



An Inquiry Into the Diverse Modes of Caring in Khayelitsha Wetlands Park's World of Many Worlds.

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COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signed:

Signed by candidate

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List of Abbreviations

AIME - An Inquiry Into Modes of Existence.

CoCT - City of Cape Town.

DFFE – The Department of Forestry, Fisheries, and the Environment.

eNCA - eNews Channel Africa

KWP - Khayelitsha Wetlands Park.

LGBTQIA+ - Lesbian, Gay, Bisexual, Transgender, Queer, Intersex, Asexual, plus+

NPO - Non-profit organisation.

SST - Silvertown.

STS – Science and Technology Studies.

UNICEF - The United Nations International Children's Emergency Fund.

WHO - World Health Organisation.

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Abstract

The management and governance of wetlands in Cape Town is largely informed by economic, techno-scientific, and engineering approaches which are deeply rooted in discourses of “Earth mastery”. Earth mastery aims to command, predict, and control the Earth’s natural processes to access ecosystem services to benefit humans. When wetland management is solely informed by logics of domination and extraction for humans, then other ways of knowing, being, being with, and caring for spaces such as the Khayelitsha Wetlands Park (KWP) are often overlooked and overshadowed. Using Maria Puig de la Bellacasa’s (2011:90) work on ‘*Matters of Care in Technoscience*’ where the notion of care is viewed as “an affective state, a material vital doing, and an ethico-political obligation”, this thesis draws attention to meanings, practices, and enactment of care through thinking with people and the more-than-human worlds in the KWP.

Based on eight months of research in the KWP which involved looking at this space’s associated landscapes and multispecies communities, this thesis explores ways of living with and relating to the KWP in Cape Town, South Africa, which do not subscribe to logics of domination. This is done by highlighting the often overshadowed and taken for granted forms of care and reciprocity that do not fall into the realm of the “advanced”, “technical”, and “objective” approaches in techno-scientific and engineering practices. In this thesis, I argue that people who live with urban wetlands practise their more-than-techno-scientific approaches and versions of care in these spaces. The evidence basis for these more-than-techno-scientific and more-than-engineering approaches of care are drawn from firstly, people’s stories and experiences of relating to and living with the KWP and secondly, an analysis of care, co-existence, and co-becoming among more-than-human species in KWP.

This thesis then suggests the importance of deconstructing and queering the understandings of care practices in wetland spaces by arguing that the government and institutions responsible for wetlands could draw on decolonial approaches in managing and practising care in these spaces, shifting from logics of control and domination to relational and historicised interactions with wetlands to address environmental injustices of the past and of the present. Queer theory is often associated with gender and sexuality where it means diverging from what is normalised, for instance, understanding that there are other ways of being outside heteronormative binaries. For this thesis I conceive queering beyond the context of gender and sexuality, for instance, I suggest the importance of being aware that KWP and wetlands in

general host multiple worlds. Thus, governmental approaches of managing and caring for these waterbodies should not *only* conform to the techno-scientific and engineering notions of care. I suggest that these governmental approaches should be democratized and open a space to be informed by citizen science as well. They should understand that their approaches should not be a “one size fits all” as modes of being and of living differ from space to space. This thesis therefore uses the concept of queering as a way to suggest that techno-scientific governmental approaches of caring for wetlands must recognize the efforts of care that are practised by people and multispecies who live with these waterbodies and to start co-existing with them instead of overlooking and overshadowing them. This thesis, drew from the environmental humanities, environmental anthropology, and queer conceptual and theoretical schools of thought to achieve its purpose.

Key words: complexities of care, more-than-techno-scientific approaches of care, more-than-engineering approaches of care, more-than-human approaches of care, queering care, queering wetland relations.

INTRODUCTION

Khayelitsha Wetlands Park's World of Many Worlds

Introduction to an urban wetland and its surrounds

The research presented in this thesis took place in the Khayelitsha Wetlands Park (KWP), a peri-urban wetland adjacent to a settlement called Silvertown, informally known as SST (*see Figure I and Figure II below*) both located on the urban fringe of Cape Town, South Africa. The KWP is also bordered by other neighbourhoods namely, Makhaza, Makhaya and Qandugandu village as well as the South African Infantry Battalion Base which is informally known as Emajonini. Silvertown is in one of Cape Town's largest neighbourhoods called Khayelitsha, which features both formal and informal housing, formal and informal businesses, libraries, community halls, schools, and hospitals. It is a space of constant activity.

