by citizens, while also substantiating societal morals and conceptions of fairness.

Rights are considered to be entitlements to which people can make both moral and legal claims, and that make a difference to the lives of those who hold them[10]. The moral aspect of rights derives from their equal application to all people without consideration of the virtue of a single agent's actions[11]. That rights are deemed moral means that justification can be made for their application to questions of social justice, as they convey a sense of integrity[12]. Government is able to associate the justifiability and integrity of rights with the way in which it acts to maintains them, and thus gain moral value itself.

[10] James, "VII-Rights as Enforceable Claims."
[11] Saladin Meckled-Garcia, "Neo-Positivism About Rights: The Problem With 'Rights As Enforceable Claims,'" *Proceedings of the Aristotelian Society (Hardback)* 105, no. 1 (June 2005): 143–148.
[12] Ronald Dworkin, *Law's Empire* (Massachusetts, USA: Belknap Press, 1986).

Legal entitlements derive from the rules that exist to enforce rights, and both institutions and specified individual agents can act as enforcement mechanisms. If there is no means through which rules can uphold rights, they are incapacitated – symptomatic of a corrupt or failing State[13]. Rights depend upon active engagement by government agents to ensure that they are met through enforcement and implementation measures[14], allowing the State to use its prerogative to justify application of coercion in upholding rights through law[15]. Once conditions of effective governance prevail, with well-delineated and enforced rules, a right can be regarded as valid. Thus, a significant role of the State is to give citizens equal rights, and to protect political and other liberties; through minimising differences among citizens, a community is more likely to focus on the common good[16].

However, integrity of rights comes not only from full implementation of rules, but also from their creation by a community in order to express communal conceptions of justice and fairness[17]. The rights of a community are themselves created through social consensus and deliberation[18]; communal cooperation confers validity to these rights. A society able to gather in such a way is known as a deliberative democracy, and has as its objective societal discussion of the common good, to create practical consensus that is acceptable to all[19]. Citizens begin from a point of equality, and identical standing is given to a multiplicity of objectives, principles, and outlooks, authorising the same hearing for all. Conflicting viewpoints are heard, and discussion works to ensure outcomes that are acceptable to all

[13] James, "VII-Rights as Enforceable Claims."
[14] Raymond Guess, *History and Illusion in Politics* (Cambridge UK: Cambridge University Press, 2001).
[15] Dworkin, *Law's Empire*.
[16] Susan James, "Power and Difference: Spinoza's Conception of Freedom," *Journal of Political Philosophy* 4, no. 3 (September 1996): 207–228.
[17] Dworkin, *Law's Empire*.
[18] Susan James, "Rights, Moral and Enforceable: A Reply to Saladin Meckled-Garcia," *Proceedings of the Aristotelian Society (Hardback)* 105, no. 1 (June 2005): 149–153.
[19] Cohen, "Deliberation and Democratic Legitimacy."

participants. Dialogue in the public sphere shapes societal priorities, formulating a generalised public conception of justice and morality[20].

Public reasoning is also essential to the understanding of freedom in a society, and the ability to use social justice to create fairer politics[21]. In understanding what society has reason to value, individuals are able to achieve morally significant lives across economic and social boundaries[22]. Incorporating all standpoints in this way ensures construction of transparent laws to enforce human rights. It also reflects the quote from Archbishop Emeritus Tutu cited at the start of this chapter – full participation of society is crucially important for decision-making in RSA.

Dialogue in society produces not only rights, but also government institutions to enforce them, which should be committed to pluralism and allow discussion to continue unchanged[23]. Political institutions are expected to conform to socially-constructed norms, enforcing rules that have been created by mutual expectation, and work to promote the common good through individual rights[24]. As they exist to enforce rules, the upholding of rights is thus endowed to institutions, rather than to individual citizens[25]. Locating rights in institutions has greater efficacy and durability and is non-discriminatory, as institutional theory assumes that institutions are not stifled by non-rational incentives and restricted cognitive capacity that hamper individual decision-making[26]. This also imparts to institutions a legitimate claim to

[20] Ibid.
[21] Amartya Sen, *The Idea of Justice* (London UK: Allen Lane, 2010).
[22] Amartya Sen, *Inequality Re-Examined* (Oxford UK: Clarendon Press, 1992).
[23] Cohen, "Deliberation and Democratic Legitimacy."
[24] A. Hamlin & P. Pettit, "Normative Analysis of the State," in *The Good Polity: Normative Analysis of the State*, ed. A. Hamlin and P. Pettit (Oxford UK: Basil Blackwell Ltd, 1989).
[25] James, "Rights, Moral and Enforceable: A Reply to Saladin Meckled-Garcia."
[26] R. Hardin, "Political Obligation," in *The Good Polity: Normative Analysis of the State*, ed. A. Hamlin and P. Pettit (Oxford UK: Basil Blackwell Ltd, 1989).

act on behalf of government to enforce rules, with particular government institutions able to become agents that influence the structure that rules take[27].

The moral nature of a State is determined by how it affects individuals through exercise of its power and protection of citizens' rights[28]. In defending rights through implementing legislation, government is regarded as virtuous. However, government also has the potential to give particular preference to certain issues over others, thereby directing the prominence of rights[29]. In this way, government tactics can significantly influence long-term outcomes for society.

2.2 Heuristics

The previous section detailed how rights claims create a basic set of expectations for society about what they are morally justified to expect from the government – and how this contributes to development of social norms in society. This next section will describe how behavioural rules, known as heuristics, could develop in a country. Behavioural theory suggests that people use simplification and experience-based techniques to evaluate losses and gains and decide on a course of action. These cognitive processes rely on simple information for quick decision-making, and thus are significantly influenced by social norms.

In the period leading up to the creation of a new Constitution and new government in RSA, and immediately afterwards, citizens were enmeshed in a period of unpredictability. In such inconstant situations, humans tend to rely on heuristics – intuitive judgements that allow simple assessment and prediction, rather than rational analysis of the numerous and indeterminate options available[30]. The concept of heuristics is in contrast to the conventional model of the rational economic human, for

[27] Hamlin and Pettit, "Normative Analysis of the State."
[28] Ibid.
[29] P. Dasgupta, "Power and Control in the Good Polity," in *The Good Polity: Normative Analysis of the State*, ed. A. Hamlin and P. Pettit (Oxford UK: Basil Blackwell Ltd, 1989).
[30] Tversky and Kahneman, "Judgement Under Uncertainty: Heuristics and Biases."

whom higher value outcomes are the unfailingly-preferred conclusion[31]. Instead, decisions are guided by estimations of potential gains and losses over final outcomes, while decisions are based on past experiences rather than analytical deliberation[32].

This is a model of behaviour known as prospect theory, developed in the late 1970s and early 1980s by Amos Tversky and Daniel Kahneman[33]. It suggests that uncertain situations and reduced information availability prevent the selection of optimum outcomes and attainment of greatest benefit from a situation. Instead, this regulates behaviour based on uncertainty[34]. Prospect theory suggests that humans are risk-averse and favour actions for which the outcome is known, even if a less certain outcome could have more advantageous consequences[35]. Reliance on heuristics in this way could lead to a widespread presence of social biases as a result of non-rational decision-making[36].

There is a great deal of uncertainty surrounding scientific methods informing creation of new laws, and their long-term implications. The wisdom of challenging government policy for those citizens who feel it is not in their best interests, is equally unsettled. Consequently, government can play a significant role in helping to simplify decision-making procedures. Individual behaviour takes place in the context of a society that government is pivotal in establishing, through imposing rules and upholding rights. Behaviour in this context is channelled through parameters, such as laws, erected and maintained by government. Therefore, in the maintenance of an

[31] A. Tversky & D. Kahneman, "Rational Choice and the Framing of Decisions," ed. Glenn Shafer and Judea Pearl, *The Journal of Business* 59, no. 4 (1986): S251.
[32] A. Tversky & D. Kahneman, "Prospect Theory: An Analysis Of Decision Under Risk," *Econometrica* 47, no. 2 (1979): 263–292.
[33] Tversky was Professor at Stanford University, and Kahneman is Professor Emeritus at Princeton University. They were co-awarded 2002 Nobel Prize in Economics for work on behavioural economics.
[34] Heiner, "The Origin of Predictable Behaviour."
[35] G.L. Clark, "Human Nature, The Environment, And Behaviour: Explaining The Scope And Geographical Scale Of Financial Decision-Making," *Geografiska Annaler: Series B, Human Geography* 92, no. 2 (2010): 159–173.
[36] Tversky and Kahneman, "Judgement Under Uncertainty: Heuristics and Biases."

ideal environment for decision-making, government can considerably influence development of heuristics that society utilises[37]. Citizens' political preferences are likewise heavily influenced by societal heuristics; demand for specific legislation necessarily reflects social thought about pressing problems. Moreover, priority given to certain policy issues will define political processes[38].

Significant in this regard is a concept known as issue framing. This is the use of mental models created in the decision-making process, in order to better evaluate outcomes[39]. The way in which an agent subjectively creates a frame affects perceived personal benefits and drawbacks[40]. Framing by outside agents can also determine emotional impacts of an issue and consequently societal interpretation and actions[41]. This is because, according to the Concreteness Principle, citizens tend not to reframe information presented to them in a prepared issue frame, and will use the details provided without assessment[42]. Here again, government could have a crucial influence on citizens through the way in which they frame and present to society the enforcement of laws and upholding of rights.

Other ways in which government could influence societal framing of an issue include selective focus on a particular aspect of a risky decision, making it more conspicuous and according it greater importance in evaluation than is necessitated,

[37] M. Altman, "Implications of Behavioural Economics for Financial Literacy and Public Policy," *The Journal of Socio-Economics* 41, no. 5 (2012): 677–690.
[38] J.J. Rachlinski, "Heuristics, Biases, and Governance," in *Blackwell Handbook of Judgment & Decision Making*, ed. D.J Koehler and N. Harvey (Oxford UK: Blackwell Publishing Ltd, 2004), 567–584.
[39] D. Soman, "Framing, Loss Aversion, and Mental Accounting," in *Blackwell Handbook of Judgment and Decision Making*, ed. D.J. Koehler and N. Harvey (Oxford UK: Blackwell Publishing Ltd, 2004), 379–398.
[40] Tversky and Kahneman, "Prospect Theory: An Analysis Of Decision Under Risk."
[41] Daniel Kahneman, *Thinking, Fast and Slow* (London: Penguin Books Ltd, 2011).
[42] Soman, "Framing, Loss Aversion, and Mental Accounting."

known as outcome salience[43]. This ties in with the availability cascade, whereby the significance of a concept is assessed by the ease with which it is recalled – so information that is given greater priority in society will be assigned greater importance for the duration of a decision-making process[44]. People tend to anchor decisions to these prominent issues, even if not relevant to a decision at hand. Thus if an issue has had previous prominence, it is likely to be re-applied to other similar issue frames[45].

Finally, given the significance of deliberative democracy for RSA, a phenomenon known as herding gains importance: the readiness of humans to mimic the behaviour of others without rationally considering the outcome of such action[46]. Social consensus gives validity to rights, and will accordingly give validity to decision-making processes that are believed to uphold, protect, and confirm such rights. These behavioural principles apply both to individuals and to other systems, including institutions – which are, after all, created through social deliberation about rules and rights[47]. Learning in institutions is a communal process, based on transfer from one individual to others[48].

Government has crucial responsibility to establish the best possible environment in which institutions operate and citizens make decisions. This requires that it precisely follows Constitutionally-assigned responsibilities. However, even given the creation of an optimum decision-making arena, citizens may not make use of the full range of information available, and instead use what are known as 'fast and

[43] Els C M Van Schie & Joop Van Der Pligt, "Influencing Risk Preference in Decision Making: The Effects of Framing and Salience," *Organizational Behavior and Human Decision Processes* 63, no. 3 (1995): 264–275.
[44] Kahneman, *Thinking, Fast and Slow*.
[45] Altman, "Implications of Behavioural Economics for Financial Literacy and Public Policy."
[46] Ibid.
[47] Heiner, "The Origin of Predictable Behaviour."
[48] H.A. Simon, "Bounded Rationality and Organizational Learning," *Organization Science* 2, no. 1 (1991): 125–134.

frugal' heuristics to come to a resolution. These heuristics require very few and generalised inputs to be useful, but do tend to disregard wider information inputs[49]. Furthermore, once information is gathered, people tend to use 'satisficing,' or simplification to find a satisfactory solution, rather than appraising all details to find the optimal solution[50]. It is plausible that even if government provided the full range of relevant information, citizens would not have the capacity to create personalised issue frames with exact precision. Instead the result would be numerous individual, non-rational decisions based on whatever detail had most salience for each individual. This would complicate deliberative decision-making, as multiple non-rational decision outcomes would confound pluralistic discussion.

2.3 Creation of a National Morality

This final section will trace the following argument: through the social creation of rules and rights and subsequent formation of heuristics to guide action, a moral theory to guide society is generated. This theory applies to individuals as well as to institutions. It serves to cement outcomes of rights and heuristics deliberations, while enabling intergenerational transfer of morals, modes of action, and beliefs in a society. This thesis refers to it as a national metanarrative. It is where specifically-designed traditions and histories allow the generic space of a country to become a place that belongs to its people[51].

Humans morally judge others for their actions, whether or not these actions are under their control[52]. People also judge others according to how assiduously their

[49] Gerd Gigerenzer, "Fast and Frugal Heuristics: The Tools of Bounded Rationality," ed. Derek J Koehler and Nigel Harvey, *Blackwell Handbook of Judgment and Decision Making* 3, no. 1977 (2004): 62–88.
[50] H.A. Simon, "Rationality as Process and as Product of Thought," *Papers and Proceedings of the Ninetieth Annual Meeting of the American Economic Association* 68, no. 2 (1978): 1–16.
[51] Duncan Brown, "National Belonging and Cultural Difference: South Africa and the Global Imaginary," *Journal of Southern African Studies* 27, no. 4 (2001): 757–769.
[52] B. Williams, "Moral Luck," in *Moral Luck, Philosophical Papers 1973-1980* (Cambridge UK: Cambridge University Press, 1981).

societally assigned duties and responsibilities are observed[53]. Any judgement of others is based the accordance of an action with social norms. Moreover, those doing the judging wish to avoid being discredited as excessively indulgent or harsh adjudicators, and thus further entrench social norms in decision-making[54]. In regarding a person's actions as correlated with their moral worth, established heuristics are made more resilient – intuitive judgements leading to specific actions are socially commended, and are transformed into habits of action. Citizens who are perceived as virtuous are close observers of heuristics that society has developed to make decisions in specific environments. Imitation, a common method of discerning socially acceptable actions, will disseminate these actions throughout society[55].

Factors considered as essential attributes of the concept of moral responsibility include responsiveness to others, acceptance of liability for actions, and holding others answerable for their actions[56]. These moral qualities are all found in the RSA Constitution: the Bill of Rights requires government responsiveness to citizens to uphold socioeconomic rights while NWA and NEMA legislation attribute personal liability to corporate directors for any polluting activity. A sense of national identity is imperative if an African country is to develop into a democracy – it allows divisions to be breached through shared values, and political mobilisation to come about[57].

Moral responsibility is intrinsically linked with agency, such that humans unconsciously equate responsibility and voluntary action[58]. If those responsibilities

[53] Garrath Williams, "Responsibility," *Internet Encyclopedia of Philosophy* (2009), http://www.iep.utm.edu/responsi/.
[54] Brian Rosebury, "Moral Responsibility and Moral Luck," *Philosophical Review* 104, no. 4 (1995): 499.
[55] Clark, "Human Nature, The Environment, And Behaviour: Explaining The Scope And Geographical Scale Of Financial Decision-Making."
[56] David Cooper, "Responsibility and the System," in *Individual and Collective Responsibility*, ed. Peter French (Cambridge, MA: Schenkman Publishing Co., 1972), 81–99.
[57] Lemon, "Perspectives on Democratic Consolidation in Southern Africa: The Five General Elections of 2004."
[58] Williams, "Moral Luck."

have been determined to be for the collective good of society, people are judged to be immoral if they do not follow through with them. Employing heuristics, citizens will use intuition to make such judgements about whether an agent has fulfilled given responsibilities. Moral codes that govern principles of behaviour in society are themselves governed by values established through collective deliberation using information available to society. Moral responsibility can thereby be amended to reflect the fact that humans cannot be regarded as 'pure' agents; humans are unable to carry out un-influenced deductive comprehension, but are instead prejudiced by a number of influences to rational thinking – and this includes heuristics[59]. Judgement of the moral value of others and their actions is intrinsically non-rational, and therefore highly influenced by biases incorporated in society's heuristics and collective decision-making.

Attributes of collective moral responsibility have to be considered alongside individual considerations. This concept is significant, as relations in human society are comprised not only of human/human interactions, but also human/group and group/group reciprocity. The argument made here is that both individual agents as well as groups can be held morally responsible for their actions[60]. Institutions can be held responsible in this way because they are capable of taking deliberate actions, and have to conform to the same legal regulations as individuals, as well as having many similar rights and duties (this particular issue will be further studied in Chapter VIII). Moreover, they respond to moral condemnation in the same way as individuals, with corrective action[61]. Thus, institutions can be viewed as having a conscience in their

[59] M.U. Walker, "Moral Luck and the Virtues of Impure Agency," *Metaphilosophy* 22 (1991): 14–27.
[60] Simon, "Bounded Rationality and Organizational Learning."
[61] Cooper, "Responsibility and the System."

potential to respond to key moral requirements – indistinguishable from characteristics of individual moral responsibility[62].

This is congruous with the concept of corporate personhood, by which means corporations are regarded as having the same legal recognition as individual citizens. This was first posited in the United States of America in 1886, with *Santa Clara County v. Southern Pacific Railroad Company*. The judge decreed that the corporation under suit should be regarded as a 'natural person' under the Fourteenth Amendment of the USA Constitution, and therefore had the right to equal protection under the law[63]. Corporate personhood has also since been enshrined in the Bill of Rights of RSA's Constitution, allowing for corporations to be both protected and prosecuted as persons[64]:

> ***Chapter 2: Bill of Rights***
>
> ***8. (4)*** *Juristic persons are entitled to the rights in the Bill of Rights to the extent required by the nature of the rights and of the juristic persons.*

Accordingly, both under law and moral considerations, institutions in RSA can be held morally responsible for actions – an accountability that is collective and nondistributive[65].

Deliberative methods assign specific functions and duties to institutions, according to what is required by society. In fulfilling requirements, institutions are seen as responsible agents and accorded a moral worth; in failing to fulfil them, institutions are regarded as behaving unethically. Given that institutions are pivotal

---

[62] J. Skorupski, "Internal Reasons and the Scope of Blame," in *Bernard Williams*, ed. A. Thomas (Cambridge UK: Cambridge University Press, 2007).
[63] *Santa Clara County v. Southern Pacific R. Co. - 118 U.S. 394*, 1886, http://supreme.justia.com/cases/federal/us/118/394/case.html.
[64] "Constitution of the Republic of South Africa - Chapter 2: Bill of Rights."
[65] Joel Feinberg, "Collective Responsibility," in *Doing and Deserving: Essays In The Theory of Responsibility* (Princeton, New Jersey: Princeton University Press, 1970).

agents in a deliberative democracy and contribute to development of heuristics, there can be no moral theory for society that does not include institutions[66].

A moral theory will reinforce socially established rights and rules and augment heuristics. In doing so, and as generations pass down social conventions, an intergenerational transfer of morals and behavioural practices is facilitated. This will create a national metanarrative that defines what it means to be a good citizen, and can also be sustained into the ethos of future generations. Based on these issues discussed, the national metanarrative in RSA is one of recognising the dignity and equality of all citizens, amending for previous injustices suffered under apartheid, and cohesiveness in diversity. It is expected that government, individual citizens, and industry will follow through with moral responsibilities accorded to each, for the benefit of the nation as a whole. If one group does not follow through with duties, or transgresses established heuristics, others will regard them as irresponsible and negligent on the basis of the national metanarrative.

3 Case Study: Water Ownership

The case study detailed here reflects on the philosophical terrain explored above. It will be used to clarify the theory reviewed, and explore its application in the South African political context. This specific issue arose at the emergence of the newly-independent nation, but repercussions resonate through to the present day. In evaluating how far the described philosophies apply to a concrete situation, this section is grounded in Chapter IV, which assessed the extent to which John Rawls and Edith Brown Weiss influenced RSA's Constitution. Here, however, the focus is not on Constitutional philosophy, but on instinctive behavioural tendencies that advance the Constitution from paper to action. This case study reflects the pivotal role played

[66] Nagel, *The View From Nowhere*.

by government in developing and perpetuating social norms and behavioural practices framed in the Constitution.

From 1873 until 1998, water resources in RSA were legal property of the individual or group over whose privately owned land the water flowed. This is based on Roman-Dutch law, upon which principles the country's legal system had been founded[67]. The riparian principle, as it is known, means that landowners whose property adjoins a water body have sole right to make use of that water body – those who do not have ownership rights of the land accordingly could not use or enjoy the water. However, under the post-apartheid 1996 Constitution and the 1998 NWA, water resource ownership shifted to a completely new dispensation regime. There were no longer private rights based on land possession, but instead public rights based on citizenship of the country, and with government acting as trustee. This change, introduced in Chapter III, demonstrates one of the major alterations in the legal system under the new Constitution, and exemplifies the priority given by drafters of the document to social justice and to redressing of inequalities.

It was noted in Chapter III that although this was an abrupt change in law, there was no associated opposition from society – citizens accepted this change and incorporated it into daily life in post-apartheid RSA. The legal change could have been conceived of as a 'takings' of land, given that government effectively withdrew land from private property for public use, without paying any form of just compensation to the former owners[68]. Even so, no landowner took government to court to challenge this newly-created water trust and the loss of their private water

[67] C. G. Van Der Merwe, J. É Du Plessis, 2004, "Introduction To The Law Of South Africa," The Netherlands: Kluwer Law International

[68] Wex Legal Dictionary/Encyclopedia, "Takings," *Cornell University Law School, Legal Information Institute*, accessed June 25, 2014, http://www.law.cornell.edu/wex/takings.

rights[69]. This thesis previously proposed that this could be the result of epistemic proceduralism: that the legitimacy of this legal change was gained not through accuracy of decisions made, but in the correctness of procedures producing them[70]. Since water laws aim to create the greatest benefit for the most citizens, an ethical status was conferred on all outcomes from the legislation under this concept[71]. This thesis suggested that few citizens would have wanted to be seen to argue against the legality and ethics of a series of laws that aimed to undo the violations of apartheid.

However, societal acceptance of this major change could have come about through other avenues as well. Novel human rights were being created in RSA under the new Constitution, and their incorporation into daily life was part of a social process that was not solely vested in individuals, but also in the State and connected institutions[72]. New water rights were necessarily considered to be moral, as they applied equally to all citizens. This is crucial in RSA, where during apartheid rights were administered on the basis of skin colour – a moral application of rights represented a sudden, discontinuous shift to regarding all people as equal under law. One of the major goals of the 1998 NWA, in protecting Constitutional rights, is to ensure that all citizens are effectively able to participate in water management, highlighting the belief that all citizens have an equal right to water resources[73]. Furthermore, the new role of government in this Act is to create political freedoms and defend equality of rights for all citizens, again an abrupt departure from previous

[69] Pienaar G.J. & van der Schyff E., 2007, "The Reform of Water Rights in South Africa," Law Environment and Development Journal, 3/2, pp.179-194
[70] Estlund D., 2008, "Democratic Authority: A Philosophical Framework ", Princeton NJ, USA: Princeton University Press
[71] See Chapter III for introduction to this concept; the basic idea is that legitimacy of any regulation proceeds not from correctness of outcomes, but in procedures producing them. The author primarily relied upon is David Estlund.
[72] James, "VII-Rights as Enforceable Claims."
[73] "Number 36 of 1998, The National Water Act."

discriminatory policies. This granted increased deference to governmental actions by according them a moral worth in the defence of equal rights[74].

Legitimacy of water rights was strengthened through simultaneous creation of agents and mechanisms to enforce them: NEMA and NWA legislation, both promulgated in 1998, serve to buttress Constitutional water laws. Agents of institutions upholding these regulations – that is, government ministries and departments – have a legitimate claim to act on behalf of government, and the authority to act to uphold water rights without their actions and decisions being questioned[75]. These institutions provide effective water governance according to rules set forth in the Constitution and associated environmental Acts. The Constitution provides enforcement, as it binds government into a trust relationship with overall moral responsibility to maintain high water quality standards and provide access to sufficient safe water for all citizens. NWA and NEMA both provide implementation, with details on achieving integrated water management and clarification of decentralisation of management functions to water catchment area levels. Both the moral and legal strands of legitimacy have made water laws more difficult to criticise in RSA.

As suggested, government institutions have been created to manage NEMA and NWA directives. Such institutions in RSA have been created by society, through dialogue among citizens in the generation of the Constitution and associated regulations guiding action[76]. Public participation in law-making is central to the legal process in RSA, and in this way, the country conforms appreciably with the model of a deliberative democracy. The Constitution was created to give equal standing to a

[74] James, "Power and Difference: Spinoza's Conception of Freedom."
[75] Hamlin and Pettit, "Normative Analysis of the State."
[76] Hassen Ebrahim, "The Public Participation Process," in *The Soul of a Nation - Constitution-Making in South Africa* (Oxford UK: Oxford University Press, 2000).

multiplicity of objectives, principles, and outlooks, all of which are given equal hearing. Consensus-based inclusive discussion guides governance, with society cooperating for mutual benefit. Such deliberation shapes societal preferences in the country, with the end result that the shift in water from private to public came to be seen as a decision by all people for the advantage of all citizens.

Social processes of incorporating new laws were complicated and ambiguous, in view of the radical changes expected to transpire. Given that humans are risk-averse, this thesis proposes that no one was willing to be one of the first to challenge new policy. Government was able to guide behavioural norms that developed from this uncertainty, through providing education about new policies and thereby ensuring selective attention to information that would lead to entrenchment of these new rights[77]. Outcome salience – focus given to a particular fact that accords it more importance in decision-making – was exploited through government focus on equal justice for all people in all communications at the time. This is most explicitly illustrated through the preamble to the Constitution[78]:

> *"We, the people of South Africa, recognise the injustices of our past, and believe that South Africa belongs to all who live in it, united in our diversity."*

Framing effects – how society perceives and communicates about reality – also play an important role here. The of the phrasing of RSA's Bill of Rights can be said to have an emotional impact; it suggests that all citizens have a specific right[79]:

> *"…to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures"*

This framing prompts favourable civil society interpretation of the legislation and consequential government actions[80]. While these heuristics established behaviour of

[77] Heiner, "The Origin of Predictable Behaviour."
[78] "Constitution of the Republic of South Africa." *(Preamble)*
[79] Ibid., (*Sections 24 and 27)*

acceptance, herding effects – the likelihood that people will imitate the behaviour of others to comply with social norms – anchored that acceptance and enabled transfer of this behaviour across society.

Heuristics evolved in this way, censuring action by private citizens against government to challenge possible takings of water resources. These constructions have led to on-going evolution of a social moral theory that has determined what is morally acceptable in RSA society. Thus, citizens would morally judge not only the behaviour of those whose actions appeared to attack new government water policy, but also the moral worth of such people as citizens of the country. Government itself assumed moral responsibility to act for the collective good of the nation, and thus exposed itself to be judged as immoral and inappropriate to administer the nation if it failed to protect water rights.

Institutions of government, specifically in this case the Department of Environmental Affairs (DEA) and the Department of Water Affairs (DWA), also take on moral responsibility for protection of water rights as institutional agents of government. These two institutions work to uphold the requirements of NEMA and NWA, as custodians of environmental and water resources in RSA. Even as institutions, the DEA and DWA are subject to the same moral condemnation as individuals for dereliction of their duty to ensure water resources are preserved in quality, and available for use and enjoyment by all citizens. In this way, a national metanarrative of water belonging to all people, with government as trustee for current and future generations, has developed. All future government decision-making will be adjudicated based on compliance with this metanarrative.

[80] Kahneman, *Thinking, Fast and Slow*.

Related to this case study is the uncertainty about possible outcomes that holds true for other water regulations under NEMA and NWA. It is possible that the uncertainty of scientific information regarding natural resources and interaction with AMD, as explored in Chapter III, has led to a general disquiet among citizens regarding the proper actions to take to deal effectively with this developing environmental issue. Unfortunately, there is a considerable amount of conflicting information available to citizens regarding the relative severity of outlook for AMD[81]. Humans, accustomed to using satisficing methods to make decisions, will be ill equipped to handle large amounts of technical information; with increasing information there is a corresponding decrease in our ability to process it effectively[82].

This case study demonstrates rights creation by society as a whole, and how heuristics determine decision-making. The development of a social moral theory around these two instances directs the moral compass of society, and gives rise to a metanarrative to which citizens conform. In RSA, the metanarrative is reinforced as being one of recognising the dignity of individual human beings, amending for previous injustices, and cohesiveness in diversity. The idea of common citizenship is emotional as well as intellectual – shared natural capital deepens the sense of belonging[83]. The two major mandates of the Constitution are to address past wrongs, and to build a single nation; these reveal its aim to create a common nationality[84]. The new nation was not defined in the 1996 Constitution, other than through promulgation of democratic values and ethics that are essential to construction of a national identity.

---

[81] National Science and Technology Forum & South African Agency for Science and Technology Advancement, "Critical Thinkers Forum: Acid Mine Drainage, Possible Solutions," in *Critical Thinkers Forum* (Boksburg, South Africa, 2011), http://www.nstf.org.za/ShowProperty?nodePath=/NSTF Repository/NSTF/files/Workshops/2011/ProceedingsAMD2011.pdf.
[82] Simon, "Rationality as Process and as Product of Thought."
[83] Brown, "National Belonging and Cultural Difference: South Africa and the Global Imaginary."
[84] A. Habib & K. Bentley, *Racial Redress and Citizenship in South Africa* (Cape Town, RSA: Human Science Research Council, 2008).

The case study also demonstrates the instrumentality of government in supporting the aims of the Constitution, and in how norms and behaviours are originated and perpetuated. The reformation of water rights as shared among all citizens, rather than aligned with private ownership, neatly harmonises with RSA's metanarrative, further anchoring water rights in the nation. The metanarrative, initially generated through deliberations on what human rights the country would espouse in the post-apartheid Constitution, wove strong threads into all heuristics that subsequently evolved – to the extent that social justice could be said to act as a background for decision-making. Yet, despite the tight appearance of this metanarrative, striations have appeared that could prompt a snarling in the fabric of human rights that binds the country together. The subsequent section will explore the ways in which, in more recent years, the government has increasingly neglected its responsibilities based on RSA's metanarrative.

4 Implications

A significant argument running through this thesis is that the increasing extent of AMD measured through Gauteng province (as explained in Chapters III and V) undermines the Constitution's long-term environmental objectives. This thesis has proposed that government abrogation of responsibilities, exacerbated by dysfunctional societal interactions, is a major reason for unchecked AMD expansion. This section will look specifically at dysfunctional interactions between government and citizens, demonstrating how government has increasingly gone against the national metanarrative in water governance.

These interactions can be regarded as occurring in the space of the Pentalogue Model introduced in Chapter V. The model acts as a framework for good governance, founded in Dahl's interest group politics and in the overarching equality of all groups

in democratic governance[85]. Exchanges between citizens and government occur along the Government/Civil Society interface of the model, with participation from all members of these clusters as principal concern. The participatory circles facilitate knowledge sharing necessary for deliberative democracy, and allow for imitation and herding effects to guide development of heuristics. Synergy between the two groups means that decisions in one sector will inevitably affect processes in the other, which should assure maintenance of the Constitution's socio-economic human rights and moral decision-making. However, it equally holds true that if there are obstructions on a particular interface, the other will suffer from simultaneous stoppage. This will halt the processes of knowledge sharing and disable good governance[86].

Rights to water are found in the centre of the model, as this is where the environment is located in the model. The government protects these rights, and ensures that no other cluster uses more than is considered a fair share, in accordance with RSA's metanarrative. Civil society protects these rights by holding government to their moral responsibility of fiduciary duty, while the media provides coverage when rights are transgressed or protections are breached. The sectors below will initially explore how government has been essential in guiding decision-making and acceptable behaviour, and subsequently why, more recently, government has been deemed to be neglecting its moral responsibilities to upholding water rights.

National identity in RSA has been debated in the academic literature since the early 2000s, with academics trying to understand what it means to be South African. Some suggest it is a communal consent to live together and commit to a share future[87], others say it is a shared history – even if it is one of conflict and separation[88].

[85] Dahl, *Democracy and Its Critiques*.
[86] Turton et al., *Governance As A Trialogue: Government-Society-Science In Transition*, 2007.
[87] Brown, "National Belonging and Cultural Difference: South Africa and the Global Imaginary."

This thesis takes the view that it is a focus on shared values and ideals that allows for national cohesion – strengthened through continuous debate that is required by and enabled through the Constitution[89]. The country's Constitution created a national identity through promulgation of collective human rights that emphasize the inclusion of all people in the new nation. This significant break with the past laid foundations from which a new national identity could be constructed. This view is supported by surveys carried out in 2015, which indicated that civic pride in RSA was strong concerning diversity of people and cultures, and in the quality of democracy in the political system[90].

4.1 Development Of A National Metanarrative

As clarified previously, a metanarrative develops in a country through repeated use of, and reliance on, heuristics in decision-making by a society. These heuristics are in themselves reliant on social processes of deliberation that define human rights and the institutions of society that enforce them. In RSA, the government contributed prominently to these processes through enforcing rights created in Constitution and associated Acts, and also establishing institutions that act to enforce new socio-economic rights, with both legal and moral legitimacy. This conclusion will be explored in three broad bands – court cases, supporting legislation, and supporting agents.

1. Court Cases

Details of the evolution of the NWA from its promulgation in 1998 were presented in Chapter III; focus was given to two particular court cases that modified

[88] Sally Peberdy, "Imagining Immigration: Inclusive Identities and Exclusive Policies in Post-1994 South Africa," *Africa Today* 48, no. 3 (2001): 5–32.
[89] Brendan P. Boyce, "Nation-Building Discourse in a Democracy," in *National Identity and Democracy in Africa*, ed. Mai Palmberg (Cape Town, RSA: Human Science Research Council, 1999).
[90] Dirk Kotzé, "Civic Pride, National Identity and the Quality of Democracy in South Africa," in *Political Studies Association Annual Conference: Political Identities Panel*, 2015.

the NWA's development - *Residents of Bon Vista Mansions v. Southern Metropolitan Local Council*[91], and *Mazibuko v. City of Johannesburg*[92]. This thesis contends that both cases were instrumental in the evolution of decision-making heuristics. This is particularly because the unpredictability of implementing new Constitutional rights meant citizens heavily relied upon these widely known judgements to make decisions and perform actions. In *Residents*, the Court held that government is obligated to provide a basic supply of water to all citizens, including those who cannot afford to pay. The *Mazibuko* case specified that water rights are progressive realisation rights, and that government duty is to provide water to citizens incrementally.

The NWA formally acknowledges intergenerational requirements for water, and recognises that equity and sustainability are critical for long-term water governance. Through the wording of the legislation, a mental model was generated that aimed to create the most benefit for South African citizens; this frame was strengthened and knowledge of it widened through *Residents* and *Mazibuko*. Moreover, influence of the availability cascade can be appreciated: given their national prominence, these Court cases are easily recalled and thus accorded greater significance in decision-making processes. Government was established as sole agent to fulfil water rights, which included the Free Basic Supply of twenty-five litres per person daily to be realised progressively in accordance with government budget and objectives[93]. Thus the national metanarrative in RSA has evolved to have government as the linchpin through which water rights are fulfilled. Through employment of fast and frugal heuristics, citizens' reliance on government has been established. Herding

[91] Gauteng High Court, Residents of Bon Vista Mansions v. Southern Metropolitan Local Council, Case No. 01/12312 (2001) (2001).
[92] Constitutional Court, Mazibuko v. City of Johannesburg, CCT 39/09 (2009), ZACC 28 (2009).
[93] See Chapter III for more details on this policy

behaviour has subsequently produced similar dependency in younger generations, accentuated by social learning mechanisms of habit and imitation.

The more recent 2012 case of *Harmony Gold Mining Co Ltd v Regional Director: Free State, Department Water Affairs and Forestry* (see Chapter IV for more details) highlighted water's function in RSA as an indivisible national asset granted prevalence over economic concerns[94]. The Constitutional Court ruled on the side of government, compelling private mining corporations to pump underground mine water on lands that were not owned by those corporations, but which would have crucial impact on water quality in the area. Citizens morally censured mining institutions for not complying with legislation, and approved of government for discharging its moral responsibility to maintain water security for the nation. This case highlighted the moral worth of government through clear actions against water rights transgressors.

2. Supporting Legislation

Earlier legislation supports these same interpretations: Guidelines for Compulsory National Standards under the Water Services Act were promulgated in 2002 by the (as then known) Department for Water Affairs and Forestry, to act as benchmarks to assist in implementation of regulations[95]. These Guidelines were developed through consultation at local, provincial and national levels, conforming with a deliberative democracy approach, and list duties required of municipalities in water service provision. Compliance has required municipalities to acknowledge moral agency and thus moral responsibilities in this arena. Prescription of compulsory national standards under the NWA and publication of guidelines on how to achieve them communicates

[94] Africa, Harmony Gold Mining Company Ltd v Regional Director: Free State Department of Water Affairs and Others (971/12) [2013] ZASCA 206; [2014] 1 All SA 553 (SCA); 2014 (3) SA 149 (SCA) (4 December 2013) (2013).
[95] RSA Department of Water Affairs and Forestry, *Guidelines for Compulsory National Standards and Norms and Standards for Water Services Tariffs*, 2002.

that government has committed itself to attaining water rights for all citizens; the wide dispersal of this publication likely means that it is easily recalled and could be relied upon in an availability cascade when citizens make decisions. It also embeds and strengthens certain types of behaviour by local municipalities, so that citizens become accustomed to a high level of moral behaviour by government agents.

Finally, "Blue Drop Reports" are produced every year by the DEA, and publicise water quality across the country, further entrenching established heuristics and the national metanarrative[96]. Local municipalities report measured drinking water quality, with the aim that transparency will enhance accountability, and provision of information to citizens will improve governance processes. A 'blue drop' is awarded to municipalities who score ninety-five per cent in the rating process. This has assured citizens of continued government efforts toward fulfilling water rights, while at the same time increasing citizen reliance on government to take responsibility to maintain water resources. Interestingly, these reports could also be seen to amalgamate local municipalities with the national government, creating an overarching collective moral responsibility for water resources for government-associated organisations.

3. Supporting Agents

The DWA also created a group known as the 'Blue Scorpions' to spread awareness about water use and monitor infractions of the NWA by individuals and industry[97]. Working in conjunction with other groups in the ministry, and assigned to various regional agencies, Blue Scorpion agents are authorised to issue verbal warnings, written warnings, and fines. They act as representatives of government institutions, and have legitimate claim to act on behalf of government to uphold rules

[96] RSA Department of Water Affairs, *Blue Drop Handbook: Version 1*, 2011, http://www.dwaf.gov.za/dir_ws/dwqr/subscr/ViewComDoc.asp?Docid=243.
[97] Brindaveni Naidoo, "Blue Scorpions to Take Zero-Tolerance Approach to Water Crimes," *Engineering News*, September 26, 2008, http://www.engineeringnews.co.za/article/blue-scorpions-to-take-zerotolerance-approach-to-water-crimes-2008-09-26.

and rights. Their establishment demonstrated to citizens that government is taking water rights seriously, and ensuring that moral responsibilities would be fulfilled legally. Blue Scorpion agents are imbued with the same moral responsibilities that government holds, and through operating within communities they reinforce government's role in upholding water rights and the national metanarrative.

4.2 Disregard For Moral Responsibilities

Government has been established as national guardian and regulator of the water sector in RSA's national metanarrative. Agents of government and institutions such as the DEA and DWA are committed to a trust relationship, protecting water resources for the benefit of current and future generations. However, given that the Constitution established only the rights, and not the means of implementation of rights, there has been some discord between government and citizens regarding fulfilment of water rights. This uncertainty has focused attention on a few specific behaviours, inhibiting government action by preventing selection of optimal outcomes. Developments subsequent to 1996 have meant that government has taken certain approaches to water stewardship that are at odds with societal expectations, and also with Constitutional requirements. Citizens are increasingly condemnatory of government for behaviour inconsistent with the metanarrative.

Perceived government failings are being given increasing attention by citizens, and are disproportionally influencing their evaluation of the country's circumstances. Selective attention to particular issues such as government's failure to deal fully with AMD is significantly impacting upon citizens' decision preferences through salience effects. Thus public opinion has been increasingly shifting against government. How citizens have come to judge this disregard for moral responsibilities will be detailed again through three lines of argument. First is an examination of the lack of action on

AMD, second an assessment of relevant court cases against government, and finally an exploration of failures in related legislation.

1. Lack of Action on Acid Mine Drainage

As explored in Chapter III, groundwater in Gauteng province has been irreversibly contaminated by AMD, and planned mining expansion in other provinces threatens to extend the problem[98]. This thesis has suggested that the unchecked expansion of AMD is a serious violation of Constitution water and environmental rights, and that a lack of national vision for dealing with this issue is a failure of government fiduciary duty. The 2012 case *Federation for a Sustainable Environment and Others v Minister for Water Affairs and Others* explores this issue in greater depth[99].

The case appeared before the North Gauteng High Court, brought by an environmental non-governmental organisation, Federation for a Sustainable Environment, on behalf of residents of three neighbouring townships. Water in the area was recognised by the Court to be contaminated with AMD, rendering it undrinkable. Water tanks had been brought in by the local municipality to replace ground- and surface-water sources, but these tanks were inadequately managed, often empty, and had no established rules of access.

The Court ruled that this was contrary to national standards, and directed the defendants – the Minister for Water Affairs and other government agents – to address long-term water supply as well as maintenance of water quality. In the short-term, the municipality was ordered to provide emergency water supplies to residents within 72 hours. Since the DEA is administrator of the Water Services Act, the Minister for

[98] Oberholster P., 2010, "The Current Status of Water Quality in South Africa," in *A CSIR Perspective on Water in South Africa - 2010*, CSIR Report No. CSIR/NRE/PW/IR/2011/0012/A
[99] RSA North Gauteng High Court, Federation for Sustainable Environment and Others v Minister of Water Affairs and Others (35672/12) [2012] ZAGPPHC 128 (2012).

Water Affairs was listed as first respondent; all other respondents were members of national government and thus enjoined to fulfil Constitutional water rights. The Court requested that respondents sincerely engage with the community and apprise them of progress made toward permanent solutions.

Here, the Court can be seen to recognise the deliberative democracy methods that underpin RSA's Constitution in compelling government to involve civil society in decision-making processes. That government requires pressure from the Court to undertake the same means of public engagement upon which the Constitution, NEMA and the NWA were constructed is revealing of the extent to which government is neglecting its Constitutional duties. Residents of these three adjacent townships are unlikely to view government as acting to fulfil their water rights, especially since a Court order was necessary to guarantee government action on water supply. Moreover, that it is AMD that has despoiled water supplies speaks to government's increasing emphasis on economic concerns over social rights – water resources are given short shrift compared to mining entitlements.

Interestingly, the *Federation* case took place in the same year as the *Harmony* case, 2012, and the latter was earlier cited as a triumph for government. Citizens regarded government as discharging its moral responsibilities toward upholding water rights in the country in *Harmony*, yet in *Federation* the exact opposite of this was experienced, in that citizens regarded government as failing to fulfil their Constitutionally-prescribed water rights. A possible reason for this disparity in government efforts is that government agents are willing to act only to compel others to fulfil rights; they are not willing to act to fulfil these rights solely through government involvement. Conceivably this is a consequence of the greater effort involved and technical ability required to fulfil rights directly – which government

cannot command. It is easier to require that other non-government agents (in the *Harmony* case, from the mining corporation) take on these duties instead.

A second issue regards national views on AMD. The National Science and Technology Forum (NTSF) is a non-profit organisation operating in RSA to further the aims of science, technology and innovation. In July 2011, it hosted a 'Critical Thinkers Forum' on AMD, and presented the results of a survey carried out assessing citizens' views on governmental handling of the issue[100]. Of all ninety-nine participants, sixty-six per cent believed government was not taking AMD seriously enough; the nine respondents who believed government was responding sufficiently also specified that this was only in response to development of crisis conditions. Further surveys carried out across a wider range of RSA society, however, show that ratings of government performance in service provision have been in decline since 2002. Furthermore, trust in political institutions has declined and perceptions of corruption in government have increased since surveys began in 1995[101].

Although the NTSF poll did not interview South African society at large, it can still be surmised that a significant proportion of civil society regard government as failing in its fiduciary duties to protect water resources, and thus equally failing its moral responsibilities. Additionally, information from the Forum indicates that government is not providing information necessary for practices of deliberative democracy. Communities feel disempowered to assess or manage AMD, as much of their knowledge is gleaned from media rather than verified government reports and guidance.

---

[100] National Science & Technology Forum (NSTF) and South African Agency for Science & Technology Advancement (SAASTA), "Critical Thinkers Forum: Acid Mine Drainage, Possible Solutions." Available from: http://www.nstf.org.za/ShowProperty?nodePath=/NSTF%20Repository/NSTF/files/Workshops/2011/ProceedingsAMD2011.pdf (Accessed 15/07/13)

[101] Mattes et al., *Democratic Governance in South Africa: The People's View*.

2. Court Cases

Two recent cases that appeared before the Constitutional Court – the highest court in RSA – highlighted government neglect of Constitutional responsibilities toward water. There has been much media coverage of these cases, as they raised fundamental questions about the soundness of the Constitution, and government responsibilities in upholding rights catalogued within it. The judgements detailed below reveal how government has overlooked its established moral responsibilities, and could be considered as disregarding the entirety of RSA's national metanarrative.

The first, *Maccsand (Pty) Ltd v City of Cape Town and Others*, is a 2012 case about the interplay in the mining sector of three sets of legislation: the Mineral and Petroleum Resources Development Act (MPRDA), the Land Use Planning Ordinance (LUPO) and NEMA[102]. Maccsand, a mining company operating in Cape Town, was awarded a permit by the Minister of the Department of Mineral Resources (DMR) to mine sand on dunes in a residential area of the municipality. The City of Cape Town questioned the legality of the permit, given that the area has been zoned as open public space under LUPO provisions. The City asserted that Maccsand could not mine without obtaining a consent use order. City authorities further claimed that environmental authorisation under NEMA also had to be granted for mining to continue. Maccsand argued that the DMR authorisation trumped other considerations, as mining clearance was the sole provenance of this ministry under RSA's Constitution, in which other ministries cannot intervene.

The Cape Town High Court granted an interdict against Maccsand, who then appealed to the Supreme Court of Appeals. This Court also upheld the interdict, so the DMR appealed to the Constitutional Court for a final ruling on land use authorisation

[102] RSA Constitutional Court, Maccsand (Pty) Ltd v City of Cape Town and Others (CCT103/11) (CC) [2012] ZACC 7; 2012 (4) SA 181 (CC); 2012 (7) BCLR 690 (CC) (2012).

priorities. This Court ruled on the side of the City, finding that mining rights are subject to LUPO regulations – and therefore dependent upon land use zoning. Regarding the requirement to obtain authorisation under NEMA for water use, the Court found against the City of Cape Town in declaring that applicability of NEMA would not be examined in this case. The reason given for this is that the DEA Minister had not yet put into effect regulations under NEMA relating to mining activities, such that no declaratory order could be granted for mining[103].

The Court suggested that the current status quo should continue until such time as these regulations were put into effect, which ultimately means that the DMR Minister regulates environmental aspects of mining over the DEA Minister. However, the Court did find that if a mining corporation undertook an activity listed under NEMA, separate authorisation through this legislation would also be required. The Court declared that LUPO and NEMA regulations serve distinct but complementary purposes to the MPRDA, insomuch that multiple authorisations for extractive activities are not contrary to the law of the nation – and could in fact be beneficial.

This case clarifies requirements for mining in RSA, specifying that corporations have to apply for clearance both from the DMR and local authorities to commence operations. This gives power to local authorities to determine whether mining in a specific area would be more beneficial than detrimental, which previously was the prerogative of the DMR. The case has also created a foundation for the future prominence of environmental regulations – assuming that the DEA Minister will soon bring NEMA listed activities into effect. Importantly, however, government failed to uphold its Constitutional requirements to manage authorisation of land usage, and

[103] Under NEMA, the DEA Minister is empowered to create a list of activities for which authorisation must be obtained for an activity to commence – that is, a listed activity - which would include prospecting, exploration and mining. However, at the time of writing (2014), such a list has not been made effective in RSA.

citizens had to rely on the Court system to force duties to be discharged. What is particularly significant to note in this case is that citizens, through the Cape Town municipality, view government as accountable for fulfilling water rights. Moral responsibility for ensuring that water quality standards are upheld is seen not as falling to individual persons, but to national government instead; citizens morally judged government as culpable and charged them as such in the nation's highest Court. Citizens believe that norms established in the Constitution were disregarded by government in favour of economic interests – a dereliction of government's social moral duty under the national metanarrative.

The second case under consideration is from 2009, *Nokotyana and Others v Ekurhuleni Metropolitan Municipality and Others*[104]. Inhabitants of Harry Gwala Informal Settlement sought an order to compel municipality to provide them with the basic services that government is Constitutionally-obligated to supply to all townships – adequate housing, electricity, sanitary systems and water supply. Plaintiffs achieved only partial success in the South Gauteng High Court, as this Court determined that basic services applied only to formal settlement blocks. The case was then argued before the Constitutional Court. The Minister for Human Settlements and Director-General of the National Department for Human Settlements were listed as respondents in the higher Court, thus implicating government in what plaintiffs perceived as failure to fulfil rights.

The plaintiffs' case for water centred on Section III of the Water Services Act, which mandates that all citizens have access to basic water supply and sanitation, and that each water services authority has to provide for realisation of these rights in water development plans. The respondents argued that municipal budgets were derived from

[104] Constitutional Court, Nokotyana and Others v Ekurhuleni Metropolitan Municipality and Others (CCT 31/09) [2009] ZACC 33; 2010 (4) BCLR 312 (CC) (2009).

planning for formal settlements, and provisions for informal settlements were necessarily less than the plaintiffs argued was their right. However, the Constitutional Court reversed the High Court's decision, ordering the municipality to upgrade the status of the informal settlement to formal, thereby entitling its inhabitants to all prescribed services that satisfy RSA's social and economic rights.

Here again is a situation in which government has to be taken to Court by citizens to secure fulfilment of rights to which citizens are entitled through the Constitution. In this case, government argued to be allowed to maintain institutional discrimination, contravening the prevailing national metanarrative. This has diminished the trust of citizens in government's adherence to its moral responsibilities, and is discordant with the heuristics that consider government to be a source of virtuous behaviour, that acts to resolve the systemic deprivations of apartheid.

Finally, a third case was argued in lower courts in late 2012, with similar implications. Residents of Vhembe District Municipality had been suffering severe water shortages for over two months. Inhabitants of Makhado town, alongside civil rights organisation AfriForum, took the municipality to North Gauteng High Court to compel urgent reconnection of water pipes and resupply of municipal water to residents[105]. The Judge ordered sinking of six new boreholes and creation of an implementation plan for water resupply. AfriForum hailed this as a legal precedent that could be used by other municipalities facing similar provision issues[106]. It is the first in which a government official, the municipal manager, has been held

[105] AfriForum, *AfriForum Fights for Louis Trichardt's Water in High Court*, *Media Statement*, 2012, http://www.afriforum.co.za/english/2012-10-01-afriforum-veg-vir-louis-trichardt-se-water-in-hooggeregshof/.
[106] Linda van der Westhuizen, "AfriForum Says Court Order Is a 'Landmark Victory,'" *Zoutpansberger Newspaper*, October 12, 2012, http://www.zoutnet.co.za/details/12-10-2012/afriforum_says_court_order_is_a_landmark_victory/15371.

accountable in Court for the failure to maintain water supplies. That the situation nationwide is extreme enough that other citizens may need to rely on this court decision to secure their Constitutionally-guaranteed water supply is significant, and exhibits the extent to which government is viewed as failing to look after moral responsibilities to fulfil water rights.

3. Failure in Other Legislation

A fundamental contravention of national metanarrative by government has been the dissolution of the Water Tribunal by the DEA Minister. The Tribunal was created as an independent body with mandate over all water disputes in the country. It is authorised to hear appeals by water users against decisions made by the DEA and associated institutions, and to assign compensation if required[107]. It is considered to be a critical component of the NWA, allowing citizens to participate in reviewing the laws of the country, following the model of deliberative democracy upon which RSA's Constitution was founded[108]. The Tribunal was disbanded in 2012 following the resignation of the Chairman, Judge Lekale. The Minister then dissolved the Tribunal because the NWA dictates that it cannot hold legal authority without a legal expert as Chairman – but another Chair has not been appointed as the Minister wanted to change the legislation regulating the Tribunal's activities to be more efficient[109].

The High Court subsequently ruled that this decision was *ultra vires* and therefore unlawful, suggesting that only the Judicial Service Commission had this power. As of February 2014, the Minister for Water and Environmental Affairs had only just opened nominations for the Chairperson of the Tribunal, to be completed by

[107] RSA Department of Water Affairs, "Water Tribunal: About Us," accessed January 29, 2013, http://www.dwaf.gov.za/WaterTribunal/About.aspx.
[108] Sue Blaine, "Molewa to Contest Tribunal Ruling," *Business Day*, December 14, 2012, http://www.bdlive.co.za/national/science/2012/12/14/molewa-to-contest-tribunal-ruling.
[109] Sue Blaine, "Water Tribunal Suspended after Losing Chairman," *Business Day*, September 13, 2012, http://www.bdlive.co.za/national/2012/09/13/water-tribunal-suspended-after-losing-chairman.

year-end[110]. Many citizens believe this fourteen-month wait was a demonstration of government disregarding its duties.

The dissolution was carried out with no public consultation or notification, which is contrary to the deliberative methods through which the Tribunal operated. This is also contrary to established norms of behaviour in which public consultation is a vital method of governance. When the Tribunal was dissolved, there were forty-four cases pending review by the Tribunal, which means that water governance has come to a standstill in the country, restricting the fulfilment of water rights[111]. It has been alleged that the Minister made no attempt to reappoint a Chairman with the required legal competency, although she had opportunity at two Judicial Service Commission meetings subsequent to Lekale's resignation[112].

Allowing the Tribunal to become invalid is a failure of government's moral responsibility to uphold the water rights of its citizens, and re-frames the DEA as a ministry that does not have social and economic rights as its top priority. The Court itself argued that the Minister had "made a mockery of the dispute process in her department" by sanctioning the Tribunal's dissolution[113]. Wide media coverage of this event ensured that citizens were widely aware of this government failing. Accordingly, the frame through which the ministry is viewed is shifting to irresponsibility and disrepute.

Even the Blue Scorpions, much lauded when they were created, have since come to be regarded as a government failure[114]. Many posts were unfilled in 2011,

[110] RSA Department of Water Affairs, *Notice 143 of 2014: Nominations for Chairperson of the Water Tribunal* (Pretoria, RSA, 2014), www.gov.za/documents/download.php?f=211243.
[111] Blaine, "Water Tribunal Suspended after Losing Chairman."
[112] Gareth Morgan, "South Africa: Water Tribunal - DA Welcomes Damning Judgement Against Water Minister," *Democratic Alliance Press Statement*, December 7, 2012, http://allafrica.com/stories/201212080087.html.
[113] Blaine, "Molewa to Contest Tribunal Ruling."
[114] Gareth Morgan, *Statement by Gareth Morgan, Democratic Alliance Shadow Minister of Water and Environmental Affairs, on the High Vacancy Rate for Blue Scorpions*, *Polity.org.za*, October 17, 2011,

with a twenty-eight per cent vacancy rate, while only three of eight regional water offices have Blue Scorpions on staff. Those who are assigned to Blue Scorpion roles have additional duties besides, so are unable to accomplish full compliance monitoring and enforcement. Incapacitation of the Ministry through weak implementation of strategies is regarded as a failure to provide equal protection for all social rights, with citizens increasingly judging government as of little moral worth in not following through with assurances.

There have been numerous media reports detailing the various areas in RSA that are suffering due to lack of water supply or poor water quality. Recently, inhabitants of Gunjaneni and Tholokuhle villages – close to Nkandla village, which is the ancestral home of current President Jacob Zuma – have been protesting severe water shortages[115]. Villagers claim that Nkandla local municipality received significant public monies to spend on improving water supply infrastructure, yet residents still rely on nearby streams and a small agricultural dam for water. Citizens also claimed that Mtubatuba local municipality has not maintained municipal taps for the past three years, and of the 3,000 inhabitants of the area, less than 750 have access to the 5000-litre water tanks supplied by district government in lieu of piped water. The municipality itself claims that lack of support and funding from central government hampers attempts to provide better services. In this case, citizens are not able to attain the water rights bestowed upon them in the Constitution due to poor provision planning by government. Moreover, citizens feel betrayed by central government, believing that corruption and short-term concern for money over environment is guiding action more than moral responsibility.

---

http://www.polity.org.za/article/da-statement-by-gareth-morgan-democratic-alliance-shadow-minister-of-water-and-environmental-affairs-on-the-high-vacancy-rate-for-blue-scorpions-17102011-2011-10-17.

[115] Canaan Mdletshe, "A Matter of Life, Death," *South Africa Sunday Times*, August 6, 2012.

Further media reports have described planned diversions of water for industrial usage – specifically for Eskom, RSA's electricity public utility[116]. Farmers and environmentalists oppose these plans, contending that government's fossil fuel reliance is untenable. Reports suggest that, in the conflict over water allocation, government favours industry; this partisanship goes against the spirit of human rights as it gives predominance to more powerful economic interests over less powerful social entitlements. Other reports detail the extreme shortage of water officials in the DEA, with only 31 full-time staff employed for compliance monitoring at the end of 2010[117]. This has engendered a looming crisis for water infrastructure and quality, and has also severely curtailed citizens' trust in government. Government is thus not able to fulfil legal rights to water, as enforcement of regulations is minimal. Nor is it able to fulfil moral rights to water, as questions have been raised about the motives guiding the DEA. Since all of these reports appear in national newspapers with extensive readership throughout RSA, government failings are communicated throughout the community.

Extensive propagation of doubt through the country, about government commitment to effecting rights to water, is exhibited in multiple newspaper reports, in several cases that have been heard before the nation's highest courts, and in the visible lack of credible effort to manage AMD. The national metanarrative has designated government actions as key determinants of whether water rights for all citizens are fulfilled. Government was established as the sole agent able to uphold water rights, and early actions against transgressors proved government's moral worth. Institutions of government that enforced these rights were regarded with

[116] Bobby Jordan, "Farms' Water to Be Diverted to Eskom," *South Africa Sunday Times*, August 12, 2010, http://www.timeslive.co.za/local/2010/08/12/farms-water-to-be-diverted-to-eskom.
[117] South Africa Press Association, "Huge Shortage of Enforcement Officials: Water Minister," *South Africa Sunday Times*, November 24, 2010.

equivalent approval. Unfortunately, in more recent years, the right to water determined through the Constitution, NWA, and NEMA has been progressively eroded. Citizens hold an increasingly mistrustful attitude toward government, as more evidence of government ineptitude or corruption is revealed, and as the court system has to be called upon more often to substantiate Constitutional entitlements.

5 Conclusion

This chapter creates a framework that allows for representation of reality in RSA's society, that is utilised to enable greater understanding of society. It began by reviewing the history of the ANC party, which has led RSA's government since 1994. The party is synonymous with State and with government, as they have been in power for nearly twenty years. The party's slogan, "Power to the People," is a reflection of RSA's metanarrative, combining deliberative democracy and popular self-government. The government is expected to uphold the country's behavioural norms through enforcing the rules established through the national Constitution[118]. RSA's Constitution was itself created through deliberation and consensus-building in society, as were subsequent environmental Acts, NEMA and NWA. A major goal of these Acts is to enable all citizens to participate effectively in water resource management. The argument has been charted that consensus-based procedures have been promoted and utilised by government since black majority rule for this purpose. This has been instrumental in proving the Constitution's worth, in arranging widespread adoption of its socioeconomic principles, and in establishing government's moral worth.

[118] A.R. Hansen & V. Ryan, "Following the Rising Polestar: An Examination of the Structures Governing Corporate Citizens in South Africa," in *Corporate Citizenship in Africa: Lessons from the Past; Paths to the Future*, ed. Wayne Visser, Malcolm McIntosh, and Charlotte Middleton (Greenleaf Publishing, 2006).

From the Constitution, social norms of behaviour were constructed. Social deliberation generated rights with both moral and legal components, and these rights are upheld and fulfilled by agents and institutions of government. Government's role is to protect all rights equally, through legislation that substantiates social norms. Once rights are in existence and are enforced, a set of heuristics evolves that guides decision-making and actions in order that they will conform to societal expectations. Heuristics designate good and bad actions, and accord moral worth to individuals and institutions that observe them. Heuristics rely on simplification and past experiences, and evaluation occurs on an immediate loss/gain basis rather than final outcome analysis. Availability of information is highly important, though contingent on the salience of that information, and what importance others in society grant it. Political preferences in society are also influenced by heuristics, as shortcuts in decision-making will grant priority to certain issues over others, thus defining political decision-making processes.

Once heuristics are entrenched, the outline of a national metanarrative can be discerned. This metanarrative substantiates ethics, beliefs and modes of action in a society. In doing so, it both guides current behaviour of individuals and institutions, and will direct the actions of future generations as well. Social consensus through the metanarrative confers validity to decision-making processes that created rights and developed institutions to implement them. In this way, government itself has acquired a sense of moral authority that means that citizens will obey it and have faith in its decisions. Archbishop Emeritus Tutu's quote at the start of this chapter illustrates this sense of community and of communal collaboration in building up the nation. It demonstrates that deliberative democracy is at the heart of RSA political decision-making, and is crucial in the national metanarrative.

However, government's moral authority is being progressively abraded through citizens' perception that it is disregarding its moral responsibilities to uphold water rights. The 2012 *Federation for a Sustainable Environment* case revealed the extent to which government has been neglecting its Constitutional duties regarding AMD pollution, while the NTSF Forum survey uncovered that the public is aware of government foundering on this problem. The 2012 *Maccsand* case, along with various media reports detailed previously, exhibit how government looks to be favouring economic interests over social rights – a clear dereliction of its social moral duty. The 2009 *Nokotyana* case and media coverage of Vhembe district water shortages demonstrate that citizens are beginning to raise questions about motives guiding government agents, with a growing hypothesis that corruption is guiding decision-making more than moral responsibility.

The overall impact is that citizens feel betrayed by the ANC government, who they see detrimental for long-term rights. With the government deemed to be overlooking RSA's national metanarrative, it is viewed as immoral. If the government is not according the proper respect to citizens' rights, then it cannot be according much significance to the law[119]. Moreover, citizens do not have confidence that Constitutional water rights will be attained. Tutu's "African Weltanschauung"[120] is being disregarded, with possible serious consequences for political decision-making.

This chapter has explained why government is viewed as failing, and how that failure has been manifest through the unsuccessful meeting of social norms. The next chapter will evaluate reasons why water resources are not being upheld for current and future generations. This will be explored through empirical investigation into which actors in society – if not government – may be working to fulfil these rights.

[119] Letsas, "Dworkin on Human Rights (Forthcoming)."
[120] Battle, *Reconciliation: The Ubuntu Theology of Desmond Tutu*.

CHAPTER VII(a): PREAMBLE: GOVERNANCE IN PRACTICE IN RSA

> *"[P]ersistent environmental problems are frequently characterized by large amounts of ambiguity … In the environmental policy arena ambiguity is especially high because of the large number of relatively autonomous actors with diverse interests, perspectives and world-views, who are involved and who try to influence each other."*
> *- K. Hogl, E. Kvarda, R. Nordbeck and M. Pregernig*[121]

1 Introduction

This preamble will chart the theoretical underpinnings for the fieldwork-based chapter to follow, allowing for a more comprehensive understanding of the theoretical concepts to inform practical experiences. The subsequent chapter will propose that the involvement of non-government actors in regulation, in a system known as multi-level governance (MLG), is a possible solution to the problems inherent in applying legislation from the theory of the country's Constitution. These problems have been thwarting progress toward intergenerational rights to water, as suggested in earlier chapters detailing the acid mine drainage (AMD) problem and government's weak response to it. In order to understand how MLG functions in RSA, the philosophy of existing governance structures first has to be considered. In addition to that aim, this preamble will review concepts of regulation to determine the means by which decisions made in the MLG space are accomplished. The overarching aim of this prologue is to make the chapter that follows more comprehensible through a fuller theoretical context.

[121] Hogl, K., E. Kvarda, R. Nordbeck, and M. Pregernig. "Legitimacy and Effectiveness of Environmental Governance – Concepts and Perspectives." In *Environmental Governance The Challenge of Legitimacy and Effectiveness*, edited by K. Hogl, E. Kvarda, R. Nordbeck, and M. Pregernig. UK: Edward Elgar Publishing Ltd, 2012

This thesis has previously asserted (see Chapter IV) that according to Kantian moral theory, humans are rational – and it is in this ability to exercise reason that human dignity originates[122]. Interactions in society should take place on this basis of rational discussion, and through it cooperative decisions can be made and consent achieved. It follows from this that citizens' rights are upheld and environmental protection ensured only when multiple agents have productive interactions in a decision-making process.

It is proposed that such interactions take place in RSA according to a MLG model. This concept is used to explain the distribution of decision-making from a central command to numerous smaller, radiated centres. It was originally defined as processes of deliberation that are on-going among multiple territorial layers of nested governments[123], but with further empirical study, the concept has been refined to refer to development of complex governance structures beyond the reach of traditional administrative boundaries[124]. MLG was originally developed to better understand the European Union[125], but this thesis proposes that the increasing political disorder experienced in RSA, prompted by the AMD crisis, has in fact led to emergence of a MLG system. MLG can be applied to circumstances in RSA because it satisfies the four common strands of any multi-level structure: increasing participation of non-State actors, disintegration of discrete levels of decision-making, a transformation in the role of the State, and a shift in the nature of democratic accountability[126]. The

[122] Immanuel Kant & H J Patton, "Groundwork for the Metaphysic of Morals (1785)," ed. Mary J Gregor, *Practical Philosophy* (Cambridge University Press, 2005).
[123] G. Marks, "Structural Policy and Multi-Level Governance in the EC," in *The State of the European Community: The Maastricht Debate and Beyond*, ed. A. Cafruny and G. Rosenthal (UK: Longman/Boulder, 1993), 391–411.
[124] L. Hooghe & G. Marks, *Multi-Level Governance and European Integration*, *Governance in Europe*, Governance in Europe. (Rowman & Littlefield Publishers, 2001).
[125] Andrew Jordan, "The European Union: An Evolving System of Multi-Level Governance ... or Government?," *Policy Politics* 29, no. 2 (2001): 193–208.
[126] Bache and Flinders, "Themes and Issues in Multi-Level Governance."

particular ways in which this is materialising will be explored in the subsequent chapter.

The communications paths through which MLG is supported can be clearly demonstrated through the Pentalogue Model, which was already made relevant to RSA society in Chapter V. In the chapter that follows, fieldwork findings will be applied to the model to reveal the influence of particular clusters, as well as to reveal dysfunctional interfaces among the five groups. The terms of interaction in society, demonstrated in the Pentalogue, have been determined through adherence to the country's metanarrative. This was specified in the preceding chapter recognising the dignity of all citizens, cohesion in diversity, and upholding intergenerational rights to water. These standards are established in the Constitution, and determine the boundaries within which deliberations and decision-making can take place – as well as the fundamental objectives that collective actions should endeavour to achieve. In RSA, public actions are circumscribed by regulations that are based on the overarching importance of this metanarrative; regulations cohere with social norms and diminish uncertainty in decision-making. Regulation can thus be regarded as an important structure guiding political life in RSA.

There are extensive debates among legal theorists about the efficacy of regulation, and how best to achieve positive environmental outcomes. Two major opposing theorists, Stephen Breyer and Cass Sunstein, are reviewed, with connections made from their theories to on-the-ground circumstances in RSA. Previous chapters have asserted that the wholesale failure of environmental and water regulation in RSA is becoming increasingly obvious – yet what is only just now distinguishable is the growing involvement of non-State actors in processes of governance, and the importance of these actors for maintenance of long-term environmental rights in the

country. These concepts are introduced in this preamble, and examined further in the subsequent chapter.

2 Kant And Governance

This thesis has proposed that RSA's Constitution is informed by Kantian theory, in the emphasis placed on human dignity and the autonomy of the individual citizen. These contribute to the particular quality of democracy in RSA that favours social and economic rights, and endeavours to achieve outcomes of liberty and equality. It is assumed that rational discussion among moral citizens will create a regulatory structure under which all citizens can pursue their moral interests[127]. This thesis suggests that the deliberative democratic principles underpinning the legal system in the country achieve this Kantian objective, with discussion among all citizens ensuring that each is subjected to law that derives from his or her own reason[128]. South Africans thus act in accordance with their moral duties, based in the metanarrative, to respect the dignity of all people; such moral duties are enforced through the legal system.

John O'Neill has claimed that deliberative democracy is informed by Kantian philosophy, as interactions between citizens create the laws to which all adhere and the rights to which all are entitled[129]. A public sphere in which reasoned argument adjudicates all disagreements is both a Kantian ideal and the backbone of deliberative democracy[130]. For Kant, this is an ideal State, a model to which all democratic nations should aspire, with public reason as the driving force behind formulating policy. Kant believed that this was a long-term aspirational project that relied on social cooperation

[127] Weinrib, "Law as a Kantian Idea of Reason" *Columbia Law Review* 87, no. 3 (1987): 472–508.
[128] Caird, *The Critical Philosophy of Immanuel Kant (Volume II)*.
[129] John O'Neill, "The Rhetoric of Deliberation: Some Problems in Kantian Theories of Deliberative Democracy," *Res Publica* 8, no. 3 (October 1, 2002): 249–268.
[130] Elisabeth Ellis, *Kant's Politics: Provisional Theory for an Uncertain World* (New Haven, USA: Yale University Press, 2005).

rather than individual motivations, hence the need for a formalised public sphere[131]. This philosophical background is evident in RSA, where official procedures for extensive public consultation are built into the Constitution and have been crucial for formation of the country's national metanarrative after the dissolution of apartheid[132].

Kant proposed that all democratic governance regimes would transition from imperfect, provisional States to exemplary systems; such regimes would be driven by concrete institutional change mediated by formal public deliberation, and grounded in rational values[133,134]. Governance of such an ideal nation would be uncomplicated, according to Kant, as there would be a single common interest represented by the State, and all dissent would be addressed through discussion rather than civil disobedience[135]. Yet the situation in RSA means it is far from being an ideal Kantian democratic regime. Civil disobedience is an important facet of political life, with 1,091 incidents logged classified as 'unrest' – that is, requiring police intervention – during the 2011/2012 period[136]. Moreover, major trade unions see significant utility in civil unrest, using it to campaign against unfavourable government proposals, over and above consultation processes legitimised through legislation[137]. This suggests that RSA is still in the form of a provisional, imperfect State, and still has to transition to being a Kantian democracy, with rational public participation leading to formation of moral laws.

Kant recognised that movement toward his ideal nation is on a long-term scale, but interestingly he did not envision a case where, as in RSA, morals-based

[131] Ibid.
[132] "The Public Participation Process," *South African History Online*, 2010, http://www.sahistory.org.za/archive/chapter-13-public-participation-process.
[133] Caird, *The Critical Philosophy of Immanuel Kant (Volume II)*.
[134] Ellis, *Kant's Politics: Provisional Theory for an Uncertain World*.
[135] Waldron, "Kant's Legal Positivism."
[136] Shauna Mottiar, "From 'Popcorn' to 'Occupy': Protest in Durban, South Africa," *Development and Change* 44, no. 3 (May 15, 2013): 603–619.
[137] eNCA, "Calls for 'Civil Disobedience,'" *eNews Online*, 2013, http://www.enca.com/south-africa/calls-civil-disobedience.

laws are already in existence without inherent obedience by citizens. Through its aspirational Constitution, this thesis puts forward that RSA has envisioned that a faultless space of governance already exists. Here, decision-making processes are based on adherence to rational discussion and moral laws. However, RSA does not yet have a fully functional, formalised arena in which these rational, collaborative deliberations can take place. As advised previously in this thesis, the affirmative goals of the Constitution are not being achieved due to the limits of Kantian theory. Chapter IV suggested that this was because citizens may not all have the same conception of human happiness, and are motivated by incentives apart from simple deference to moral laws, as Kant assumes. This preamble goes further, and proposes that the failure of Kantian philosophy is also a result of forced application – laws were created under the assumption of an ideal society, without the space or time given for that moral community to develop.

Although Kant believed that the existence of such a legal system would uphold citizens' moral rights, RSA has to an extent frustrated this premise. Although the previous chapter demonstrated that laws are indeed upheld in the country, through the case study of the 'takings' of land that has not been challenged by citizens in Court, this has demonstrably not been the case with AMD. Government has persistently disregarded regulation to uphold intergenerational rights to water in the face of expanding AMD, meaning that public reasoning is not the driving force behind decision-making. Deliberations among citizens and government play a pivotal role in the creation and maintenance of the country's legal system; these interactions should also then uphold environmental quality standards. When this sytem has stopped working, there is the possibility that RSA could descend into lawlessness. Nonetheless, it has not, and processes of governance continue. The means by which

this could be happening is explained in the subsequent section, which explores how processes are upheld through non-traditional governance methods.

3 Multi-Level Governance

Kant proposed that interactions among all members of a society create moral laws to which all can adhere. However, he does not present a method by which this interaction could take place – and this thesis suggests that the process in RSA is MLG. Although originally developed the observation of the operation of the European Union[138], the scope of the concept has since been expanded to signify a comprehensive distribution of decision-making powers across territorial boundaries[139]. It indicates that there is no clear distinction between international, national, regional and local governance structures; it also transforms the role of the State from a structure of top-down command-and-control to part of a multi-level and polycentric decision-making process[140].

There are four common elements to any MLG structure. First is that high-level decision-making is characterised by increased contributions from non-State actors. Second, complex systems of decision-making are more common than nested and distinct strata. Third is an altered role for the State in any collective action procedures. Lastly, responsibility for taking action has to be adapted to this new context of decision-making[141]. This section will chart the history and benefits of MLG, and introduce reasons why it has developed in RSA. Further evidence that MLG exists in RSA will be explored in the fieldwork that follows.

[138] Marks, "Structural Policy and Multi-Level Governance in the EC."
[139] Hooghe and Marks, *Multi-Level Governance and European Integration*.
[140] Bache and Flinders, "Themes and Issues in Multi-Level Governance."
[141] Ibid.

Two theoretical types of governance in MLG have been recognised, imaginatively named Type I and Type II. The former is compared to a Matryoshka Doll set with encapsulated governance jurisdictions that are only applicable at a single territorial level[142]. It has a limited number of levels serving multiple functions. The latter, Type II, has more flexible jurisdictions with a greater number of levels, all with increased specialisation of functions. Services are provided by broad governance jurisdictions based on efficient costs and benefits, rather than a defined territory. Moreover, services are generated in response to changing preferences rather than pre-formulated priorities.

RSA conforms more closely to Type II MLG with regards water governance, with task-specific and specialised roles given to the Department of Mineral Resources (DMR), the Department of Environmental Affairs (DEA) and the Department of Water Affairs (DWA), all of which cross regional boundaries in the country. As a specific example, the DWA carried out a long-term solution feasibility study to address AMD that has involved multiple local governments across Gauteng province, as well as international governments through the Lesotho Highlands Water Project[143]. An Inter-Ministerial Committee was formed of government agents from multiple departments working alongside a non-government 'Team of Experts,' all tasked with investigating and proposing solutions to AMD. This flexible design with a specific problem focus is paradigmatic of Type II MLG structure.

These overlapping networks allow actors to bridge disparate decision-making scales, while also allowing the scales themselves to evolve to meet requirements of

[142] This concept is developed from L. Hooghe & G. Marks, "Contrasting Visions of Multi-Level Governance," in *Multi-Level Governance.*, ed. Ian, Bache and Matthew V. Flinders (Oxford, UK: Oxford University Press, 2004).
[143] RSA Department of Water Affairs, "Acid Mine Drainage: Long Term Solution Feasibility Study," 2012, http://www.dwa.gov.za/Projects/AMDFSLTS/default.aspx.

the issue being addressed[144]. This avoids the stumbling block of scale mismatches faced in traditional governance processes when public goods spill outside discrete territorial boundaries[145]. This is particularly pertinent for water as a public good in RSA that belongs to all citizens and is held in fiduciary trust by the government. Current systems, without the flexibility allowed in MLG, have resulted in water resources being subject to scale mismatches. In this way, assigned management systems do not correspond with natural flows of water, resulting in unsustainable management practices in RSA. Collective action problems with water, such as those encountered with AMD in Gauteng have therefore become prevalent. Rehabilitation will be best achieved through the polycentric structures of MLG[146].

Flexibility is a key aspect of MLG, and part of the reason why it has successfully taken hold in RSA. Increasing intricacy and lack of predictability of decision-making encourages non-government actors to create closer relationships with other governance levels in order to secure their own capacity for action[147]. In RSA, AMD has led to political disorder, and managing it will require highly complex and flexible decision-making procedures to administer. Subnational actors in the country have reacted to this disruption by developing their own governance structures, which are in harmony with and supplement already-existing environmental legislation. This will be investigated further in the chapter to come.

Taking as granted that MLG exists in RSA, this preamble proposes that it is of great benefit to the country, as multiple levels and scales of decision-making are able

[144] P. Stubbs, "Stretching Concepts Too Far? Multi-Level Governance, Policy Transfer and the Politics of Scale in South East Europe," *Southeast European Politics* 7, no. 2 (2005): 66–87.
[145] Art Dewulf & Maartje Van Lieshout, "Disentangling Scale Approaches in Governance Research: Comparing Monocentric, Multilevel, and Adaptive Governance," *Ecology And Society* 15, no. 4 (2010): 29.
[146] E. Ostrom, "Polycentric Systems: Multilevel Governance Involving a Diversity of Organizations," in *Global Environmental Commons: Analytical and Political Challenges in Building Governance Mechanisms*, ed. E. Brousseau et al. (Oxford, UK: Oxford University Press, 2012).
[147] J. Fairbrass & A. Jordan, "Multi-Level Governance and Environmental Policy," in *Multi-Level Governance*, ed. Ian Bache and Matthew V. Flinders (Oxford UK: Oxford University Press, 2004).

to more effectively manage the numerous and diverse externalities of environmental issues[148]. Transfer of knowledge and skills occurs more easily in MLG structures, given the greater amount of social capital mobilised. Therefore, multi-level linkages across diverse institutions are essential for long-term protection of environmental resources[149]. Such relationships build trust between government and non-government agents, and feed into maintenance of moral, rational dialogue that is essential in a deliberative democracy[150]. Communications linkages in RSA society will be exhibited more clearly in the next chapter through application of fieldwork to the Pentalogue Model introduced in Chapter V this thesis.

Participation of the public and other non-government agents in management of water resources facilitates decision-making, improves the quality of decisions made, and strengthens transparency of democratic processes[151]. Coping with the uncertainty of AMD and the change it is likely to bring to water policy in RSA is facilitated by social learning in the context of MLG: communities of learning develop through participation in a shared project, and generate more knowledge and have greater efficacy than traditional command and control measures[152]. MLG dovetails neatly with deliberative democracy, as effective discussions in society require comprehensive integration of technical, regulatory, and public perspectives[153]. Having such polycentric contribution to governance debates facilitates compromise and leads

[148] Hooghe and Marks, "Contrasting Visions of Multi-Level Governance." *pp.16*
[149] Eduardo S. Brondizio, E. Ostrom, & Oran R. Young, "Connectivity and the Governance of Multilevel Social-Ecological Systems: The Role of Social Capital," *Annual Review of Environment and Resources* 34, no. 1 (2009): 253–278.
[150] K. Hogl et al., "Legitimacy and Effectiveness of Environmental Governance – Concepts and Perspectives," in *Environmental Governance The Challenge of Legitimacy and Effectiveness*, ed. K. Hogl et al. (UK: Edward Elgar Publishing Ltd, 2012).
[151] C. Bruch, *Public Participation In The Governance Of International Freshwater Resources* (Tokyo: United Nations University Press, 2005).
[152] Claudia Pahl-wostl et al., "Social Learning and Water Resources Management," *Ecology And Society* 12, no. 2 (2007): 5.
[153] Ortwin Renn, "Participatory Processes for Designing Environmental Policies," *Land Use Policy* 23, no. 1 (2006): 34–43.

to better results for long-term environmental quality[154]. The subsequent chapter will show that contributions to the water governance debate from industry actors in RSA alongside input from civil society and the required government participation, have improved implementation and enforcement of environmental legislation.

The following chapter will also significantly examine the changing role of government under MLG. Increased involvement of ancillary organisations, including industry and non-governmental organisations that are not formally part of governance structures in the existing legislative framework, will necessarily shift government responsibilities[155]. Governance under MLG is a process of on-going interaction between government agents and private actors, such that decision-making deliberations are increasingly taking place outside of the control of government, and government power is diffused among other groups: international actors, regions and cities, and civil society[156]. The question of whether the MLG structure was intended in the way the Constitution was drafted, or whether it has formed as a way of coping with increased environmental uncertainty, will also be addressed in the next chapter. Briefly, using a High Court case and recent amendments to legislation, it will be asserted that MLG was unanticipated, and was the consequence of overly-complex decision-making procedures that require advice from diverse inputs.

4 Regulation

It is then important to consider the regulatory environment guiding behaviour under MLG, as this will determine outcomes from collaborative decision-making with

[154] Thomas Dietz & Paul C. Stern, *Public Participation in Environmental Assessment and Decision Making* (USA: National Academies Press, 2008).
[155] B.G. Peters & J. Pierre, "Multi-Level Governance and Democracy: A Faustian Bargain?," in *Multi-Level Governance*, ed. Ian, Bache and and Matthew V. Flinders (Oxford UK: Oxford University Press, 2004).
[156] Dewulf and Lieshout, "Disentangling Scale Approaches in Governance Research: Comparing Monocentric, Multilevel, and Adaptive Governance."

non-government agents. There are two opposing schools of thought on the level of regulation required: more regulation is restrictive, or more regulation ensures moral decision-making. If the interpretation in a country is the former school of thought, market values will be applied; if it is the latter then public values are given greater focus. These two opposing concepts and their arguments are explored below, focusing on two academics, Stephen Breyer and Cass Sunstein. The type of regulation in use could have far-reaching effects on protection of citizens' entitlements, and in RSA, on maintenance of intergenerational water rights. Regulation is essential for the successful functioning of a democratic nation, as it ensures that legitimate actions are condoned and unlawful actions censured.

Stephen Breyer[157] is an adherent of the less-is-more school of regulatory theory, suggesting that regulatory processes are both prone to nonfulfillment and are undemocratic[158]. The latter claim rests on the fact that regulators hold non-elected positions, and as such lack the legitimacy accorded to elected government officials, and are less answerable to public demands. He suggests that the growth in regulation globally since the 1970s has been associated with high costs and major failures. This has been a consequence of agency staff not possessing requisite knowledge, of overly bureaucratic agency processes, and of a general discrepancy in scale between the regulatory policy and entities to be regulated. Breyer concludes that regulatory regimes are often motivated by the self-interest of agents running them, thus can become distorted into serving the interests of regulated industries rather than public interest. In RSA, aspects of this claim can be discerned in the relationship between the DMR and the mines, as proposed previously in this thesis. Mines are sometimes

[157] Stephen Breyer is a Harvard University law professor and Associate Justice of the Supreme Court of the United States. His specialism is administrative law, and he has published extensively on the topic. He is most well-known for his 1982 book, "Regulation and Its Reform."
[158] All following information from: S. Breyer, *Regulation and Its Reform* (USA: Harvard University Press, 1982).

managed more permissively than literal interpretation of regulations would allow, due to an informal alliance between industry and regulatory agents.

As regards environmental legislation, Breyer presumes that a less restrictive system – that is, less regulation – would be of greater benefit for environmental sustainability. He argues that the setting of standards, heavily relied upon in the USA to enforce regulation, is expensive, often wasteful, and ineffective, partly because technologically complex issues cannot be effectively dealt with through simplistic regulations. Moreover, the setting of uniform standards across a country is impractical due to regional variations – this results in non-uniform effects on the environment and water resources. The sizable number of individual sources of pollution or damage makes enforcement increasingly difficult, while there are minimal incentives for voluntary compliance with regulations. Judicial intervention in cases that regulatory agencies bring to court can also have negative effects, freezing technological innovation and thereby slowing progress toward improved environmental conditions.

Breyer proposes that market forces are a more appropriate for guiding behaviour. He suggests that especially for environmental issues, a tax system of marketable credits is preferable. The market, he stresses, is more equitable in decision-making as it allows for bargaining that will reflect true costs of production. It minimises coercion and allows for fairer compensation structures to be generated. Breyer maintains that regulation has too many spillover effects, and should be used only after less restrictive alternatives have been attempted.

The major opposition to this reasoning is Cass Sunstein[159], who believes that the modern regulatory State is both highly coherent and moral, and that far from too

[159] Cass Sunstein is a Harvard University law professor. He was Administrator of the White House Office of Information and Regulatory Affairs from 2009-2012. He is a proponent of libertarian paternalism, and is well-known for the 2008 popular book co-authored with Richard Thaler, "Nudge: Improving Decisions about Health, Wealth, and Happiness."

much regulation, there can in fact be too few regulatory controls[160]. Sunstein asserts that regulation is superior to private market control because it protects public values and enacts aspirational initiatives that might otherwise conflict with utility maximising decisions made in market situations. Moreover, and importantly in RSA's case, regulation overcomes the problem of a lack of knowledge and a discriminatory status quo leading to development of preferences that are unsound and inequitable. For example, the creation in RSA's 1996 Constitution of a right to clean water for all citizens was antithetical to the pre-existing norm of water aligned with private property rights. Market forces were unlikely to effect this radical change that regulation enforced against a prevailing convention.

Regulation is also an effective solution to an issue that Sunstein identifies as "irreversibility": when a certain course of conduct will induce an outcome from which future generations will not be able to recover, or could only recover at an extreme cost[161]. Markets take only current preferences into account, not the effect of present-day transactions on generations to come. "Incommensurable" losses, those involving entities that are exceptional and unique, equally cannot be calculated in monetary terms and require regulation to ensure preservation. Moral intuition plays a role in this situation, given that irreversibility can refer both to importance and permanency of any loss; this is another aspect that markets cannot capture in fiscal calculations.

Sunstein suggests that regulation fails not due to inherent insufficiencies, but rather due to inadequate implementation, or due to limitations in the original statute. Inadequate implementation includes regulators following self-interest in protecting the interests of the industry to be regulated, rather than the public good. Agent self-interest thus obstructs democratic processes and public accountability. As indicated in

[160] Sunstein, *After the Rights Revolution: Reconceiving the Regulatory State*.
[161] C.R. Sunstein, "Irreversibility," *Law, Probability and Risk* 9, no. 3–4 (September 1, 2010): 227–245.

the discussion of Breyer's theories, aspects of this can be seen in the relationship between mining corporations and the DMR. However, Sunstein regards this not as a regulatory failure, but as a repercussion of poor execution by fallible agents. As regards limitations in the original statute, in RSA it is possible to see that problems may be encountered due to a weak balancing of newly-created rights against existing social interests. This will have knock-on effects through society. Problems can also result from omitting to unravel the consequences of a single regulatory intervention on the economy at large, with detrimental systemic effects[162].

However, in cases where markets are relied upon for control, Sunstein recommends requirements for information disclosure and default rules – what he refers to as 'nudges' – to ensure that social gains are achieved[163]. Under Sunstein, markets are assumed to lead to less desirable welfare and environmental outcomes. Regulation should thus be the preferred option. Regulations do not fail because of intrinsic faults, but due to shortcomings incorporated into the overarching system. In RSA, Chapter III demonstrated that regulatory programmes were created to serve the public interest, and ensure that private decision-making has a guide other than self-interest and individual utility maximisation. This is largely more along the lines of Sunstein's theory that more regulation ensures moral decision-making and action.

5 Conclusion

This preamble submits that regulation was constructed in RSA from moral groundings and the objectives of an aspirational Constitution, to avoid the problem of irreversibility. Through rational discussion and decision-making among government, civil society, and private entities in a MLG system, regulation is operated and

[162] Sunstein, *After the Rights Revolution: Reconceiving the Regulatory State*.
[163] C.R. Sunstein, "The Storrs Lectures: Behavioral Economics and Paternalism," *SSRN Electronic Journal* (November 29, 2012).

enforced for public interest. This thesis claims that RSA regulation more closely follows Sunstein's theories, aiming to enforce aspirational goals, overcome unjust status quos, and tackle irreversibility by taking the rights of future generations into account. Sunstein believes that these are all issues that Breyer's market forces could not handle as conscientiously. Regrettably in RSA, implementation of regulations by government agents is less than ideal, such that non-government actors, including market forces, have come to the fore to fill the vacuum, taking on the role of regulation enforcers. This is an unorthodox blending Breyer and Sunstein's hypotheses – existing regulation is beneficial and protects public values, while market forces (as non-State actors) are involved in making implementation more effective.

The previous chapter claimed that RSA's metanarrative allows all actors to rely upon a corresponding moral background for decision-making. Sunstein's theory indicates that regulations may boost this corresponding background through guiding collective actions toward moral objectives in a more formal, legislative manner[164]. Accordingly, through the regulatory environment in RSA, which is grounded in the national metanarrative, decision-making uncertainty should be diminished and public interest and public goods should have the greatest focus. This should result in outcomes to the satisfaction of all citizens, and further entrenches the national metanarrative in the nation.