I lived in Khayelitsha, Silvertown whilst completing my undergraduate studies in 2015. I have previously conducted research in this neighbourhood for my honours project which explored the everyday lives, stories, and experiences of people who are located next to wetlands and storm water-infrastructure. This thesis also draws on some of the findings of my honours project in building its argument that the governmental techno-scientific¹ and engineering² practices of management which are often practised when managing and caring for wetlands in Cape Town are not the only approaches of care that take place in these spaces. There are other versions of care that are outside of these realms which need to be recognized in order for the techno-scientific approaches to avoid being limited when understanding care in wetland spaces. For instance, one of my participants informed me during the fieldwork process that she believes she has an *ina ethe* (give and take) relationship with KWP which she enacts through gardening

1 Techno-scientific versions of care for wetlands refer to the scientific fundamentalism management approaches that are employed to practice care on wetlands. (See: Gopalakrishnan, V. and Bakshi, B.R., 2018. Ecosystems as unit operations for local techno-ecological synergy: Integrated process design with treatment wetlands. *AIChE Journal*, 64(7), pp.2390-2407).

2 Engineering versions of care for wetlands refer to the application of engineering principles, practices, and technologies in solving problems and improving care for wetlands. (See: Dini, J. and Bahadur, U., 2016. South Africa's national wetland rehabilitation programme: Working for wetlands. *The Wetland Book; Springer: Dordrecht, The Netherlands*, pp.3).

(see chapter three). Stories and phenomena such as *ina ethe* do not always fit in scientific and engineering practices that look to solve problems in urban wetlands especially when fences, walking paths, and bridges are built.

Prioritizing *only* siloed approaches to manage urban wetlands where human settlements are treated as separate from the environment result in management approaches failing to observe the kinds of material flows that occur or can occur between urban settlements and the natural environment. For instance, one of my participants showed concern over how limited the techno-managerial government is when it comes to caring for KWP and said:

“Ngoku kwakuzakuqala u Day Zero ngo 2018 ndandinengcinga zokuba if urhulumente ebelikhathalele ngendlela efanelekileyo eligxobho sasizakukha amanzi kulo for ukuhlamba iimpahla nokupheka sisuke siwathenge amanzi wokusela, but iindawo ezinintsi kweligxobho zimdaka so sasingeno kwazi”

(“When Day Zero was approaching in 2018, I had thoughts that if the government cared for the KWP properly, we were going to fetch water from the pond to do laundry and to cook then buy water for drinking. But then, most parts of the wetland are dirty, so we were not going to be able to do that”).

Such pitfalls could have been avoided if intensive and inclusive conversations of understanding suitable care for KWP took place between techno-scientific wetland management and residents who live with this urban wetland prior to the technical developments. If ways of relating between residents of Silvertown and the KWP were prioritized, KWP could have been an alternative of providing water for residents when the Cape Town Day Zero³ was approaching.

3 The Cape Town Day zero/water crisis in South Africa was a time of extreme water scarcity in the Western Cape region, most notably affecting the City of Cape Town. (See: Maxmen, A., 2018. As Cape Town water crisis deepens, scientists prepare for 'Day Zero'. *Nature*, 554(7690), pp.13).