These issues will be examined in the subsequent chapter, with particular focus given to the involvement of non-government agents in the regulatory space. Further revisions of the Pentalogue Model from Chapter V will reveal that there is no way for all five clusters of South African society to congregate to deliberate environmental issues; this has had negative effects on preservation of long-term water rights. This

[164] Sunstein, *After the Rights Revolution: Reconceiving the Regulatory State*.

void in the structure of deliberative democracy has created a space where MLG methods have developed to manage the growing complexity of environmental policy. RSA has thus found itself dependent on participation of non-State actors for governance. These agents are involved in supervision of compliance with legislation, and although separate from government, work in pursuance of government objectives of intergenerational equity (IGE) in environmental policy outcomes.

While it is important to realise that non-State actors have always been involved in governance processes, what is distinct about MLG is how government is displaced in the decision-making process[165]. MLG necessarily requires diffusion of government power in governance processes, with non-State actors capturing this power for themselves and their own participation in regulatory decision-making. MLG also diverges from traditional involvement of non-State actors with government through the diversity of actors involved, and the opportunities this presents for knowledge sharing and for creation and implementation of novel strategies for complex environmental problems. The chapter that follows will disclose that it is particularly the financial and mining sectors that have taken on this responsibility. Thus the market in RSA, through these industry actors, has been co-opted into administering actions for the public good.

[165] Dewulf and Lieshout, "Disentangling Scale Approaches in Governance Research: Comparing Monocentric, Multilevel, and Adaptive Governance."

CHAPTER VII(b): GOVERNANCE IN PRACTICE IN RSA

> *"Few trends could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their stockholders as possible."* - *Milton Friedman*[1]

> *"Friedman's view of economic activity is hence rendered inapplicable by ... weak and corrupt national governments ... this is particularly pertinent to the context of mining ... where the mining company becomes a sort of de facto government."*
>
> - *Subhabrata Bobby Banerjee*[2]

1 Introduction

The preamble to this chapter laid out the theoretical background that informed fieldwork in Johannesburg, South Africa, in July 2013. Twenty agents from government and industry clusters were interviewed. In government, focus was given to agents involved in water regulation; in industry, attention was on agents in the mining and financial sectors, and in other extractive and water-intensive industry sectors. This was to ensure concentration on any repercussions from mining on water resources in RSA, while allowing some comparison to be made with other impactful industries, including chemicals and electricity production.

This chapter will use the information gathered to expand on theory presented in the preamble, and demonstrate the ways in which it can be applied to RSA. The preamble proposed that interactions in RSA take place in accordance with Kantian reasoning, through which people create consent through rational discussion. This consequently leads to development of regulations to guide actions. Discussions take

[1] Friedman, *Capitalism and Freedom*.
[2] Subhabrata Bobby Banerjee, "Corporate Social Responsibility: The Good, the Bad and the Ugly," *Critical Sociology* 34 (2008): 51–79.

place in a system of multi-level governance (MLG), with increased participation of non-State agents in regulatory decision-making as a result of increasing disorder in existing political processes.

It is suggested that regulation is enforced in RSA through MLG, due both to government failure to uphold and enforce legislation in the water sector, and poor interactions in society. This has necessitated increased involvement of non-State agents from mining and financial industries in the regulatory sphere. MLG operates in a space of meta-governance, which is outside of the arena of politics envisioned by Kant and also by the writers of the RSA Constitution. Political decision-making in this space operates alongside national government, but is discrete from it.

Use will be made of the Pentalogue Model introduced in Chapter V, which divides South African society into five clusters – government, industry, science, media and civil society, with environment posited to be at the nexus of all five. This chapter will reveal that the industry cluster is involved in governance for the public good, with non-profit motives. This will be justified by explaining how a blending of regulation types – that is, Sunstein versus Breyer – created impetus for industry to be incentivised by the country's metanarrative. This chapter proposes that MLG is crucial for upholding principles of intergenerational equity (IGE) in the country, and that this is a solution to problems inherent to application of the philosophy of the Constitution. Thus MLG could work to resolve continued pollution of water supplies in the country by acid mine drainage (AMD), and negate government's abrogation of responsibility in upholding IGE.

2 Beyond Formalism

In this section, the idea of moving beyond the formal conception of regulatory decision-making and governance will be explored. This thesis previously proposed, in Chapter V, that citizens no longer have faith that their government will uphold environmental rights, while industry felt it was forced to shoulder the blame for environmental problems. This was illustrated through the Pentalogue Model that detailed societal participation in political decision-making, and is which based on Dahl's theories of deliberative democracy. In this chapter, the Pentalogue Model will be adapted to reflect observed interactions in society, and will be employed to further emphasize existing communication issues in political decision-making, thus complicating the upholding of intergenerational rights to water resources.

Chapter IV proposed that the RSA Constitution reflected a level of influence by Kant. Kant's political philosophy looks upon citizens as autonomous subjects who have the ability to form relationships with each other and with the State, and who are able to make their own determination of the good[1]. He believed that citizens should engage actively in the public sphere, in order to drive the transition from an incomplete, provisional State to an ideal democracy[2]. In doing so, citizens ensure they are subjected to laws that are of their own making, which also conform to society's moral code[3]. As proposed in the preamble, this has established the metanarrative upon which regulations that circumscribe public behaviour are based. Accordingly, environmental rights in RSA should be upheld through discussion and interaction among all sectors of society, with agents from all clusters acting as political agents in political decision-making.

[1] Ellis, *Kant's Politics: Provisional Theory for an Uncertain World*.
[2] Caird, *The Critical Philosophy of Immanuel Kant (Volume II)*.
[3] Ibid.

The Pentalogue Model, as well as finding its basis in Dahl's deliberative democracy, is derived from the Kantian model of participation. In it, discussion is viewed as the appropriate instrument of democracy to foster reciprocal understanding and encourage negotiation to reach reciprocally-beneficial outcomes[4, 5]. The theoretical model in Chapter V illustrated that legitimate decisions can only be reached with contribution from all clusters, confirming both Dahl's understanding that governance relies on reciprocal action in society[6], and the Kantian principle that the rights of citizens derive from the interactions of the entire group[7]. Equality of opportunity for all citizens to contribute in the political sphere is a fundamental Kantian concept[8] – and in the theoretical, idealised Pentalogue structure, the five clusters utilise interfaces among them to participate in governance. This gives rise to a balanced power infrastructure.

However, the reality of South African decision-making does not adhere to this idealised structure, instead following the configuration set out in Figure 4 overleaf, now referred to as the Applied Pentalogue Model[9]. This applied structure is based on semi-structured interviews with agents involved in water and environmental policy, conducted in January 2012 and August 2013 in Johannesburg, RSA. Application of fieldwork findings shows the reality of governance in RSA, with the model elucidating complications in the system.

[4] Dahl, *Democracy and Its Critiques*.
[5] Dahl, *Polyarchy: Participation and Opposition*.
[6] Ibid.
[7] Caird, *The Critical Philosophy of Immanuel Kant (Volume II)*.
[8] Coyle, "The Intellectual Commitments of Modern Juridical Thought."
[9] Created by S-J Littleford in Microsoft PowerPoint for Mac (20/08/13)

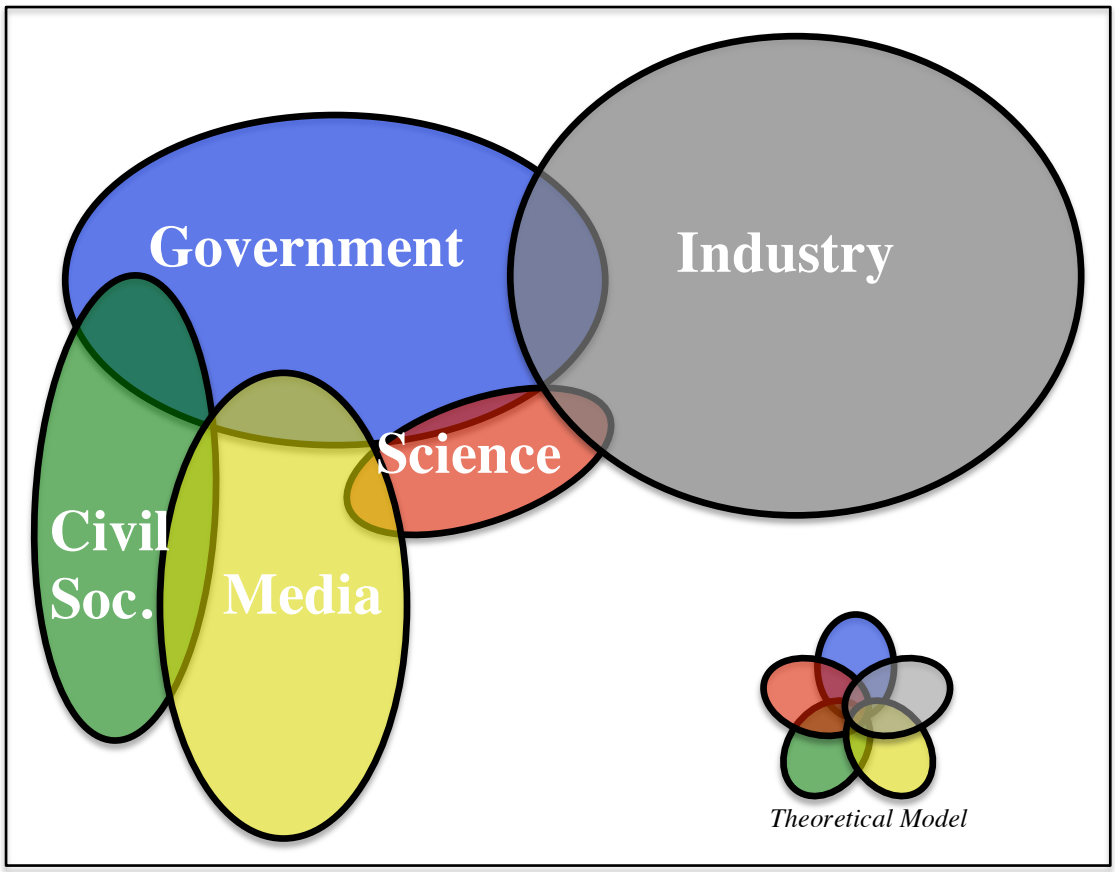

Figure 4 – Applied Pentalogue Model: depicting interfaces among government, science, society, media and industry clusters

As can be seen, the distinctive flower-petal formation of the original, idealised Model (see Figure 3) has disappeared, taking with it collective linkages among all five clusters; what remains of the original model indicates two particular deficient characteristics. The first is a disproportionate influence in decision-making, indicated by size of cluster bubbles, and second is the absence of communication among certain sectors, indicated through lack of overlap of cluster bubbles. Assumptions informing the theoretical Pentalogue Model proposed that the environment was found at the centre of the five clusters, since all impact upon it. In this transposition, however, there is no central area in which the environment can be located, and thus no means by which all five clusters can come together to deliberate. This will have negative implications for RSA's environmental future, because deficient discourse will lead to faulty governance structures – and significantly, poor long-term AMD management.

The attitudes of all five clusters will be surveyed below. As with the theoretical Pentalogue Model from Chapter V, the clusters are not entirely mutually exclusive, with agents able to play a role in more than one cluster. Nonetheless, this is atypical; it is more customary that agents will be situated in a single cluster. Those multi-cluster agents who do exist tend not to be significant agents in the system.

The government cluster includes the Department of Water Affairs (DWA), the Department of Environmental Affairs (DEA), and the Department of Mineral Resources (DMR). This is the sole cluster in the Applied Model that interacts with all others, placing government as the pivotal agent for upholding environmental rights. It interacts significantly with civil society through legally-required consultations[10], and as fiduciary trustee for water resources on behalf of citizens. Government interaction with the science cluster is mostly through hire of academic consultants to conduct scientific assessments of environmental issues – including AMD development.

One of the most important government interfaces is with the industry cluster. This thesis will predominantly focus on the interface with finance and mining corporations in the industry cluster. This interface is significant economically because mining contributes nineteen per cent of the nation's GDP through direct and induced impacts, thus contributing heavily to RSA's economy[11]. Furthermore it is an important interface for public relations because the mining industry has received considerable media attention for the AMD situation, and as detailed in Chapter V, this has reflected poorly on both government and industry. The financial services sphere is also significant, as seventy-two per cent of adults in the country are formally

[10] *For example, the National Water Act includes guidelines for consultation on establishing water catchment management agencies* "Number 36 of 1998, The National Water Act." *(Chapter II, Part II, Note X)*

[11] Roger Baxter, "Role of the South African Mining Industry in South Africa's Growth and Development Plans: Background Presentation to a Harmony Sponsored Investor Forum," *Chamber of Mines South Africa*, 2013, http://www.bullion.org.za/documents/CoM presentation Role of the RSA Mining Industry in SAs Growth.pdf.

financially included in the economy, with a considerable increase in the banked population from 2011 to 2012[12]. Moreover, the financial sector is highly developed and has consistently added to the country's total annual real growth[13]. This suggests that the financial sphere is highly relevant to citizens' lives, and should interact frequently with government to ensure adherence to RSA's metanarrative.

Government has a generally inimical attitude to the mining industry, blaming it for continued impacts of AMD on water resources. To this regard, the DWA and DEA believe that mines should take full responsibility for AMD, including financial liability for acid water decontamination. Contributing to the antagonism is the recognition by senior government agents that the government suffers from an almost total lack of technically-able staff to support the implementation of the National Water Act (NWA)[14]. Agents also admitted that the DWA has no permanent focus due to constant shifts in upper management – there has been substantial turnover of Director-Generals and high-level staff in the past five years. This prevents long-term planning in the DWA, with detrimental effects on intergenerational water rights[15].

Civil society interacts primarily with government and media clusters, and is disconnected from science and industry. Mines regard civil society as a hindrance to forward progress – they resent dealing with multiple demands from a single community with numerous representative assemblies in their operation area. Mines also believe themselves to be unfairly targeted for censure by civil activist groups[16].

---

[12] FinMark Trust, "FinScope: South Africa Country Survey," 2012, http://www.finscope.co.za/finscope/pages/Initiatives/Countries/South-Africa.aspx?randomID=2377af91-bdc0-4246-be70-5ef6d886e126&linkPath=3_1&lID=3_1_11.

[13] Klaus Schwab, Xavier Sala-i-Martín, & World Economic Forum, "The Global Competitiveness Report 2012–2013," *World Economic Forum: Insight Report*, 2012, http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf.

[14] Information from interview with anonymised agent from government cluster

[15] Information from interview with Johan van Rooyen, Director: National Water Resource Planning at the Department of Water Affairs

[16] Information from interview with Nikisi Lesufi, Senior Executive: Health and Environment, Chamber of Mines of South Africa

Since civil society shares interfaces with only two of the possible four clusters, the substantive citizenship that Kant envisioned as a requirement for good governance cannot occur[17]. Without full transparency and comprehensive access to information, citizens cannot actively engage in political deliberations. Accordingly, civil society in RSA cannot be conceived of as an autonomous agent, and is thus playing a reduced role in political decision-making.

The science cluster has minimal interaction with civil society, as it has been unable to effectively communicate scientific findings in an easily intelligible way. While groups such as the Water Resources Commission exist to attempt to bridge the science-civil society gap[18], fieldwork findings show that little impact has been made. Science interacts with media, government and industry clusters primarily as an independent consultant, called upon when these clusters require more rigorous or technological research than in-house teams are able to provide. Fieldwork indicated that each of these three clusters employs consultants from the same few scientific groups – and although no conflict of interest was observed, there is the prospect of such a situation in the future. The science cluster therefore acts as a fulcrum, providing specialist information about AMD to multiple clusters, and delivering information that could impact long-term environmental decision-making. However, this cluster currently has the smallest bubble size, demonstrating its nominal impact on environmental policy; science does not contribute independently to environmental decision-making, but instead is obliged to other clusters as a retainer[19].

Overall, the Applied Model reveals insufficient and non-productive interactions among all clusters in RSA society. Without effective communications,

[17] Ellis, *Kant's Politics: Provisional Theory for an Uncertain World*.
[18] Water Resources Commission, http://www.wrc.org.za/. Established through an Act of Parliament (No 34 of 1971) to purposefully promote RSA's water research as education for the wider public.
[19] Information from interview with Anthony Turton, former scientist at the Council for Scientific and Industrial Research

and without a central area for collaborative discussion of the environment, it unlikely that environmental rights will be fulfilled and IGE achieved. Long-term planning is stunted, as communication across all five clusters is unrealised. Moreover, certain clusters have more extensive influence on environmental policy, due to greater leverage with government. These issues negate both Dahl's and Kant's conditions for good governance. Without collective decision-making, there can be no progress toward the universal freedom that Kant associates with the ideal democratic nation[20].

In introducing the Pentalogue Model, Chapter V advised that faulty governance was due to poor communications among clusters, with IGE viewed differently by each, thus complicating AMD management. This chapter advances this assertion, proposing that not only are interpretations of IGE dissimilar, but communication pathways are essentially non-existent and not all clusters are able to contribute to the national discussion on management of polluted water resources. This advances the concept of RSA as a country on a water governance precipice: laws exist that should regulate public behaviour to follow the metanarrative established through the Constitution, but implementation of regulations is insufficient given the serious, long-term burden of AMD on water resources.

However it must be emphasized that, although water governance is poor, RSA is still essentially a law-abiding country with democratic elections and maintained rule of law. This could indicate that regulations are upheld by some means other than solely government supervision. This thesis earlnetier determined that the country's legal system is based on Kantian political philosophy, which posits that a national legal system and citizens' rights are created only through reasoned argument among

[20] Ibid.

all sectors of society in an active public sphere[21]. Intriguingly, however, it appears that Kantian order is disrupted in RSA: laws upholding moral order and protecting entitlements exist without effective interaction of all five clusters of society.

Laws enacted in RSA under the new Constitution were aspirational, focusing on the common good and on developing an ideology of participation of all members of the nation in governance processes[22]. Legislators attempted to create an ideal nation-state, but without the long-term, formal background of societal participation in regulatory decision-making that would then lead into formation of moral laws. Instead, legislation was developed under an assumption of common good, but before a transformation of society could come about that would lead to citizens thinking of themselves as collective participants in the political decision-making system. Unusually, RSA finds itself in a space where Kantian order is out of sync: Kantian political decision-making without the Kantian political agents to populate it.

The thesis refers to this out-of-sync decision-making area as the space of meta-governance. This is a space between governance and lawlessness where government does not perform effective governance, but where nonetheless RSA functions as a democracy. The meta-governance space is outside of the political arena envisioned by Kant, and indeed possibly also by the writers of RSA's Constitution. In the Applied Pentalogue Model, the space of meta-governance can be envisioned as occurring in an area that is not part of the Venn diagram of cluster bubbles, but that is superimposed over the whole structure. In this way, the meta-governance space can be perceived of as not part of the original conception of society in RSA, but very difficult to tease apart from how society currently functions. Moreover, it keeps society functioning in a way in which government regulations are upheld.

[21] Rauscher, "Kant's Social and Political Philosophy."
[22] M. Langford et al., *Socio-Economic Rights in South Africa* (New York, USA: Cambridge University Press, 2014).

3 Multi-Level Governance

This then raises the question of how governance processes occur, if it is not government overseeing substantive citizen engagement and fulfilling of regulations. This chapter asserts that the space of meta-governance is characterised by supervision of compliance with the moral laws of the country by agents not necessarily from government, but in accordance with government objectives. In this space, traditional governance boundaries are cut across, and novel relationships in society are formed. It can be regarded as an action space for managing complications arising from compliance with RSA's rigorous environmental laws, utilising methods that were unanticipated by lawmakers and government agents – but that are still lawful and effective. The increased flexibility of this space allows action to take place in the intricate and unpredictable regulatory environment of RSA[23].

As reviewed in the preamble, MLG is the distribution of decision-making powers across multiple strata, including across public/private and government/non-government boundaries[24]. Four common elements characterise all instances of this system – growth of non-State agent participation, merging levels of decision-making, a transformation of the role of the State, and modified obligations for all agents in society. This thesis proposes that the meta-governance space and MLG have come about due to increasing intricacy in environmental regulation, and a lack of predictability in government decision-making. This encourages non-government agents to forge relationships with other affected agents, in order to secure their own capacity for action in the country. This generates new nested levels of governance, with alternative pathways for decision-making to those traditionally relied upon by

[23] Fairbrass and Jordan, "Multi-Level Governance and Environmental Policy."
[24] Hooghe and Marks, *Multi-Level Governance and European Integration*.

government. MLG in the meta-governance space creates order from the disorder of the situation explored in the theoretical Pentalogue and Applied Pentalogue Models.

It would be useful at this point to review how the Pentalogue Model corresponds with MLG. The theoretical Pentalogue Model (Chapter V) is a display of traditional governance structures, and the Applied Model introduced in this chapter makes visible how these governance processes are dysfunctional. MLG takes place across the entire Venn diagram construct of the Model – but reaches outside of the established boundaries for decision-making that the Model shows. It takes place alongside, but separate from, the system envisioned through the theoretical Model. The Applied Pentalogue makes clear why MLG is necessary for the upholding of IGE and water rights in RSA. The four main characteristics of a MLG system will be explored through fieldwork findings below.

3.1 Increasing Political Disorder

Government capacity

All five clusters of society share the opinion that government does not have the capacity to implement environmental legislation. There are a number of factors contributing, but predominant among them is that government lacks the technical ability required to implement specialist environmental regulations. Industry, science, media and civil society clusters believe this is due to skills flight from government after the end of apartheid, as white males previously holding government positions either emigrated, left voluntarily, or were replaced over subsequent years as a result of Broad-Based Black Economic Empowerment policies[25]. This affirmative action

[25] This policy requires that government jobs to be preferentially assigned to previously disadvantaged RSA citizens. Department of Trade and Industry, RSA, "Broad-Based Black Economic Empowerment," https://www.thedti.gov.za/economic_empowerment/bee.jsp

strategy in particular has led to high levels of mainly white brain drain from the country, with this being regarded as a policy failure by the government[26].

This has a knock-on effect on public consultation: the response time after publication of policy issues in the Government Gazette has been shortened to thirty days, due to discounting of the requisite environmental impact assessments[27]. Or indeed, no consultation is carried out at all, as was the case with the government's Integrated Resource Plan II in 2010[28]. Moreover, the mining sector owns up to exacerbating this problem, for it will often hire away from government and into the private sector those government agents who show greater aptitude[29].

Moreover, there is a high turnover of senior staff in government, especially in the DWA, with five Director-Generals taking on the role in as many years[30]. As suggested in Chapter V, the DWA is regarded as a 'junior' ministry, wielding less power than the DMR. Thus, senior government officials appointed as DWA Director-General do not regard it as a pinnacle position, and will not establish a long-term outlook for their role there. That being said, according to an interviewee from the government cluster, each Director-General also wants to establish a legacy during their tenure, with the result that each new appointment comes with new priority areas, again disrupting long-term planning of the ministry. Other clusters struggle to build lasting relationships with government ministries because of this high turnover[31].

---

[26] Anthony Lemon, "The General Election in South Africa, April 2009," *Electoral Studies* 28, no. 4 (December 2009): 670–673.
[27] David Fig, "Fracking and the Democratic Deficit in South Africa," *Transnational Institute: Environmental Justice*, 2012, http://www.tni.org/paper/fracking-and-democratic-deficit-south-africa.
[28] *The Integrated Resource Plan II is a scheme for the sustainable expansion of electricity supply in RSA.* Calland and Nakhooda, "Participatory Democracy Meets the Hard Rock of Energy Policy: South Africa's National Integrated Resource Plan,."
[29] Information from interview with Richard Garner, Group Manager: Water at Anglo American
[30] Information interview with Johan van Rooyen, Director: National Water Resource Planning at the Department of Water Affairs
[31] Information from interview with Heather McLeish, Environment & Social Risk Manager at FirstRand Ltd

Precluding long-term planning decreases stability – instead, multiple short-term projects are initiated with each new staff member who takes up a senior position.

Decentralisation

Another factor increasing political disorder in RSA is decentralisation – and unfortunately this a key feature in all environmental legislation, including the NWA. Municipalities are tasked with particular environmental standard-setting and regulation implementation that neither provincial-level nor national government can undertake. Municipal councils are given responsibility through legislation to draft by-laws that prescribe rules and orders to ensure effective administration[32]. Yet municipalities have both insufficient funding and capacity to carry this out successfully[33].

Furthermore, by-laws in adjacent municipalities can differ to such an extent as to be antithetical. This principally affects the industry cluster, as members of this cluster often operate across municipal boundaries. Mining corporations in particular have been vocal about their frustration in satisfying multiple, sometimes incompatible ordinances. They are especially frustrated that there is no single authority retaining ultimate control over environmental regulation, as such diffuse jurisdiction complicates compliance with laws[34].

Communications

A similar issue, but concentrated in the national departments, is that communication within the government cluster itself is inadequate. Acrimony between the DWA, DEA, and DMR has been previously documented in this thesis. Moreover, the lack of regulatory integration between mining and water legislation reduces

[32] "Constitution of the Republic of South Africa." *(Chapter 7, §156)*
[33] Information from interview with anonymised agent from government cluster
[34] Information from interview with Nikisi Lesufi, Senior Executive: Health & Environment; Chamber of Mines of South Africa

overall government capacity to deal with its environmental duties. Not only is there a lack of interdepartmental cooperation, but there is also a conflict over responsibilities, which is disruptive for all other sectors of society[35].

Particularly important in this regard is the Mineral and Petroleum Resources Development Bill (2013)[36]. This legislative reform Bill aims to ensure that the mining industry has to meet water and environmental standards to which other industries already conform. The prior version of the MPRDA allowed for a parallel environment assessment system that restrained DWA jurisdiction over mining impacts on water resources in favour of DMR jurisdiction. There are two reasons why this Bill is important – firstly, it took a number of years of deliberation for DMR and DWA Ministers to agree to promulgate counterpart legislation to implement a single environmental authorisation for all industries. The DWA implemented its side of the agreement fairly quickly, but this Development Bill languished in Parliament for nearly two years, waiting for the DMR to fulfil its side of the agreement[37].

The second reason is that even that the Development Bill has now been promulgated, the DMR acknowledges that it lacks capacity for environmental impact assessments – which it is now in charge of carrying out. The DEA, on the other hand, has significantly more experience in this area, but has been excluded from this process in the Bill. Far from creating a more streamlined process, this will make issuing of water licences a more complicated and potentially more time-consuming

[35] Information from interview with anonymised government agent
[36] RSA Department of Mineral Resources, *Mineral and Petroleum Resources Development Amendment Bill*, 2013.
[37] Centre for Environmental Rights, "MPRDA Amendment Bill: Some Progress, but Environmental Authorities' Hands Still Tied," *Centre for Environmental Rights News Blog*, 2013, http://cer.org.za/news/mprda-amendment-bill-some-progress-but-environmental-authorities-hands-still-tied.

issue – all as a result of the DMR taking over responsibility for something the DEA could complete more efficiently[38].

Cooperative Governance

A final major issue increasing political disorder in RSA is the complications arising from cooperative governance. The Constitution established three separate spheres of government – national, provincial, and local/municipal – that are expected to operate mostly independently to fulfil Constitutionally-assigned responsibilities[39]. Local government is responsible for implementation of government programmes and is mandated to fulfil the planning and development objectives of national government[40]. Provincial government is given a supportive, monitoring role, while national government creates the enabling policy. In practice, this means that each sphere cannot encroach in any way on the specified territory and power of another sphere; conditions under which an intervention may occur are highly circumscribed and usually avoided for this reason by government agents.

National government may intervene in provincial government action through Section 100 of the Constitution, and provincial government may mediate municipal operations through Section 139 of the Constitution, yet no provision exists for national government to by-pass the province and step in where municipal governments are failing in their duties. Equally, municipal government has little recourse to remonstrate with national government if they would like conditions changed. This creates strains within the government cluster where agents recognise problems but are unable to resolve them. It also creates discontent across other

[38] L. Peyper, "DMR Concedes Constraints Impeded MPRDA," *MiningMX*, August 2, 2013, http://www.miningmx.com/page/news/markets/1632241-DMR-concedes-constraints-impeded-MPRDA.
[39] "Constitution of the Republic of South Africa." *(Chapter 3, §40 & §41)*
[40] "Constitution of the Republic of South Africa - Chapter 7, Local Government," 1996, http://www.gov.za/documents/constitution/1996/96cons7.htm.

clusters, which resent that corrupt and underperforming local governments cannot be prosecuted and reformed.

This proscription was tested in the case, *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal and Others (2010)*, in which the City of Johannesburg municipality took the provincial government organisation, Gauteng Development Tribunal, to RSA's Constitutional Court[41]. The City challenged the Constitutional validity of the Development Facilitation Act (No. 67 of 1995) that allowed the provincial authority to rezone land for establishment of townships. The City believed that this duty belonged to local government. The respondents, which included not only the Tribunal, but also the Minister of Land Affairs and Member of the Executive Council for Development Planning and Local Government in Gauteng province, contended that rezoning powers fell under 'urban and rural development' – an element that falls outside of municipal executive authority. However, the Constitutional Court unanimously found for the petitioner, suggesting that the autonomy of municipalities should be free from interference by national and provincial spheres.

The Constitutional Court found that two chapters of the Development Facilitation Act were constitutionally invalid, in that they reassigned exclusive municipal powers to other spheres of government. Parliament was given a twenty-four month period in which to rectify the Act. In this judgement, the Constitutional Court upheld laws that restrict national government from intruding into municipal or provincial affairs – even when these subordinate spheres of government are failing in their duties. As a consequence, in the case of nonfulfillment of local water regulations, national government finds itself incapable of forcing compliance;

[41] RSA Constitutional Court, *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal and Others [ZACC 11] CCT89/09 ZACC 11; 2010 (6) SA 182 (CC) ; 2010 (9) BCLR 859 (CC)*, 2010, http://www.saflii.org/za/cases/ZACC/2010/11.html.

increased political disorder is the result. All of the issues described above reveal that government is ill equipped to promulgate required legislation. They further demonstrate that political decision-making as envisioned by the Constitution and related Acts has in fact caused disorder in the political realm.

3.2 Participation Of Non-State Agents

Consultative processes required by the RSA Constitution mean that non-State agents have always had input into legislative processes at a specific stage of establishment of regulations, synonymous with deliberative democracy. However, the participation assumed in MLG has a different focus, with non-State agents involved at all stages, from agenda setting and formulation through to implementation and policy evaluation[42]. The shift here is from government command-and-control with minor contribution from society, to cooperation and self-regulation from all clusters of society, effectively displacing power outwards from the central pillar of government. Governance under MLG is reliant on the participation of non-State agents to improve quality of decision-making, to ensure fairness and inclusiveness of decision-making, and to enhance the implementation of and compliance with environmental policies[43].

Financial Sector

In RSA, the participation of non-State agents is particularly intriguing in that financial institutions are taking on regulatory roles in environmental governance. Indeed, some research has suggested that the financial sector is crucial, through its

[42] J. Newig & E. Kvarda, "Participation in Environmental Governance: Legitimate and Effective?," in *Environmental Governance The Challenge of Legitimacy and Effectiveness*, ed. K. Hogl et al. (Edward Elgar Publishing Ltd, 2012).
[43] O. Fritsch & J. Newig, "Participatory Governance and Sustainability: Findings of a Meta-Analysis of Stakeholder Involvement in Environmental Decision-Making," in *Reflexive Governance for Global Public Goods*, ed. E. Brousseau, T. Dedeurwaerdere, and B. Siebenhuner (USA: MIT Press, 2012).

lending policies, for positive social and environmental performance[44]. RSA has four major banking organisations: Absa, FirstRand, Nedbank and Standard Bank. These are widely recognised as the 'Big Four' banks, controlling the majority of the banking market in the country. These banks share similar responsibilities and express equivalent opinions on environmental governance. There is significant concern in the sector that banks are being forced into a quasi-regulatory role through the inability of government authorities to enforce regulations – however many regard it as the "next logical step" in RSA's disordered environmental governance[45].

Regulatory actions that banks are undertaking principally concern environmental policy, through conditions placed on major loans, particularly as concerns mining corporations. The Big Four banks are all signatories to the Equator Principles (EPs), which is a framework for risk management for financial institutions that allows an assessment of environmental and social risk in project loans, and provides a minimum due diligence standard for responsible lending to all industries worldwide[46]. As of September 2014, there were 80 global signatories to the EPs, all of whom enforce environmental requirements that are often more stringent than national legislation[47]. This framework ensures that environmental costs are built into the estimated expenses of any project[48].

Although EPs only pertain to project funding over a threshold of US$50 million, the Big Four banks have committed to promoting socially responsible

[44] K.T.A. Hayes, "Grounding African Corporate Responsibility," in *Corporate Citizenship in Africa: Lessons from the Past; Paths to the Future*, ed. Wayne Visser, Malcolm McIntosh, and Charlotte Middleton (Greenleaf Publishing, 2006).
[45] Quote from interview with Vicky Beukes, Social & Environmental Risk Manager, Nedbank Group
[46] "The Equator Principles," 2011, http://www.equator-principles.com/.
[47] Equator Principles, "Members & Reporting," 2014, http://www.equator-principles.com/index.php/members-reporting.
[48] Tina Costas & Michael Torrance, "Equator Principles III Is Approved and Launched – New Trends and a Strategy Rethink," *Norton Rose Publications*, 2013, http://www.nortonrosefulbright.com/files/equator-principles-iii-is-approved-and-launched--new-trends-and-a-strategy-rethink-pdf-144kb-80284.pdf.

environmental stewardship in all lending, and thus have extended core EPs standards into smaller lending projects as well. Accordingly, banks review all new infrastructural ventures and expansions of operations for their feasibility with environmental impact assessments (EIA) and environmental management plans (EMP). Although these are the same EIA and EMP plans submitted to government departments for water and mining licence approvals, they are re-examined by banks even after government departments have sanctioned them. This reflects the cooperation and self-regulation that are hallmarks of MLG. This is also a regulatory role insofar as banks do not rely on government approval of mining licences, but carry out their own, separate review to ensure that environmental regulations have not been breached in the establishment or expansion of operations.

Equator Principles and Mines

EPs are of particular importance for lending to large operations, and the actions of mining corporations are therefore scrutinised by financial institutions for this reason. As part of EPs approval for lending, banks have to confirm that water licences are in place for mining operations. However, this issue has become complicated due to the technical inadequacies of the DWA, which has resulted in an extreme backlog for granting of water licences of a number of years. One particular mine in RSA has been waiting nine years for approval of one of its licence applications[49]. Thus, banks have been put in the precarious position of approving loans without full EPs compliance – if banks did not do so, they assert that mining development in the country would come to a halt. Instead, banks grant loans after reviewing the EIA and EMP plans in-house, and if mining corporations can demonstrate that their water licence is being reviewed by government. Banks then

[49] Information from interview with anonymised mining agent

carry out quarterly or annual audits on the progress of the application. Bank agents also work with mines to ensure that applications meet the stipulations, and to guarantee that EMPs are feasible. Again this indicates a regulatory role for banks through independent verification of water regulation compliance, since government is unable to keep abreast of licencing demands.

Contaminated Land

To this end, banks in RSA presuppose that government wants to utilise financial institutions as regulators, as they have the technical capacity to effectively assess environmental compliance. Banks have already been obligated to take on an overtly regulatory role with regards contaminated land through the 2011 National Waste Management Strategy[50]. This piece of legislation has a specific section on contaminated property, but unlike British legislation on which it is based, it does not include a so-called 'safe harbour' clause for financial institutions. Without this clause, financial institutions are liable for contamination on any property if they foreclose on a loan – and under the Act this applies retroactively, including all lending since 1998.

When the Draft Act was published for public comment in 2010, the Banking Association of South Africa applied for an exemption – but this was not granted. Instead, the Strategy included a sub-goal to publish guidelines for the responsibilities of financial institutions, property developers, estate agents, and other affected parties. This was the responsibility of the DEA, to be published in 2012/13. Almost three years have since lapsed without these provisions being published, so it is still unclear

[50] RSA Department of Environmental Affairs, *National Waste Management Strategy*, 2011, https://www.environment.gov.za/sites/default/files/docs/nationalwaste_management_strategy.pdf.

how banks with deal with historical contamination on properties where loans have already been granted[51].

When the Draft was published, banks created a binding voluntary agreement to manage their own direct impacts and to commit to putting stringent due diligence processes into place for lending. As part of this, the Banking Association took on the additional responsibility of training the Property Valuers Association of South Africa to recognise signs of contaminated land, and produced a valuation guide for their use as well. There is no inventory of contaminated land in RSA complied by government; this has meant that banks, with ancillary services from property valuers, have taken on the regulatory role of appraising land pollution. As there has been little response from government as to guidelines for responsibilities of affected organisations, banks have accepted that they are de facto regulators in this realm of environmental policy.

Auditing Corporations

Major auditing firms also play a role in regulation, particularly in carrying out closure cost provisions for mining companies. These incorporate all major legal obligations, including putting finances aside at the start of operations to treat water at the end of a mine's useful life. This regulatory role encompasses annual audits of corporate environmental performance with a particular focus on water use and impact, as water provisions account for the vast majority of expenses – up to eighty per cent of total costs – at mine closure. This is because the NWA instructs that at the end of operations, mines should treat water until it has been proven clean by the DWA. However, it is generally assumed by auditors that mines will have to treat water into perpetuity, as less than ten mine closure certificates have actually been awarded since

[51] Catherin Warburton, "The State of the Land: Developments in the Regulation of Contaminated Land in South Africa," *Warburton Attorneys and IMBEWU Sustainability Legal Specialists (Pty) Ltd* June (2015).

the NWA and MPRDA came into effect[52]. Such a close observation of compliance with environmental legislation is arguably the role of government, and not of auditing corporations.

Another area of regulatory action for auditing corporations is in carrying out costings for closure requirements. The DMR produced generic rates in 2010, but has not revised these since. Financial agents interviewed during fieldwork disputed these basic costings as unrealistic and out-dated, and asserted that they do not take cumulative future impacts into account. Mining clients often use government rates in good faith, but then have trouble escalating the finances initially reserved for closure to the more realistic levels required for full environmental rehabilitation. Clients are thus advised to use the auditor's in-house rates, substituting for government wherewithal in this particularly important area. Moreover, government has requested that one particular major auditing firm provide it with information about clients who the auditing firm has calculated are in non-compliance with the NWA and MPRDA. The auditing firm has refused, citing client privacy privileges, and recognising that it does not want to take this crucial step into a publically recognised regulatory role[53].

Partnerships Across Clusters

The financial sector does realise that it already serves as an indirect regulator in ensuring that clients comply with environmental legislation. It should be said, however, that banks are not purely motivated by environmental concern – the predominant motivation is ensuring they are not left with bad debts or substantial liability if the client goes out of business for non-fulfilment of laws. Consequently, the Big Four banks have fostered a relationship with a non-governmental

[52] Interview with Charlotte Grobbelaar, Senior Advisor: Climate Change and Sustainability at KPMG South Africa
[53] Interview with anonymised financial agent

organisation, the Wildlife and Environment Society of South Africa (WESSA). This is one of RSA's oldest and largest NGOs, which encourages public participation in conservation projects and acts as environmental watchdog through many regional offices. For a number of years WESSA has tracked compliance of mining corporations with their licence requirements. Banks have harnessed this knowledge to augment their own activities, utilising WESSA as a consultant feeding back on mining activities[54]. This allows banks to be more secure in loan investments to mining corporations that no polluting activities are being clandestinely carried out.

It is important to note that all clusters in RSA realise the power of personality politics – relationships are predicated not on a melding of business plans, but on the compatibility of specific industry agents with specific government agents. To this end, the Big Four banks have created specific departments whose singular role it is to liaise with government, and develop a good working partnership that will facilitate economic development. This holds true for other large extractive and production industries as well, including electricity and oil and gas. Larger mining corporations have also created the role of a linkage person, enabling them to gain insight into the enforcement patterns of government regulation, as well as to possibly influence the thinking of government agents around issues in the sector.

However, smaller (known as junior) mining companies generally do not have the manpower to create a position specifically for liaison with government. Thus they suffer setbacks when government changes policy or regulatory patterns seemingly without warning. Junior mines know they are at a disadvantage in this way, and are of the opinion that it is therefore more challenging for them to operate, and impractical

[54] WESSA, *Mining and Mining Resources: WESSA Position Statement* (Howick, South Africa, 2012), http://wessa.org.za/uploads/images/position-statements/Mining and Mining Resources - WESSA Position Statement Approved 2013.pdf.

for them to comply with all of the required legislation[55]. Research has suggested that sustainability reporting by junior mines gives greater focus to aspirational statements, while major mines focus on data disclosure to a high level of consistency[56]. This is echoed by a superior commitment by major mining corporations to corporate social responsibility issues through listings in international stock exchanges and international best-practice agreements[57]. The reduced standing of junior mines in this way may result in more environmental violations coming from these operations – but does also demonstrate that not all agents in the industry cluster are equally as influential over the government cluster.

3.3 Transformation Of The Role Of The State

As a result of increasing political disorder alongside the participation of non-State agents in governance processes, the role of the State is being transformed, with new relationships between State and non-State agents as the result. As an example, one business organisation interviewed during fieldwork has taken on the informal role of government educator, allowing government agents to have access to training programmes that are marketed toward industry agents. The business organisation understands that government agents attend these sessions to gain knowledge on issues they should be regulating, and this has included training on efficient use of water and water purification. Although it is not abnormal for government agents to gain knowledge outside of their own departments, what is unusual in this case is that the education takes place alongside industry groups, in a programme designed for

[55] Interview with Johan du Toit, CEO at Central Rand Gold
[56] M. Reichardt & C. Reichardt, "Tracking Sustainability Performance Through Company Reports: A Critical Review Of The South African Mining Sector," in *Corporate Citizenship in Africa: Lessons from the Past; Paths to the Future*, ed. Wayne Visser, Malcolm McIntosh, and Charlotte Middleton (Greenleaf Publishing, 2006).
[57] David Fig, "Manufacturing Amnesia: Corporate Social Responsibility in South Africa," *International Affairs* 81, no. 3 (2005): 599–617.

industry, and that these educational programmes take place without official central government sanction.

The changing function of government can also be understood through its response to AMD in Gauteng. Government has refused to take responsibility for dealing with the consequences of this issue, and as previously suggested in this thesis is abrogating Constitutional responsibilities in doing so. Non-State agents including industry and NGOs are taking on more significant roles in AMD management, removing the State from the central role envisioned in legislation. Mining sector agents interviewed maintain that they have been insufficiently consulted by government on the matter, and believe there has been a great deal of behind-the-scenes political wrangling about making a profit from AMD treatment, and who will be able to do so. The four other clusters do not see any meaningful long-term management proposals coming from the government cluster – and most crucially, have not seen sufficient money set aside by National Treasury to make hypothetical government plans plausible. Lack of trust in government capability has further removed it from a hitherto dominant position in environmental policy.

The DWA has publically expressed a desire to see development of more projects like Emalahleni water treatment plant[58], a public-private water purification partnership that includes Anglo Thermal Coal, BHP Billiton Energy Coal South Africa (BECSA) and the Emalahleni Local Municipality[59]. This innovative treatment plant draws rising ground-waters from current Anglo operations and a defunct BECSA mine, preventing these acid waters from decanting onto the surface, and

[58] Sam Dodson, "Anglo American Wastewater Treatment Plant Praised," *World Coal, Mining News Articles*, 2014, http://www.worldcoal.com/news/mining/articles/Emalahleni_treatment_plant_praised_807.aspx.
[59] "Case Study: Emalahleni Water Reclamation Plant," *Anglo American South Africa*, 2013, http://www.angloamerican.co.za/sustainable-development/case-studies/emalahleni-water-reclamation-plant.aspx.

treats and desalinates the water to potable quality. Twenty-five megalitres can be produced daily in this way, the majority of which is pumped directly into municipal reservoirs, while the rest is used to make nearby coal mining operations self-sufficient for water requirements. In doing so, the industry-operated treatment plant ensures that local government comes closer to meeting Constitutional requirements to provide potable water to all citizens within reasonable distance from their homestead.

This again exemplifies the changing role of the State, in that the government department responsible for national water policy in RSA would call for an expansion of water treatment by the private sector. While the current Emalahleni plant produces water at no cost for the local municipality and community, this opens up the potential for subsequent projects to only be initiated with expectation of future profits from selling purified water.

3.4 Modified Obligations For All Agents

It has been established that financial institutions have taken on regulatory responsibilities in lieu of State fulfilment. Banks have integrated national environmental policy into internal lending policy, creating new strategies of action that by-pass government control that is expected by legislation, and create new responsibilities for banking agents. The result is that the State provides ground rules for governance, but non-State agents are increasingly implementing rules in order to achieve the intentions of legislation. Thus apparent is the space of meta-governance, superimposed over the typically expected governance order, which checks development of any lawlessness in RSA. What one might usually expect to see are nongovernmental regulatory strategies that utilise voluntary standards through a supply chain, using sanctions and incentives to induce environmental management[60].

[60] Dara O'Rourke, "Outsourcing Regulation: Analyzing Nongovernmental Systems of Labor Standards and Monitoring," *The Policy Studies Journal* 31, no. 1 (2003).

The South African situation is different, however, as non-government agents are transforming regulatory practices by taking control of government jurisdiction issues.

A particular illustration of modified obligations in water governance concerns the offices of one of the Big Four banks, Nedbank Group, located in the Eluzini precinct adjacent to Johannesburg and nearby the UNESCO World Heritage Site, the Cradle of Humankind[61]. This area has no potable water supplies, and the stream flowing through it is highly contaminated with industrial and agricultural run-off. Nedbank had been granted a licence by the DWA to draw contaminated water from the stream and purify it for use as grey water and irrigation in their facilities. It is released after use, and this cleaner water is then available for downstream rural communities. Over time, the bank realised that it had to become self-reliant for clean water supplies, as the Eluzini municipality was itself unable to provide potable water due to both technical and financial restrictions. Nedbank Group is highly aware that downstream communities benefit free of charge from its water purification scheme, and that these predominantly indigent populations are heavily reliant on the bank – instead of the municipality – to continue to provide this service.

Where modified duties are also visible is in implementation of the contractual relationship between mines and government, through the Mining Charter[62]. Government lined out its expectations for industry, including local economic development and environmental regulation fulfilment, while mines were given to understand there would be a minimum level of government support and collaboration. However, given the host of problems already explained in this chapter, there is a trust deficit between mines and government such that neither trusts the other to satisfy the

[61] Information from interviews with Vicky Beukes, Social and Environmental Risk Manager; and Fabio Francis, Portfolio and Admin Management: Group Finance, both at Nedbank Group
[62] RSA Department of Mineral Resources, *Amendment of the Broad-Based Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry*, 2010, http://www.bullion.org.za/MediaReleases/Downloads/Amended_of_BBSEE_Charter.pdf.

contract. Mines, believing they are not treated as equal partners, are increasingly realising they will have to manage AMD in-house, without government input. Moreover, mines believe that the government has unrealistic expectations of the social provisions that the industry is able to provide, and have complained that government wrongly expects their industry to have community-centred outcomes, rather than being a profit-motivated business[63].

Other industries too are coming to appreciate that self-regulation is inevitable where water is concerned. Chemicals and energy industry representatives interviewed spoke of the need for regulatory certainty in the water sector. Given government inadequacy, this has led to the adoption and implementation of numerous international voluntary disclosure agreements across the industry cluster, including the Carbon Disclosure Project for Water and the Global Reporting Initiative. These agreements have high standards that satisfy and sometimes exceed RSA's regulations, ensuring that industries have targets that allow them to manage processes with a high degree of certainty.

Where the banking industry is concerned, it too has modified obligations, particularly resulting from two factors. The first is the lender liability issues in the draft National Waste Strategy, as described previously. The second is that enacting the EPs created a whole range of new responsibilities, from commencement through to completion of any large project. In addition to EPs requirements, the financial industry has found that it has taken on an educational role, raising awareness of environmental issues for clients, government, and communities. Banks run education and awareness courses for local and provincial governments, and provide best practice training courses for their clients to ensure that regulations are met. The

[63] Information from interview with Teresa McNeill, Manager: Green Fund, AngloAmerican Zimele

financial sector believes that it has been forced into the regulatory space by government inaction in applying legislation, and has been made to act as both the "watchdogs and ultimate cash-cow" in the country[64].

3.5 Overview

Increasing political disorder, alongside greater participation of non-State agents, and a transformation of the role of the State in regulation have all altered responsibilities in the water sector in RSA. Governance has shifted from central government jurisdiction to a process of continuous interaction among government and private entities; in this multi-level structure, State power and control have been displaced outwards to civil society and non-State agents and organisations. Since RSA's Constitution and environmentally focused Acts were written consciously for State control, this distributed structure operates in meta-governance space that is superimposed upon the expected governance order. It does not operate within traditional governance boundaries, but still follows the regulatory principles established in those boundaries.

Influence in this space extends across existing governance jurisdictions, but does not operate within these boundaries. Research on the European Union has found that such a state of affairs is a superior way of allocating authority and responsibilities – and it appears the same outcome is plausible for RSA[65]. Indeed, research has suggested that governance at diverse levels is imperative in order to evade negative outcomes of policy externalities[66].

The question must then be asked whether the MLG structure was intended in the way RSA's Constitution was written – did the writers foresee that government

[64] Quote from interview with Vicky Beukes, Social and Environmental Risk Manager at Nedbank Group
[65] Bache and Flinders, "Themes and Issues in Multi-Level Governance."
[66] Hooghe and Marks, "Contrasting Visions of Multi-Level Governance."

enforcement would need to be supplemented by input from other sectors of society? Or instead, has the development of MLG simply been necessitated by environmental uncertainty? This thesis suggests that it is the latter – MLG was unanticipated and has developed organically in RSA in response to increasing intricacy of political decision-making. Intricacy has increased because there is no central space in which all clusters are able to come together to discuss and make decisions about environmental regulation, as is demonstrated in the Applied Pentalogue Model. The outcome of a High Court case decision from 2006 demonstrates the complexity of long-term environmental decision-making in RSA.

In *Bareki NO and Another v Gencor Ltd and Others (2006),* a traditional leader, Chief Pule Shadrack VII Bareki**,** brought a case against an asbestos mining company, as well as the government and Minister of Minerals and Energy[67]. The claim was that significant local environmental degradation had occurred due to asbestos mining activity from 1981-1985. Plaintiffs alleged that the defendants, three mining corporations and three government departments, did not take reasonable action to clean up the pollution, thus failing to perform their duty under the National Environmental Management Act (NEMA). The defendants claimed that NEMA was only promulgated in 1999, and does not apply retrospectively, so the company and government cannot be liable for pollution created in prior years. The Gauteng High Court found for the defendants, writing that NEMA could not apply retrospectively, as retrospective legislation in addition to the strict liability already imposed in the Act would prove overly burdensome. The outcome of this case established that the Constitution and resulting environmental legislation do not allow for application of

[67] RSA Gauteng High Court, Chief Pule Shadrack VII Bareki NO and Another v Gencor Limited and Others, (19895/03) [2005] ZAGPHC 109 (19 October 2005) (2005).

retrospective liability[68]. It has thus been under the assumption that environmental transgressions anterior to 1999 are not litigable that all clusters in RSA have made provisions for upcoming years.

However, the *Bareki* decision could be overturned through legislation currently under debate in Parliament. There is a significant draft amendment to the MPRDA that would include retrospective liability in both NEMA and MPRDA, in complete contradiction to this hitherto pivotal court case[69]. For the industry cluster, and particularly for banks, the proposed change is a major concern and has forced the construction of new relationships and chains of command among and within cluster groupings, in order to safeguard capacity for future operations. This consequential and unanticipated revision has also led to the formation of novel affiliations such as industry with NGOs. As a result of increasing political disorder and resultant modified obligations for all agents, MLG has developed as the predominant means by which governance is discharged in RSA.

Given the complexity of governing water use in RSA and the limited technical capacity of all three levels of government to carry out effective monitoring and enforcement of water regulations, there was a lacuna created into which other clusters have felt obliged to wade. This is a consequence of the need for business behaviour to be channelled in such a way as to dampen uncertainty and complexity[70]. Moreover, regulation activity is carried out in pursuance of RSA's metanarrative of clean water for all citizens. This is contrary to public choice theory, which suggests that corporate

[68] T. Field, "Liability to Remedy Asbestos Pollution," *Journal of Environmental Law* 18, no. 3 (July 27, 2006): 479–494.
[69] RSA Department of Mineral Resources, "MPRDA Amendments Bill: Notice 1066 of 2012," *Government Gazette*, 2012, http://www.dmr.gov.za/publications/summary/4-bills/898-gazette-mprda-amendments-bill.html.
[70] Wayne Visser, Charlotte Middleton, & Malcolm McIntosh, "Corporate Citizenship in Africa," *Journal of Corporate Citizenship* no. 18 (2005): 18–20.

behaviour is self-interested and will only take environment into consideration in the face of coercion[71].

This thesis has proposed that this lacuna has given rise to MLG in the RSA political realm, with regulatory compliance supervised by non-government agents, thereby opening up established decision-making networks. This diffusion of power, accountability, and responsibility has changed RSA's regulatory landscape, forcing institutional innovation as organisations take on greater obligation for water resources. This includes such initiatives as banks and property valuers creating a national list of contaminated land, and business organisations educating government agents. With the EPs, it is important to recognise that they have not been implemented simply as a voluntary standard to which the financial sector is adhering, and through which they are then able to regulate across supply chains[72]. Rather, the EPs have appropriated government duties in enforcement of environmental regulations. This is not a substitution of government regulations with directives imposed by the market place, but instead an extension of government regulation that is implemented by non-government agents.

The Applied Pentalogue Model illustrated that there is no central area where all clusters can come together to discuss the environment, contrary to Constitutional requirements. However, the meta-governance space that has developed to implement MLG allows clusters to reach across customary boundaries, outside of established roles and regulatory regimes. This higher-order space should allow for development of innovative processes to uphold environmental rights, enhancing predictability of environmental regulation enforcement and thereby creating a reliable framework

[71] David Graham & Ngaire Woods, "Making Corporate Self-Regulation Effective in Developing Countries," *World Development* 34, no. 5 (2006): 868–883.
[72] O'Rourke, "Outsourcing Regulation: Analyzing Nongovernmental Systems of Labor Standards and Monitoring."

under which industries could operate for the long-term. MLG has produced order out of the disorder of traditional political decision-making, allowing for problems inherent in applying the philosophy of the Constitution to be circumvented. This has created better prospects for the upholding of intergenerational rights to water.

4 Regulation

It is typical that corporate involvement in areas of public service provision such as the water sector is conducted through market forces. Specific examples include, at the national level, privatisation of water supplies in the United Kingdom[73], and at the provincial level, the Tirupur Water Supply and Sewerage Project in India[74]. Both of these projects demonstrate that participation of private industry in regulated public sectors is motivated by profit, and by use of market forces to transform production processes. What these and other precedents suggest is that industry will only assume regulatory responsibilities that usually appertain to government if this will lead to growth in the corporation's bottom line.

Despite this, it can be discerned through information presented in this chapter that this is not necessarily the case in RSA. Private industries involved in regulation through the MLG system seem to follow incentives more closely aligned with RSA's metanarrative of intergenerational concern, over and above profit motives. The preamble to this chapter detailed two opposing views on regulation – concisely, the Breyer school of less-is-more, and the Sunstein school of more-is-more. This thesis proposes that within the MLG structure of governance in RSA, these two schools of thought work in tandem. This atypical situation succeeds at putting IGE for the

[73] E. Lobina and D. Hall, "UK Water Privatisation - A Briefing," *Public Services International Research Unit*, 2001, www.archives.gov.on.ca/en/e_records/.../pdf/CUPE18UKwater.pdf
[74] Roopa Madhav, "Tirupur Water Supply And Sanitation Project: An Impediment To Sustainable Water Management?," *International Environmental Law Research Centre, Working Paper* November 1 (2008).

environment and for water as primary objective for regulation. The melding of contradictory regulation types demonstrates MLG's capacity to enforce public values through participation in the governance process. This is done without exclusive recourse to market forces, which is the more customary arena for non-State agents.

Mining Views on Regulation

The mining industry falls into two distinct camps on the issue of regulation: junior mines regard the sector as overregulated, while major mines do not. This divide proceeds principally from the Mining Charter, which commits mines to sourcing a certain percentage of goods, services, and capital equipment from companies owned or managed by historically-disadvantaged South Africans[75]. Junior mines believe they are overburdened by these requirements given their reduced need for inputs, and are obliged to spend significant resources in undertaking to fulfil them. This is evocative of Breyer's belief that regulatory processes have become overly bureaucratic and prone to nonfulfillment[76]. Major mines, with greater need for inputs and more resources to devote to identifying partners, do not feel encumbered in this way.

The Chamber of Mines – the body representing mining interests to government – is very clear in its belief that the sector is overregulated, suggesting that "there is a lot of red tape, [and] not enough smart tape" guiding government action toward mines[77]. It is plausible that the Chamber takes on a more extreme perspective in order to strengthen its negotiation position with government, and thereby ultimately come to a moderate middle-ground solution. This contrariness is possible because the Chamber has a long-established relationship with government agents, in which

[75] Department of Mineral Resources, *Amendment of the Broad-Based Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry*.
[76] Breyer, *Regulation and Its Reform*.
[77] Quote from interview with Nikisi Lesufi, Senior Executive: Health & Environment at Chamber of Mines of South Africa

deliberations play a major role, entitling Chamber agents to assume a more provocative function.

This is contrasted with the position of mining companies, which depend on government sanction for continued operations, through approval of water, environment, and extraction permits. This situates mines in a subordinate role to government, making it less likely that extreme viewpoints will be championed. Accordingly, the major mining corporations concur, in contrast to their business organisation, the Chamber of Mines, that the sector is not overregulated, and are unwilling to dissent against regulations.

The majority of mines operating in RSA – these are major mines – believe that regulation as it has been written is of a high level. Interviews revealed that major mines act in accordance with Sunstein's view that regulation is required to ensure moral outcomes[78], and in RSA that means to satisfy the metanarrative of clean water for all citizens. Mines would also agree with Sunstein's claim that it is not due to fundamental limitations in the regulation itself that it fails, but rather it is shortcomings in implementation that cause the failure. Across the entire industry cluster, interviewees shared the view that government incompetency was prime cause of regulatory nonfulfillment; interviewees were of the opinion that government agents act in self-interested ways that can obstruct democratic processes. Mining agents conclude that this inhibits corporations from effectively executing their environmental regulatory mandate.

However, following Breyer, the Chamber of Mines argues – and the smaller number of junior mines operating in RSA would agree – that government regulations work against efficient market forces, and maintain that this is the case with AMD.

[78] Sunstein, *After the Rights Revolution: Reconceiving the Regulatory State*.

The Chamber asserts that water tariffs set by government make it infeasible for mines to treat acid waters to potable standards, as mines are legally forbidden to sell decontaminated water at prices that cover reasonable costs. Thus inappropriate regulations are preventing technically-able mines from managing AMD themselves, and instead place the burden for provision of clean water on a technically-incapable government[79]. This concurs with Breyer's theory that over-regulation can lead to a freezing of technological innovation.

Breyer and the Chamber predominantly share the same manifesto: market forces allow for bargaining, which improves environmental conditions through use of new technology, and by reflecting the true cost of operating impacts on environmental resources. The Chamber proposed that if government removed rigid water tariffs, mines could apply innovative methods for cleaning up AMD in order to sell potable water to third parties for a profit. Breyer would assume that water prices would be prevented from going too high by competition from other water producers, including other mines, and by negotiations with buyers.

Also following Breyer, both junior and major mining corporations agree that there is too little regulatory flexibility in RSA, and that government is uninterested in regulatory innovation. Mining agents interviewed believe that water regulation is unclear, as NEMA and NWA are inconsistent in a number of regards, and the National Water Strategy does not lay out explicit objectives to which mines can conform. Regulation, Breyer would assert, is too simple to deal with the complexity of environmental issues, and will have many unintended negative spillover effects.

[79] Information from interview with Nikisi Lesufi, Senior Executive: Health & Environment; Chamber of Mines of South Africa

Government Views on Regulation

The government perspective would be more along the lines of Sunstein, who believes that without the moral guidelines provided by regulation, markets will overlook aspirational environmental goals and disregard public values. Regulating AMD could avoid the problem of irreversibility by taking into account the assumed preferences of future generations as well as current generations, and by ensuring that any course of action taken has favourable outcomes for all. Sunstein might say that water is an incommensurable resource, the loss or damage of which cannot be tallied by fiscal market forces[80]. Interestingly, major mines now view water as core to their business, and are increasingly including water targets as key performance indicators on managerial contracts[81]. In this way, it can be seen that mines are adopting Sunstein's regulation-friendly outlook in certain respects.

Surprisingly however, a government agent in the DWA expressed the view that mining organisations are going to have to become increasingly self-policing, because national government does not have the capacity to enforce existing legislation[82]. This agent advised that this was a widespread view among high-level managers in the department. This is a surprising divergence from the Sunstein-like convictions of the Constitution, and brings in Breyer's belief that uniform standard-setting by central government is impractical and cannot effectively deal with complex environmental problems. Moreover, and also in contrast to Sunstein's position, even major mines regard government unwillingness to modify existing regulation where AMD is concerned as a hindrance to continued commercial operations.

[80] Sunstein, "Irreversibility."
[81] Information from interview with Richard Garner, Group Manager: Water at Anglo American
[82] Quote from interview with Johan van Rooyen, Director: National Water Resource Planning at the Department of Water Affairs

Financial Sector Views on Regulation

The financial sector falls overwhelmingly in the Sunstein camp. Financial agents interviewed expressed the opinion that mining or water sectors are overregulated, and are in agreement that regulation in RSA is world-class. Regulations are failing, in their view, due to the inadequacies of government agents, including poor inter-departmental communications and inconsistent approaches to environmental issues between national and local governments. This concurs with Sunstein's proposal that regulatory nonfulfillment is often the consequence of fallible government agents. One interviewee suggested that government has "policy incongruence," due to the simultaneous push for both mineral and societal beneficiation, which has created a clash of objectives[83]. This reflects Sunstein's claim that limitations in the original statute may also cause regulations to fail; in this case, the aspirational objectives of NEMA, NWA and the MPRDA were not reconciled prior to promulgation to ensure that they intended upon the same outcomes.

Regulation Overview

As a broad group, industry cluster agents in RSA conform to Sunstein's theory of regulation, outwardly agreeing that the water and mining sectors are not overregulated, and that the aspirational objectives of the Constitution are crucial to achieve. It can then be said that the industry cluster believes regulation is necessary to ensure fulfilment of the country's metanarrative and citizens' water rights. This includes intergenerational aspects of water law, guaranteeing that current and future citizens have access to water. It also includes the correcting of previous wrongs, achieved in the Mining Charter by enforcing the use of historically disadvantaged suppliers. However, agents across the industry cluster concur that regulatory

[83] Quote from interview with Rohitesh Dhawan, Global Sustainability Lead for the Mining Sector at KPMG South Africa

uncertainty in RSA has impacted upon economic development in their sector, and could impede future preservation of environmental rights. Thus, the priority given by Breyer to market forces is preferred for particular environmental issues in RSA, including the management of AMD. Mines and banks believe that a market for re-cleaned water in Gauteng would produce innovative solutions more quickly, and result in more equitable water distribution across the country.

All of the circumstances detailed above suggest that a blending of the two views on regulation is occurring in RSA, as proposed in the preamble, in order to protect public values while still achieving effecting implementation. This melding of regulation ideologies across the industry cluster is intrinsically woven into the structure of MLG. Policy derived from discussion and negotiation in the MLG domain exhibits both Sunstein- and Breyer-like characteristics, achieving water policy through regulatory and market-based means. This demonstrates how the meta-governance space in which MLG has developed can enforce public values in governance without falling back onto market forces, which are conventionally more accepted by industry cluster agents. In this way, those agents more familiar with the manipulation of market forces can work toward achieving aspirational goals and IGE in water rights.

5 Conclusion

This chapter began by suggesting that industry involvement in regulatory activities through MLG has created a possible solution to problems inherent to the application of the philosophy of RSA's Constitution. The previous chapter asserted that government is acting in ways that thwart its moral responsibilities to uphold intergenerational rights to water, thus abrogating its trusteeship obligations. In this chapter, industry involvement in the regulatory sphere was explored. The suggestion

was made that involvement of financial and mining sectors in regulatory activities could counteract any course of conduct with results from which future generations may not be able to recover, or only at prohibitive cost[84].

The Applied Pentalogue Model, developed in this chapter, displays interactions among the five clusters of South African society. The Model is a lens through which the reality of political decision-making in RSA can be viewed, and elucidates the failings of the system. It makes obvious the influence of sectors such as industry, and the lack of influence of sectors such as civil society that should be more significant according to the Constitution. The Model also demonstrates that there is no central area in which society can assemble to collaboratively discuss environmental issues – thereby nullifying the deliberative democratic values upon which RSA's metanarrative is based. This makes it gradually more improbable that intergenerational environmental rights will be sustained for society.

The void in the governance structure that the Model exposes has resulted in the creation of a space of meta-governance, in which regulation is operated separately form traditional governance methods, but in pursuit of the same environmental standards. The meta-governance space improves existing impaired communications among clusters, allowing them to generate new connections across customary cluster boundaries. This has the potential to produce new areas in which environment can be discussed among cluster agents.

Due to the increasing complexity of environmental policy and a broadly felt insecurity about government inaction for environmental resources, a system of MLG has developed in the meta-governance space. It is maintained through the increasing political disorder in the country, and has resulted in a proliferation of non-government

[84] C.R. Sunstein, "Irreversibility,"

agents participating in governance activities, as well as transforming what is regarded as the conventional role of the State. This has given rise to modified obligations for all agents in the governance space – and in RSA, this has entailed the financial and mining sectors taking on greater responsibility for maintaining intergenerational rights to water. Non-government agents now uphold the moral laws of the country, in conformity with RSA's metanarrative and with government goals. Coupled with an increasing lack of trust in government capability, RSA finds itself reliant on the participation of non-State agents to ensure continued progressive environmental decision-making and equity in policy outcomes. The contribution of multiple agents to regulation in this way has been demonstrated to result in improved environmental quality in the European Union[85]. The same can be seen to be developing in RSA.

Industry has been able to follow such moral goals over and above profit motives because they, like individuals, are guided by RSA's metanarrative. This is demonstrated through an unusual combination of dissimilar regulation types, marrying the need for more regulation for moral outcomes, with the desire for less restrictive regulation for economic development. In the meta-governance space in which these theories of regulation are applied, this ensures that non-government agents, rather than falling back on application of market forces, enforce public values instead. Where regulation has failed, it is assumed that – following Sunstein – this is a repercussion of shortcomings of the overall system[86].

This chapter has, through application of fieldwork to theories of deliberative democracy and regulation, demonstrated how RSA society operates under a system of MLG. This has allowed the country to experience economic growth and continued operation of mining corporations, while maintaining water quality and availability

[85] Dietz and Stern, *Public Participation in Environmental Assessment and Decision Making*.
[86] Sunstein, *After the Rights Revolution: Reconceiving the Regulatory State*.

standards. While not quite to the level implied in the introductory quote from Banerjee, industry is progressively taking on government functions, creating order from the existing disordered situation. With disengagement of government and inclusion of non-State agents in environmental regulation, RSA has departed from the expectations of the Constitution – but has nonetheless developed a novel method for enforcement of water legislation for the benefit of current and future generations.

The following chapter will explore the implications for RSA of increasing corporate participation in political decision-making. Although this chapter has demonstrated that there are on-going current benefits to the participation of non-State agents in the MLG system, this thesis will move to exploring the possible negative consequences of decreasing government involvement in governance procedures.

CHAPTER VIII: PROSPECTS FOR DEMOCRACY IN RSA

> *"We want the water of this country to flow out into a network - reaching every individual - saying: here is this water, for you. Take it; cherish it as affirming your human dignity; nourish your humanity. With water we will wash away the past, we will from now on ever be bounded by the blessing of water."*
>
> *- White Paper on a National Water Policy for South Africa*[87]

1 Introduction

The previous chapter suggested that a multi-level governance (MLG) system is crucial for upholding rights to intergenerational equity (IGE) in RSA. It further suggested that MLG could be a possible solution to the problems inherent in transforming the Constitution from theory to application. Increased participation of non-State agents in political decision-making, outside of the traditional regulatory space, allows for market forces to uphold intergenerational rights to water in a way that government is currently incapable of doing. Chapter VI introduced the concept of a national metanarrative in RSA, suggesting that strong moral values of the primacy of human dignity and equality, and a respect for intergenerational rights to environmental resources, are the standards by which all political decision-making should be guided. However, government nonfulfillment is undermining these values. Civil society is also losing faith in the ability and willingness of government to discharge its duties, as is the industry cluster, which in turn has itself been taking on a more active role in the provision of social goods, including water.

This thesis has proposed that the Rawlsian concept of democracy has been incorporated in RSA legislation, through discussion by all members of society in a

[87] RSA Department of Water Affairs and Forestry, *White Paper on a National Water Policy for South Africa* (Pretoria, RSA, 1997), http://www.polity.org.za/polity/govdocs/white_papers/water.html.

participatory political space. It was further demonstrated, through the Applied Pentalogue Model, that there is currently no central area in which all members of society can come together to discuss environmental issues. This will have detrimental effects on outcomes for intergenerational water and other environmental rights by disregarding a central tenet of democracy in RSA.

However, the regulatory space in which MLG has developed is, as the previous chapter asserted, a space of meta-governance, outside of the political decision-making space envisioned by the writers of the national Constitution. Deliberations by agents in this space operate alongside but distinct from national government. Sub-national agents forge relationships with each other to secure their own capacity for action, but also to ensure that rights enshrined in the Constitution are fulfilled. The creation of such alternative pathways for regulatory decision-making are changing RSA's regulatory landscape by forcing institutional innovation, as detailed in the preceding chapter.

Nevertheless, there are some significant negative effects that are possible, resulting from the increased responsibilities taken on by non-State bodies. As market forces take more control over public provision of services and fulfilling intergenerational rights to water – both of which are duties of the State under the Constitution – this thesis proposes that the nature of democracy in RSA will be called into question. It must be pointed out that the new regulatory space being forged with industry involvement still does not create that central area of discussion that the theoretical Pentalogue Model displayed. The Applied Model showed actual interactions in society, and MLG developed as a way to overcome the deficiency of this accustomed system. However, MLG has not evolved, or has stopped short of evolving into, a comprehensive, novel system of democracy. In fact, it could be

argued that there is even less Rawlsian democratic discussion, as the industry cluster has the opportunity to gain more comprehensive control over inputs of information and outputs of decision-making processes. If this argument is developed to its full extent, it can be estimated that rights may be upheld in a specific area and for a contained population, but not in other areas where industry does not operate. Moreover, citizens will have no recourse to the deliberative forums that are the mainstay of democratic decision-making – neither the population served if unsatisfied with service provision, nor the unserved population to gain access to these goods.

This chapter will interrogate the concept of democracy in RSA, given the growing importance of non-State agents, as well as the increased control of industry over water provision. Specific focus will be given to the precarious position of the country as market forces claim jurisdiction over public services and human rights provision. Using organisational theory, the chapter will analyse how organisations operate in RSA and how they are taking on what are essentially moral responsibilities. The traditional role of organisations will be explored to begin with, in order to understand the change that is occurring. Power relationships and accountability will be a significant part of this analysis. The chapter will come to the conclusion that corporate involvement in decision-making on water resources is problematic. RSA's democratic future is hanging in the balance as a result of expanding involvement of market forces, and decreasing relevance of government, in upholding intergenerational rights to water.

2 Breakdown of Government Control

A possible account for why the objectives of the National Environmental Management Act (NEMA) and National Water Act (NWA) have been so challenging

to put into practice is the hasty embedding of new institutions in RSA after 1994[88]. The rapid shift from apartheid policies to more inclusive policies under majority-rule government meant that unfamiliar new institutional procedures were not fully embedded in the developing political conditions. The basic structure of rule-making spaces was created, but not filled in with context, and quite often did not take local features into consideration. Accordingly, the policy of decentralisation to municipalities espoused in NEMA and NWA placed greater pressure on these already-overstretched institutions. The pressure to adopt specific policy approaches after the new Constitution was promulgated, and the speed with which this was expected to happen has meant that engagement with environmental policies has been somewhat ineffective, leaving environmental rights fulfilment in some disarray.

This gap between written regulations and their implementation is heightened by a parallel gap between regulators and citizens. With a circumscribed set of ways in which civil society can get involved in water policy decisions, and limited contact with elected representatives, the number of citizens involved in political decision-making has been shrinking. Surveys showed that only eleven per cent of citizens engaged in political discussions in 2002 – the lowest level measured since surveys began in 1995[89]. Consequently, the role of civil society agents has been altered from active political participants to simply end users – a commercialisation of their function as envisioned in the Constitution. This has allowed the long-term environmental interests of civil society to be overlooked in favour of short-term, non-environmental concerns. In RSA, this alteration is inherently connected with

[88] Navroz K. Dubash & Bronwen Morgan, "Understanding the Rise of the Regulatory State of the South," *Regulation and Governance* 6 (2012): 261–281.
[89] Mattes, "South Africa: Democracy Without the People?"

negotiations of State-market relations, particularly in questions of water provision[90]. As will be explored in this chapter, industry is progressively supplementing and adapting the traditional role of government in the realisation of water rights.

While the NWA decreed that water services should be local and highly regulated, there has been an increasing drift in RSA toward replacing these political systems with transactional frameworks that instead give priority to market factors[91]. Transactional frameworks use market-based exchange to create a structure for water delivery; political frameworks, on the other hand, moderate market exchanges with a redistributive outlook and with participatory procedures. These two frameworks, although not incompatible, do have mismatching policy goals and different key actors: transactional goals are efficiency and key actors are funders and operators, while political goals are equity and key actors are citizens and the State[92]. This can be illustrated through exploring customary corporate practice in the mining sector, which is a concentration on extraction, with some awareness of the need for corporate responsibility. Political practice, conversely, should have social development as the essential core of strategy[93].

From 1994 until 2003, up to fifteen per cent of RSA's population were served by private sector water service providers. With the acid mine drainage (AMD) crisis, the amount of informal (that is, not officially government-partnered) private sector

[90] Bronwen Morgan, *Water on Tap: Rights and Regulation in the Transnational Governance of Urban Water Services* (Cambridge UK: Cambridge University Press, 2011).
[91] Bronwen Morgan, "Global Business, Local Constraints: The Case of Water in South Africa," in *Making Global Regulation Effective* , ed. Ngaire Woods (Oxford UK: Oxford University Press, 2006).
[92] B. Morgan, "Emerging Global Water Welfarism: Access to Water, Unruly Consumers and Transnational Governance," in *Consumer Cultures, Global Perspectives*, ed. F. Trentmann and J. Brewer (Oxford UK: Berg Press, 2006).
[93] P.O. Lenero & F. Thompson, "Riding the Resource Wave: How Extractive Companies Can Succeed in the New Resource Era," *McKinsey & Company: Insights and Publications*, 2014, http://www.mckinsey.com/insights/sustainability/riding_the_resource_wave?cid=other-eml-alt-mip-mck-oth-1408.

provision has further increased[94]. This means that efficiency goals and funders and operators of the transactional framework are having a growing influence on decision-making about water provision. This could lead to future outcomes that are objectionable on the basis of RSA's Constitution, which has redistributive potential and socioeconomic rights as central principles. These issues – along with more detail on industry involvement – will be explored in the sections that follow.

3 Toward An Understanding Of Institutions

How non-government institutions operate in RSA is progressively more important for long-term upholding of water and other environmental rights, given the inadequacy of government response to situations such as water pollution by AMD. A multi-level approach to governance has seen participation in political decision-making by corporations steadily increase. The traditional role of the organisation – which will be surveyed below – will have to change in response to this new situation, in order to incorporate the new functions that industry has been obliged to take on. Accordingly, the democratic decision-making space will also be reconstructed to reflect these new key actors and frameworks for action. Institutions have always been pivotal in providing a basis for decision-making and in creating predictable expectations of actions – without such institutionally-created frameworks, rational decisions in society would be unobtainable[95]. As the institutional responsibilities and frameworks change, so will action and expectation outcomes.

[94] Morgan, "Global Business, Local Constraints: The Case of Water in South Africa."
[95] G. Hodgson, *Economics and Institutions* (Cambridge UK: Polity Press, 1988).

3.1 Legal Concerns

Under RSA law, a corporation is considered to be a juristic person, thus has the rights and duties, but not corporal appearance, of a natural person[96]. Chapter VI first reviewed how corporations are regarded as juristic persons in the RSA Constitution, meaning they can be held legally liable for actions that contravene the Bill of Rights, and they can also be held morally responsible for their action or inaction. Rights are extended to corporations primarily to protect the rights and interests of the people comprising them – and only so far as is necessary to protect these underlying rights and interests. This includes protecting the rights of individuals who make up those corporations (directors, employees, and shareholders), and using the corporation as a convenient vehicle through which people can act in collaboration to safeguard their rights. This is not as far a step as the United States of America have taken in *Citizens United*, but also extends corporations more socioeconomic rights than they currently have in the United Kingdom[97].

RSA's Constitution promulgated[98]:

> ***8: Application***
> ***(4)*** *Juristic persons are entitled to the rights in the Bill of Rights to the extent required by the nature of the rights and of the juristic persons.*

After promulgation of the final Constitution in 1996, the Courts were left to interpret whether this provision would mean that juristic persons have rights to property, privacy, equality and expression; Courts decided that they did hold these rights. This means that rights specifically for natural persons, such as to dignity, life, food, or health care do not apply to corporations, but rights including freedom of expression, privacy, and property do apply. It has been felt by judges that fundamental rights have

[96] Republic of South Africa, "Companies Act (No. 71 of 2008)."
[97] Citizens United v. Federal Election Commission' (130 S. Ct. 876, 558 U.S. 310, 175 L. Ed. 2d 753 (2010)) is a 2010 case heard by the US Supreme Court. It allows corporations unrestricted political expenditures, which the Federal government cannot limit, under First Amendment rights. This is an extension of the rights of natural persons to juristic (corporate) persons. http://supreme.justia.com/cases/federal/us/558/08-205/
[98] "Constitution of the Republic of South Africa - Chapter 2: Bill of Rights." (*Section 8:4)*

to be extended to juristic persons as well as natural persons in order to be fully recognised under law and to be effective[99].

However it has also been decided through Court decisions that corporations do not have right to religious belief, the right to citizenship, or the right to life[100]. In *Hyundai Motor Distributors (Pty) Ltd & Others v Smit NO & Others (2000)*, the Court further decided that corporations cannot be the bearers of the right to human dignity[101]. Consequently, while corporations do have a right to privacy, this cannot legally be to the same extent as the right of natural persons. The law thus recognises that corporations have very similar rights to natural persons, while on-going interpretation by Courts has determined how far these rights extend.

The Companies Act of 2008 ventures to codify the duties of directors, and details the extent of directors' liability for environmental harms caused by the operations of their corporation. Furthermore, a director is liable for any losses the corporation suffers as a result of actions taken, or the failure to take actions against unapproved or illegal circumstances. This echoes the personal liability clauses in NEMA and NWA, which make corporate directors liable for damage caused to natural resources through action or non-action of their corporation. However the Companies Act details that this liability can be waived in three specific instances: if the director has taken the initiative to become seriously informed about the issue, if the director had no conflict of interest or complied with rules on conflict of interest, or

[99] For further information on these Court decisions, see *AK Entertainment CC v Minister of Safety and Security & Others, 1994 (4) BCLR 31, 38 (E)*, which decided that equality rights should extend to juristic persons.
Also see *Ex parte Chairperson of the Constitutional Assembly: in re Certification of the Constitution of the Republic of South Africa 1996, 1996 (4) SA 744 (CC) 1996 (10) BCLR 1253 (CC)*, which decided that corporations deserve no less protection of their rights than do natural persons.
[100] Stu Woolman, "Application," in *Constitutional Law of South Africa(2nd Edition)*, ed. S. Woolman and M. Bishop (South Africa: Juta Law, 2008), 31–1 – 31–161.
[101] RSA Constitutional Court, "Investigating Directorate: Serious Economic Offences & Others v Hyundai Motor Distributors (Pty) Ltd & Others In Re: Hyundai Motor Distributors (Pty) Ltd & Others v Smit NO & Others (CCT1/00) [2000] ZACC 12; 2000 (10) BCLR 1079; 2001 (1) SA 545 (CC)," 2001, http://www.saflii.org/za/cases/ZACC/2000/12.html.

if the director had a reasonable basis for belief that the decision made was in the best interests of the corporation. In this way, actions taken by mining corporations can start to be understood in a new way: if action is taken to purify water in the vicinity of operations, or provide water to populations who are unsupplied by municipal services, then the director is exculpated. There are similar regimes for financial institutions – if they hold debtors to strict standards, then they limit their own liability if the debtors are later found negligent.

With juristic responsibilities and duties added to personal liability for directors, corporations should then strictly abide by all pertinent legislation. This would be in order to fulfil their role as good corporate citizens, and also to ensure that directors do not face future liability for actions for which they gave approval. In these ways, corporations in RSA are already in a position where they have some effect on intergenerational rights through actions involving and impacting upon the country's water resources that are circumscribed by the Companies Act.

3.2 Traditional Role of the Institution

In the study of corporations, it is generally assumed that their economic activity is separate to that of the owners of the corporation. Accordingly, owners are not liable for debts or obligations taken on by the business – known as limited liability. This is the real entity theory, whereby the corporation is regarded as a separate entity from its owners and from the State[102]. It is assumed that firms are not fictive entities, but existent, and exhibit a degree of cohesiveness and resilience over time. Since firms are considered real entities, they are entitled to rights, and are expected to comply with national laws and duties. Moreover, corporations should be

[102] Gindis, "Some Building Blocks for a Theory of the Firm as a Real Entity."

expected to act in accordance with a nation's metanarrative, just as natural persons would do.

Extending this concept, however, suggests that countries may only legislate on corporations up to a certain level, after which they could be deemed as interfering unreasonably with private interests[103]. While this thesis asserts that this level of regulation has not been reached in RSA, it could be brought into play in the future to prevent further government intervention in corporate undertakings. This could conceivably impact on water service provision: if government continues to manage AMD substandardly, citizens will increasingly view it as illegitimate, and will rely more on corporations for water provision. Government could have less control over these juridical persons, and citizens could increasingly come to depend on their good will in fulfilling intergenerational rights to water. Democracy as conceived of in the Constitution would thus be curtailed.

There is, however, another, less calamitous, way of interpreting the real entity theory in application in RSA. Corporations were granted limited liability by the State in return for working toward issues of public interest; society has expectations that corporations will take on this responsibility in return for such curtailing of legal culpability[104]. Corporate governance has always been associated with accountability in some way, to shareholders or to stakeholders[105]. In this way, citizens as taxpayers can be regarded as corporate stakeholders, because they finance the national infrastructure within which corporations operate and profit[106]. Consequently, corporate power is an issue for public concern, and the liabilities of corporations are

[103] Reuven S. Avi-Yonah, "Citizens United and the Corporate Form," *Wisconsin Law Review* 4 (2010): 999–1047.
[104] S. Brammer, G. Jackson, & D. Matten, "Corporate Social Responsibility and Institutional Theory: New Perspectives on Private Governance," *Socio-Economic Review* 10, no. 1 (2011): 3–28.
[105] Jill Solomon, *Corporate Governance and Accountability*, 4th Ed. (Chichester, UK: John Wiley & Sons Ltd, 2013).
[106] Ibid.

increasingly considered to be the collective liability of society. Enlarging upon this interpretation means that corporations taking on the responsibility of dealing with AMD in the place of government could multiply its limited liability – and accordingly add to collective societal liability. This may have some impact on democracy in RSA by slightly shifting the concept of an advantageous communal freedom achieved through implementation of Kantian laws; greater strain placed on civil society for the same outcome of water rights will alter the social contract that was created in the Constitution.

This thesis makes the claim, however, that the real entity theory of institutions is implemented only partially in RSA. It is true that corporations are considered to be juridical persons, with rights and duties associated with natural persons as far as is possible and required. As well, there is a separation of State, corporation, and owners/managers in terms of economic investments and debts. However, significantly, there is no such disconnect between a corporation and its managers as regards responsibility for environmental damage. The NEMA, NWA and Mineral and Petroleum Resources Development Act (MPRDA) all state that corporate directors and managers can be held personally liable for environmental harms caused by the operations of their corporations – and this could include a personal fine, a period of imprisonment, and contributing to clean-up costs of into the millions of South African Rands. It is simply necessary for prosecutors to demonstrate that the director responsible had failed to take reasonable measures – even if harmful effects were caused inadvertently.

Courts have upheld such legislation in the very recent 2014 case of *S. v Blue Platinum Ventures 16 Pty Ltd & Others*[107]. A regional court sentenced a corporate director to 5 years in prison, suspended for 5 years on the condition of rapid rehabilitation of the environmental harm caused (this has already been explained in Chapter III). Such strict liability applied personally disrupts the real entity theory, and means that corporations are not entirely regarded in RSA law as separate and individual entities – instead they have communal aspects in which responsibility and liability can be apportioned. This polarity seems to go against the historical construction of separate entities of director and corporation.

Yet there is some supporting evidence for the fact that, although ambiguous, RSA law stays true to the original construct of the real entity theory. RSA is a society with fundamental respect for socioeconomic rights, and for holding someone responsible for any erosion of these rights. Accountable corporations can only recompense for damage with money, as they are juridical persons without the full complement of rights and duties in the Bill of Rights, and only have that to contribute. Since environmental damage is an offence to citizens' rights that goes beyond simple financial remediation, answerability has to fall at the feet of a natural person in order that the penalty be more commensurate with the violation. Thus, limited liability for a corporation is retained, while strict liability allows for a very focused punishment to be applied to a director. Financial risks can be shared with society through the real entity view, but environmental risk requires a specific apportioning of culpability.

It follows that it is in the vital interests of the corporation to fully monitor its polluting activities, in order to minimise liability of its directors. This can be seen, in a way, as a privatisation of the responsibilities of government: citizens are no longer

[107] Magistrates Court for Regional Division of Limpopo Province, The State v Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya (RN126/13) (2014).

able to sue a government department for not minimising or preventing pollution, but instead have to sue a strictly liable corporate agent. While in all likelihood this is an easier legal suit to pursue, it has the effect of muddying the nature of democracy – it means that elected government officials are not as important as executives at the head of major corporations. Executives are more likely to monitor environmental resources and remedy environmental harms than municipal government authorities or central departments.

What this theoretical exploration of the real entity theory has demonstrated is that democracy is becoming an increasingly distorted concept in South Africa as private corporations become more involved with rights. This was first explained in Chapter VII(b), where it was shown that traditional governance structures are no longer feasible in RSA, and that MLG with non-State agents is instead becoming the norm. There are three possible implications that have been explored: the first is that the State will have less democratic control over corporations, as it is only able to legislate in relation to these juridical persons up to a certain level of control. The second is that increasing corporate liability will add to collective societal liability and shift the social contract making up democracy. The third is that personal liability for directors could make them more important than government agents for maintaining and rehabilitating environmental resources. These demonstrate that democracy is in under threat as market forces gain jurisdiction over public services and human rights.

3.3 Corporate Social Responsibility

Corporate governance discourse has always been based on a system of duty – conventionally to shareholders, and progressively more often to stakeholders as well[108]. Traditionally, however, it has also been a closed system with local context not

[108] Solomon, *Corporate Governance and Accountability*.

significantly considered in governance structures[109]. This has led to an under-contextualisation of corporations, which in some cases has prompted problems with stakeholders and national authorities. Corporations should instead build on internal and external interdependencies in the local conditions to be successful in the long term[110]. For high water-use corporations, water stewardship is already an important consideration, given the risks to internal operations as well as the water security of surrounding communities posed by any alterations to water quality and quantity[111].

In RSA, an effort has been made to ensure that such a contextualisation is undertaken: all corporations listed on the Johannesburg Stock Exchange are required to comply with a set of non-legislative corporate governance regulations laid out in the King Report[112]. This was first released in 1994 and updated in 2004 and 2009; much of the 2004 report has since been incorporated into the 2008 Companies Act. The 2009 report, known as King III, has altered public reporting specifications, requiring an integration of governance, strategy and sustainability in a single report rather than in a separate, disconnected sustainability review.

King III focuses on three major aspects of corporate governance: responsible leadership based on moral duties, sustainability as a core concern of business, and taking on the duties of a juristic person through the concept of corporate citizenship. It utilises an 'apply-or-explain' structure, requiring a manager to explain the application

[109] R. V. Aguilera et al., "An Organizational Approach to Comparative Corporate Governance: Costs, Contingencies, and Complementarities," *Organization Science*, 2008.
[110] W.R. Scott, R.E. Levitt, & R.J. Orr, *Global Projects: Institutional and Political Challenges* (Cambridge UK: Cambridge University Press, 2011).
[111] Nick Hepworth & Stuart Orr, "Corporate Water Stewardship Exploring Private Sector Engagement in Water Security," in *Water Security : Principles, Perspectives, and Practices*, ed. Bruce A. Lankford et al. (New York, USA: Routledge, 2013).
[112] The Institute of Directors in Southern Africa, *King Report on Governance for South Africa (King III)*, 2009, http://c.ymcdn.com/sites/www.iodsa.co.za/resource/collection/94445006-4F18-4335-B7FB-7F5A8B23FB3F/King_Code_of_Governance_for_SA_2009_Updated_June_2012.pdf

or non-application of principles of the King III code[113]. Information on compliance or non-compliance is available to shareholder to figure into investing decisions. The aim is to make corporations more likely to comply in order to attract investors.

King III defines corporate social responsibility (CSR) as part of good corporate citizenship, as mindfulness of the effects of corporate activities on society and on natural resources, and finally as integration of transparent and ethical decision-making and behaviour throughout a corporation. Institutional theory also views CSR not simply as a voluntary action, but rather as an indispensable component of economic governance that is closely aligned with the business case[114]. CSR is defined by the expectations of society, and in RSA, this is the metanarrative that has evolved form the Constitution. King III principles are built from this, and shape the decision-making structures of corporations. Thus CSR in RSA requires corporations to take responsibility for their impacts on environmental resources.

Research has highlighted the important role of the private sector in funding and provision of infrastructure to improve public health and economic development[115,116]. In developing countries, where upgrading infrastructure is the most important way in which living standards are improved, this is particularly of concern for the corporate good citizen[117]. This holds especially true for resource extractors like mining corporations, who are viewed as guests by the community[118]. These institutions thus need to actively engage with local resources and stakeholders to have a positive impact on the way they are viewed, and to demonstrate a real

[113] Vaughan Pierce & Stephen Kennedy-Good, "King III – What Does It All Mean?!," *Polity.org.za*, 2009, http://www.polity.org.za/article/king-iii-what-does-it-all-mean-2009-12-01.
[114] Brammer, Jackson, and Matten, "Corporate Social Responsibility and Institutional Theory: New Perspectives on Private Governance."
[115] Scott, Levitt, and Orr, *Global Projects: Institutional and Political Challenges*.
[116] C. Dawkins & F. W. Ngunjiri, "Corporate Social Responsibility Reporting in South Africa: A Descriptive and Comparative Analysis," *Journal of Business Communication*, 2008.
[117] Scott, Levitt, and Orr, *Global Projects: Institutional and Political Challenges*.
[118] J. Gawler et al., "Stakeholder Engagement: Build Trust with Local Communities and Minimise Social Risk for Your Operations (Webinar)" (Ethical Corporation, 2014).

contribution to the local and national economy. CSR in this case would entail maximising positive benefits for surrounding communities through a full risk assessment of impacts on natural resources, including water.

This community role of the corporation has been recognised for some decades, even though it is only currently being given greater attention under the label 'CSR'. In the 1953 case in the United States of America, *AP Smith Manufacturing Co v Barlow*, the Supreme Court of New Jersey ruled that juridical persons such as corporations should be encouraged to give to charity in the same way as natural persons[119]. The plaintiff, a manufacturing corporation, had wanted to donate US$1,500 to Princeton University. However, minority stockholders opposed this decision as *ultra vires*, arguing that the firm's certificate of incorporation did not authorise such contributions, and moreover that New Jersey statues authorising the contribution did not apply to the corporation, as it was created significantly before these statutes were enacted.

The Court ruled for the plaintiffs, finding that corporations could make modest gift donations as good will and for the betterment of society, without the approval of shareholders. There were some codicils: the donation had some form of corporate benefit, it was modest, and was made in furtherance of corporate – rather than personal – ends. In this case, the donation to Princeton University was seen as beneficial to the corporation by increasing goodwill. There were also no personal ties to Princeton University, ensuring that there was no personal benefit to any corporate agent.

This case was significant because that it was one of the first in which the Court acknowledged that economic power was shifting from private individuals to

[119] A.P. Smith Manufacturing Company v. Barlow (13 N.J. 145, 98 A.2d 581) (1953).

corporations, and that corporate actions could have the same effect as actions by natural person. In fact, corporations were increasingly regarded as having public obligations, such that contributions to educational establishments were considered essential to maintain such services. This view has continued into present day, with subsequent Court decisions ruling that corporations have specific duties associated with their rights as juridical persons to contribute to public goods and services. This corresponds closely with King III, which regards CSR as an aspect of good corporate citizenship. Corporations should be embedded within the social networks in which they operate, and CSR should be viewed not simply as a voluntary action, but as part of a fundamentally stakeholder-oriented approach to business.

3.4 Corporations and Social Embeddedness

CSR can only be fully realised if it takes into account local knowledge, and if the corporation is embedded in the community[120]. Embeddedness means that the health of relationships among agents at all levels will affect both economic and social actions and outcomes[121]. In this way, social relationships among a network of employees, stakeholders and shareholders will drive the behaviour of an organisation[122]. Choices are guided by long-term relationships based on trust connections and past interactions – and ideally these self-regulating interactions discourage transgressions, including of RSA's national metanarrative[123]. It is then important to consider power relationships in the network, as this can change the flow of interactions and interdependencies, and thus affect outcomes of organisational decision-making.

---

[120] Scott, Levitt, and Orr, *Global Projects: Institutional and Political Challenges*.
[121] Gernot Grabher, "Rediscovering the Social in the Economics of Interfirm Relations," in *The Embedded Firm: On the Socio-Economics of Industrial Networks*, ed. Gernot Grabher (London UK: Routledge, 1993).
[122] Mark Granovetter, "Economic Action and Social Structure: The Problem of Embeddedness," *American Journal of Sociology* 91, no. 3 (1985): 481.
[123] Ibid.

Moreover, CSR is defined by societal expectations, which are entrenched in and embodied by institutions[124]. This was first explored in Chapter VI, which proposed that social norms in RSA have been created through processes of social deliberation, leading to development of morals and assignment of responsibilities. Thus agents both within and outside of corporations are able to have an effect on decisions made and actions taken for the environment. In an embedded firm, these agents share beliefs about the role of the corporation, which grants it stability and predictability[125]. The existence of long-standing personal ties reinforces social processes that result in agents having mutual attitudes toward an issue, with similar decision-making processes[126].

However, the situation now experienced in RSA is highly uncertain due to doubts about government action over AMD. Thus corporations affected by AMD have to create new behavioural patterns and allocate new roles to cope with this burgeoning situation[127]. In this situation, the social ties that shape decision-making also have to be reconstructed due to new, emerging patterns of interactions. These ties will be re-embedded in the developing social context, resulting in new decision-making frameworks that will change economic outcomes as well[128].

Chapter VI established that the country's national metanarrative created expectations of particular action from government and from institutions – but the new situation, under influence from AMD, means that these expectations are undergoing a shift. With citizens' perception that government is acting immorally in not taking

[124] Brammer, Jackson, and Matten, "Corporate Social Responsibility and Institutional Theory: New Perspectives on Private Governance."
[125] Scott, Levitt, and Orr, *Global Projects: Institutional and Political Challenges*.
[126] Gernot Grabher, "The Weakness of Strong Ties: The Lock-in of Regional Development in the Ruhr Area," in *The Embedded Firm: On the Socio-Economics of Industrial Networks*, ed. Gernot Grabher (London UK: Routledge, 1993), 255–277.
[127] Simon, "Bounded Rationality and Organizational Learning."
[128] Grabher, "Rediscovering the Social in the Economics of Interfirm Relations."

effective action against AMD, the power of government and government agents has been eroded. This has created a lacuna in moral authority. As corporations take on greater responsibilities for provision of water, their role could be shifting to fill this hole. Citizens, faced with great uncertainty, will make decisions using established heuristics – and consequently it is possible that simplification techniques could lead to a replacement of government's moral authority with corporate moral authority[129]. It is important to realise, however, that corporations are not permitted the same legal prerogatives as the government to apply coercive measures to uphold rights through law[130]. If citizens do begin to look to corporations to uphold the country's national metanarrative, this could create a severe barrier to continued fulfilment of democracy.

Organisational Field

Another aspect of embeddedness to consider is a corporation's organisational field. This is a frequently interacting group of organisations that make up a specific corporate system[131,132]. Interacting groups may include agents from government, private corporations, end users, non-governmental organisations, and trade unions. They will also include non-corporeal issues such as institutional logics, which are the belief systems through which an institution operates, regulatory controls, and intermediary organisations such as advisors, information brokers, and watchdog organisations[133]. In RSA the latter would include the Federation for a Sustainable Environment, an environmental NGO mentioned previously in this thesis as an important civil society monitor for AMD. It has also taken corporations and government to court for pollution-related activities.

---

[129] Tversky and Kahneman, "Judgement Under Uncertainty: Heuristics and Biases."
[130] Dworkin, *Law's Empire*.
[131] P. DiMaggio & W. W. Powell, "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields," *American Sociological Review* 48, no. 2 (1983).
[132] W. Richard Scott, *Institutions and Organizations*, 2nd ed. (Thousand Oaks, California USA: Sage, 2001).
[133] Scott, Levitt, and Orr, *Global Projects: Institutional and Political Challenges*.

The academic DiMaggio uses the term organisational field in a more ontological sense[134]. However, in this thesis it is utilised in a broader, context-based way, as organisations in RSA are able to self-consciously seek to create the world in which they function in order to narrow the range of expectations about their activities. Nonetheless, an understanding of the background literature informs this context, and leads to a deeper appreciation of the consequences of belonging to an organisational field.

Interacting bodies in an organisational field come together as a local social order, to make sense of their operating environment, and to work together to achieve mutually advantageous outcomes[135]. The field is not static, and will change in response to new conditions and actors[136] – and this thesis proposes that in RSA, the indeterminate environmental conditions have created a critical point that has changed the field concerning water in the country. More frequent interaction is taking place between financial and mining corporations, whose interests are merging, and there is less frequent interaction between mining agents and government, who find their goals to be comparatively divergent. Civil society is being progressively shut out from the field; its views are disregarded by government, and it has no way of reaching out to corporate agents in the same way as its democratically-elected government agents. Such a change in the organisational field is a mirror image of the shift taking place in the decision-making space, with the increasing involvement of corporate agents.

In addition to a change in agents, the end goals of the field are also being re-shaped as the AMD crisis continues. Increased engagement between finance and

---

[134] DiMaggio and Powell, "The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields." *Paul DiMaggio is a Princeton University sociology professor, and has published extensively on the study of institutions and organisations.*
[135] Scott, *Institutions and Organizations*.
[136] Royston Greenwood et al., *The SAGE Handbook of Organizational Institutionalism*, *The Sage Handbook of Organizational Institutionalism* (London UK: SAGE Publications, 2008).

mining has shifted customary end goals from mining *laissez faire* as practised in apartheid RSA[137], to be more in line with post-1994 intergenerational environmental legislation. This is in order to avoid future environmental liabilities and to ensure continued successful operation into the future. This is having a causal sequence through the supply chain, with other organisations translating these new goals into their own systems and practices. It is too soon to tell how far through the water organisational field this shift has penetrated, but the literature gives to understand that this could be a permanent shift in procedures through an alteration of the stickiest of institutional elements – belief in the role of the corporation[138].

Social Licence to Operate

A high level of embeddedness is crucially important for a mine's social licence to operate (SLO), which is the degree of acceptance by the local community of the operations of the mining corporation[139]. This may go beyond legal compliance to ensure that stakeholders and interest groups are satisfied with corporate behaviours. Maintaining a SLO requires direct engagement with the community to build lasting partnerships. It is not granted by governments but by communities themselves, and requires good relationships between corporations and local communities based on transparency, open consultation, provision of information, and ethical actions. Once a SLO is obtained, it reduces social risks and liabilities, and will both improve productivity and enhance corporate reputation. It may be included in a CSR framework, but can also incorporate local agreements, philanthropic outreach, and strengthening local business opportunities. Particularly in RSA, the major community

[137] Walter E. Williams, "The Origins and Demise of South African Apartheid: A Public Choice Analysis," *The Independent Review: The Independent Institute* Summer (1999), http://www.independent.org/publications/tir/article.asp?a=304.
[138] Scott, Levitt, and Orr, *Global Projects: Institutional and Political Challenges*.
[139] N. Gunninham, R. Kagan, & D. Thornton, "Social License and Environmental Protection: Why Business Go Beyond Compliance," *Journal of the American Bar Foundation* 39, no. 2 (2004): 307–341.

concerns around mining operations include poverty alleviation, HIV/AIDS and access to clinics, housing projects, and compensation programmes[140].

This of course links in with the good corporate citizenship ideals of King III, but certainly necessitates a more substantial embedding in the community than simple CSR reporting. This is because it is a response to the expectations of society, rather than siloed decisions from within the organisation; communities are increasingly expecting more than just compliance with regulations from extractive corporations. However, small and medium-sized firms find formation of a SLO particularly challenging, and because of this may not wholly take it on[141]. This has been demonstrated empirically in South Africa (see Chapter VII(b)), where junior mining organisations feel already overburdened by regulation in the country. Smaller firms often also experience less market pressure to have very high standards of production, and this lessened shareholder pressure means less scrutiny overall. Having to spend a significant portion of earnings on legal compliance, junior mines are less likely to spend further earnings on creation of and adherence to a SLO; therefore their sustainability reporting is more likely to be aspirational rather than on data disclosure and transparency[142].

This thesis contends that the SLO will prove to be of increasing importance in RSA over the next few years, as it is one of the few ways in which communities are able to have meaningful input into corporate decision-making. It could allow for more democratic discussions to take place around the impact of corporate involvement in

[140] Hakan Tarras-Wahlberg, "Mining and Social License to Operate: Differences and Similarities in South Africa and Sweden," *Stockholm School of Economics (Presentation)* (2013), http://www.slideshare.net/SSE_Insights/investments-andbusinessinsouthernafricahakantarraswahlberg.
[141] Jason Prno & D. Scott Slocombe, "Exploring the Origins of 'Social License to Operate' in the Mining Sector: Perspectives from Governance and Sustainability Theories," *Resources Policy* 37, no. 3 (2012): 346–357.
[142] Reichardt and Reichardt, "Tracking Sustainability Performance Through Company Reports: A Critical Review Of The South African Mining Sector."

provision of water and upholding of water rights. Engaging in SLOs has already demonstrated to corporations in RSA that there are benefits to fully engaging with stakeholders – instrumentally through increased financial returns, and normatively through discharging responsibilities to King III as good corporate citizens[143]. There is a possibility that modifying this engagement space to reflect a progressively more democratic decision-making arena – such as exists for citizen involvement with government – could further improve corporate performance.

It should be borne in mind, however, that the only community able to participate in the creation of a SLO is that directly surrounding mining operations – the wider community of citizens cannot have the same concordat with the corporation. In addition to this, different mining corporations will have individualised SLOs, based on the requirements of the particular community surroundings, and it may be impracticable to expand this precise SLO to other districts. Moreover, this is yet again a reshaping of the nature of democracy, through involvement of non-representative agents as means of democratic management. There is no certainty that such a fundamental change would result in continued full participation by all sectors of society, as the Constitution envisioned for the country.

3.5 Power Relations

Under the limited liability theory, corporate power and responsibilities are of public concern. However there is a distinction to be made between being of public concern, and being of public control to change. There is a conception that civil society can alter corporate policy through purchasing decisions, and indeed this has worked in a few notable cases such as Coca-Cola's divestment from apartheid South Africa in

[143] Prno and Scott Slocombe, "Exploring the Origins of 'Social License to Operate' in the Mining Sector: Perspectives from Governance and Sustainability Theories."

the 1980s[144]. Nevertheless, for the most part there is conflicting evidence over whether consumer activism has significant power over corporations[145]. Instead, corporations have a greater ability to shape opportunities available in society through provision of certain goods over others, and can shape the tastes of society through marketing[146]. Consumers are able to reject goods, but do not have much input into which goods are supplied in the first instance. Autonomous individual will, it is thus assumed, is an illusory concept – corporations are able to influence preferences without conscious consumer apprehension of this[147]. Moreover, the majority of consumers are uninterested in corporate policy for the environment, unless the situation is well publicised or involves a serious incident.

Furthermore, corporations are able to influence government and policy creation, in two particular ways. First, governments want to ensure that corporations experience continued profitability and bring economic development – as has been experienced in RSA with the permissive attitude of the Department of Mineral Resources (DMR) toward mining corporations that was examined in Chapter V and VII(b). Second, through having such important inputs into the economic circumstances of a country, corporations are able to construct the pecuniary context in which policy-making takes place. This cannot help but constrain the choices available to government agents, and can thus configure policy outcomes to be more advantageous to corporations[148]. This has corporations – and in particular, mines in RSA – in a dominant position over both government and civil society.

---

[144] Bill Sing, "Coca-Cola Acts to Cut All Ties With South Africa," *Los Angeles Times*, September 18, 1986, http://articles.latimes.com/1986-09-18/news/mn-11241_1_south-africa.
[145] Solomon, *Corporate Governance and Accountability*.
[146] Lisa Whitehouse, "Corporate Social Responsibility: Views from the Frontline," *Journal of Business Ethics* 63 (2006): 279–296.
[147] John E. Parkinson, *Corporate Power and Responsibility: Issues in the Theory of Company Law* (Oxford UK: Oxford University Press Catalogue, 1995).
[148] Ibid.

Dahl's theories of deliberative democracy, first introduced in Chapter V, require that society actively participates in the decision-making space[149]. While there is participation by civil society, government and industry in this space in RSA, this thesis contends is that it is not 'active' participation, in that it is not carried out with full information, and with all agents on an even power footing. Corporations have always wielded a power over employees through determining their wellbeing, which is perhaps a greater power than government has over those same people[150]. However as this thesis has proposed, corporate power is mushrooming to include citizens apart from employees as well. The Applied Pentalogue Model also displayed that the industry cluster is granted greater voice than the other four clusters in the decision-making space. Given its primacy in power relations over both government and civil society, industry's recommendations and counsel in the decision-making space could greatly re-frame the space. This framing will influence the end product by defining what information is considered and what is discounted in the creation of environmental policy.

Dahl's hypothetical ideal democracy is one that fulfils five criteria: equal opportunity to participate, equal weighting of voting preferences, the ability to learn and confirm choices, the ability to adjudicate what political issues are discussed, and inclusivity for all citizens in these processes[151]. He recognises that this is perhaps an impossible ideal, and that democracy is grasped in progress toward these objectives, rather than the goals themselves. RSA's Constitution allows for maturation of such an ideal democratic nation through equal rights for all people and through the potential

[149] Dahl, *Democracy and Its Critiques*.
[150] S.R. Ratner, "Corporations and Human Rights: A Theory of Legal Responsibility," *Yale Law Journal* (2001): 443–545.
[151] Dahl, *Democracy and Its Critiques*.

for all citizens to engage with and become informed by political discussions and policy debates.

Despite this, advancement toward these objectives is hindered by an unfavourable triumvirate: the government cluster failing to tackle AMD and thus not upholding long-term water rights, the absence of a central area in which all clusters can come together to discuss this issue, and the associated shift in responsibility from the government to industry in provision of water and fulfilment of water rights. This means that RSA is in a limbo area, with poor legal consequences as a repercussion of insufficient participatory, rational dialogue. Without reciprocal action in society and with some clusters able to more significantly frame the discussion space, political equality is truncated. With less political equality, existing systems of law are curtailed – as are intergenerational rights to water[152].

3.6 Re-Scaling

This thesis further posits that RSA is currently experiencing a re-scaling of the political decision-making space, with shifts in relationships among all five clusters of society. Re-scaling is conceptualised as institutional development and change, which is inherently political in nature and also entails changes in relationships between State and society[153]. Scale, used to describe social structures, is generated through interactions among agents at various levels and is used to describe power relationships in both political and economic strata[154]. Re-scaling involves a shift in level of competencies, which necessarily involves shifts the political and economic

[152] Dahl, *On Political Equality*.
[153] A. Thiel & C. Egerton, "Re-Scaling Of Resource Governance As Institutional Change: The Case Of Water Governance In Portugal," *Journal of Environmental Planning and Management* 54, no. 3 (2011): 383–402.
[154] Maureen G. Reed & Shannon Bruyneel, "Rescaling Environmental Governance, Rethinking the State: A Three-Dimensional Review," *Progress in Human Geography* 34, no. 5 (2010): 646–653.

levels as well[155]. This is often achieved during times of upheaval or contention, as the optimal space in which to modify actions and reform identities[156].

This is a particularly important concept for resource management, as it ensures that the resource of concern corresponds with the skills and number of people managing it. This can be seen in RSA, where it is managed principally by local municipalities following directives from central government. This allows endemic issues and demand flows to be reflected in local water administration. In the re-scaling of water management, there is a concomitant adjustment in the number of agents involved in existing power relationships, in the perception of environmental problems, and in accountability[157]. This change has been observed in RSA, and is best understood through the Pentalogue Model. The theoretical Model demonstrated how all five clusters of society had to come together and interact in a central space in order to make effective commitments to intergenerational water rights. However, the empirical Model revealed that this space is absent in RSA, and substandard interactions among clusters will potentially lead to poor environmental outcomes. For intergenerational rights to be upheld, market forces through the industry cluster have had to become more involved, resulting in a reorganisation, or re-scaling, of the decision-making space. In this way, the natural resource of concern, water, is under the care of those industry agents with the correct skills and initiative to manage it.

If it is assumed that social processes shape regulations, as the theories of Dahl and Rawls suggest (explored in Chapter VI), then an on-going re-scaling means that regulations are themselves in disorder. The reason for this is twofold. First is that

[155] Thiel and Egerton, "Re-Scaling Of Resource Governance As Institutional Change: The Case Of Water Governance In Portugal."
[156] E. Swyngedouw, "Neither Global Nor Local: 'Glocalization' and the Politics of Scale," in *In Spaces of Globalization: Reasserting the Power of the Local*, ed. K Cox (New York/London: Guilford/Longman, 1997), 137 – 166.
[157] Thiel and Egerton, "Re-Scaling Of Resource Governance As Institutional Change: The Case Of Water Governance In Portugal."

scales are themselves institutionalised in complex ways according to existing power relationships and discourses, and are important contexts for action in a space[158]. This makes the process of changing existing scales challenging – and often it is only destructive political procedures that can effect a change[159]. The second reason draws a logical conclusion from the fact that social processes shape regulations, so that with inadequate social interactions, laws are in flux and cannot become secure enough to allow other cluster agents to observe and follow them. Both of these issues can be discerned empirically in RSA in the debate about action on AMD: without all agents having equal input into discussion, negotiations are stunted and a conclusion cannot be reached – and civil society is reacting with some unrest to this situation. Consequently, little official action has been taken on the issue – and unofficial action by the industry cluster has taken on greater significance.

Re-scaling in the country is creating new spaces that are extra-State – this is the space of meta-governance where MLG can take place, as suggested in Chapter VII(a). The political scale in RSA is thus expanding both horizontally, with greater number of agents involved in environmental decision-making, and vertically, with a higher number of nested levels within that space. As industry involvement is not necessarily officially sanctioned, it is regarded as an in-between space that is neither local nor global, but where decisions are made and action is taken[160]. By becoming more prominent through the re-scaling process, industry has captured a greater voice in political decision-making, and is occupying a more productive space to shape societal discourse[161]. Power relationships are being repositioned in RSA, with

[158] Anssi Paasi, "Place and Region: Looking through the Prism of Scale," *Progress in Human Geography* 28, no. 4 (2004): 536–546.
[159] Ibid.
[160] Andrew E.G. Jonas, "Pro Scale: Further Reflections on the 'Scale Debate' in Human Geography," *Transactions of the Institute of British Geographers, New Series* 31, no. 3 (2006): 399–406.
[161] Paasi, "Place and Region: Looking through the Prism of Scale."

industry gaining more influence. This necessarily has a pronounced effect on environmental politics by determining parties involved and the extent of their involvement. As this thesis has previously suggested, the proposition is that this will lead to a reduced contribution from civil society and from government, with negative implications for democracy.

4 Implications For Democracy In RSA

This thesis has proposed that the traditional role of the organisation is changing with developing circumstances in RSA. Intergenerational rights of citizens to water are threatened by the AMD crisis, and the situation is exacerbated by government's poor response. Chapter VII(b) revealed that the industry cluster – particularly mining and financial sectors – is increasingly more involved in the provision of social goods such as water, and that this is a novel way of upholding rights through use of market forces for moral purposes. Despite this, this chapter has further proposed that this situation places the ideals of democracy in RSA under threat.

More is coming to be expected of corporations in RSA, for the reason that in taking on the responsibilities of government, they have come to occupy the same space as it. This space is both a position in the political decision-making cale, as well as a status in the metanarrative held by citizens. Democratic principles in the country hold that current and future citizens have a right to water, and are collective owners of all water and mineral resources. The same principles appointed government to a trusteeship position with duties to protect human dignity and uphold moral values. Government institutions thus exist to maintain and fulfil rights claims. Yet citizens have increasingly less faith in the moral nature of government, and are decreasingly likely to participate in democratic processes. Civil society has also seen that

government has no formal plans to tackle the expanding AMD situation, and regards this as an abrogation of duties under the trust – hence increasingly considers government to be illegitimate.

This has led to a supplanting of government with corporations, particularly from the mining sector, who are themselves able to effectively deal with AMD and who do have long-term plans for managing RSA's water resources. Consequently, industry has been tasked with primary accountability for good democratic practice in the country. Yet the impartiality of corporate participation in decision-making on water is questionable – corporations are legally obligated to give precedence to shareholder and private concerns over any common pool concerns of water resources[162].

4.1 Legal Concerns

Corporations previously did not intrude on this civic space. The industry cluster was granted limited liability in return for fulfilling particular expectations of society, but this was not anticipated to extend into provision of social goods or fulfilment of rights claims. The real entity theory proposes that corporations are separate bodies from their owners and from the State, which permits them to carry out profit-making activities with greater proficiency. Moreover, the RSA Constitution considers corporations to be juristic persons, granting them a limited number of the same rights as natural persons – but with some explicit exceptions that juristic persons cannot exercise. This is an acknowledgement that corporations are not private citizens, but instead are a convenient vehicle for the protection of the rights and interests of the people who comprise the corporation. In this way, both corporate

[162] Hepworth and Orr, "Corporate Water Stewardship Exploring Private Sector Engagement in Water Security."

theory and the Constitution acknowledge that corporations are not ideal custodians of democratic practice, and separate them from this governmental role very carefully.

However, RSA legislation has shifted this original conception in some measure by extending the limited liability of corporations, and imposing personal liability on corporate directors for costs of remediation for polluting activities. Limited liability should mean that this is not possible, as directors' personal liability is legally separated from the activities of a corporation. Yet under NEMA and NWA, this separation has been eliminated in order to more effectively account for environmental harms. Thus costs of remediation – both monetary and carceral – can be personally attributed in RSA. As suggested in this chapter, this could have the effect of making corporate directors more important than government agents in the survey and rehabilitation of environmental resources. Furthermore, it has fundamentally altered the intrusion of corporations in a space characteristically occupied by government, through widening from a limited liability framework the responsibilities of corporate agents.

4.2 Moral Issues

Under King III, corporations have public obligations associated with good corporate citizenship that extend beyond compliance with legislation. This has contributed to some extent to the entry of corporations into the civic domain. It has however been compounded by civil society's reduced trust in government. Social heuristics in RSA mean that citizens rely on habit and simplification models to make decisions[163] – thus citizens are increasingly looking to corporations in the same way as they previously did government, in a straightforward substitution. Furthermore, as first introduced in Chapter VI, the concept of moral responsibility becomes crucial.

[163] Thiel and Egerton, "Re-Scaling Of Resource Governance As Institutional Change: The Case Of Water Governance In Portugal."

Through this, moral duty is intrinsically linked with agency, so that citizens unconsciously equate voluntary actions with responsibility[164]. Corporations are thus supplanting government as moral authority through their voluntary actions to uphold water rights. Civil society is increasingly coming to rely on industry for the same rights fulfilment as was previously expected from government.

Entry of the industry cluster into the public arena has ineluctably increased its interactions with the country's moral values and with human rights, given that this thesis proposed that the public space has been shaped by influences of Kant, Rawls and Brown Weiss. Each philosopher regards the State as the appropriate agent to protect human dignity and defend rights – and if another agent takes their place, then that agent will take on these functions as well. This is an enlargement of the scope of industry under the MLG system detailed in Chapter VII(b), as industry is both expanding its own role and taking on the role of another cluster. Nonetheless, as previously proposed, this is not a wholly positive development. Significant corporate involvement in the political decision-making space may result in less democratic outcomes for intergenerational water rights, even though it appears in the short-term that this is an improvement on government jurisdiction over these same rights.

4.3 Deliberative Matters

A major concern of this thesis is that the re-scaling of water management space will not change the current situation – there is still no space in which all five clusters of society can come together to collaborative debate environmental issues and come to a collective decision. The Applied Pentalogue Model from Chapter VII(b) showed that government was the only cluster to interact with all other four clusters, and there was no central area where all came together. If the industry cluster were to

[164] Williams, "Moral Luck."

expand and take over more governmental duties, this would simply broaden its sphere of influence without changing interactions in any significant way. This would still be a fundamentally non-democratic system in which there is disproportionate input from certain clusters into policy creation. The diminution of the government cluster could also mean that there would be no way for particular clusters to have input into discussions, given that government heard the views of all five clusters. Furthermore, industry – already a powerful player – would become even more dominant in the decision-making space and would have fewer checks on its activities.

While corporations are obligated to consult the public for issues including a SLO, this has always been limited in number to those stakeholders affected by the operations of the corporation. In the mining sector in particular, a SLO requires consent from surrounding communities from which employees are drawn, and for whom expansion of extractive activities may increase pollution impacts. However, consultation is particularly circumscribed, and does not extend very far beyond the geographic boundaries of operations; this decision-making space does not include wider society.

This is an important consideration as corporations gain more control of provision of public services – will this too be limited to a specific geographic area? What are the incentives for a particular mining corporation to extend water supply beyond its appropriate stakeholders to the wider society? Even if a corporation did want to extend supply, how could it broaden the SLO system to include water rights stakeholders, rather than the more traditional interpretation of a stakeholder? These are complex questions for corporations to take on board as they move into the public domain.

4.4 Corporate Rationale Concerns

The concept of a public domain developed from the property rights system in Roman Law[165]. This defined those elements that could not be privately owned: *res communes*, sunlight, air and water enjoyed by all people, *res publicae*, roads, rivers, harbours, and bridges that are enjoyed by all citizens, and *res universitatis*, those items belonging to a community group for use by the group, which includes municipalities. The modern idea of a public domain developed from this – and certainly in South Africa, these three elements are still considered as belonging to all people equally. The question that must then be posed is whether juristic persons can effectively manage the public domain, given that their only experience of management is in the private domain. Private elements require different decision-making strategies because there are fewer people involved and affected, and given that long-term implications of the activity are typically not the focus of the decision. Private managers are accustomed to exclusive use, though in the public space this is not the case, with use and enjoyment apportioned among many more people[166].

Investment in this space is therefore fundamentally different, and the payback period will be longer than is customary in a private domain. This could either lead to underinvestment, or a realisation by private managers that they no longer wish to participate in underwriting issues of the public domain. In addition to these possibilities, the shift from management of private corporations to public resources will necessitate some major changes in administration and expected outcomes. This shift may take a long time to transpire, and will be associated with significant costs to the corporation.

[165] C. M. Rose, "Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age," *Law and Contemporary Problems* (2003): 89–110.
[166] Ibid.

A related issue concerns the business models and transactional frameworks that corporations use to make decisions. As previously described, transactional frameworks involve dependence on market-based exchanges to create economic value. Moral outcomes, though they may be minimally acknowledged as part of good corporate citizenship, are not significantly considered in a transactional framework. Water resources and their management in RSA are, however, inherently moral in nature. Moreover, as water belongs to all citizens, it cannot be sold for profit in RSA. This fits with the government's political framework but is inappropriate for a corporate transactional framework, as government aims to achieve welfare maximisation while corporations strive for wealth maximisation[167]. Traditionally, corporations and government have differing end goals associated with these frameworks, of efficiency and equity respectively. Accordingly, government focuses on long-term moral outcomes, while corporations prefer to follow short-term demands of shareholders and particular stakeholders. In taking on water management, corporations would have to deviate from this long-established method in order to understand and engage with associated moral issues. Revising existing business models to harmonise with water resource management in this way would doubtlessly be challenging for corporations.

Another concern is the re-scaling that this chapter posited is currently on-going in RSA. This is not a shift within a corporation on the business plan as explored above, but rather is a change outside of the corporation in the relationship between corporations, civil society and the State. This thesis hypothesised that re-scaling involves a change in management of resources from government to corporations, altering the political decision-making landscape. This is all taking place in RSA

[167] Parkinson, *Corporate Power and Responsibility: Issues in the Theory of Company Law*.

within the MLG framework of political decision-making, with multiple interacting groups that completely change the levels of authority.

This has two probable adverse outcomes: first, it entails a complete shift in capability and training from government to industry, without recourse to shift back to government again if and once government re-skills to an appropriate level. This means that government is blocked from participating in the water decision-making space at a management level, which may have a contagion effect into other government departments as well. Second, with regulations in disarray as the re-scaling process continues, corporations continue to gain legal and moral authority while government loses it. Civil society is incapable of regulating the outcome of this overhaul, as it is not part of the hand-over process. This is a further diminution of the collaborative decision-making space that an ideal democracy should have, and that the theoretical Pentalogue Model displayed.

4.5 Conceptual Questions

On a more philosophical scale, the physical existence of a corporation should be considered. As an inanimate, non-natural person, a corporation is not accorded the same human dignity rights in RSA as natural persons. Without experiencing this status themselves, how could corporations fulfil this consequential human right through their activities? Corporations take a due diligence approach to satisfying human rights requirements, which means that an investigation is undertaken to ensure that the right quality and amount of action is taken[168]. However this can be a weak approach, as it relies on an appropriate analysis – and this may not take place, or it may take too long for a quick and effective rights fulfilment. It may also lead to reactive rather than pro-active approaches, again slowing rights fulfilment. This thesis

[168] Ralph Hamman & Christoph Schild, *Business and Human Rights in South Africa: Context and Recommendations for Pro-Active Engagement* (Johannesburg, South Africa, 2008), http://www.nbi.org.za/Lists/Publications/Attachments/69/Business_Human_Rights_in_SA.pdf.

proposes that a juridical person cannot be expected to fully comprehend all the rights accorded to natural persons, leading to problems in appreciating how to accomplish them.

Corporations in RSA realise that business risks are broadening from simply financial, to include social, ethical and environmental issues as well. However, they believe that the space in which they normally operate is a denationalised, independent space, and that they have been forced into an overtly regulatory space by a government unwilling and unable to enforce regulations. This was uncovered through empirical research on financial and mining corporations, detailed in Chapter VII(b). However, although this may initially improve provision of potable water supplies because of the superior technical abilities of the industry cluster, there are question marks hanging over what this will mean for democratic decision-making in the country. Given that industry will have a significantly larger input – and perhaps the only input – into future water policy decisions, this will transfigure the democracy envisioned by Kant, Rawls, and the writers of the Constitution. With government playing a progressively smaller role, it is conceivable that the government cluster may be completed subsumed, giving rise to an overt corporatocracy[169].

It has to be considered that ethics-based approaches to business are regarded as infeasible by corporations given their fiduciary obligations to maximise profits for shareholders[170]. Yet South Africa corporations will have to become conscious of the fact that water management in RSA will require supplanting the government in all ways possible – including provision of water services as a public service and moral action, and not making a profit on all their activities. For the industry cluster to take into serious consideration the inviolable rights of citizens, they will have to be guided

[169] Carl Gibson, "The Corporatocracy Is the 1 Percent," *The Huffington Post*, February 11, 2011, http://www.huffingtonpost.com/carl-gibson/the-corporatocracy-is-the_b_1070659.html.
[170] Solomon, *Corporate Governance and Accountability*.

by the national metanarrative, and move away from transactional frameworks and business-as-usual approaches, in order to maintain democracy for the long term.

5 Conclusion

The White Paper on a National Water Policy for South Africa, from which the opening quote for this chapter was taken, is constructed from fundamental equality for all citizens in access to and benefits from the country's water resources. It mandates that the government ensure water is used to improve the quality of life of all citizens[171]. Water is equated with human dignity in the White Paper, affirming the inherent importance of RSA's water resources and the water rights of its citizens. The equal sharing of water among all members of society is considered to be crucial to moving away from apartheid-era policies toward a more socio-economically equitable society, where no one group of citizens is more privileged than another. It can be discerned that water is of great significance, both economically and conceptually, for this emergent nation.

Previous chapters have exposed the fact that agents from the industry cluster are becoming increasingly involved in the provision of social services such as clean water, chiefly due to government inability and disinclination to fulfil legislative requirements. This has resulted in a MLG system, in which increasing political disorder has resulted in more non-State agents participating in political decision-making, with development of complex systems and new decision-making scales. This has compelled institutional innovation, particularly in the mining and financial sectors, both of which have taken on significant responsibilities that are typically the duty of government. While this has ensured continued provision of potable water to

[171] Department of Water Affairs and Forestry, *White Paper on a National Water Policy for South Africa*.

some specific areas of the country in the face of government negligence, it could have harmful effects on long-term prospects for democratic discussion and thus upholding of intergenerational rights in the country. Research has indicated that those areas where corporate engagement is most needed to support institutional water policy are also the places where such corporate support could have undesirable repercussions[172]. This chapter has produced evidence to support the assertion that democracy in RSA is under threat with increased involvement of market forces and decreased involvement of government in the decision-making space of water rights.

The concept of democracy was examined in this chapter, including the assumed influence of the philosophers Kant and Rawls on the writers of RSA's Constitution. Water is regarded as a democratic commodity as it belongs to all citizens, who have equal rights to use and enjoy it, and is managed by popularly elected officials with a duty of care to ensure its long-term sustainability. Yet democracy is of an increasingly doubtful quality in RSA, with poor support for it from the citizenry and a growing assumption that government is inept and illegitimate[173]. For these reasons, citizens are steadily turning to corporations to discharge government responsibilities to uphold water rights. This is the first distortion of democracy in the country.

Corporations are considered juristic persons under RSA law, having some but not all of the rights and duties of natural persons. As well, through the limited liability accorded to corporations, these entities are expected to comply with national laws and to work toward some aspects of the public good, in return for an easing of legal culpability. In this way, since the implementation of black majority rule in 1994, RSA's corporations have had some meaningful effect on human rights through

[172] Hepworth and Orr, "Corporate Water Stewardship Exploring Private Sector Engagement in Water Security."
[173] Carter, *Sources Of State Legitimacy In Contemporary South Africa: A Theory Of Political Goods*.

activities impacting on national water resources. Over and above this, both NEMA and NWA include personal liability clauses for corporate directors whose corporations cause environmental harm. The Companies Act also extends personal liability for unapproved or illegal actions to corporate directors. This strict liability disrupts traditional corporate limited liability and changes the relationship of corporations with civil society and government. Corporations are thus more closely involved with upholding water rights than was previously required. This is the second distortion of democracy in the country.

Corporate social responsibility in RSA is enshrined in the King Reports, with the latest, King III, published in 2009. Compliance is required for listing on the Johannesburg Stock Exchange, so the majority of corporations in the country will do so. King III requires that corporations take responsibility for significant aspects of their impact on environmental resources, reemphasising the participation of corporations in democratic processes of rights fulfilment. With rapidly decreasing performance of government in discharging rights, civil society is looking to corporations to take their place. This is both a conscious decision, due to superior technical capacity of industry cluster agents, but also because civil society relies on heuristics and simplification and may unconsciously replace government with industry as the moral authority in the country. This is all leading to a re-scaling of society, with shifts in the relationships among civil society, industry and government. This is the third distortion of democracy in the country.

Singularly important, however, is that the re-scaling of society in RSA has not changed the situation explained in Chapter VII(b) through the Applied Pentalogue Model, whereby there is no way for all five clusters of society to come together to collaboratively discuss the environment and decide communally about water policy

and intergenerational rights. Instead, the industry cluster is expanding and the government cluster shrinking in the same MLG framework. This could have even more undesirable effects in the long-term in restricting democracy, as the only cluster to have a significant voice in water policy decisions would be industry, while government is progressively more silenced. This is the fourth distortion of democracy in the country.

Corporations have to realise and accept that they are active participants in the public realm, whether or not they feel forced into this space. This will require corporations to take a more active role than current good corporate citizenship guidelines require, in order to effectively assume the role and responsibilities of government. Water rights in RSA are a moral consideration, and to include this concept in the transactional frameworks utilised by corporations would be a significant step-change for industry. For corporations to attain this change will be wholly necessary if the country's democratic principles are to be upheld in the long-term. The 1992 Cadbury Report on corporate governance from the United Kingdom suggested that corporate governance is about complying in spirit, rather than just pursuing shareholder value[174]. In RSA, complying with the spirit of corporate governance will necessitate taking on significant aspects of government governance, including responsibility for water rights that are moral and not-for-profit, if RSA democracy is to flourish into the future.

[174] Adrian Cadbury, *Report of the Committee on the Financial Aspects of Corporate Governance (The Cadbury Report)*, vol. 1 (Gee, 1992), http://www.icaew.com/en/library/subject-gateways/corporate-governance/codes-and-reports/cadbury-report.

CHAPTER IX: CONCLUSION

> *"Rather, as the most sentient of living creatures, we have a special responsibility to care for the planet."*
>
> *- Edith Brown Weiss*[1]

1 Introduction

This thesis makes the argument that there is a crisis of governance in RSA, precipitated by acid mine drainage (AMD), that makes intergenerational rights to water unlikely to be fulfilled. It gives an account of a newly-independent, developing country that faces a significant amount of pressure from its citizens to develop faster and more substantially. With an official unemployment rate of just over twenty-five per cent, citizens want a vibrant economy that will create jobs[2]. With a population of 7.5 million lacking adequate housing and secure tenure, citizens expect government to provide housing for their families[3]. With fifty-seven per cent of the population living below the poverty income line, citizens expect government to take action to improve their wellbeing and help them move out of poverty[4].

Yet these short-term pressures compete with long-term duties assigned to the government in the 1996 Constitution and subsequent environmental Acts. Legislation requires that government agents protect environmental resources for current and future generations – and moreover that this should be given priority over economic development. This places government in a challenging position – in order to stay in power, they have to be seen to be dealing effectively with short-term demands of their

[1] Brown Weiss, "Intergenerational Equity: A Legal Framework for Global Environmental Change."
[2] Statistics South Africa, "People | Statistics South Africa."
[3] "South Africa: Winter Freeze Highlights Homeless Crisis," *IRIN Africa*, May 24, 2007, http://www.irinnews.org/report/72357/south-africa-winter-freeze-highlights-homeless-crisis.
[4] Craig Schwabe, "Fact Sheet: Poverty in South Africa (Human Sciences Research Council)," *South African Regional Poverty Network*, 2004, http://www.sarpn.org/documents/d0000990/.

electorate for economic development. However to fulfil their mandate under law, they also have to demote this in favour of safeguarding the intergenerational sustainability of the country's environmental resources. The latter choice is, of course, not a popular option for government agents who are up for re-election every few years.

This thesis has demonstrated how the government is prioritising short-term demands over of long-term rights in RSA. This is most obvious in the case of AMD, a pollutant that is an after-effect of mining. This substance has proliferated throughout Gauteng province, which is the economic hub of the country. Citizens are troubled by what appears to be government discounting its duties – water has been polluted at rapid rates by AMD, with no action by government to counter this spread. Multiple, varied sectors of society have protested government inaction[5], but have realised that this is unlikely to change soon. This is due not only to a lack of government will, but also a deficiency of specialised knowledge to deal with technical provisions in environmental Acts. This has meant that some sectors of society – specifically the financial and mining industries – are taking on more responsibilities in this regard. This will have profound implications for the country in the years ahead, particularly for the democratic system of government. With intensified contribution from industry alongside abating contribution from government, representative democracy as it is understood in RSA is likely to be dissolved.

1.1 Thesis Summary

The thesis began by detailing the regulatory history of RSA, from the formation of the country's markedly innovative Constitution in 1996 and subsequent environmental legislation, through to present-day implementation of the socioeconomic rights contained within them. This is in order to pay particular

[5]Laura Grant, "Research Shows Sharp Increase in Service Delivery Protests," *Mail and Guardian*, February 12, 2014, http://mg.co.za/article/2014-02-12-research-shows-sharp-increase-in-service-delivery-protests.

attention to how the concept of intergenerational equity (IGE) has been integrated. IGE proposes a shift in political decision-making from short-term thinking focused on current gains, to a long-term framework with wellbeing of current and future generations as the basis for policy-making. In RSA, IGE is a central tenet of legislation, which should ensure that future generations are a major policy concern. In assuming the relevance of the theories of three particular philosophers to the writers of the Constitution, this thesis has presupposed that the weak points in these philosophies have translated into limitations when the philosophies are enacted through legislation. This is predominantly because intergenerational moral concepts are challenging to render into normative obligations – humans are not predictable decision-makers as the philosophy assumes.

This is well demonstrated by the spread of AMD; this polluting substance has extended through Gauteng province unchecked by government intervention. A theoretical lens is used to develop a model to analyse the views of RSA society on this issue, labelled the Pentalogue Model. This model divides RSA into five clusters: civil society, industry, government, media and science. It allows for interactions among all to be studied, to better understand the power dynamics and flows of information in a deliberative democracy. Such active participation in decision-making processes by all sectors of society is required by RSA's Constitution. The model revealed that citizens believe their government has abrogated its responsibilities to IGE through nonfulfillment of its duties in environmental legislation, as it is not upholding high standards of water quality for the long term. However, fieldwork exposed the very poor interactions among all clusters in society, and the conflicting visions of the future of the country and intergenerational policy. This has culminated

in substandard governance with poor outcomes for intergenerational rights to resources.

In order to better understand why citizens view their government as failing, this thesis has attempted to analyse the national metanarrative that guides decision-making and action in the country. Through analysis of society, the national meta-narrative is proposed to comprise respect for human dignity, cohesion in diversity, and redistribution to make society more equal. It defines good and bad actions, and duties that a moral citizen has to fulfil. Based on the ethics guiding the national meta-narrative, citizens view government as behaving unethically in the nonfulfillment of duties toward intergenerational water rights by not dealing effectively with AMD.

In the face of increasing political disorder and ineffective government authority, traditional governance models are being shifted to a multi-level governance (MLG) framework instead. In applying fieldwork findings to the Pentalogue Model, actual interactions in society are displayed. This Applied Model shows that the clusters do not deliberate together and there is no way for each sector to input into discussions about the environment. Since traditional governance structures have led to this detrimental situation, non-State actors are playing progressively larger roles to ensure that intergenerational rights to water are upheld. This has shifted governance from a central command to numerous smaller, radiated centres that are beyond the reach of traditional administrative boundaries – and in RSA that takes the form of industry involvement, particularly of the mining and financial sectors. Industry, even as a non-State actor, is increasingly participating in regulatory and political decision-making through MLG. In this way, industry is currently the principal agent upholding and expanding water rights in the country.

However, industry involvement in this traditionally government realm has some negative implications for the future of democracy in RSA. With increasing power of industry and decreasing power of government, the nature of democracy is being called into question. There is a real possibility that the democracy envisioned by the writers of the Constitution will dwindle as the industry cluster gains greater control over inputs of information and outputs of decision-making processes. Market control over moral rights and public goods may lead to less ethical outcomes for intergenerational rights to water.

2 What Issues Did This Thesis Bring To Light?

This thesis has claimed that there is a crisis of governance in RSA, and claims that this has been precipitated by AMD. Not only is the current government response inadequate, with continued pollution of water supplies in Gauteng province, but the ensuing industry response may also threaten the future of democracy in the country. This all means that realisation of IGE is significantly complex – and indeed it may not materialise in RSA at all. The thesis introduction presented a set of five questions that guided development of the argument, and each question was answered in the thesis chapters. A synopsis of the explanation to each of these questions will be narrated below; chapters have been clustered together to provide the reader with the unimpeded flow of the argument.

2.1 Chapters II and III: How Has IGE Been Incorporated into RSA Legislation?

This question is posed in order to better comprehend how the writers of the Constitution envisioned RSA legislation evolving to sustain intergenerational rights. Through understanding the philosophy of IGE, it is easier to understand how it can be

applied in certain contexts – and also perhaps to understand why certain applications may not be successful, or how some applications may fail to realise their envisioned role. IGE is a firm fibre running through the thread of South African legislation – and, crucial to this thesis, it is incorporated in the Bill of Rights in the Constitution, in both the environment and water sections[6]. These two sections, S.24 and S.27, declare all citizens to have the right to sufficient water and an environment not harmful to health, protected for present and future generations through legislative and other measures.

It has been proposed in this thesis that the influences of a specific group of philosophers can be seen in the RSA legislation, due to the way that IGE has been incorporated. The Constitution's roots lie in social contract theory, with societal values determined through agreement among moral citizens, and environmental rights protected by government. Immanuel Kant's theories of jurisprudence propose that people should only act insofar as their chosen action does not interfere with the freedom of others[7]. Kant believed that human dignity should be the paramount desired outcome in creation of policy – a price cannot be set on attainment of dignity. This is reflected in the RSA Constitution, which mentions human dignity in the Founding Provisions as a value from which the nation is constructed.

John Rawls was one of the first academics to write about IGE, and conceived of justice as fairness, with undifferentiated rights for all citizens[8]. This is particularly important for post-apartheid RSA, where Founding Provisions ground legislation in equal entitlement of all citizens to the rights and benefits of citizenship, as well as equal liability for duties and responsibilities of citizenship. He believed that impartiality and rationality are ideal decision-making qualities, while liberty and equality should be sole outcomes of policy. Rawls utilises the 'original position,'

[6] "Constitution of the Republic of South Africa - Chapter 2: Bill of Rights."*Sections 24 and 27*
[7] Rauscher, "Kant's Social and Political Philosophy."
[8] Rawls, *A Theory of Justice: Revised Edition*.

whereby people are behind a theoretical veil of ignorance about personal attributes, and thus will make the most just decisions based on equal rights for all people.

Edith Brown Weiss is a contemporary philosopher who employs the legal mechanism of public trust to put IGE into practice – current generations are obliged under this trust to convey the planet to future generations in no worse condition than it was received[9]. She refers to this as the 'planetary trust.' This is incorporated into RSA legislation through both the National Environmental Management Act (NEMA) and the National Water Act (NWA), which place environmental and water resources into a public trust with all citizens as beneficiaries, and obligate government to act as fiduciary trustee on their behalf to protect these resources. Governmental duties are to protect resources and consider public good in water allocation and policy decisions.

The success of incorporating IGE into national legislation in RSA is significant, as it is one of the first countries globally to attempt to transform IGE from philosophical hypothesis to normative behaviour. Moral and legal rights have been given equal standing, with the appreciation that there is an unavoidable connection between them[10]. IGE is a cornerstone of RSA's Constitution, and although a difficult concept to actualise, has created a roadmap through NEMA, NWA and the Mineral and Petroleum Resources Development Act (MPRDA) legislation.

2.2 Chapters IV and V: What are the Impediments to Upholding IGE?

This section moves from looking at the theory of legislation, to the application of that theory through legislation It has tried to answer the question of whether IGE in legislation is being upheld by government, and take a more detailed look at obstacles that may exist that impede implementation of government duties. While there are a confluence of factors acting as stumbling blocks to achieving IGE, all converge

[9] Brown Weiss, "The Planetary Trust: Conservation and Intergenerational Equity."
[10] Dworkin, *Taking Rights Seriously*.

through the connecting factor of AMD. An acidic, radioactive pollutant resulting from mining, AMD contamination is extensive in Gauteng province and threatening water supplies of Johannesburg, RSA's economic capital. If unchecked, AMD will contaminate nature reserves and sites of historical interest, and generate a tear in the fabric of IGE that was carefully established in the Constitution[11].

RSA's legislation sanctions government action to halt environmental harms like AMD, through authorisations in NEMA and NWA to hold industries financially liable for pollution – including personal liability for corporate directors. Moreover, government is permitted to requisition finances set aside by mining operations to restore environmental conditions, if this has not been completed effectively. In spite of this, government has taken little action against polluters, and AMD is continuing to prove controversial and complex to manage. That water resources have been impaired without action by government is an incomprehensible neglect of its Constitutional duties to uphold water and environmental rights.

The philosophies informing legislation have disadvantages that impede effective AMD management. Rawlsian justice as fairness relies on highly-aware individuals in positions of authority, motivated solely by impersonal, moral rationales, and who are also expected to have access to perfect information to best allocate social benefits. It cannot be assumed ethical reasoning will motivate government agents, given the short-term pressure of election cycles. Application of Brown Weiss' planetary trust concept suggests government has fiduciary obligations to protect natural resources. These obligations mean that quality of water resources should be maintained into the future, and utility of economic activities weighed against environmental costs. However, with growing demand for employment, and energy

[11] Oelofse, "Mine Water Pollution – Acid Mine Decant, Effluent and Treatment: A Consideration of Key Emerging Issues That May Impact the State of the Environment."

and raw material requirements of a rapidly-developing industrial sector, RSA's government is hard-pressed to balance environment and development needs, and is incapable of fully satisfying the planetary trust. Consequently, assuaging immediate employment and other shortfalls takes precedence over devising solutions for long-term water quality preservation.

Interactions of society's five clusters were displayed through the Pentalogue Model. This utilised Dahl's theories of deliberative democracy to elucidate interactions in RSA society under five cluster groupings of science, civil society, government, media and industry. Use of the model to illustrate fieldwork findings demonstrated that poor interactions among all clusters obstruct allocation of responsibilities, harmonisation of goals, and collaborative behaviour. Trust relationships have been fractured, limiting AMD management. The environment, found where all five clusters converge, is being compressed and overlooked due to overarching focus on short-term concerns. A combination of limitations of philosophy in implementation and miscommunications in society engender poor outcomes for long-term water management. Legislation is disregarded and the country is unable to achieve intergenerational outcomes.

2.3 Chapters VI and VII(a): Why is Government Viewed as Failing to Uphold IGE?

This thesis has concluded that government is not protecting intergenerational rights to water in RSA, and moreover that citizens across the political and economic spectrum regard their government as failing this duty. This raises the question of what expectations exist in society that government is unable to fulfil, and what actions citizens expect their government to take.

The same political party that was the driving force behind RSA's liberation movement, the African National Conference (ANC), still runs the government, almost

twenty years after black majority rule was achieved. Due to this longevity, the government has established significant relationships among the five clusters of society, and has developed entrenched ways of interacting. It has been instrumental in supporting the aims of the Constitution and associated environmental Acts from promulgation in the 1990s. This thesis has claimed that these pieces of legislation have been essential for the development and perpetuation of social norms and accepted behaviour in the country. This is because collaboration and deliberation was required in the creation of the regulations, so that all citizens were well aware of their responsibilities that emerged from the regulations.

Social deliberation in society lead to the collaborative creation of socioeconomic rights that were included in the Bill of Rights, which have since been enforced by government. This form of deliberative democracy lends integrity and validity to rights – but it also shapes societal priorities, values and beliefs. What RSA society has come to understand as freedom and as justice has been sculpted through deliberation and widely-known promulgation of regulations. Once rights have been established, the connected priorities and beliefs can be utilised in decision-making through use of heuristics. In uncertain situations, such as is faced with AMD, humans will make non-rational, intuitive judgements based on past experiences, on emotional significance, and on the actions of others around them. This gives rise to a behavioural guide, that citizens will rely upon when taking action. Both of these together – social deliberation to create rights, alongside use of heuristics to make judgements and take action – prompt the creation of a national metanarrative. This code determines good and bad actions in society, and adherence to it determines the moral worth of citizens, government, and institutions. In RSA the meta-narrative has developed to guide decision-making, based on the underlying principles that all

citizens are equal, that human dignity should be respected above all other considerations, and that socioeconomic rights should be upheld for all.

Legislation has vouchsafed government with the responsibility of acting as trustee of water resources on behalf of all citizens. However, the complexity of environmental regulations and the uncertainty of how to respond to the AMD crisis has had the consequence of eliciting a substandard response from government. This poor reaction is in conflict with Constitutional duties. Moreover, in not taking action to stem the flow of a pollutant that will have long-term consequences for the right to water, government has been judged by citizens as morally wrong. This is because they are regarded as setting aside the national meta-narrative through not upholding socioeconomic rights. Government's moral authority is being abraded as it disregards long-term water rights; citizens feel betrayed by their government disregarding its role as trustee of resources, and consequently regard it as failing.

2.4 Chapters VI, VII(a) and VII(b): What are Other Options for IGE to be Upheld?

With a lack of confidence from citizens and lack of action by government against AMD, this thesis has come to the conclusion that intergenerational rights were unlikely to be upheld in RSA. However, this is not wholly the case, as there are alternatives to government through which IGE could yet be achieved. The lacuna created by government absence has brought on political disorder in RSA, which has led to increasing participation of non-State actors in an attempt to maintain governance standards and uphold intergenerational rights to water.

This is a shift in governance models from central government control to a MLG approach where discrete levels of decision-making are broken up and the role of the State is transformed. Ancillary organisations not formally part of government structures participate in policy decision-making. MLG fits well with the Pentalogue

Model described previously in the thesis, as it operates through rational discussion among multiple smaller centres that are beyond the reach of traditional administrative boundaries – and the cluster interfaces provide a communications path to support this. MLG operates according to the Kantian principles that guide government action under the Constitution, which means that democratic, moral outcomes are still attainable.

This shift in governance processes was exposed through application of the Pentalogue Model introduced previously, based on further fieldwork in South Africa. The re-working of the model shows actual interactions and the influences of each cluster, showing that government is a small player among the five clusters, while industry's influence is growing. Due both to impaired interactions among clusters and non-involvement of government, non-State actors are increasingly influential in the regulatory sphere; fieldwork unmasked that it is predominantly the industry sector that has taken on these additional responsibilities. The assertion was made that the financial and mining sectors are most involved in assisting to uphold rights to water, in conformity with RSA's meta-narrative. This occurs in a space of meta-governance that is contiguous with normal governance, but separate from it.

The country has thus found itself dependent on participation of non-State actors to ensure continued progressive environmental decision-making through a system of MLG. Industry agents are involved in supervision of compliance with legislation, and although separate from government, work in pursuance of government objectives of equity in environmental policy outcomes. This is proposed as a possible solution for the problems inherent to the Constitution. However, it is also pointed out that the Applied Pentalogue Model still displays that there is no central area in which all five clusters come together to collaboratively deliberate on the environment – and this remains a stumbling block to achieving full democracy.

2.5 Chapter VIII: Where Next for Democracy and IGE in RSA?

The crucial issue remaining, after exploring MLG and non-government options for upholding intergenerational rights, is to unravel the implications of all of this for IGE and for democracy in the country. The thesis closes by suggesting that democracy in RSA is under threat, given the greater involvement of industry agents in regulatory processes through MLG. It can be seen that the financial and mining sectors are guided by the country's meta-narrative, and are currently attaining moral outcomes in fulfilling water rights for citizens in the place of government. Nevertheless, that market forces preside over moral rights and public goods may undermine the strong values of human dignity and equality upon which the nation was founded. As a progressively more influential sector, industry is able to exert more comprehensive control over inputs of information and outputs of decision-making processes. This could limit collaborative processes of decision-making and the number of differing viewpoints expressed in the decision-making space. Consequently the Rawlsian democratic discussion enshrined in the Constitution may be diminished.

Under governance as usual, corporations are considered juristic persons with some of the rights and duties accorded to natural persons. As well, through limited liability, corporations are separated from government and civil society, in order that they can more straightforwardly pursue profit motives. Therefore, the findings of the previous research question, that industry is progressively more influential in upholding water rights, is remarkable. This goes against conventional corporate decision-making in that it appears to be guided not by transactional frameworks, but in line with the country's national meta-narrative – without overarching considerations of financial gain. The traditional role of the corporation is distorted,

and this has changed the relationship of corporations with civil society and government.

However, this thesis hastens to add that corporations are not natural persons, and that the corporate model is not the optimum means through which moral rights are upheld. Participation of corporations in democratic processes of rights fulfilment will transform democracy by enmeshing industry in government realms. Through implementation of the MLG framework, the industry cluster is expanding and government cluster shrinking. It is possible that if current trends in participation and governance continue into the future, then the only cluster to have significant input into water policy decisions could be industry. This would run entirely counter to the democratic principles that have guided the country since liberation from apartheid.

3 Implications For Public Policy

Even with IGE's centrality in legislation, given impediments provoked by AMD, this thesis reasons that intergenerational outcomes are unlikely in RSA. Both the consequences of this theory as well as areas for additional future research will be outlined in this section.

Political Implications

Immediate implications of government inability to effectively manage AMD will begin locally. Johannesburg, the economic capital of RSA, will have to cope with expanding water pollution; this will entail greater expenditure by taxpayers due to higher costs of purifying heavy metal-tainted water. Water shortages may arise as potable water becomes less readily available – with concomitant ramifications for worst-off sectors of society already under water stressed situations. A reduction in potable water supply will have detrimental knock-on effects through a host of issues

affecting the wellbeing of citizens, from immediate matters of food security to issues of longer duration such as electricity supply. It may also fundamentally shift community relations, and eliminate essential support networks and supply chains for vulnerable communities[12].

Nationally, RSA's relationship with Lesotho will change. Traditionally, the landlocked country has relied extensively on RSA for income from customs duties and remittances from the great number of migrant workers[13]. However, RSA's reliance on Lesotho will intensify over the next few years, as the Lesotho Highlands water project is expanded and the city of Johannesburg depends more and more on this water input. This changing relationship will shift strategic development plans for both countries. With government according greater focus to short-term economic concerns, natural resource exploitation may be disregarded. While economics takes precedence, RSA's progressive Constitution will be inadequately actualised – and this may have global implications for environmental legislation, given the significance accorded to the success or failure of RSA's legislation[14].

Two major issues currently undermine NEMA and NWA. The first is that the local consultation required by the Acts is not complied with, so that citizens feel their democratic right to feed into policy decision-making is ignored[15]. The second is that the ANC government has not developed an overarching national strategic framework for dealing effectively with environmental rights achievement – and this particularly includes the lack of targeted and effective measures to control AMD in Gauteng, as described in preceding chapters. As a consequence, citizens are gradually more likely

[12] Jane Battersby-Lennard, *The State of Urban Food Insecurity in Cape Town (Urban Food Security Series No. 11., AFSUN)* (Cape Town, RSA: Idasa Publishing, 2011).
[13] Andrew England, "Lesotho Bids to Lower Reliance on Neighbour," *The Financial Times*, April 18, 2013, http://www.ft.com/cms/s/0/968b6f2a-9b97-11e2-8485-00144feabdc0.html#axzz3UjWuV8zR.
[14] Faull, "In Praise of the South African Constitution."
[15] Rossouw and Wiseman, "Learning from the Implementation of Environmental Public Policy Instruments after the First Ten Years of Democracy in South Africa."

to resort to seeking help from non-State institutions to complete service delivery[16]. This has already begun, and will build on itself in a cyclical process.

Judicial Implications

Repercussions from government/Court interactions have been minimal thus far, although this could emerge as a more serious issue in the future. Courts have played major roles in upholding rights thus far. They have highlighted government inaction in *Harmony Gold Mining Co Ltd (2012)*[17] (Chapter IV) and in *Nokotanya (2009)*[18] (Chapter VI). They have compelled government follow-through in *Residents of Bon Vista Mansions (2001)*[19] (Chapter III) and in *Federation for a Sustainable Environment (2012)*[20] (Chapter VI). Furthermore, they have highlighted cases of government misapplication of the law, as with *City of Johannesburg Metropolitan Municipality (2010)*[21] (Chapter VII(b)). Finally, the recent case of *Blue Platinum Ventures (2014)*[22] (Chapter VIII) demonstrated that Courts are willing to enforce the strict liability clauses established in NEMA and NWA for corporate directors – with or without government support for such enforcement.

However, if RSA faces a case comparable to *Minors Oposa (2012)*[23] (Chapter II), which required the government of the Philippines to act against dominant economic interests, ostensibly to the detriment of immediate economic growth, there

---

[16] Carter, *Sources Of State Legitimacy In Contemporary South Africa: A Theory Of Political Goods*.
[17] RSA Constitutional Court, Harmony Gold Mining Company Ltd v Regional Director: Free State Department of Water Affairs and Others (68161/2008) [2012] ZAGPPHC 127 (2012).
[18] Constitutional Court, Nokotyana and Others v Ekurhuleni Metropolitan Municipality and Others (CCT 31/09) [2009] ZACC 33; 2010 (4) BCLR 312 (CC) (2009).
[19] Gauteng High Court, Residents of Bon Vista Mansions v. Southern Metropolitan Local Council, Case No. 01/12312 (2001) (2001).
[20] North Gauteng High Court, Federation for Sustainable Environment and Others v Minister of Water Affairs and Others (35672/12) [2012] ZAGPPHC 128 (2012).
[21] Constitutional Court, *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal and Others [ZACC 11] CCT89/09 ZACC 11; 2010 (6) SA 182 (CC) ; 2010 (9) BCLR 859 (CC)*.
[22] Magistrates Court for Regional Division of Limpopo Province, The State v Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya (RN126/13) (2014).
[23] Supreme Court of the Philippines, Minors Oposa v. Secretary of the Department of Environmental and Natural Resources 33 ILM 173 (1994) (1994).

could be more drastic government/Court confrontations. In the South African case *BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs (2004)*[24] (Chapter IV), the Court ruled that environmental concerns should be considered on parity with other socioeconomic concerns – setting up the stage for just such a clash of priorities. This could have two possible outcomes: first, Court authority could be weakened through government noncompliance, which could impoverish subsequent environmental cases. Second, government could further lose legitimacy, being in clear violation of Constitutional statutes. This will make government even more vulnerable to dominance by other powerful interests.

Environmental Dialogue Implications

The thesis has further proposed that the environment is found at the centre of the Pentalogue Model, since it belongs to all citizens and thus should be at the nexus of interactions in a deliberative democratic State. The first, theoretical iteration of the Model demonstrated that due to very poor interactions among clusters, the space for the environment at the centre of the model was restricted. The second, applied iteration of the Model demonstrated that even under the altered governance framework of MLG, the collaborative environmental space remains unchanged – insufficient. Restricting the theoretical space given to the environment results in a concrete reduction in discourse, diminishing the ability of all sectors of society to have an effect on upholding current rights and on positive long-term environmental policy outcomes.

It is also important to note that environmental policy under apartheid was used as a tool of racial oppression, and has continued to be perceived in this way by large

[24] Gauteng High Court, BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs (03/16337) [2004] ZAGPHC 18 (31 March 2004) (2004).

parts of civil society – even after black majority rule was implemented[25]. This suggests that there is an underlying mistrust of environmental legislation, which, when compounded by the sluggish way in which government is fulfilling many Constitutional rights, means that many citizens do not believe environmental issues should take precedence over other needs. There is a focus on short-term rights in RSA, with the top three issues being unemployment, crime, and housing[26]. Seventy-six per cent of citizens said the most critical problem in RSA was job creation, while only fourteen per cent said it was water issues[27]. These short-term pressures are competing with long-term environmental – and particularly water – rights, as government officials increasingly give priority to short-term demands and policy.

Industry Control Implications

As it occupies a central position, the environmental space is open to annexation by powerful groups that are expanding their reach into the spaces occupied by less powerful clusters. This is the prevailing situation in RSA, with the industry sector increasing its control over governance procedures while the government cluster sets aside its Constitutional responsibilities. A possible implication is that dominant groups such as industry will then be able to employ environmental resources for their own benefit, shut down national discussions on policy-making, and prevent citizens from taking advantage of their Constitutionally-bequeathed resources. In addition, dominant clusters will be able to obstruct other clusters from voicing opposition to particular uses of resources – and there will not be a powerful government cluster to stand up to any misuses.

[25] Rossouw and Wiseman, "Learning from the Implementation of Environmental Public Policy Instruments after the First Ten Years of Democracy in South Africa."
[26] IDASA, *Afrobarometer Summary of Results Round 5: Survey in South Africa*.
[27] Mattes, "South Africa: Democracy Without the People?"

This thesis has suggested that the industry cluster is guided by the moral meta-narrative of the country. However, given the haste with which government responsibilities toward fulfilment of water rights have been embedded into industry operations, there is every possibility that the transactional frameworks that traditionally guide industry decision-making will end up guiding industry's implementation of public goods and moral rights. Transactional frameworks use market-based exchanges to generate economic value – moral outcomes are not a desired outcome. There will be some discordance between the guiding meta-narrative of the country and transactional frameworks, and it is unclear that moral outcomes will prevail in the longer term.

To better understand these long-term implications, longitudinal studies of industry and government relations would have to be undertaken, with focus on what relationships exist, as well as the depth of trust connections across the levels of MLG. This would assist in better understanding the power dynamics within political decision-making, and could allow for a prediction of political actions regarding intergenerational rights to water. Furthermore, this thesis proposes that the relationship of the Courts in RSA with the five clusters of society will prove critical in the future. The courts hold significant activist potential through their ability to enforce regulation where government is not doing so itself, or where non-government clusters are ignoring the law. This issue will be explained further in the section that follows.

4 Implications For Research

An area that would benefit from significant further research is the similarities between Kantian and Rawlsian theory and the RSA Constitution, to which this thesis drew attention. An extensive literature search did not reveal published papers or books that demonstrate a clear connection, but nonetheless my contention is that there

are interesting parallels, and analysis is needed to probe this. This thesis was not specifically about this connection, which is why no definitive remarks could be made about it; however it is fertile ground for future study.

The role of judges in maintaining IGE is particularly significant for RSA. This thesis shows judges to be central to the Pentalogue Model and to have authority to guide behaviour in accordance with a long-term outlook. With government abrogating its IGE responsibilities, courts may have to take on the additional, and not classically adjudicatory, responsibility of reaching out and taking actions necessary to ensure that IGE becomes a national priority. Due to existing poor environmental knowledge in RSA, this supplementary role could severely impact on the Court's ability – and legitimacy – in functioning as protector of the law.

Moreover, without a strong central government, the Court may have to take on the role of moderator for industry actions. This could be in the form of decisions made in cases brought before judges, or could be more proactive with judges broadening the scope of their decisions and authority, de facto stepping in for legislators in making decisions that apply to industry. Again, however, this would extend the envisioned role of the judiciary and burden this sector with further duties. This has two possible negative outcomes: first that Courts are unable to focus on the primary role of upholding law, and second that RSA could end up as a *kritarchy*, where judges are the holders of governance without the institution of political rule[28].

The possible ramifications of increasing industry authority (be it mitigated by the judiciary or not) could be decidedly negative for the country. As suggested in Chapter VIII, industry has the power to shape opportunities in society through provision of certain goods and suppression of others; this will also shape societal

[28] Michael van Notten & Spencer Heath, "Law Without Government," *Policy* 22, no. 3 (2006).

tastes by constraining available choices. This limits the autonomous will of RSA citizens, transferring some of it directly to industry control. Drawing this out means that Kantian human dignity is limited through restricted autonomy, in that laws no longer develop from social priorities and deliberation, but instead from the reason of industry. It is then feasible that industry could influence election outcomes in the shaping of subconscious societal predispositions and desires that influence voting decisions. This could affect democracy in a more indelible way than issues discussed in Chapter VIII.

Voting may be affected by two further issues. First, with increasingly pessimistic views of political institutions and political leaders, citizens will be less likely to participate in democratic decision-making[29]. Indeed it has already been found that this is the case: only eleven per cent of citizens engage in frequent political discussions, and there has been a decline in the number of political protests since 2000[30]. Furthermore, there are low levels of contact with government officials[31], which makes participatory democratic discussion that much more unattainable.

Second, this thesis has stated that the popularly voted ANC government and the RSA State are regarded as indistinguishable[32]. It has also stated that citizens increasingly regard the government as illegitimate due to its lack of effective action against AMD and its failure to uphold intergenerational rights to water. When these two issues converge, the outcome is that the State is seen as unethical. There are two ways this could affect voting – first, that popular votes could give majority to an opposition party who have policies specifically tackling AMD and water rights. The

[29]Mattes, Derek Davids, and Africa, *Views Of Democracy In South Africa And The Region: Trends And Comparisons*.
[30]IDASA, *Afrobarometer Summary of Results Round 5: Survey in South Africa*.
[31] Mattes, Derek Davids, and Africa, *Views Of Democracy In South Africa And The Region: Trends And Comparisons*.
[32] Mattes et al., *Democratic Governance in South Africa: The People's View*.

second possibility is that citizens are completely disaffected by their State acting in an unconstitutional manner, and do not vote at all. The first option could have the positive result of government taking up their responsibilities once more, and control of policy decision-making returning to a strong central government. The latter option could have the negative result of turning over even more control to industry through MLG, affording industry even more discretion regarding how and whether rights to water are fulfilled for citizens.

It is therefore interesting to consider the proposition that political institutions shape behaviour and learning in the political decision-making realm[33]. This was originally proposed in Chapter VI, which illustrated how the Constitution defined good and bad actions in society, leading to construction of a metanarrative that guides behaviour. The claim in this chapter is that persistent civic education by political institutions will develop citizens' political skills, and through incentivisation and disincentivisation, can shape long-term behavioural outcomes. With waning rates of involvement of citizens in political processes, education is hampered and desirable democratic behaviours (including participation) are lost. This growing indifference of citizens is exacerbated by the deficiency of democratic civic education – and this cycle is building upon itself in a circular manner. The end result is that long-term democratic decision-making and outcomes could be jeopardised.

Another issue that deserves further exploration is consequences that may result from the shift away from designation of juristic person as industry takes on more responsibilities of government. This classification allows industry to be a profit-making enterprise operating in a morals-based legislative system, without being inhibited by having the same duties as citizens. Taking on the moral-fulfilment

[33] Mattes, "South Africa: Democracy Without the People?"

responsibilities of government may entail industry stepping outside the safety net of being a juristic person, taking on duties of a natural person. How this will affect financial gains and expectations of organisations deserves additional research.

Related to this is whether the nature of environmental rights will change with increasing industry jurisdiction over their fulfilment. Government institutions exist to maintain and fulfil rights claims, so that rights are dependent on institutions that exist to fulfil them and react to transgression. Government institutions were founded with the express purpose of discharging these goals, but industry institutions were not. This threatens the very concept of environmental rights, as industry institutions cannot provide unchanged services for the implementation of rights. Moreover, involvement of non-government institutions could actually narrow the space for environmental rights claims by citizens through use of transactional networks that focus on efficiency issues before equity. Rights fulfilment by industry as is now happening with water resources may result in a situation where rights protect pursuit of the life anticipated in the Constitution, but not necessarily the achievement of it. Intergenerational rights to water may therefore not ever be realised.

The question is then raised, what will happen to other aspects of the country's aspirational Constitution when industry is acting to fulfil water rights? With a shift in governance frameworks from centralised to multi-level, other aspects of legislation could also shift to reflect growing industry oversight. This could have detrimental effects on human dignity that underlies the Constitution. This is particularly a hazard for labour rights, given that industry would have the upper hand over employees.

Without proper oversight of government, there may even be a further translation of governance frameworks away from MLG and back to a centralised control – but control by industry solely. Industry has already supplanted government

in the nation's meta-narrative as source of rights fulfilment. This thesis has already suggested that this could have negative consequences for democracy in RSA, but it could have further negative implications for civic education. The skewing of the meta-narrative means citizens do not – and do not know how to – rely on any form of government. This will impact citizens' beliefs and duties as well as affect their future capacity and ability through shifting the norms that are transmitted by institutions in charge of decision-making. Citizens could be disempowered with limited ability to participate in dialogue about environmental policy. Additionally, community relationships could change based on new potentially diminished assumptions and knowledge; this would detrimentally alter what is regarded as injustice or inequality in RSA's political system.

5 Limitations Of This Research

This research has of course been limited by the short time span in which interviews were conducted. Ideally a country study would require multiple years of data collection and interviews, whereas this thesis used only two years of information-gathering. As well, this study focused on Gauteng province, principally as this was the first area in RSA to be materially affected by AMD and to have widespread, mainstream media coverage on the issue. However, ramifications from AMD will affect other parts of the country as well; mining is a major foreign currency earner for RSA, and expansion of mining operations was identified as a priority for the country in its 2012 New Growth Path framework[34]. Therefore, it can be safely assumed that the negative effects of AMD will be experienced across the country – which could mean further involvement of industry in provision of public goods and human rights,

[34]RSA Economic Development Department, "The New Growth Path Framework," 2011, http://www.economic.gov.za/communications/51-publications/151-the-new-growth-path-framework.

with more appreciable impacts on democracy. Additional research would be required to better understand the implications of the expansion of AMD across RSA.

Over and above that, this thesis has followed a particular narrative of government failure to uphold IGE and increasing industry control of government duties. There are other narratives that this thesis has not addressed that deviate from this path. Government could choose to act constructively on AMD in the next few years, which would transform and reduce industry involvement; alternatively international mining houses now involved in upholding water rights could withdraw from RSA due to the challenging operating environment, leaving no one administering fulfilment of intergenerational water rights.

More fundamentally, there could be a case in which industry involvement in provision of social goods would not result in less democratic outcomes. Chapter VI proposed that government agents select suboptimal actions, due to lack of technical knowledge leading to uncertainty about which options to select. Industry agents, however, are assumed to have more technical skills and access to greater financial resources. If government agents are removed from centrality in the field and replaced by agents for whom the course of action is clearer, then uncertainty is reduced and more advantageous decision-making for the environment can take place. In this case, corporate involvement could result in democratic outcomes if the motives guiding the decision-makers are shaped by an impact-first outlook, rather than finance-first. This will adhere more closely to the country's meta-narrative.

6 Final Remarks

Edith Brown Weiss, as per the opening quote, believes that humans are born with responsibilities to care for the planet, as we are the organisms best placed to do so, with superior mental capacity and emotional range. This requires that we conserve

resources currently available to us for use by people far removed from us in the future. In RSA, this has taken shape through the Constitutional right to a healthful environment and potable water, to be preserved for current and future generations, with government acting as fiduciary trustee on behalf of all citizens. Water security means finding a balance between tolerable quality and quantity of water, and tolerable water-related risk[35]; in RSA, it also means taking a long-term perspective on this issue – which is a complicating factor.

If the government continues to abrogate its Constitutional duties to IGE in water through not dealing with AMD, it could become a 'weak state,' characterised by the absence or weakness of formal state institutions[36]. State institutions have become subordinate to other informal and non-government institutions, which instead are the principal channel for service delivery and fulfilment of public services. These non-government institutions may serve the interests of some of the population, but service will be inconsistent across the country. If the water provisions of the Bill of Rights continue to be contravened, the Constitutional intention will be diverted; rather than IGE remaining as a guiding tenet for policy, it will be disregarded entirely in political decision-making. Chapter II proposed that IGE is a decision by current generations to select either utility or equity as the instrument through which to make policy decisions. It currently appears as though government is selecting utility and short-term concerns.

Through review of what IGE entails in the literature, how it is guaranteed in legislation, and how it is enacted through regulatory bodies, this thesis demonstrates the importance of the concept of IGE for RSA. The aspirational Constitution, characterised by the philosophies of Kant, Rawls and Brown Weiss, is a framework

[35] David Grey, "Water Security in Changing Climates," *Talk at the University of Oxford* (2012).
[36] Charles T. Call, "The Fallacy of the 'Failed State,'" *Third World Quarterly* 29, no. 8 (2008): 1491–1507.

for achieving IGE. Water has been placed in a public trust for current and future generations, with government required to maintain this resource for citizens' use and enjoyment. Yet AMD expansion through Gauteng province undermines these long-term objectives, due to government avoidance of duties and exacerbated by dysfunctional societal interactions. If government is seen is disregarding rights, this is tantamount to disregarding the law as a whole[37]. The Pentalogue Model, used to display these interactions, demonstrated that RSA society operates in silos, with little meaningful interaction across boundaries to problem-solve. Thus fulfilment of IGE legislation has proved problematic.

In the vacuum of government non-participation, industry has found itself as de facto government replacement for the fulfilment of water rights through provision of the public good of water resources. This is currently succeeding in delivering the Constitutionally-required volume and quality of water to communities that have been disenfranchised by government inaction against AMD. However, industry control of the public trust doctrine for water puts the country on the edge of a water governance precipice. If water principles in the Bill of Rights continue to be disregarded, then deliberative democratic discussion over water policy will be overlooked in favour of exclusively industry, non-participatory decision-making about water provision.

A host of reasons has been assembled to expose the critical juncture that AMD has engendered for governance in RSA. Traditional governance arrangements are patently not working, as government is not willing, and perhaps not able, to uphold duties to intergenerational rights. Other non-traditional governance types – particularly MLG – are presently utilised as governance substitutes. However it is uncertain that MLG is guaranteed to work into the future, given the threats posed to

[37] Letsas, "Dworkin on Human Rights (Forthcoming)."

democracy by the involvement of non-State agents in political decision-making. Consequently, although IGE is guaranteed in the RSA Constitution, its achievement is looking steadily more implausible in the long term in the country.

APPENDIX: INTERVIEWS

Interviewees

January 2012

Science cluster:

1. Dr Anthony Turton: former scientist at the Council for Scientific and Industrial Research, current independent consultant in water and policy sectors. Interviewed in person at his offices in Krugersdorp, on 10/01/12.
2. Dr Jo Barnes: epidemiologist at Stellenbosch University, research focuses on water and community health. Interviewed via telephone to her Stellenbosch offices on 19/01/12
3. Dr Inga Jacobs: Research Manager for Water-Centred Knowledge at the Water Research Commission. This was established in RSA under an Act of Parliament (The Water Research Act No. 34 of 1971) to enhance water knowledge and establish water priorities. Interviewed in person (with Dr Burgess) at her offices in Pretoria, on 19/01/12.
4. Dr Jo Burgess: Research Manager for Mine Water Treatment and Management at the Water Research Commission. Interviewed in person (with Dr Jacobs) at her offices in Pretoria, on 19/01/12.
5. Mike Muller: Visiting Adjunct Professor at the Graduate School of Public and Development Management at University of the Witwatersrand. Interviewed in person at the University of the Witwatersrand, on 17/01/12.

Civil society cluster:

1. Koos Pretorius: Director of the Federation for a Sustainable Environment, a NGO promoting sustainable development and use of natural resources. (http://www.fse.org.za/). Interviewed via telephone to his offices in Krugersdorp on 23/01/12.
2. Mariette Liefferink, Chief Executive Officer of Federation for a Sustainable Environment, board member of the National Nuclear Regulator, and advisory committee member of the Human Rights Commission. Interviewed in person at her home in Johannesburg on 13/01/12.
3. Mr Ramin Pejan: lawyer with the Association for Water and Rural Development, a South African NGO focusing on water supply and management. Interviewed via telephone to his offices in Klaserie on 17/01/12.

Government cluster:

1. Rika Kruger: Member of the Democratic Alliance party, Caucus Chair for Social Development, Agriculture, Conservation and Environment. Interviewed in person during a guided tour of the Krugersdorp mining area, on 13/01/12.

2. Gareth Morgan: Member of the Democratic Alliance party, Whip for the Democratic Alliance, and Shadow Minister of Water and Environmental Affairs. Interviewed via telephone to his Cape Town Parliamentary offices on 10/01/12.
3. Ishaam Abader, Member of the African National Congress, and Department of Environmental Affairs Deputy Director-General for Environmental Quality and Protection. Interviewed via email on 15/01/12.
4. Peter Lukey, Member of the African National Congress, and Department of Environmental Affairs Acting Deputy Director-General for Climate Change in 2011/12. Interviewed via email on 15/01/12.
5. Mike Muller: advisor to government's National Planning Commission. Interviewed in person at the University of the Witwatersrand, on 17/01/12. *(Also in Science cluster)*

Industry cluster:

1. Francois van Wyk: Head of the Source Water Quality Services Section at Rand Water, private bulk water supplier to Gauteng province. Interviewed in person at his office at Rand Water, Randburg, on 23/01/12.
2. Nigel Beck: Head of Environmental Investment Banking at Standard Bank, one of RSA's 'Big Four' group of banks. Interviewed in person at the Standard Bank offices in Sandton, Johannesburg, on 18/01/12.
3. Brent Baxter: Business Unit Leader for Environmental Services at Golder Associates Consulting, mining consulting company. Interviewed via Skype from Oxford, UK to his offices in Johannesburg on 09/02/12
4. Dr Bill Harding: founder of DHS Environmental Consulting and past Chair of Institute of Ecologists & Environmental Scientists (South Africa). Interviewed via Skype from Johannesburg to his office in Cape Town, on 16/01/12.

Media cluster:

1. Hilary Erasmus: former editor of three trade magazines in the water sector. Interviewed in person at a coffee shop in Johannesburg, on 20/01/12
2. Megan Wait: staff journalist with Mining Weekly, a trade periodical. Interviewed via telephone to her offices in Johannesburg, on 20/01/12
3. Joy Summers: producer for *Carte Blanche*, an award-winning investigative journalism television series in RSA. Interviewed in person in a coffee shop in Johannesburg on 18/01/12.
4. Dr Bill Harding: writer of South African water issues blog, "Droplets" (http://blog.dhec.co.za/). Interviewed via Skype from Johannesburg to his office in Cape Town, on 16/01/12. *(Also in Industry cluster.)*

July 2013

Mines and Related Industries:

1. Nikisi Lesufi: Senior Executive: Health & Environment at the Chamber of Mines of South Africa, a mining business organization in RSA. Interviewed in person at his office in Johannesburg CBD on 15/07/13
2. Teresa McNeill: Manager: Green Fund at AngloAmerican Zimele. This is Anglo American's enterprise development initiative. Interviewed in person at a coffee shop in Johannesburg, on 16/07/13
3. Steve van der Westhuizen: CEO at SitePlan Consulting, a mining consultancy. Interviewed via Skype from Johannesburg to his office in Strand, on 19/07/13
4. Richard Garner: Group Manager: Water at Anglo American, a major mining corporation in RSA. Interviewed in person at his office in Johannesburg CBD on 19/07/13
5. Carol Dixon: Head of Safety, Health and Environmental Law at Anglo American. Anglo American is a major mining corporation in RSA. Interviewed in person (with Mr Koti) at her offices in Johannesburg CBD on 19/07/13
6. Madoda Koti: Mining and Environmental Legal Advisor at Anglo American. Interviewed in person (with Mrs Dixon) at his offices in Johannesburg CBD on 19/07/13
7. Johan du Toit: CEO at Central Rand Gold. This is a junior mining corporation in RSA. Interviewed in person at his office in Roodepoort in on 29/07/13

Financial and Related Industries:

1. Heather McLeish: Environmental and Social Risk Manager at FirstRand Limited. This is one of the 'Big Four' banking corporations in RSA. Interviewed in person at her office in Johannesburg on 17/07/13
2. Charlotte Grobbelaar: Senior Advisor: Climate Change and Sustainability at KPMG South Africa. KPMG is one of the 'Big Four' global auditing companies. Interviewed in person at her office in Johannesburg CBD on 17/07/13
3. Kim Adonis: Water Sector Leader: Global Infrastructure – Africa, Transactions and Restructuring at KPMG South Africa. Interviewed in person at her office in Johannesburg on 18/07/13
4. Rohitesh Dhawan: Global Sustainability Lead for the Mining Sector at KPMG South Africa. Interviewed in person at his office in Johannesburg on 18/07/13
5. Karin Ireton: Group Sustainability Management at Standard Bank. This is one of the 'Big Four' banking corporations in RSA. Interviewed in person at her office in Johannesburg on 19/07/13
6. Vicky Beukes: Social and Environmental Risk Manager at Nedbank Group Ltd. This is one of the 'Big Four' banking corporations in RSA. Interviewed in person (with Mr Francis) at his office in Johannesburg on 25/07/13

7. Fabio Francis: Portfolio and Admin Management: Group Finance at Nedbank Group Ltd. Interviewed in person (with Mr Beukes) at his office in Johannesburg on 25/07/13

Government:

1. Johan van Rooyen: Director: National Water Resource Planning at Department of Water Affairs. The Department of Water Affairs is the government department that manages water resources. Interviewed in person at his office in Johannesburg CBD on 24/07/13
2. Richard Holden: Business Analyst at Trans-Calendon Tunnel Authority. This is a state-owned, special-purpose vehicle created to manage RSA's obligations under the Lesotho Highlands Water Project. Interviewed in person at a coffee shop in Johannesburg on 20/07/13

Other Industry:

1. Steve Nicholls: Programme Manager: Climate Change, Water and Biodiversity at National Business Initiative. This is a business organization focused on environmental responsibility. Interviewed in person at his office in Johannesburg on 23/07/13
2. Mpetjane Kgole: Water Manager at Eskom, RSA's electricity public utility. Interviewed in person at her office in Johannesburg on 29/07/13
3. Martin Ginster: Water and Environmental Advisor at Sasol Group Services, an integrated chemicals and energy corporation. Interviewed in person at his office in Johannesburg on 29/07/13
4. Makhiba Mollo: SRI Associate: Strategy and Legal Counsel at Johannesburg Stock Exchange. This is RSA's stock exchange, the largest in Africa. Interviewed in person at her office in Johannesburg CBD on 30/07/13.

Interview Questions

Below are two basic sets of interview questions posed to interviewees during my fieldwork visits in 2012 and 2013. Not all of the questions were asked of each interviewee, with adjustments being made depending on who I was meeting and their attitude toward the interview. As suggested in the methodology section (Chapter III), interviews were semi-structured, with these questions used as a guide to creating a more free-flowing conversation.

January 2012

Questions Posed to All Interviewees:

1. What do you see as your role in RSA's water future?
2. What do you think should be focused on in order to create the best possible water future for the country?
3. What do you see as the current direction of environmental decision-making in RSA?

4. What do you see as the role of government as regards the environment?
    a. What do you see as the role of business as regards the environment?
    b. What do you see as the role of media as regards the environment?
    c. What do you see as the role of academics and independent researchers as regards the environment?
    d. What do you see as the role of civil society as regards the environment?
5. How is decision-making about the environmental quality & protection made?
    a. Who are the involved parties?
6. From where does your department/organisation get most of the information about the environment?
7. How is information collected disseminated to the public?
8. Does your department/organisation canvas public opinion about the environment, and if so how?
    a. How are such opinions figured into environmental decision-making?
9. What is your department/organisation's mandate as regards water protection?
10. What is the current stance of your department/organisation on acid mine drainage?
11. What do you see as the most pressing issue (or issues) for your department/organisation to address in the immediate future?

July 2013

Questions for Government:

1. What is the relationship between the (government department) and mining operations with regards water use and water impact?
2. How are mines accountable to the (government department)?
3. Do you think mines are recognizing the risk that water issues pose to their operations?
4. Do you feel that there are disconnects between the (government department) and mining industry, in terms of what each expects from the other?
5. I've heard some suggestions that there is too much legislation governing the mining sector, and some of it is redundant. What are your views on this?
6. How can the question of acid mine drainage be handled effectively?
7. Who is involved in deliberations surrounding creation of new water policy?
8. How does the (government department) involve citizens of RSA in deliberations to create policy?
9. Where does (government department) get most of its information about the environment from?
10. What does (government department) regard as the biggest issues facing water supply & water quality in RSA?
11. NBI's Water Disclosure Project Report 2012 shows that RSA companies are particularly exposed to water-related risks. Do you think this is the case?
12. What do you see as the role of the mining sector as regards safeguarding water resources?
    a. What do you see as the role of civil society as regards safeguarding water resources?
13. How does the (government department) see their role in RSA's water future?
14. What are your long-term views for RSA's water future?

Questions for Banks:

1. With lending for operations, mines are accountable to banks. How does this work?
2. Equator Principles not specifically focused on mining – do you find these criteria useful for mining project funding?
3. What do banks see as biggest risk factors in lending to mines?
4. Is there a new social charter emerging for banks, as secondary regulatory body in regulation of mines? (through lending operations)
5. Is / how is government legislation regarding mining ineffective or failing?
6. Do you see any inconsistencies in government policy and government action on water & mines?
7. Are there disconnects between banks and government, with regards the mining industry, and where do they happen?
    a. Has this / how has this hampered RSA's international competitiveness?
8. Are banks involved in deliberations surrounding creation of new policy?
9. How do banks negotiate relationships with mines and with government?
10. Is there too much regulation surrounding mining and/or water in RSA?
11. What do banks see as biggest risk factors in financing mining operations? (Water operations?)
12. Obviously mines are a big part of RSA's immediate future. Is it the role of banks to ensure that mines remain competitive?
    a. How do banks ensure competitiveness?
13. Undeclared risk in mining re: water? How affect direct foreign investment?
14. I've heard suggestions that banks don't fully understand mining liability – how do you ensure that the bank has a full understanding of the risk it is taking on?
15. How can the issue of acid mine drainage be handled effectively?
16. Do banks regard themselves as having a role in sustaining RSA's water resources? (Intergenerational equity concerns etc.)

Questions for Mines:

1. Are there disconnects between government and mining industry, and where do they happen?
    a. Has this / how has this hampered RSA's international competitiveness?
2. Is / how is government legislation ineffective or failing?
3. Do you see any inconsistencies in government policy and government action on water & mines?
4. Has the role of the State in mining operations shifted in recent years?
5. How do mines negotiate relationships with banks and with government? (Competing etc.?)
6. To whom are mines accountable?
7. Apart from government & banks, are there other regulatory bodies to which mines have to answer?
8. What can mines do in RSA to remain competitive worldwide?
9. What do mines see as biggest risk factors in operating?
10. What about undeclared risk in mining, such as water & acid mine drainage? Do these/ how do these affect direct foreign investment?
11. How do mines regard their role in sustaining the country's water resources?

   a. What are mines doing to fulfil their Constitutional responsibilities to ensure clean water for current and future generations?
12. How do mines regard current regulations concerning water – is there too much regulation?
13. How can the question of acid mine drainage be handled effectively?
14. How do mines negotiate between satisfying shareholders (private interests) and satisfying public interest through Constitution & regulations?
15. Are mines involved in deliberations surrounding creation of new policy?
16. What is the relationship between mines and civil society?
17. New legislation proposed suggests that minerals will only be able to be exported at price determined by DMR Minister – how does mining industry regard this?
18. What are your views on compliance with the Mining Charter?
19. What is your relationship with Chamber of Mines?

Interview Summaries

Interviews were recorded and subsequently transcribed. This transcription was not word-for-word, but a long-form summary of the conversation. Below are two interviews, one from the January 2012 visit (Francois van Wyk) and another from the July 2013 visit (Richard Garner). All other interviews are available, and can be provided to the examiners upon request.

January 2012

Francois van Wyk (FvW)
Head of the Source Water Quality Services Section at Rand Water

Johannesburg relies on the Vaal dam for water – no AMD detected in there yet

Continental divide in Johannesburg for water catchment
→ Water has become more scarce in the last two years – where to after Lesotho? Need a strategy of saving water instead.
→ 40% of water in system moves out of it e.g. wastewater flowing downstream. Could recapture and transport back into the Vaal system

Problem isn't a lack of technology to treat decreasing quality of water, but a lack of money available. Will have to be an overall increase in burden on taxpayers, through municipal water bills
AMD is treatable, but is currently very expensive

Rand Water plans 20 years in advance (done every year)
→ Population growth, infrastructure building, treatment capacity
→ Sludge dam used for wastes, sludge sold as fertiliser (mostly sewage wastes, due to poor infrastructure)
* Sewerage infrastructure as next big water issue; municipalities lack money and technical ability to maintain the pipes & works

Rand Water is the oldest water supplier in the country – origins in gold mining. Was established by private funds from mining corporations so is managed slightly differently to other RSA water suppliers
→ No subsidies from government, even though is a 'public utility' but government has to approve of the price they charge for water, rigid regulation
→ DWA is responsible for providing water; Rand Water buys water off them and then treats and supplies

Government legislation = only government can take legal action against polluters, Rand Water is not able to do so
→ If the municipality pollutes, they can only take them to Court as a last resort – BUT no one in government is willing to charge the municipality for failure, cronyism, and so they hide behind legislation
→ Corruption in the municipalities means that money is misused
→ Government doesn't have the political will to do anything, & they also lack the technical skill
→ Even if Rand Water challenged municipalities, nothing would change

Media?
Can help in exposing municipalities but higher management at Rand Water cautioned FvW against using media for such actions
→ FvW has cultivated a few trusted journalists to ensure accuracy but feels that as long as issues are being talked about, then accuracy doesn't necessarily matter
Civil society reacts to these stories, helps by taking issues to Court (e.g. landowners on Vaal create SAVE NGO, take Sasol to Court for environmental damage in river system)

Senior management at Rand Water are friendly with industry therefore often protect industry against charges by FvW and colleagues
→ FvW's job is protecting the environment but he is not allowed to charge specific industries with pollution offences
→ Top people in Rand Water are on 5-year contracts so have short-term outlook. Used to be jobs for life. Now, contracted management not look to long-term effects, and will often disrupt the existing – working – system.
→ No one has the vision to say, "…*certain things must be forever*"

Focus for the future? *AMD and sewerage as main issues for Rand Water.
→ Need more focus on responsibility for water regulation. It does not work to have DWA as the only responsible agent. Should devolve to Rand Water to challenge polluters
→ NWA has provision for Catchment Management Agencies *(Law: in accordance with Chp2 Pt2 of NWA, CMAs are responsible for protection, conservation, development and management of water resources)*
However only 2 of 11 have been created, and even these 2 are not doing anything useful. CMAs should have the power of the NWA to act, but don't have power or an actual role to fulfil, as DWA not willing to devolve responsibility

Long-term views?
98% of RSA's water is already allocated for use AND in many cases the Constitutionally-required Reserve is not determined.

With population growth, there will have to be an increase in efficient use of water. This will require:
→ Education of the population about costs and volume of water use,
→ Fixing up municipalities who lost between 25-50% of water through leakages and stealing
→ Increased involvement of the Department of Education, bigger role for water in the curriculum + targeting of youth
→ Political will to spend money: this could come from PPPs (e.g. Sasol partner with Vereeniging municipality to fix leaks, enable them to demand more water in the future with expansion)

Ecological Reserve is protected by law but no progress has been made in determining it = not sure if it will be maintained in the future.
→ Pressure is increasing on the Reserve with increasing number of mining licences awarded.
"Toilets don't sell votes, so attention goes elsewhere"

If the government had good information about AMD, then better decisions could have been made
→ Need historical data on previous AMD and mining sites
→ Need extensive monitoring and public provision of information, especially from mines. Mines have the information but do not share it
→ Researchers lack data to make informed recommendations
→ Not much data sharing between civil society/academia/government
Need someone in government to stand up and make the environment an issue of AMD, and to stand up to the mining industry.

July 2013

Richard Garner (RG)
Group Manager: Water at Anglo American

More than 70% of Anglo mines are in water-stressed areas where there are competing needs (domestic, agriculture & sanitation)
→ Agriculture is the biggest water user in RSA, but mining tends to be clustered around resource rich areas, where it is the main water user
→ Mining is one of those industries where we influence not only the amount of surface and ground water, but also its chemistry = quantity & quality issues

Anglo American water strategy focuses on the following four main areas:

- Making our operations water independent (e.g. treating sewage effluent for use in plants)
- Investing in water treatment and relevant technology innovation (development and installation of mobile water treatment units)
- Building water infrastructure for mutual benefit (dams & water / sewerage pipelines)
- Partnering with other stakeholders: NGOs, communities, other industries, competitors and both local & national governments

Anglo American is a leader in industry with Water Efficiency Target Tool (WETT) = every part of Anglo American identified & committed to water saving projects, leading to water savings

Hierarchy of allocation of water = industry at bottom
→ BUT in terms of who can do what with water, industry is at the top – have the money, so have sway in what is done with water

Anglo American (and RG) feels frustration in dealing with government:
→ Industry is more aware of & active about water risk than government
It is paramount for mines to ensure continued supply of water
→ Mines are frustrated with government non-fulfilment of NWA, in not taking a catchment approach to water governance
Industry tries to bring government along, has many discussions about PPPs in water sector BUT lack of resources & experience in government
→ There is a lot of confusion about the roles of government departments – does mining fall under DMR or DWA? There is almost a total lack of communications among departments.
→ If the innovation that a mine wants to implement doesn't abide by the National Water Strategy, then the government is uninterested, even if it will be beneficial for the country / environment (e.g. desalination in mining industry: no strategy for country = government has no interest)

Government is slow in reacting due to lack of technical resources & skilled people
→ Mining companies are at fault here, as hire good people out of government. Industry should realize that "*they are pulling the rug out from underneath themselves*" in un-skilling government in this way
DWA shows a complete lack of innovation (compared to other government departments. e.g. tax which went completely online in recent years with resultant monetary and efficiency savings)
→ DWA has complete lack of clear targets & guidance = department and industry do not know what they're trying to do!
Anglo American has been waiting for a water license for a particular mine for 9 years. They have submitted many revisions in that time, but have heard nothing back from government.

Interactions with government, and the ability of DWA, are very personality-driven
Currently there is a lack of interest from top management, so nothing is achieved.
→ People lower down are hesitant to make decisions as they do not feel that they have back-up (*i.e. support*) from the top
Government is unlikely to engage proactively with mines BUT more likely to 'get their hackles up' about issues. This has been very unhelpful

Banks understand slowness of the DWA, so will approve lending without mines having received full approval for licences
→ As well, indices understand that mines have issues with licences & do not mark down too harshly
BUT indices are light on compliance measures, due to Western focus

RG does not believe that the sector is overregulated, BUT he worries about future changes to legislation being debated. He believes the major problems are:

- Clarity of understanding of legislation in different departments.
- Inconsistent application: managers on the ground see the next-door mine taking shortcuts, and want to do that as well
- Policing & enforcement of legislation are very poor to non-existent

* National Water Strategy isn't clear on what direction to take – there are too many key areas to focus on & DWA / DMR do not have skill set to maintain regulations

The leadership at Anglo American has been very important in ensuring a green point of view throughout organisation
→ Previous CEO refer to water as "*core to our business*" – so it has to be managed as integral part of line management of organization
→ Water is a key performance indicator on contracts of managers
→ Water is a revenue protector – putting in correct measures today will protect future from flooding / fines / civil suits
Previously, water issues were driven by compliance and risk, but timeframes for water are difficult to envision
** Importance of the business case for environmental protection: putting a dollar value on elements means that it is easier to integrate environmental management into business
→ This makes it not about risk, but about protecting business value

Overseas investors have great interest in environmental impact of Anglo American
Indices to which Anglo American subscribes also have significant environmental questions
Their Sustainability Board (London-based) puts pressure on RSA operations as well

How does Anglo value water?
→ Anglo American as industry leader on water valuation – BUT mining industry is also one of slowest to take on this approach (compared Nestle, Coke)
RG worked with academics in Australia to calculate 'true cost' of water for mines:

- Pricing (national set costs)
- Operation management costs (where costs are incurred: moving water, storing water, administrative costs)
- Risk to operations of stoppage (e.g. days without work if drought occurs)
- Understanding impact on society through catchment delivery of ecosystem services (huge cost – could come to 9% of total OPEX)

* True value of water is mostly hidden costs – this has to change way that water management is approached

Anglo American has many NGO partnerships – e.g. with WaterAid, WWF, GIZ
It is also a signatory to the CEO Water Mandate

How should AMD be managed?
→ Anglo sees water as an asset, especially as it is operating in water stressed country. Therefore, mine waters should not be regarded as a liability but as an opportunity
→ RG would like to see future water treatment along the lines of Emalahleni Water Treatment Plant, where local government partnered with mines to generate something of long-term value to society

Society & mines share the costs of water treatment, to ensure that society gets water where they did not have any before

Mines can be regarded as a water resource provider: they take poorer quality water and treat it, before release for use by others in the catchment area
→ This requires collaboration from all water users, rather than simply "hammering" the mining industry as is the norm from civil society, media and government (e.g. government should work more with agriculture, as it is the biggest water user in RSA)

BIBLIOGRAPHY

A.P. Smith Manufacturing Company v. Barlow (13 N.J. 145, 98 A.2d 581) (1953).

Adler, R.A., M. Claassen, L. Godfrey, and A.R. Turton. "Water, Mining, and Waste: An Historical and Economic Perspective on Conflict Management in South Africa." *The Economics of Peace and Security Journal* 2, no. 2 (2007): 33–41.

Africa, The Supreme Court of Appeal of South. Harmony Gold Mining Company Ltd v Regional Director: Free State Department of Water Affairs and Others (971/12) [2013] ZASCA 206; [2014] 1 All SA 553 (SCA); 2014 (3) SA 149 (SCA) (4 December 2013) (2013).

African National Congress Party. "The Freedom Charter," 2011. http://www.anc.org.za/show.php?id=72.

———. "What Is the African National Congress?," 2011. http://www.anc.org.za/show.php?id=172.

AfriForum. *AfriForum Fights for Louis Trichardt's Water in High Court*. *Media Statement*, 2012. http://www.afriforum.co.za/english/2012-10-01-afriforum-veg-vir-louis-trichardt-se-water-in-hooggeregshof/.

Aguilera, R. V., I. Filatotchev, H. Gospel, and G. Jackson. "An Organizational Approach to Comparative Corporate Governance: Costs, Contingencies, and Complementarities." *Organization Science*, 2008.

Aguis, E. "Obligations of Justice Towards Future Generations: A Revolution in Social and Legal Thought." In *Future Generations & International Law*, edited by E. Agius, S. Busuttil, T-C. Kim, and K. Yazaki. London UK: Earthscan Publications Ltd, 1998.

Altman, M. "Implications of Behavioural Economics for Financial Literacy and Public Policy." *The Journal of Socio-Economics* 41, no. 5 (2012): 677–690.

ANC. "The Reconstruction and Development Programme (RDP)." *The Nelson Mandela Centre of Memory*, 1994. https://www.nelsonmandela.org/omalley/index.php/site/q/03lv02039/04lv02103/05lv02120/06lv02126.htm.

Antin, Daniel. "The South African Mining Sector: An Industry at a Crossroads." *Hanns-Seidel-Foundation: Economy Report South Africa* December (2013).

Assocation, World Nuclear. "Nuclear Power in South Africa," 2015. http://www.world-nuclear.org/info/Country-Profiles/Countries-O-S/South-Africa/.

Asunka, J. "What People Want From Government: Basic Services Performance Ratings, 34 Countries." *AfroBarometer Policy Briefing* December (2013). http://www.afrobarometer.org/files/documents/policy_brief/ab_r5_policybriefno5.pdf.

Avi-Yonah, Reuven S. "Citizens United and the Corporate Form." *Wisconsin Law Review* 4 (2010): 999–1047.

Bache, Ian, and Matthew V. Flinders. "Themes and Issues in Multi-Level Governance." In *Multi-Level Governance*, edited by Ian Bache and Matthew V. Flinders. Oxford UK: Oxford University Press, 2004.

Baker, S.E., and R. Edwards. "How Many Qualitative Interviews Is Enough?" *National Centre for Research Methods Review Paper* (2012).

Banerjee, Subhabrata Bobby. "Corporate Social Responsibility: The Good, the Bad and the Ugly." *Critical Sociology* 34 (2008): 51–79.

Barresi, P.A. "Beyond Fairness to Future Generations: An Intragenerational Alternative to Intergenerational Equity in the International Environmental Arena." *Tulane Environmental Law Journal* 11 (1997): 59–88.

Battersby-Lennard, J. "Apartheid/Post-Apartheid." In *International Encyclopaedia of Human Geography*, 167–173. Elsevier, 2009. http://www.sciencedirect.com/science/article/pii/B9780080449104009202#a0005.

Battersby-Lennard, Jane. *The State of Urban Food Insecurity in Cape Town (Urban Food Security Series No. 11., AFSUN)*. Cape Town, RSA: Idasa Publishing, 2011.

Battle, Michael J. *Reconciliation: The Ubuntu Theology of Desmond Tutu*. Ohio, USA: Pilgrim Press, 1997.

Baxter, Roger. "Role of the South African Mining Industry in South Africa's Growth and Development Plans: Background Presentation to a Harmony Sponsored Investor Forum." *Chamber of Mines South Africa*, 2013. http://www.bullion.org.za/documents/CoM presentation Role of the RSA Mining Industry in SAs Growth.pdf.

Beder, S. "Costing the Earth: Equity, Sustainable Development and Environmental Economics." *New Zealand Journal of Environmental Law* 4 (2000): 227–243.

Bernard, H.R. *Research Methods in Anthropology, Second Edition*. London UK: Sage Publications, 1995.

Berry, J.M., and K.E. Portney. "The Group Basis of City Politics." *Paper Delivered at the Annual Meeting of the American Political Science Association, Seattle, Washington USA.* September (2011). http://ase.tufts.edu/polsci/faculty/berry/groupBasis.pdf.

Biernacki, Patrick, and Dan Waldorf. "Snowball Sampling: Problems and Techniques of Chain Referral Sampling." *Sociological Methods Research* 10, no. 2 (November 1, 1981): 141–163.

Blaine, Sue. "Molewa to Contest Tribunal Ruling." *Business Day*, December 14, 2012. http://www.bdlive.co.za/national/science/2012/12/14/molewa-to-contest-tribunal-ruling.

———. "Water Tribunal Suspended after Losing Chairman." *Business Day*, September 13, 2012. http://www.bdlive.co.za/national/2012/09/13/water-tribunal-suspended-after-losing-chairman.

Boden, T.A., G. Marland, and R.J. Andres. *Global, Regional, and National Fossil-Fuel CO2 Emissions (Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, U.S. Department of Energy)*. Oak Ridge, Tennessee, USA, 2011.

Bounaim, Najia. "Africa Faces Some Serious Environmental Problems: Greenpeace." *SABC News*. June 6, 2013. http://www.sabc.co.za/news/a/ef45eb804fe3d1dab97cfb0b5d39e4bb/Africa-facessome-serious-environmental-problems:-Greenpeace-20130606.

Boyce, Brendan P. "Nation-Building Discourse in a Democracy." In *National Identity and Democracy in Africa*, edited by Mai Palmberg. Cape Town, RSA: Human Science Research Council, 1999.

Boyle, A. "Human Rights And The Environment, Where Next?" *Amnesty Lecture Series: Oxford United Kingdom* May (2012).

Brammer, S., G. Jackson, and D. Matten. "Corporate Social Responsibility and Institutional Theory: New Perspectives on Private Governance." *Socio-Economic Review* 10, no. 1 (2011): 3–28.

Bremner, Lindsay. "The Political Life of Rising Acid Mine Water." *Urban Forum* 24 (2013): 463–483.

Breyer, S. *Regulation and Its Reform*. USA: Harvard University Press, 1982.

Brondizio, Eduardo S., E. Ostrom, and Oran R. Young. "Connectivity and the Governance of Multilevel Social-Ecological Systems: The Role of Social Capital." *Annual Review of Environment and Resources* 34, no. 1 (2009): 253–278.

Brown, Duncan. "National Belonging and Cultural Difference: South Africa and the Global Imaginary." *Journal of Southern African Studies* 27, no. 4 (2001): 757–769.

Brown Weiss, Edith. "A Reply to Barresi's 'Beyond Fairness to Future Generations.'" *Tulane Environmental Law Journal* 11 (1997): 89–97.

———. "Climate Change, Intergenerational Equity, And International Law." *Vermont International Law Journal* 9 (2008): 615–627.

———. "Global Environmental Change and International Law." *Global Environmental Change* 2 (1992): 250–256.

———. "In Fairness to Future Generations." *Environment: Science and Policy for Sustainable Development*, 1990.

———. “Intergenerational Equity: A Legal Framework for Global Environmental Change.” In *Environmental Change and International Law: New Challenges and Dimensions*, edited by Edith Brown Weiss. Tokyo: United Nations University Press, 1992.

———. “Our Rights and Obligations to Future Generations for the Environment.” *The American Journal of International Law* 84, no. 1 (1990): 198–207.

———. “The Planetary Trust: Conservation and Intergenerational Equity.” *Ecology Law Quarterly* 11 (1984): 495–582.

Bruch, C. *Public Participation In The Governance Of International Freshwater Resources*. Tokyo: United Nations University Press, 2005.

Buthelezi, Londiwe. “Director Gets Jail for Land Damage.” *IOL Business Report*. February 10, 2014. http://www.iol.co.za/business/companies/director-gets-jail-for-land-damage-1.1644299.

Cadbury, Adrian. *Report of the Committee on the Financial Aspects of Corporate Governance (The Cadbury Report)*. Vol. 1. Gee, 1992. http://www.icaew.com/en/library/subject-gateways/corporate-governance/codes-and-reports/cadbury-report.

Caird, E. *The Critical Philosophy of Immanuel Kant (Volume II)*. Glasgow UK: James Maclehose & Sons Publishers, 1889.

Call, Charles T. “The Fallacy of the ‘Failed State.’” *Third World Quarterly* 29, no. 8 (2008): 1491–1507.

Callahan, D. “What Obligations Do We Have to Future Generations?” In *Responsibilities to Future Generations*. Buffalo, NY, USA: Prometheus Books, 1981.

Calland, Richard, and Smita Nakhooda. “Participatory Democracy Meets the Hard Rock of Energy Policy: South Africa’s National Integrated Resource Plan,.” *Democratization* 19, no. 5 (2012): 912–931.

Canada, Great Basin Gold Ltd. “Great Basin Gold Ltd. Annual Report.” *US Securities and Exchange Commission*, 2002. http://yahoo.brand.edgar-online.com/EFX_dll/EDGARpro.dll?FetchFilingHTML1?ID=2366559&SessionID=s7Vc6jaFdFYPiT7.

Carson, Rachel. *Silent Spring*. New York, USA: Houghton Mifflin Harcourt, 2002.

Carter, D. *Sources Of State Legitimacy In Contemporary South Africa: A Theory Of Political Goods*. AfroBarometer Working Paper, 2011.

“Case Study: Emalahleni Water Reclamation Plant.” *Anglo American South Africa*, 2013. http://www.angloamerican.co.za/sustainable-development/case-studies/emalahleni-water-reclamation-plant.aspx.

Centre for Applied Legal Studies, University of the Witwatersrand. “CEOs Are Liable for Enviro Damage.” *Wits Media Centre*. February 7, 2014. http://www.wits.ac.za/newsroom/newsitems/201402/22873/news_item_22873.html.

Centre for Environmental Rights. “Breaking News: Mining Company Director Convicted of Environmental Offences, Suspended Sentence Linked to Cleanup.” *CER News*, February 4, 2014. http://cer.org.za/news/breaking-news-mining-company-director-convicted-of-environmental-offences-suspended-sentence-linked-to-cleanup.

———. “MPRDA Amendment Bill: Some Progress, but Environmental Authorities’ Hands Still Tied.” *Centre for Environmental Rights News Blog*, 2013. http://cer.org.za/news/mprda-amendment-bill-some-progress-but-environmental-authorities-hands-still-tied.

Choucri, N. *Global Accord: Environmental Challenges and International Responses*. Cambridge, MA: MIT Press, 1993.

Claassen, M. “How Much Water Do We Have? A CSIR Perspective on Water in South Africa.” *CSIR Report No. CSIR/NRE/PW/IR/2011/0012/A* (2010).

Clapham, Andrew, and Joseph Weiler. “Human Rights and the European Community: A Critical Overview.” *Nomos* 1 (1991).

Clark, G.L. “Human Nature, The Environment, And Behaviour: Explaining The Scope And Geographical Scale Of Financial Decision-Making.” *Geografiska Annaler: Series B, Human Geography* 92, no. 2 (2010): 159–173.

———. “Making Moral Landscapes: John Rawls’ Original Position.” *Political Geography Quarterly, Supplement to Vol. 5* no. 4 (1986): 147–S162.

Clark, Gordon L. “Stylized Facts and Close Dialogue: Methodology in Economic Geography.” *Annals of the Association of American Geographers* 88, no. 1 (March 1998): 73–87.

Cohen, Joshua. “Deliberation and Democratic Legitimacy.” In *Deliberative Democracy Essays on Reason and Politics*, edited by Alan Hamlin and Philip Pettit, 47:67–91. Working Paper. MIT Press, 1997.

Cohen, M., and P. Burkhardt. “Once-Lauded Eskom Now Derided Over South African Power Cuts.” *Bloomberg Business*, June 7, 2015. http://www.bloomberg.com/news/articles/2015-06-07/once-lauded-eskom-now-derided-over-south-african-power-outages.

Collins, Lynda Margaret. “Revisiting the Doctrine of Intergenerational Equity in Global Environmental Governance (Forthcoming).” *The Dalhousie Law Journal* (2010).

Connole, Joseph. “The Polis in Aristotle’s Politics.” *Federalist Publicola*, 2008. http://federalistpublicola.com/2008/03/24/the-polis-in-aristotle’s-politics/.

“Constitution of the Republic of South Africa,” 1996. http://www.gov.za/documents/constitution/1996/a108-96.pdf.

“Constitution of the Republic of South Africa - Chapter 2: Bill of Rights,” 1996. http://www.gov.za/documents/constitution/1996/96cons2.htm.

“Constitution of the Republic of South Africa - Chapter 7, Local Government,” 1996. http://www.gov.za/documents/constitution/1996/96cons7.htm.

Constitutional Court, RSA. *City of Johannesburg Metropolitan Municipality v Gauteng Development Tribunal and Others [ZACC 11] CCT89/09 ZACC 11; 2010 (6) SA 182 (CC) ; 2010 (9) BCLR 859 (CC)*, 2010. http://www.saflii.org/za/cases/ZACC/2010/11.html.

———. “Investigating Directorate: Serious Economic Offences & Others v Hyundai Motor Distributors (Pty) Ltd & Others In Re: Hyundai Motor Distributors (Pty) Ltd & Others v Smit NO & Others (CCT1/00) [2000] ZACC 12; 2000 (10) BCLR 1079; 2001 (1) SA 545 (CC),” 2001. http://www.saflii.org/za/cases/ZACC/2000/12.html.

———. Maccsand (Pty) Ltd v City of Cape Town and Others (CCT103/11) (CC) [2012] ZACC 7; 2012 (4) SA 181 (CC); 2012 (7) BCLR 690 (CC) (2012).

———. Mazibuko v. City of Johannesburg, CCT 39/09 (2009), ZACC 28 (2009).

———. Nokotyana and Others v Ekurhuleni Metropolitan Municipality and Others (CCT 31/09) [2009] ZACC 33; 2010 (4) BCLR 312 (CC) (2009).

Cooper, David. “Responsibility and the System.” In *Individual and Collective Responsibility*, edited by Peter French, 81–99. Cambridge, MA: Schenkman Publishing Co., 1972.

Cornwall, J. “A Case-Study Approach to Lay Health Beliefs: Reconsidering the Research Process.” In *Qualitative Methods in Human Geography*, edited by J. Eyles and D. Smith, 219–32. Cambridge UK: Polity Press, 1988.

Cosgrove, W.J. *World Water Vision: Making Water Everybody’s Business*. London UK: Earthscan Publications Ltd, 2000.

Costas, Tina, and Michael Torrance. “Equator Principles III Is Approved and Launched – New Trends and a Strategy Rethink.” *Norton Rose Publications*, 2013. http://www.nortonrosefulbright.com/files/equator-principles-iii-is-approved-and-launched--new-trends-and-a-strategy-rethink-pdf-144kb-80284.pdf.

Coyle, Sean. “The Intellectual Commitments of Modern Juridical Thought.” *Canadian Journal of Law & Jurisprudence* 23, no. 2 (2010): 461–482.

CSIR. *Acid Mine Drainage in South Africa, Briefing Note 2009/02*, 2009. www.csir.co.za/nre/docs/BriefingNote2009_2_AMD_draft.pdf.

Currie, I., and J. de Waal. *The Bill of Rights Handbook (5th Edition)*. South Africa: Juta & Company Ltd, 2005.

Dahl, R.A. *A Preface to Economic Democracy*. California, USA: University of California Press, 1992.

———. *Democracy and Its Critiques*. Connecticut, USA: Yale University Press, 1989.

———. *On Political Equality*. Connecticut, USA: Yale University Press, 2006.

———. *Polyarchy: Participation and Opposition*. *Democratization*. Vol. 54. New Haven, USA: Yale University Press, 1971.

Dale, M. O. "South Africa: Development of a New Mineral Policy." *Resources Policy* 23, no. 1 (1997): 15–25.

Dasgupta, P. "Power and Control in the Good Polity." In *The Good Polity: Normative Analysis of the State*, edited by A. Hamlin and P. Pettit. Oxford UK: Basil Blackwell Ltd, 1989.

Davidson, J. "Parfit's Paradox." *University of Oregon's Intergenerational Justice Database*, 2010. http://ijdb.auzigog.com/concept/parfit's-paradox.

Davis, D. "Liberty, Commerce, and Prosperity - and a Bill of Rights." In *South Africa's Crisis of Constitutional Democracy: Can the U.S. Constitution Help?*, edited by R.A. Licht and B. de Villiers. Washington DC, USA: The AEI Press, 1994.

Dawkins, C., and F. W. Ngunjiri. "Corporate Social Responsibility Reporting in South Africa: A Descriptive and Comparative Analysis." *Journal of Business Communication*, 2008.

De Albuquerque, Catarina. *U.N. General Assembly, 18th Session, Report of the Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation (A/HCR/18/33/Add.1)*, 2011.

De Bruyn, C. "CSIR Criticised for Muzzling One of Its Scientists." *Engineering News Online*, November 25, 2008. http://www.engineeringnews.co.za/article/csir-criticised-for-muzzling-one-of-its-scientists-2008-11-25.

De Schutter, O. "Climate Change And Human Rights." *Oxford Amnesty Lecture, University of Oxford* 26 April (2012).

De Vos, P. "Lest We Forget." *Constitutionally Speaking (blog)*, 2011. http://constitutionallyspeaking.co.za/lest-we-forget/.

Delattre, E. "Rights, Responsibilities, and Future Persons." *Ethics* 82, no. 3 (1972): 254–258.

Department of Environmental Affairs, RSA. *National Waste Management Strategy*, 2011. https://www.environment.gov.za/sites/default/files/docs/nationalwaste_management_strategy.pdf .

Department of Mineral Resources, RSA. *Amendment of the Broad-Based Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry*, 2010. http://www.bullion.org.za/MediaReleases/Downloads/Amended_of_BBSEE_Charter.pdf.

———. *Mineral and Petroleum Resources Development Amendment Bill*, 2013.

———. "MPRDA Amendments Bill: Notice 1066 of 2012." *Government Gazette*, 2012. http://www.dmr.gov.za/publications/summary/4-bills/898-gazette-mprda-amendments-bill.html.

Department of Water Affairs and Forestry, RSA. *Guidelines for Compulsory National Standards and Norms and Standards for Water Services Tariffs*, 2002.

———. "National Water Resource Strategy: First Edition. Appendix F: Public Consultation," n.d. http://www.dwaf.gov.za/Documents/Policies/NWRS/Sep2004/pdf/AppendixF.pdf.

———. "Regulations Relating To Compulsory National Standards And Measures To Conserve Water." *GN R509 In Government Gazette 22355* June (2001). http://cer.org.za/wp-content/uploads/2011/10/Regulations-relating-to-compulsory-national-standards-and-measures-to-conserve-water.pdf.

———. *White Paper on a National Water Policy for South Africa*. Pretoria, RSA, 1997. http://www.polity.org.za/polity/govdocs/white_papers/water.html.

Department of Water Affairs, RSA. “Acid Mine Drainage: Long Term Solution Feasibility Study,” 2012. http://www.dwa.gov.za/Projects/AMDFSLTS/default.aspx.

———. *Blue Drop Handbook: Version 1*, 2011. http://www.dwaf.gov.za/dir_ws/dwqr/subscr/ViewComDoc.asp?Docid=243.

———. *Notice 143 of 2014: Nominations for Chairperson of the Water Tribunal*. Pretoria, RSA, 2014. www.gov.za/documents/download.php?f=211243.

———. “Water Tribunal: About Us.” Accessed January 29, 2013. http://www.dwaf.gov.za/WaterTribunal/About.aspx.

Dewulf, Art, and Maartje Van Lieshout. “Disentangling Scale Approaches in Governance Research: Comparing Monocentric, Multilevel, and Adaptive Governance.” *Ecology And Society* 15, no. 4 (2010): 29.

Dierksmeier, C. “Rawls on the Rights of Future Generations.” In *Handbook of Intergenerational Justice*, edited by J.C. Tremmel. Cheltenham, UK: Edward Elgar Publishing Ltd, 2006.

Dierksmeier, Claude. “John Rawls on the Rights of Future Generations.” In *Handbook of Intergenerational Justice*. Vol. 1. Cheltenham UK: Edward Elgar Publishing, 2006.

Dietz, Thomas, and Paul C. Stern. *Public Participation in Environmental Assessment and Decision Making*. USA: National Academies Press, 2008.

DiMaggio, P., and W. W. Powell. “The Iron Cage Revisited: Institutional Isomorphism and Collective Rationality in Organizational Fields.” *American Sociological Review* 48, no. 2 (1983).

Diop, S., S. Ekolu, and F. Azene. “Acid Mine Drainage Research in Gauteng, Highlighting Impacts on Infrastructure and Innovation of Concrete-Based Remedial Systems.” *American Geophysical Union, Fall Meeting* (2013).

“Discovery of the Gold in 1884.” *South African History Online*, 2010. http://www.sahistory.org.za/discovery-gold-1884.

Dodson, Sam. “Anglo American Wastewater Treatment Plant Praised.” *World Coal, Mining News Articles*, 2014. http://www.worldcoal.com/news/mining/articles/Emalahleni_treatment_plant_praised_807.aspx.

Donnelly, Jack. *Universal Human Rights in Theory and Practice*. Ithaca, NY: Cornell University Press, 2013.

Driss, R. “The Responsibility of the State Towards Future Generations.” In *Future Generations & International Law*, edited by E. Agius, S. Busuttil, T-C. Kim, and K. Yazaki. London UK: Earthscan Publications Ltd, 1998.

Du Plessis, A. “A Government in Deep Water? Some Thoughts on the State’s Duties in Relation to Water Arising from South Africa’s Bill of Rights.” *Review of European Community and International Environmental Law* 19, no. 3 (2010): 316–327.

Dubash, Navroz K., and Bronwen Morgan. “Understanding the Rise of the Regulatory State of the South.” *Regulation and Governance* 6 (2012): 261–281.

Dubreuil, C. *The Right to Water: From Concept to Implementation*. France: World Water Council, 2006.

Dugard, J. “Human Rights and the Rule of Law in Postapartheid South Africa.” In *South Africa’s Crisis of Constitutional Democracy: Can the U.S. Constitution Help?*, edited by R.A. Licht and B. de Villiers. Washington DC, USA: The AEI Press, 1994.

Dworkin, Ronald. “A Special Supplement: Taking Rights Seriously by Ronald Dworkin.” *The New York Review of Books*, December 1970. http://www.nybooks.com/articles/archives/1970/dec/17/a-special-supplement-taking-rights-seriously/.

———. *Law’s Empire*. Massachusetts, USA: Belknap Press, 1986.

———. “Rights As Trumps.” In *Theories of Rights*, edited by Waldron J, 153–167. Oxford UK: Oxford University Press, 1984.

———. *Taking Rights Seriously*. London UK: Duckworth, 1978.

———. "You Cannot Calculate Human Rights Based on Cost." *The Guardian*, May 24, 2006. http://www.theguardian.com/commentisfree/2006/may/24/comment.politics.

Ebrahim, Hassen. "The Public Participation Process." In *The Soul of a Nation - Constitution-Making in South Africa*. Oxford UK: Oxford University Press, 2000.

Economic Development Department, RSA. "The New Growth Path Framework," 2011. http://www.economic.gov.za/communications/51-publications/151-the-new-growth-path-framework.

Ellis, Elisabeth. *Kant's Politics: Provisional Theory for an Uncertain World*. New Haven, USA: Yale University Press, 2005.

eNCA. "Calls for 'Civil Disobedience.'" *eNews Online*, 2013. http://www.enca.com/south-africa/calls-civil-disobedience.

England, Andrew. "Lesotho Bids to Lower Reliance on Neighbour." *The Financial Times*, April 18, 2013. http://www.ft.com/cms/s/0/968b6f2a-9b97-11e2-8485-00144feabdc0.html#axzz3UjWuV8zR.

Equator Principles. "Members & Reporting," 2014. http://www.equator-principles.com/index.php/members-reporting.

Eshleman, A. "Moral Responsibility." *The Stanford Encyclopedia of Philosophy (Winter 2009 Edition) (ed. Edward N. Zalta)*, 2009. http://plato.stanford.edu/entries/moral-responsibility.

Estlund, D. "Beyond Fairness and Deliberation: The Epistemic Dimension of Democratic Authority." In *Deliberative Democracy: Essays on Reason and Politics*, edited by J. Bohman and W. Rehg, 173–204. Cambridge, USA: MIT Press, 1997.

———. *Democratic Authority: A Philosophical Framework*. Princeton NJ, USA: Princeton University Press, 2008.

Fabbrini, S. "Bringing Robert A. Dahl's Theory of Democracy to Europe." *Annual Review of Political Science* 6 (2003): 119–137.

Fairbrass, J., and A. Jordan. "Multi-Level Governance and Environmental Policy." In *Multi-Level Governance*, edited by Ian Bache and Matthew V. Flinders. Oxford UK: Oxford University Press, 2004.

Family Health International. "Qualitative Research Methods Overview." *Qualitative Research Methods: A Data Collector's Field Guide* (2012). http://www.ccs.neu.edu/course/is4800sp12/resources/qualmethods.pdf.

Faruqui, N. "Balancing Between the Eternal Yesterday and the Eternal Tomorrow: Economic Globalisation, Water, and Equity." In *Rethinking Water Management: Innovative Approaches to Contemporary Issues*, edited by C. Figuères, J. Rockstrom, and C. Tortajada. London UK: Earthscan Publications Ltd, 2003.

Faull, J. "In Praise of the South African Constitution." *"Africa Is A Country" News Blog* February (2012). http://africasacountry.com/2012/02/16/praising-the-south-african-constitution/.

Feinberg, Joel. "Collective Responsibility." In *Doing and Deserving: Essays In The Theory of Responsibility*. Princeton, New Jersey: Princeton University Press, 1970.

Feinstein, C. H. *An Economic History of South Africa: Conquest, Discrimination, and Development*. Cambridge UK: Cambridge University Press, 2005.

Field, T. "Liability to Remedy Asbestos Pollution." *Journal of Environmental Law* 18, no. 3 (July 27, 2006): 479–494.

Fig, David. "Fracking and the Democratic Deficit in South Africa." *Transnational Institute: Environmental Justice*, 2012. http://www.tni.org/paper/fracking-and-democratic-deficit-south-africa.

———. "Manufacturing Amnesia: Corporate Social Responsibility in South Africa." *International Affairs* 81, no. 3 (2005): 599–617.

Figueres, C.M, C. Tortajada, and J. Rockstrom. *Rethinking Water Management*. London UK: Earthscan Publications Ltd, 2003.

FinMark Trust. "FinScope: South Africa Country Survey," 2012. http://www.finscope.co.za/finscope/pages/Initiatives/Countries/South-Africa.aspx?randomID=2377af91-bdc0-4246-be70-5ef6d886e126&linkPath=3_1&lID=3_1_11.

Finney, C.G. *The Heart of Truth*. Michigan, USA: Bethany House Publishers, 1976.

Fitzmaurice, M. *Contemporary Issues in International Environmental Law*. Cheltenham, UK: Edward Elgar Publishing Limited, 2009.

Fletcher, G.P. "Human Dignity as a Constitutional Value." *University of Western Ontario Law Review* 171 (1984).

———. "Law And Morality: A Kantian Perspective." *Columbia Law Review* 87 (1987): 533–558.

Frankel, Tamar. *Fiduciary Law*. Oxford, UK: Oxford University Press, 2011.

Fried, C. *Contract as Promise*. Cambridge, MA: Harvard University Press, 1981.

Friedman, Milton. *Capitalism and Freedom*. Chigaco, USA: University of Chicago Press, 1962.

Friedman, N. "Apartheid Now: The Private Lives Of Others." *Unpublished MPhil Thesis, University of Oxford* (2010).

Frimmel, H. E. "Genesis of the World's Largest Gold Deposits." *Science* 297 (2002): 1815–1816.

Frischmann, B.M. "Some Thoughts on Shortsightedness and Intergenerational Equity." *Loyola University of Chicago Law Journal* 36 (2004): 457–467.

Fritsch, O., and J. Newig. "Participatory Governance and Sustainability: Findings of a Meta-Analysis of Stakeholder Involvement in Environmental Decision-Making." In *Reflexive Governance for Global Public Goods*, edited by E. Brousseau, T. Dedeurwaerdere, and B. Siebenhuner. USA: MIT Press, 2012.

Funke, N., K. Nortje, J. Rascher, and A. Turton. "The Evolution of Water Governance in South Africa: Lessons from a Resilience Theory-Based Analysis of the Khoian and Gold Mining Social-Ecological Systems." In *Exploring Sustainability Science: A Southern African Perspective*, edited by A. Weaver and M. Burns. Stellenbosch, RSA: SUN Press, 2008.

"Fur Seal Arbitration: Proceedings." *Internet Archive, University of Toronto Library*, 1895. http://archive.org/details/fursealarbitrat02beri.

Gauteng High Court, RSA. BP Southern Africa (Pty) Ltd v MEC For Agriculture, Conservation, Environment And Land Affairs (03/16337) [2004] ZAGPHC 18 (31 March 2004) (2004).

———. Chief Pule Shadrack VII Bareki NO and Another v Gencor Limited and Others, (19895/03) [2005] ZAGPHC 109 (19 October 2005) (2005).

Gauteng High Court, South Africa. Residents of Bon Vista Mansions v. Southern Metropolitan Local Council, Case No. 01/12312 (2001) (2001).

Gawler, J., G. Herzog, L. Coche, and B. Petrovic. "Stakeholder Engagement: Build Trust with Local Communities and Minimise Social Risk for Your Operations (Webinar)." Ethical Corporation, 2014.

Gerring, John. "Case Selection for Case-Study Analysis: Qualitative and Quantitative Techniques." In *The Oxford Handbook of Political Methodology*, edited by J.M. Box-Steffensmeier, H.E. Brady, and D. Collier. Oxford, UK: Oxford University Press, 2008.

———. *Case Study Research: Principles and Practices*. Cambridge, UK: Cambridge University Press, 2006.

Gibson, Carl. "The Corporatocracy Is the 1 Percent." *The Huffington Post*, February 11, 2011. http://www.huffingtonpost.com/carl-gibson/the-corporatocracy-is-the_b_1070659.html.

Gigerenzer, Gerd. "Fast and Frugal Heuristics: The Tools of Bounded Rationality." Edited by Derek J Koehler and Nigel Harvey. *Blackwell Handbook of Judgment and Decision Making* 3, no. 1977 (2004): 62–88.

Gindis, David. “Some Building Blocks for a Theory of the Firm as a Real Entity.” In *The Firm as an Entity: Implications for Economics, Accounting and the Law*, edited by Yuri Biondi, Arnaldo Canziani, and Thierry Kirat. Oxford UK: Routledge, 2007.

Godfrey, L. “Ecosystem Governance And The Trialogue Debate: An Overview Of The Trialogue Relationship And The Engagement Along Interfaces.” In *Governance As A Trialogue: Government-Society-Science In Transition*, edited by A.R. Turton, J.H. Hattingh, G.A. Maree, D.J. Roux, M. Claassen, and W.F. Strydom. Germany: Springer-Verlag, 2007.

Godfrey, L., N. Funke, and C. Mbizvo. “Bridging the Science–Policy Interface: A New Era for South African Research and the Role of Knowledge Brokering.” *South African Journal of Science* 106, no. 5/6 (2010).

Golding, Martin P. “Obligations to Future Generations.” In *Responsibility to Future Generations*, edited by E. Partridge, 61–72. Buffalo, NY, USA: Prometheus Books, 1981.

Goldstone, R.J. “Declaration Of Responsibilities And Human Duties.” *Valencia Third Millennium Foundation*, 2002. http://globalization.icaap.org/content/v2.2/declare.html.

Goodman, Leo A. “Snowball Sampling.” *The Annals of Mathematical Statistics* 32, no. 1 (March 1, 1961): 148–170.

Gorelick, Sherry. “Contradictions of Feminist Methodology.” In *SAGE Qualitative Research Methods*, edited by Paul Atkinson and Sara Delamon. London UK: SAGE Publications, 2011.

Government Gazette 17 March 2000. “White Paper on Integrated Pollution and Waste Management for South Africa: A Policy on Pollution Prevention, Waste Minimisation, Impact Management and Remediation,.” *Government Notice No. 227* (2000). www.info.gov.za/view/DownloadFileAction?id=68787.

Government Gazette 23922. *Mineral and Petroleum Resources Development Act (Act 28 of 2002)*. Department of Minerals and Energy, 2002. http://www.saflii.org/za/legis/consol_act/maprda2002452/.

Government Gazette 31789. *National Environmental Management Amendment Act, No. 62 of 2008 (GN 22/GG 31789/09-01-2009)*, 2009. http://us-cdn.creamermedia.co.za/assets/articles/attachments/18939_ac62-08.pdf.

Grabher, Gernot. “Rediscovering the Social in the Economics of Interfirm Relations.” In *The Embedded Firm: On the Socio-Economics of Industrial Networks*, edited by Gernot Grabher. London UK: Routledge, 1993.

———. “The Weakness of Strong Ties: The Lock-in of Regional Development in the Ruhr Area.” In *The Embedded Firm: On the Socio-Economics of Industrial Networks*, edited by Gernot Grabher, 255–277. London UK: Routledge, 1993.

Graham, David, and Ngaire Woods. “Making Corporate Self-Regulation Effective in Developing Countries.” *World Development* 34, no. 5 (2006): 868–883.

Granovetter, Mark. “Economic Action and Social Structure: The Problem of Embeddedness.” *American Journal of Sociology* 91, no. 3 (1985): 481.

Grant, Laura. “Research Shows Sharp Increase in Service Delivery Protests.” *Mail and Guardian*, February 12, 2014. http://mg.co.za/article/2014-02-12-research-shows-sharp-increase-in-service-delivery-protests.

Green, R.M. “Intergenerational Distributive Justice and Environmental Responsibility.” In *Responsibilities to Future Generations*, edited by E. Partridge. Buffalo, NY, USA: Prometheus Books, 1981.

Greenawalt, K. *Conflicts of Law and Morality*. Oxford UK: Oxford University Press, 1989.

Greenwood, Royston, Christine Oliver, Kerstin Sahlin, and Roy Suddaby. *The SAGE Handbook of Organizational Institutionalism*. *The Sage Handbook of Organizational Institutionalism*. London UK: SAGE Publications, 2008.

Grey, David. “Water Security in Changing Climates.” *Talk at the University of Oxford* (2012).

Griffin, James. *On Human Rights*. Oxford UK: Oxford University Press, 2008.

Groenewald, Y. “Aurora Mine’s Toxic Water Crisis.” *Mail and Guardian, South Africa*, June 11, 2010. http://mg.co.za/article/2010-06-11-aurora-mines-toxic-water-crisis.

Guess, Raymond. *History and Illusion in Politics*. Cambridge UK: Cambridge University Press, 2001.

Gundling, L. “Our Responsibility to Future Generations.” *The American Journal of International Law* 84, no. 1 (1990): 207–212.

Gunninham, N., R. Kagan, and D. Thornton. “Social License and Environmental Protection: Why Business Go Beyond Compliance.” *Journal of the American Bar Foundation* 39, no. 2 (2004): 307–341.

Guyer, P. “The Cambridge Companion to Kant.” Cambridge UK: Cambridge University Press, 1992.

Habib, A., and K. Bentley. *Racial Redress and Citizenship in South Africa*. Cape Town, RSA: Human Science Research Council, 2008.

Hamlin, A., and P. Pettit. “Normative Analysis of the State.” In *The Good Polity: Normative Analysis of the State*, edited by A. Hamlin and P. Pettit. Oxford UK: Basil Blackwell Ltd, 1989.

Hamman, Ralph, and Christoph Schild. *Business and Human Rights in South Africa: Context and Recommendations for Pro-Active Engagement*. Johannesburg, South Africa, 2008. http://www.nbi.org.za/Lists/Publications/Attachments/69/Business_Human_Rights_in_SA.pdf.

Hansen, A.R., and V. Ryan. “Following the Rising Polestar: An Examination of the Structures Governing Corporate Citizens in South Africa.” In *Corporate Citizenship in Africa: Lessons from the Past; Paths to the Future*, edited by Wayne Visser, Malcolm McIntosh, and Charlotte Middleton. Greenleaf Publishing, 2006.

Hardin, R. “Political Obligation.” In *The Good Polity: Normative Analysis of the State*, edited by A. Hamlin and P. Pettit. Oxford UK: Basil Blackwell Ltd, 1989.

Hayes, K.T.A. “Grounding African Corporate Responsibility.” In *Corporate Citizenship in Africa: Lessons from the Past; Paths to the Future*, edited by Wayne Visser, Malcolm McIntosh, and Charlotte Middleton. Greenleaf Publishing, 2006.

Heiner, R.A. “The Origin of Predictable Behaviour.” *The American Economic Review* 73, no. 4 (1983): 560–595.

Hepworth, Nick, and Stuart Orr. “Corporate Water Stewardship Exploring Private Sector Engagement in Water Security.” In *Water Security : Principles, Perspectives, and Practices*, edited by Bruce A. Lankford, Karen Bakker, Mark Zeitoun, and Declan Conway. New York, USA: Routledge, 2013.

Hobbs, P.J., and J.E. Cobbing. “Hydrogeological Assessment of Acid Mine Drainage Impacts in the West Rand Basin, Gauteng Province.” *CSIR Report No. CSIR/NRE/WR/ER/2007/0097/C* August (2007). http://hdl.handle.net/10204/3348.

Hodgson, G. *Economics and Institutions*. Cambridge UK: Polity Press, 1988.

Hogl, K., E. Kvarda, R. Nordbeck, and M. Pregernig. “Legitimacy and Effectiveness of Environmental Governance – Concepts and Perspectives.” In *Environmental Governance The Challenge of Legitimacy and Effectiveness*, edited by K. Hogl, E. Kvarda, R. Nordbeck, and M. Pregernig. UK: Edward Elgar Publishing Ltd, 2012.

Holland, J., and J. Webb. *Learning Legal Rules: A Student’s Guide to Legal Method and Reasoning (3rd Edition)*. London UK: Blackstone Press, 1996.

Hooghe, L., and G. Marks. “Contrasting Visions of Multi-Level Governance.” In *Multi-Level Governance.*, edited by Ian, Bache and Matthew V. Flinders. Oxford, UK: Oxford University Press, 2004.

———. *Multi-Level Governance and European Integration*. *Governance in Europe*. Governance in Europe. Rowman & Littlefield Publishers, 2001.

Horowitz, Asher. “‘Man Is a Political Animal’: The Method of Aristotle’s Politics (Lecture Series).” *Department of Political Science, York University*, 2010. http://www.yorku.ca/horowitz/courses/lectures/12_political_animal.html.

Houck, O. A. *Taking Back Eden: Eight Environmental Cases That Changed the World*. USA: Island Press, 2011.

Houghton, D. Hobart. "The Significance of the Tomlinson Report." *Africa South* 1, no. 2 (1957): 14–21.

IDASA. *Afrobarometer Summary of Results Round 5: Survey in South Africa*, 2013. http://www.afrobarometer.org/files/documents/media_briefing/saf_r5_presentation1.pdf.

James, Susan. "Power and Difference: Spinoza's Conception of Freedom." *Journal of Political Philosophy* 4, no. 3 (September 1996): 207–228.

———. "Rights, Moral and Enforceable: A Reply to Saladin Meckled-Garcia." *Proceedings of the Aristotelian Society (Hardback)* 105, no. 1 (June 2005): 149–153.

———. "VII-Rights as Enforceable Claims." *Proceedings of the Aristotelian Society (Hardback)* 103, no. 1 (June 2003): 133–147.

Jonas, Andrew E.G. "Pro Scale: Further Reflections on the 'Scale Debate' in Human Geography." *Transactions of the Institute of British Geographers, New Series* 31, no. 3 (2006): 399–406.

Jonas, H. "Technology and Responsibility: The Ethics of an Endangered Future." In *Responsibilities to Future Generations*, edited by E. Partridge. Buffalo, NY, USA: Prometheus Books, 1981.

Jordan, Andrew. "The European Union: An Evolving System of Multi-Level Governance ... or Government?" *Policy Politics* 29, no. 2 (2001): 193–208.

Jordan, Bobby. "Farms' Water to Be Diverted to Eskom." *South Africa Sunday Times*, August 12, 2010. http://www.timeslive.co.za/local/2010/08/12/farms-water-to-be-diverted-to-eskom.

Kahneman, Daniel. *Thinking, Fast and Slow*. London: Penguin Books Ltd, 2011.

Kant, Immanuel. *Critique of Practical Reason and Other Works on the Theory, (Translator T. K. Abbott), 6th Revised Edition*. London UK: Longmans, Green And Co., 1909.

Kant, Immanuel, and H J Patton. "Groundwork for the Metaphysic of Morals (1785)." Edited by Mary J Gregor. *Practical Philosophy*. Cambridge University Press, 2005.

Kavka, G. "The Futurity Problem." In *Obligations to Future Generations*, edited by R.I. Sikora and B. Barry. Cambridge, UK: White Horse Press, 1978.

Kende, M.S. "The South African Constitutional Court's Embrace of Socio-Economic Rights: A Comparative Perspective." *Chapman Law Review* 6, no. 13 (2003).

Kidd, M. "Greening the Judiciary." *Address at the Environmental Law Association Conference, 24 February, Cape Town: South Africa* (2006). http://hdl.handle.net/10394/1743.

Kotzé, Dirk. "Civic Pride, National Identity and the Quality of Democracy in South Africa." In *Political Studies Association Annual Conference: Political Identities Panel*, 2015.

Lamont, Julian, and Christi Favor. "Distributive Justice." *The Stanford Encyclopedia of Philosophy (Fall 2014 Edition) (ed. Edward N. Zalta)*, 2014. http://plato.stanford.edu/archives/fall2014/entries/justice-distributive/.

Langbein, J.H. "Questioning the Trust Law Duty of Loyalty: Sole Interest or Best Interest?" *Yale Law School, Faculty Scholarship Series* 495 (2005).

Langford, M., B. Cousins, J. Dugard, and T. Madlingozi. *Socio-Economic Rights in South Africa*. New York, USA: Cambridge University Press, 2014.

Lemon, Anthony. "Beyond Apartheid: New Directions in Southern Africa." *Tijdschrift Voor Economische En Sociale Geografie* 98, no. 4 (September 2007): 419–420.

———. "Perspectives on Democratic Consolidation in Southern Africa: The Five General Elections of 2004." *Political Geography* 26, no. 7 (September 2007): 824–850.

———. "The General Election in South Africa, April 2009." *Electoral Studies* 28, no. 4 (December 2009): 670–673.

Lemon, Anthony, and Jane Battersby-Lennard. "Emerging Geographies of School Provision in Cape Town, South Africa." *Geography* 94, no. 2 (2009): 79–87.

———. “Overcoming the Apartheid Legacy in Cape Town Schools.” *Geographical Review* 99, no. 4 (2009): 517–538.

Lenero, P.O., and F. Thompson. “Riding the Resource Wave: How Extractive Companies Can Succeed in the New Resource Era.” *McKinsey & Company: Insights and Publications*, 2014. http://www.mckinsey.com/insights/sustainability/riding_the_resource_wave?cid=other-eml-alt-mip-mck-oth-1408.

Létourneau, Alex. “World’s Largest Gold Producing Countries: South Africa.” *Forbes*, June 20, 2014.

Letsas, George. “Dworkin on Human Rights (Forthcoming).” *Jurisprudence (Hart Publishing)* (2013).

Lobina, E., and D. Hall. “UK Water Privatisation - A Briefing.” *Public Services International Research Unit* (2001). www.archives.gov.on.ca/en/e_records/.../pdf/CUPE18UKwater.pdf.

Madhav, Roopa. “Tirupur Water Supply And Sanitation Project: An Impediment To Sustainable Water Management?” *International Environmental Law Research Centre, Working Paper* November 1 (2008).

Magistrates Court for Regional Division of Limpopo Province. The State v Blue Platinum Ventures Pty Ltd and Matome Samuel Maponya (RN126/13) (2014).

Malhotra, A. “A Commentary on the Status of Future Generations as a Subject of International Law.” In *Future Generations & International Law*, edited by E. Agius, S. Busuttil, T-C. Kim, and K. Yazaki. London UK: Earthscan Publications Ltd, 1998.

Marks, G. “Structural Policy and Multi-Level Governance in the EC.” In *The State of the European Community: The Maastricht Debate and Beyond*, edited by A. Cafruny and G. Rosenthal, 391–411. UK: Longman/Boulder, 1993.

Mattes, R., Y. Derek Davids, and C. Africa. *Views Of Democracy In South Africa And The Region: Trends And Comparisons*. Afrobarometer Working Paper, 2000.

Mattes, R., C. Keulder, A.B. Chikwana, C. Africa, and Y. Derek Davids. *Democratic Governance in South Africa: The People’s View*. AfroBarometer Working Paper, 2003.

Mattes, R.B. “South Africa: Democracy Without the People?” *Journal of Democracy* 13, no. 1 (2002): 22–36.

McDowell, Linda. “Doing Gender: Feminism, Feminists and Research Methods in Human Geography.” *Transactions of the Institute of British Geographers, New Series* 17, no. 4 (1992): 399–416.

———. “Women/gender/feminisms: Doing Feminist Geography.” *Journal of Geography in Higher Education* 21, no. 3 (1997): 381–400.

Mdletshe, Canaan. “A Matter of Life, Death.” *South Africa Sunday Times*, August 6, 2012.

Meckled-Garcia, Saladin. “Neo-Positivism About Rights: The Problem With ‘Rights As Enforceable Claims.’” *Proceedings of the Aristotelian Society (Hardback)* 105, no. 1 (June 2005): 143–148.

Medecins Sans Frontieres. *A Guide to Using Qualitative Research Methodology*, 2002. http://fieldresearch.msf.org/msf/bitstream/10144/84230/1/Qualitative research methodology.pdf.

Mekete, B.T., and J.B Ojwang. “The Right to a Healthy Environment: Possible Juridical Bases.” *The South African Journal of Environmental Law and Policy* 3, no. 2 (1996).

Michelman, F. “The Constitution, Social Rights and Reason: A Tribute to Etienne Mureinik.” *Southern African Journal on Human Rights* 14 (1998): 499–507.

Miller, Fred. “Aristotle’s Political Theory.” *The Stanford Encyclopedia of Philosophy (Fall 2012 Edition) (ed. Edward N. Zalta)*, 2012. http://plato.stanford.edu/archives/fall2012/entries/aristotle-politics/.

Morgan, B. “Emerging Global Water Welfarism: Access to Water, Unruly Consumers and Transnational Governance.” In *Consumer Cultures, Global Perspectives*, edited by F. Trentmann and J. Brewer. Oxford UK: Berg Press, 2006.

Morgan, B., and F. Trentman. “Introduction: The Politics of Necessity.” *Journal of Consumer Policy* 29 (2006): 345–353.

Morgan, Bronwen. “Global Business, Local Constraints: The Case of Water in South Africa.” In *Making Global Regulation Effective* , edited by Ngaire Woods. Oxford UK: Oxford University Press, 2006.

———. *Water on Tap: Rights and Regulation in the Transnational Governance of Urban Water Services*. Cambridge UK: Cambridge University Press, 2011.

Morgan, Gareth. “South Africa: Water Tribunal - DA Welcomes Damning Judgement Against Water Minister.” *Democratic Alliance Press Statement*, December 7, 2012. http://allafrica.com/stories/201212080087.html.

———. *Statement by Gareth Morgan, Democratic Alliance Shadow Minister of Water and Environmental Affairs, on the High Vacancy Rate for Blue Scorpions*. *Polity.org.za*, October 17, 2011. http://www.polity.org.za/article/da-statement-by-gareth-morgan-democratic-alliance-shadow-minister-of-water-and-environmental-affairs-on-the-high-vacancy-rate-for-blue-scorpions-17102011-2011-10-17.

Moss, Pamela. “Taking On, Thinking About, and Doing Feminist Research in Geography.” In *Feminist Geography in Practice: Research and Methods*, edited by Pamela Moss, 1–17. Oxford, UK: Wiley-Blackwell, 2002.

Mottiar, Shauna. “From ‘Popcorn’ to ‘Occupy’: Protest in Durban, South Africa.” *Development and Change* 44, no. 3 (May 15, 2013): 603–619.

Movik, S. *The Dynamics and Discourses of Water Allocation Reform in South Africa (STEPS Working Paper 21)*. Brighton, UK: STEPS Centre, 2009.

Mthembu, J. *African National Congress: Press Statements*, 2011. http://www.anc.org.za/show.php?id=7682.

Muller, M. “Free Basic Water – a Sustainable Instrument for a Sustainable Future in South Africa.” *Environment and Urbanisation* 20 (2008): 67–87.

Mullings, Beverley. “Insider or Outsider, Both or Neither: Some Dilemmas of Interviewing in a Cross-Cultural Setting.” *Geoforum* 30, no. 4 (November 1999): 337–350.

Nagel, T. *The View From Nowhere*. Oxford UK: Oxford University Press, 1986.

Naidoo, Brindaveni. “Blue Scorpions to Take Zero-Tolerance Approach to Water Crimes.” *Engineering News*, September 26, 2008. http://www.engineeringnews.co.za/article/blue-scorpions-to-take-zerotolerance-approach-to-water-crimes-2008-09-26.

National Science and Technology Forum, and South African Agency for Science and Technology Advancement. “Critical Thinkers Forum: Acid Mine Drainage, Possible Solutions.” In *Critical Thinkers Forum*. Boksburg, South Africa, 2011. http://www.nstf.org.za/ShowProperty?nodePath=/NSTF Repository/NSTF/files/Workshops/2011/ProceedingsAMD2011.pdf.

Newig, J., and E. Kvarda. “Participation in Environmental Governance: Legitimate and Effective?” In *Environmental Governance The Challenge of Legitimacy and Effectiveness*, edited by K. Hogl, E. Kvarda, R. Nordbeck, and M. Pregernig. Edward Elgar Publishing Ltd, 2012.

Nickel, James. “Human Rights.” *The Stanford Encyclopedia of Philosophy (Spring 2014 Edition) (ed. Edward N. Zalta)* (2014). <http://plato.stanford.edu/archives/spr2014/entries/rights-human/>.

NIST/SEMATECH. “Populations and Sampling.” In *Engineering Statistics E-Handbook of Statistical Methods*, 2012. http://www.itl.nist.gov/div898/handbook/.

North Gauteng High Court, RSA. Federation for Sustainable Environment and Others v Minister of Water Affairs and Others (35672/12) [2012] ZAGPPHC 128 (2012).

“Number 107 of 1998, The National Environmental Management Act,” 1998. http://www.environment.gov.za/polleg/legislation/natenvmgmtact/natenvmgmtact.htm.

“Number 36 of 1998, The National Water Act,” 1998. www.info.gov.za/view/DownloadFileAction?id=70693.

Nyambe, N., C. Breen, and R. Fincham. “Organisation Culture as a Function of Adaptability and Responsiveness in Public Service Agencies.” In *Governance As A Trialogue: Government-*

Society-Science In Transition, edited by A.R. Turton, J.H. Hattingh, G.A. Maree, D.J. Roux, M. Claassen, and W.F. Strydom. Germany: Springer-Verlag, 2007.

O'Neill, John. "The Rhetoric of Deliberation: Some Problems in Kantian Theories of Deliberative Democracy." *Res Publica* 8, no. 3 (October 1, 2002): 249–268.

O'Rourke, Dara. "Outsourcing Regulation: Analyzing Nongovernmental Systems of Labor Standards and Monitoring." *The Policy Studies Journal* 31, no. 1 (2003).

Oberholster, P. "The Current Status of Water Quality in South Africa,." *A CSIR Perspective on Water in South Africa (Report No. CSIR/NRE/PW/IR/2011/0012/A)* (2010).

Oelofse, S. "Mine Water Pollution – Acid Mine Decant, Effluent and Treatment: A Consideration of Key Emerging Issues That May Impact the State of the Environment." *Emerging Issues Paper: Mine Water Pollution (DEAT South Africa)* (2008).

Organisation of African Unity. "African Charter on Human and Peoples' Rights." *African Commission on Human and Peoples' Rights*, 1981. http://www.achpr.org/instruments/achpr/.

Ostrom, E. "Polycentric Systems: Multilevel Governance Involving a Diversity of Organizations." In *Global Environmental Commons: Analytical and Political Challenges in Building Governance Mechanisms*, edited by E. Brousseau, T. Dedeurwaerdere, P. Jouvet, and M. Willinger. Oxford, UK: Oxford University Press, 2012.

P.A., Adler, and Adler P. *Membership Roles in Field Research*. Newbury Park, CA: Sage Publications, 1987.

Paasi, Anssi. "Place and Region: Looking through the Prism of Scale." *Progress in Human Geography* 28, no. 4 (2004): 536–546.

Page, T. "On the Problem of Achieving Efficiency and Equity, Intergenerationally." *Land Economics* 73, no. 4 (1997): 580–596.

Pahl-wostl, Claudia, Marc Craps, Art Dewulf, Erik Mostert, David Tabara, and Tharsi Taillieu. "Social Learning and Water Resources Management." *Ecology And Society* 12, no. 2 (2007): 5.

Palmer, Stephanie. "Human Rights: Implications for Labour Law." *The Cambridge Law Journal* 59, no. 1 (2000): 168 – 200.

———. "Public Functions and Private Services: A Gap in Human Rights Protection." *International Journal of Constitutional Law* 6, no. 3–4 (2008): 585–604.

Pangle, T. "South Africa, Viewed Through the Eyes of the American Constitution." In *South Africa's Crisis of Constitutional Democracy: Can the U.S. Constitution Help?*, edited by R.A Licht and B. de Villiers. Washington DC, USA: The AEI Press, 1994.

Parkinson, John E. *Corporate Power and Responsibility: Issues in the Theory of Company Law*. Oxford UK: Oxford University Press Catalogue, 1995.

Partridge, E. "Environmental Ethics Without Philosophy." In *Human Ecology: A Gathering of Perspectives*, edited by Borden R.J., 136–149. Society for Human Ecology, 1986.

———. "Future Generations." In *Companion to Environmental Ethics*, edited by D. Jamieson. Oxford, UK: Blackwell Publishing Ltd, 2001.

———. "Introduction." In *Responsibilities to Future Generations*. Buffalo, NY, USA: Prometheus Books, 1981.

———. "On The Rights of Future Generations." In *Upstream / Downstream: Issues in Environmental Ethics*, edited by D. Scherer. Philadelphia PA, USA: Temple University Press, 1990.

———. "Posterity and the 'Strains of Commitment.'" In *Creating a New History for Future Generations*, edited by Kim & Dator. Kyoto, Japan: Institute for the Integrated Study of Future Generations, 1994. http://gadfly.igc.org/papers/strains.htm.

———. "Rawls and the Duty to Posterity." *Doctoral Dissertation: University of Utah* (1976). http://gadfly.igc.org/Rawls/RDP.htm.

———. "Why Care About the Future?" In *Responsibilities to Future Generations*. Buffalo, NY, USA: Prometheus Books, 1981.

Passmore, J. “Conservation.” In *Responsibilities to Future Generations*, edited by E. Partridge. Buffalo, NY, USA: Prometheus Books, 1981.

Peberdy, Sally. “Imagining Immigration: Inclusive Identities and Exclusive Policies in Post-1994 South Africa.” *Africa Today* 48, no. 3 (2001): 5–32.

Peters, B.G., and J. Pierre. “Multi-Level Governance and Democracy: A Faustian Bargain?” In *Multi-Level Governance*, edited by Ian, Bache and and Matthew V. Flinders. Oxford UK: Oxford University Press, 2004.

Peyper, L. “DMR Concedes Constraints Impeded MPRDA.” *MiningMX*. August 2, 2013. http://www.miningmx.com/page/news/markets/1632241-DMR-concedes-constraints-impeded-MPRDA.

Pienaar, G.J., and E. van der Schyff. “The Reform of Water Rights in South Africa.” *Law Environment and Development Journal* 3, no. 2 (2007): 179–194.

Pierce, Vaughan, and Stephen Kennedy-Good. “King III – What Does It All Mean?!” *Polity.org.za*, 2009. http://www.polity.org.za/article/king-iii-what-does-it-all-mean-2009-12-01.

Press Association, South Africa. “Huge Shortage of Enforcement Officials: Water Minister.” *South Africa Sunday Times*, November 24, 2010.

Preston B.J. (The Hon. Justice). “Principles of Ecologically Sustainable Development.” *Speech given in the Land and Environment Court, New South Wales, Australia* November (2006). http://www.lec.justice.nsw.gov.au/agdbasev7wr/_assets/lec/m4203011721754/preston_principles of ecologically sustainable development.pdf.

Prno, Jason, and D. Scott Slocombe. “Exploring the Origins of ‘Social License to Operate’ in the Mining Sector: Perspectives from Governance and Sustainability Theories.” *Resources Policy* 37, no. 3 (2012): 346–357.

Rachlinski, J.J. “Heuristics, Biases, and Governance.” In *Blackwell Handbook of Judgment & Decision Making*, edited by D.J Koehler and N. Harvey, 567–584. Oxford UK: Blackwell Publishing Ltd, 2004.

Ratner, S.R. “Corporations and Human Rights: A Theory of Legal Responsibility.” *Yale Law Journal* (2001): 443–545.

Rauscher, Frederick. “Kant’s Social and Political Philosophy.” *The Stanford Encyclopedia of Philosophy (Summer 2012 Edition) (ed. Edward N. Zalta)*, 2012. http://plato.stanford.edu/archives/sum2012/entries/kant-social-political/.

Rawls, J. *A Theory of Justice: Revised Edition*. *1999*. Massachusetts, USA: Belknap Press of Harvard University Press, n.d.

———. *Justice as Fairness: A Restatement*. Cambridge, MA: Harvard University Press, 2001.

———. *The Law of the Peoples*. Rhode Island, USA: Harvard University Press, 2001.

Redgwell, C. *Intergenerational Trusts and Environmental Protection*. Manchester, UK: Manchester University Press, 1991.

Reed, Maureen G., and Shannon Bruyneel. “Rescaling Environmental Governance, Rethinking the State: A Three-Dimensional Review.” *Progress in Human Geography* 34, no. 5 (2010): 646–653.

Reichardt, M., and C. Reichardt. “Tracking Sustainability Performance Through Company Reports: A Critical Review Of The South African Mining Sector.” In *Corporate Citizenship in Africa: Lessons from the Past; Paths to the Future*, edited by Wayne Visser, Malcolm McIntosh, and Charlotte Middleton. Greenleaf Publishing, 2006.

Renn, Ortwin. “Participatory Processes for Designing Environmental Policies.” *Land Use Policy* 23, no. 1 (2006): 34–43.

Republic of South Africa. “Companies Act (No. 71 of 2008).” *Companies Act 2008.*, 2008. http://www.justice.gov.za/legislation/acts/2008-071amended.pdf.

Richardson, H.S., and P.J. Weithman. *Development and Main Outlines of Rawls’s Theory of Justice*. New York, USA: Garland Publishing Inc., 1999.

Ridl, J., and E. Couzens. “Misplacing NEMA? A Consideration Of Some Problematic Aspects Of South Africa’s New EIA Regulations.” *Potchefstroom Electronic Law Journal* 13, no. 5 (2010). http://www.ajol.info/index.php/pelj/article/viewFile/65052/52758.

Rose, C. M. “Romans, Roads, and Romantic Creators: Traditions of Public Property in the Information Age.” *Law and Contemporary Problems* (2003): 89–110.

Rose, Peter. “Long-Term Sustainability in the Management of Acid Mine Drainage Wastewaters – Development of the Rhodes BioSURE Process.” *Water SA* 39, no. 5 (2013): 583–592.

Rosebury, Brian. “Moral Responsibility and Moral Luck.” *Philosophical Review* 104, no. 4 (1995): 499.

Rosen, M. *Dignity: Its History and Meaning*. Rhode Island, USA: Harvard University Press, 2012.

Rossouw, Nigel, and Keith Wiseman. “Learning from the Implementation of Environmental Public Policy Instruments after the First Ten Years of Democracy in South Africa.” *Impact Assessment & Project Appraisal* 22, no. 2 (2004): 131–140.

RSA Office of the Auditor-General. *Report of the Auditor-General to Parliament on A Performance Audit Of The Rehabilitation Of Abandoned Mines At The Department of Minerals and Energy*, 2009. http://afrosai-e.org.za/sites/afrosai-e.org.za/files/reports/rehabilitation_of_abandoned_mines_at_the_dme.pdf.

Runciman, David. *The Confidence Trap: A History of Democracy in Crisis from World War I to the Present*. Princeton, New Jersey: Princeton University Press, 2013.

Saldaña, Johnny. *The Coding Manual for Qualitative Researchers*. 2nd ed. London UK: Sage, 2013.

Sand, P.H. “Sovereignty Bounded: Public Trusteeship for Common Pool Resources.” *Global Environmental Politics* 4, no. 1 (2004): 47–71.

Sandel, M.J. *Liberalism and the Limits of Justice (Second Edition)*. Cambridge UK: Cambridge University Press, 1998.

Santa Clara County v. Southern Pacific R. Co. - 118 U.S. 394, 1886. http://supreme.justia.com/cases/federal/us/118/394/case.html.

Schultz, C., H. Buckle, M. Kgomongoe, T. Malungani, and M. Drackner. “Gold, Scorched Earth and Water: The Hydropolitics of Johannesburg.” *Water Resources Development* 22, no. 2 (2006): 313–335.

Schwab, Klaus, Xavier Sala-i-Martín, and World Economic Forum. “The Global Competitiveness Report 2012–2013.” *World Economic Forum: Insight Report*, 2012. http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2012-13.pdf.

Schwabe, Craig. “Fact Sheet: Poverty in South Africa (Human Sciences Research Council).” *South African Regional Poverty Network*, 2004. http://www.sarpn.org/documents/d0000990/.

Scott, W. Richard. *Institutions and Organizations*. 2nd ed. Thousand Oaks, California USA: Sage, 2001.

Scott, W.R., R.E. Levitt, and R.J. Orr. *Global Projects: Institutional and Political Challenges*. Cambridge UK: Cambridge University Press, 2011.

Seawright, Jason, and John Gerring. “Case Selection Techniques in Case Study Research: A Menu of Qualitative and Quantitative Options.” *Political Research Quarterly* 61 (2008): 294–308.

Selassie, Abebe Aemro. “What Ails South Africa.” *International Monetary Fund, Finance and Development Publication* December (2011). http://www.imf.org/external/pubs/ft/fandd/2011/12/selassie.htm.

Sen, Amartya. *Inequality Re-Examined*. Oxford UK: Clarendon Press, 1992.

———. *The Idea of Justice*. London UK: Allen Lane, 2010.

Seto, T.P. “Intergenerational Decision Making: An Evolutionary Perspective.” *Loyola of Los Angeles Law Review* 35 (2001): 235–276.

Shell, S.M. “Chapter 13: Kant’s Concept of Human Dignity as a Resource for Bioethics.” *Human Dignity and Bioethics: Essays Commissioned by the President’s Council on Bioethics* (2008). http://bioethics.georgetown.edu/pcbe/reports/human_dignity/chapter13.html.

Sikora, R.I. “Is It Wrong to Prevent the Existence of Future Generations?” In *Obligations to Future Generations*, edited by R.I. Sikora and B. Barry. Cambridge, UK: The White Horse Press, 1996.

Simon, H.A. “Bounded Rationality and Organizational Learning.” *Organization Science* 2, no. 1 (1991): 125–134.

———. “Rationality as Process and as Product of Thought.” *Papers and Proceedings of the Ninetieth Annual Meeting of the American Economic Association* 68, no. 2 (1978): 1–16.

Sing, Bill. “Coca-Cola Acts to Cut All Ties With South Africa.” *Los Angeles Times*, September 18, 1986. http://articles.latimes.com/1986-09-18/news/mn-11241_1_south-africa.

Sitkoff, R.H. “The Economic Structure of Fiduciary Law.” *Boston University Law Review* 91 (2011): 1039–1049.

Skorupski, J. “Internal Reasons and the Scope of Blame.” In *Bernard Williams*, edited by A. Thomas. Cambridge UK: Cambridge University Press, 2007.

Smit, Carel. “The Role of Mining in the South African Economy.” *KPMG South Africa Blog*, 2013. http://www.sablog.kpmg.co.za/2013/12/role-mining-south-african-economy/.

Smith, David M. “Back to the Good Life: Towards an Enlarged Conception of Social Justice.” *Environment and Planning D: Society and Space* 15 (1997): 19–35.

———. “Social Justice And The (South African) City: Retrospect And Prospect.” *South African Geographical Journal* 86, no. 1 (2012): 1–6.

———. “Social Justice and the Ethics of Development in Post-Apartheid South Africa.” *Philosophy & Geography* 2, no. 2 (1999): 157–177.

———. “Social Justice Revisited.” *Environment and Planning A* 32 (2000): 1149–1162.

Solomon, Jill. *Corporate Governance and Accountability*. 4th Ed. Chichester, UK: John Wiley & Sons Ltd, 2013.

Soman, D. “Framing, Loss Aversion, and Mental Accounting.” In *Blackwell Handbook of Judgment and Decision Making*, edited by D.J. Koehler and N. Harvey, 379–398. Oxford UK: Blackwell Publishing Ltd, 2004.

“South Africa to Procure Still More Renewable Energy.” *South Africa Info*. April 15, 2014. http://www.southafrica.info/business/economy/infrastructure/energy-150414.htm#.VZUf_-1Viko.

“South Africa: Winter Freeze Highlights Homeless Crisis.” *IRIN Africa*. May 24, 2007. http://www.irinnews.org/report/72357/south-africa-winter-freeze-highlights-homeless-crisis.

Staff Reporter. “Water Expert Warns of Crisis by 2020.” *Mail and Guardian*. February 19, 2011. http://mg.co.za/article/2011-02-19-water-expert-warns-of-crisis-by-2020.

Statistics South Africa. “People | Statistics South Africa,” 2013. http://beta2.statssa.gov.za/?page_id=737&id=1.

Stubbs, P. “Stretching Concepts Too Far? Multi-Level Governance, Policy Transfer and the Politics of Scale in South East Europe.” *Southeast European Politics* 7, no. 2 (2005): 66–87.

Sunstein, C.R. *After the Rights Revolution: Reconceiving the Regulatory State*. USA: Cambridge University Press, 1990.

———. *Designing Democracy: What Constitutions Do*. New York, USA: Oxford University Press, 2001.

———. “Irreversibility.” *Law, Probability and Risk* 9, no. 3–4 (September 1, 2010): 227–245.

———. “The Storrs Lectures: Behavioral Economics and Paternalism.” *SSRN Electronic Journal* (November 29, 2012).

Supreme Court of the Philippines. Minors Oposa v. Secretary of the Department of Environmental and Natural Resources 33 ILM 173 (1994) (1994).

Swyngedouw, E. "Authoritarian Governance, Power, and the Politics of Rescaling." *Environment and Planning D: Society and Space* 18 (2000): 63–76.

———. "Neither Global Nor Local: 'Glocalization' and the Politics of Scale." In *In Spaces of Globalization: Reasserting the Power of the Local*, edited by K Cox, 137 – 166. New York/London: Guilford/Longman, 1997.

Tarras-Wahlberg, Hakan. "Mining and Social License to Operate: Differences and Similarities in South Africa and Sweden." *Stockholm School of Economics (Presentation)* (2013). http://www.slideshare.net/SSE_Insights/investments-andbusinessinsouthernafricahakantarraswahlberg.

Tesch, R. *Qualitative Research: Analysis Types and Software Tools*. New York, USA: Falmer, 1990.

"The Dublin Statement on Water and Sustainable Development." In *International Conference on Water and the Environment*, 1992. http://www.wmo.int/pages/prog/hwrp/documents/english/icwedece.html.

"The Equator Principles," 2011. http://www.equator-principles.com/.

The Institute of Directors in Southern Africa. *King Report on Governance for South Africa (King III)*, 2009. http://c.ymcdn.com/sites/www.iodsa.co.za/resource/collection/94445006-4F18-4335-B7FB-7F5A8B23FB3F/King_Code_of_Governance_for_SA_2009_Updated_June_2012.pdf.

The International Network for Acid Prevention. "Sources of Acid Rock Drainage, Neutral Mine Drainage, and Saline Drainage." *GARD Guide*, 2012. http://www.gardguide.com/index.php/Chapter_4#4.3_Sources_of_Acid_Rock_Drainage.2C_Neutral_Mine_Drainage.2C_and_Saline_Drainage.

"The Public Participation Process." *South African History Online*, 2010. http://www.sahistory.org.za/archive/chapter-13-public-participation-process.

The Supreme Court of Appeal of South Africa. HTF Developers v Minister of Environmental Affairs and Tourism and Others (337/06) ZASCA 37; [2007] SCA 37 (RSA); [2007] 4 All SA 1108 (SCA) (28 March 2007) (2007).

Thiel, A., and C. Egerton. "Re-Scaling Of Resource Governance As Institutional Change: The Case Of Water Governance In Portugal." *Journal of Environmental Planning and Management* 54, no. 3 (2011): 383–402.

Thompson, J. *Intergenerational Justice: Rights and Responsibilities in an Intergenerational Polity*. New York, NY, USA: Routledge, 1990.

Tonn, B.E. "Integrated 1000-Year Planning." *Futures* 36 (2004): 91–108.

Tremmel, J.C. *Handbook of Intergenerational Justice*. Cheltenham UK: Edward Elgar Publishing Ltd, 2006.

Truter, Justin. "Environmental Law Compliance - the Noose Is Tightening." *Werksmans Attorneys Legal Briefs*, 2014. http://www.werksmans.com/legal-briefs-view/environmental-law-compliance-noose-tightening/.

Truth and Reconciliation Commission of South Africa. "Truth and Reconciliation Commission of South Africa Report (Volume 6, Section 2, Chapter 6)" 21 March (2003). http://www.gov.za/reports/2003/trc/index.html.

Turton, A.R. "Can Water Governance Deepen Democracy in South Africa? Towards a New Social Charter for Mining." *International Journal of Water Governance* 1 (2013): 65–87.

———. "Three Strategic Water Quality Challenges That Decision-Makers Need to Know About and How the CSIR Should Respond." *Keynote Address: A Clean South Africa, Presented at the CSIR Conference "Science Real and Relevant."* November 18, 2008.

Turton, A.R., J.H. Hattingh, G.A. Maree, D.J. Roux, M. Claassen, and W.F. Strydom. *Governance As A Trialogue: Government-Society-Science In Transition*. *The Economics of Peace and Security Journal*. Germany: Springer-Verlag, 2007.

———. *Governance As A Trialogue: Government-Society-Science In Transition*. Germany: Springer-Verlag, 2007.

Tversky, A., and D. Kahneman. "Judgement Under Uncertainty: Heuristics and Biases." *Science* 185, no. 4157 (1974): 1124–1131.

———. "Prospect Theory: An Analysis Of Decision Under Risk." *Econometrica* 47, no. 2 (1979): 263–292.

———. "Rational Choice and the Framing of Decisions." Edited by Glenn Shafer and Judea Pearl. *The Journal of Business* 59, no. 4 (1986): S251.

United Nations. "Human Rights 50th Anniversary / Universal Declaration." *United Nations Department of Public Information*, 1998. http://www.un.org/rights/50/decla.htm.

United Nations Environmental Program. *Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication*, 2011. http://www.unep.org/greeneconomy/Portals/88/documents/ger/ger_final_dec_2011/GreenEconomyReport_Final_Dec2011.pdf.

United Nations General Assembly. "The Universal Declaration of Human Rights," 1948. http://www.un.org/en/documents/udhr/.

United Nations General Assembly 10967. *General Assembly Adopts Resolution Recognizing Access To Clean Water, Sanitation*, 2010. http://www.un.org/News/Press/docs/2010/ga10967.doc.htm.

Van der Linde, M., and E. Basson. "Environment." In *Constitutional Law of South Africa (2nd Edition), Volume 3*, edited by W. Woolman, M. Bishop, and J. Brickhill. South Africa: Juta Legal and Academic Publishers, 2002.

Van der Schyff, E., and G. Viljoen. "Water and the Public Trust Doctrine – A South African Perspective." *TD: The Journal for Transdiciplinary Research in Southern Africa* 4, no. 2 (2008): 339–354.

Van der Westhuizen, Linda. "AfriForum Says Court Order Is a 'Landmark Victory.'" *Zoutpansberger Newspaper*, October 12, 2012. http://www.zoutnet.co.za/details/12-10-2012/afriforum_says_court_order_is_a_landmark_victory/15371.

Van Eeden, E.S., M. Liefferink, and J.F. Durand. "Legal Issues Concerning Mine Closure and Social Responsibility on the West Rand." *TD: The Journal for Transdisciplinary Research in Southern Africa* 5, no. 1 (2009): 51–71.

Van Eeden, E.S., M. Liefferink, and E. Tempelhoff. "Environmental Ethics and Crime in the Water Affairs of the Wonderfontein Spruit Catchment, Gauteng, South Africa." *TD: The Journal for Transdisciplinary Research in South Africa* 4, no. 1 (2008): 31–58.

Van Notten, Michael, and Spencer Heath. "Law Without Government." *Policy* 22, no. 3 (2006).

Van Schie, Els C M, and Joop Van Der Pligt. "Influencing Risk Preference in Decision Making: The Effects of Framing and Salience." *Organizational Behavior and Human Decision Processes* 63, no. 3 (1995): 264–275.

Visser, Wayne, Charlotte Middleton, and Malcolm McIntosh. "Corporate Citizenship in Africa." *Journal of Corporate Citizenship* no. 18 (2005): 18–20.

"Vital Water Graphics." *United Nations Environmental Program Graphics Website*. Accessed February 11, 2012. http://www.unep.org/dewa/vitalwater/article69.html.

Waldron, Jeremy. "How Law Protects Dignity." *NYU School of Law: Public Law and Legal Theory Research Paper Series, Working Paper No.11-83* December (2011).

———. "Human Rights: A Critique of the Raz/Rawls Approach." *NYU School of Law, Public Law Research Paper No. 13-32* June (2013).

———. "Is Dignity the Foundation of Human Rights?" *NYU School of Law, Public Law Research Paper No. 12-73* January (2013).

———. "Kant's Legal Positivism." *Harvard Law Review* 109, no. 7 (1996): 1535–1566.

Walker, M.U. "Moral Luck and the Virtues of Impure Agency." *Metaphilosophy* 22 (1991): 14–27.

Warburton, Catherin. “The State of the Land: Developments in the Regulation of Contaminated Land in South Africa.” *Warburton Attorneys and IMBEWU Sustainability Legal Specialists (Pty) Ltd* June (2015).

Warren, M. “Do Potential People Have Moral Rights.” In *Obligations to Future Generations*, edited by R.I. Sikora and B. Barry. Cambridge, UK: White Horse Press, 1978.

“Water Crisis.” *World Water Council*, 2012. http://www.worldwatercouncil.org/index.php?id=25.

Weinrib, E. J. “Law as a Kantian Idea of Reason.” *Columbia Law Review* 87, no. 3 (1987): 472–508.

WESSA. *Mining and Mining Resources: WESSA Position Statement*. Howick, South Africa, 2012. http://wessa.org.za/uploads/images/position-statements/Mining and Mining Resources - WESSA Position Statement Approved 2013.pdf.

“Western Basin Is an AMD Disaster Area, Says Mintails.” *Mining News*. April 15, 2014. http://www.miningne.ws/2014/04/15/western-basin-is-an-amd-disaster-area-says-mintails/.

Wex Legal Dictionary/Encyclopedia. “Takings.” *Cornell University Law School, Legal Information Institute*. Accessed June 25, 2014. http://www.law.cornell.edu/wex/takings.

Whitehouse, Lisa. “Corporate Social Responsibility: Views from the Frontline.” *Journal of Business Ethics* 63 (2006): 279–296.

Williams, B. “Moral Luck.” In *Moral Luck, Philosophical Papers 1973-1980*. Cambridge UK: Cambridge University Press, 1981.

Williams, Garrath. “Responsibility.” *Internet Encyclopedia of Philosophy* (2009). http://www.iep.utm.edu/responsi/.

Williams, Walter E. “The Origins and Demise of South African Apartheid: A Public Choice Analysis.” *The Independent Review: The Independent Institute* Summer (1999). http://www.independent.org/publications/tir/article.asp?a=304.

Winde, Frank, and EJ Stoch. “Threats and Opportunities for Post-Closure Development in Dolomitic Gold Mining Areas of the West Rand and Far West Rand (South Africa) - a Hydraulic View Part 1: Mining Legacy and Future Threats.” *Water SA* 36, no. 1 (2010): 69–74.

Woods, C. “The Environment, Intergenerational Equity and Long-Term Investment.” *Unpublished DPhil Thesis, University of Oxford* (2011).

Woolman, Stu. “Application.” In *Constitutional Law of South Africa(2nd Edition)*, edited by S. Woolman and M. Bishop, 31–1 – 31–161. South Africa: Juta Law, 2008.

World Coal Association. “Coal Mining,” 2015. http://www.worldcoal.org/coal/coal-mining/.

Yager, Thomas R. “The Mineral Industry of South Africa.” *USGS 2012 Minerals Yearbook: South Africa* December (2014): 38.1 – 38.26.