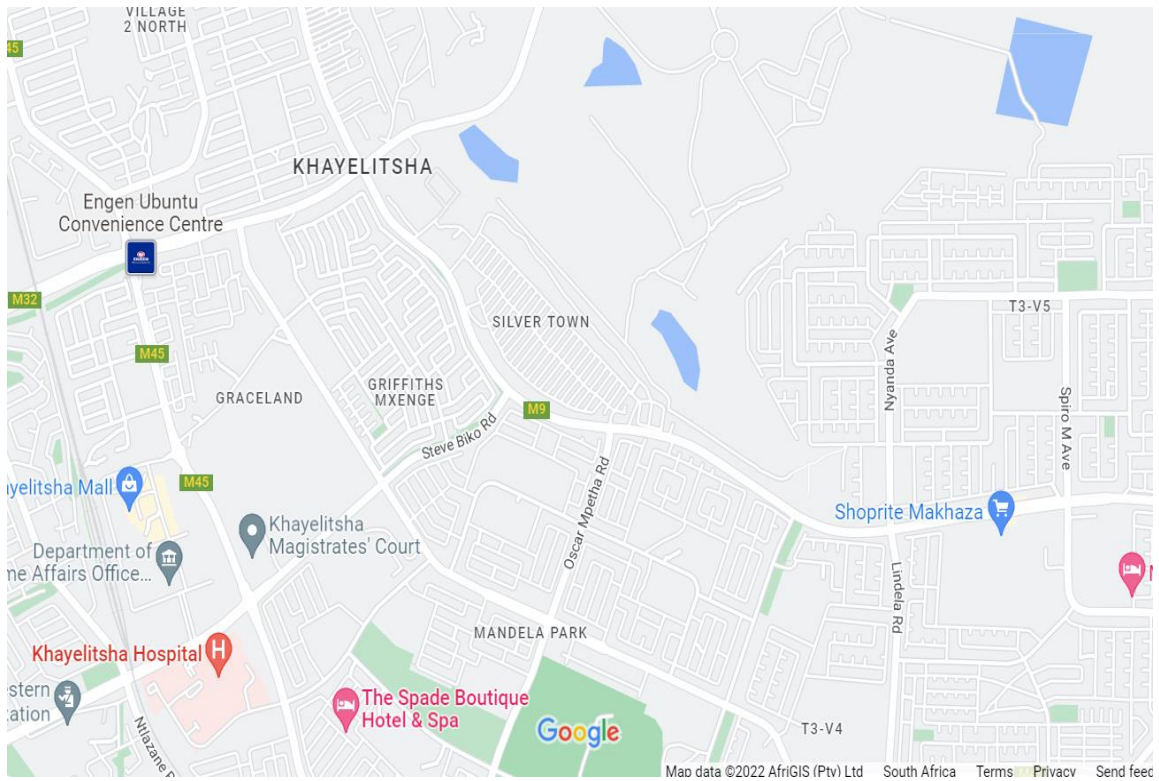


Figure I: A map showing SST/Silvertown, KWP and the surrounding areas (Source: Google Maps, 2022).



Figure II: A map showing SST/Silvertown, KWP and the South African Infantry Battalion Base (Source: Mathenjwa, 2017).

Silvertown, which consists of predominantly IsiXhosa speaking people living mostly in the informal settlements known as shack⁴ areas, is located on a thin strip between the formal Reconstruction and Development Programme (RDP)⁵ houses on one side and the KWP on the other. In this informal settlement, a site ravaged by fires (see *figure III below*) on several occasions (at least once a year) over the recent years (Smit, 2018), residents have to make use of whatever cheap materials are available to construct homes. Often available materials are not ideal, are flammable or not flame retardant (McDonald and Smith, 2004). Thus, the fires often spread quickly in these areas, and this often results in devastating impacts where many residents lose all their belongings in a matter of minutes (Pather, 2018).

In most cases, homes are usually close to one another in informal areas which is why fires easily expand when such incidents occur (see *figure III below*). In October 2018, there was a fire incident that left hundreds of Silvertown residents homeless, and all their belongings burned down (Smit, 2018; Pather, 2018). One research participant highlighted that one of the reasons for the expansion of the fire during the 2018 incident was that the fire fighters ran out of water and had to wait for a while to get more water. Had there been proper and flexible piping in the KWP that would easily reach to Silvertown, KWP water would have been useful at that moment. It would have contributed towards preventing the fire from spreading. Drawing attention to the incidents of fire in Silvertown as an introduction to the wetland and adjacent

4 Shacks are urban informal settlements and are the fastest-growing household sector in South African cities (See: Turok, I. and Borel-Saladin, J., 2016. Backyard shacks, informality, and the urban housing crisis in South Africa: stopgap or prototype solution? *Housing Studies*, 31(4), pp.384-409).

5 The Reconstruction and Development Programme (RDP) is a policy framework for integrated and coherent socio-economic progress. It seeks to mobilise South African people and our country's resources toward the final eradication of the results of apartheid. Its goal is to build a democratic, non-racial, and non-sexist future and it represents a vision for the fundamental transformation of South Africa, one of the efforts to achieve that is to provide proper housing for those who do not have proper housing. (See: Cameron, R., 1996. The reconstruction and development programme. *Journal of Theoretical Politics*, 8(2), pp.283-294).

settlements demonstrates the irony that these fire incidents result in devastating impacts for residents while there is a waterbody (KWP) in proximity (see *figure IV below*).



Figure III: A picture showing an aftermath of a fire incident in Silvertown (Source: Smit, 2018).

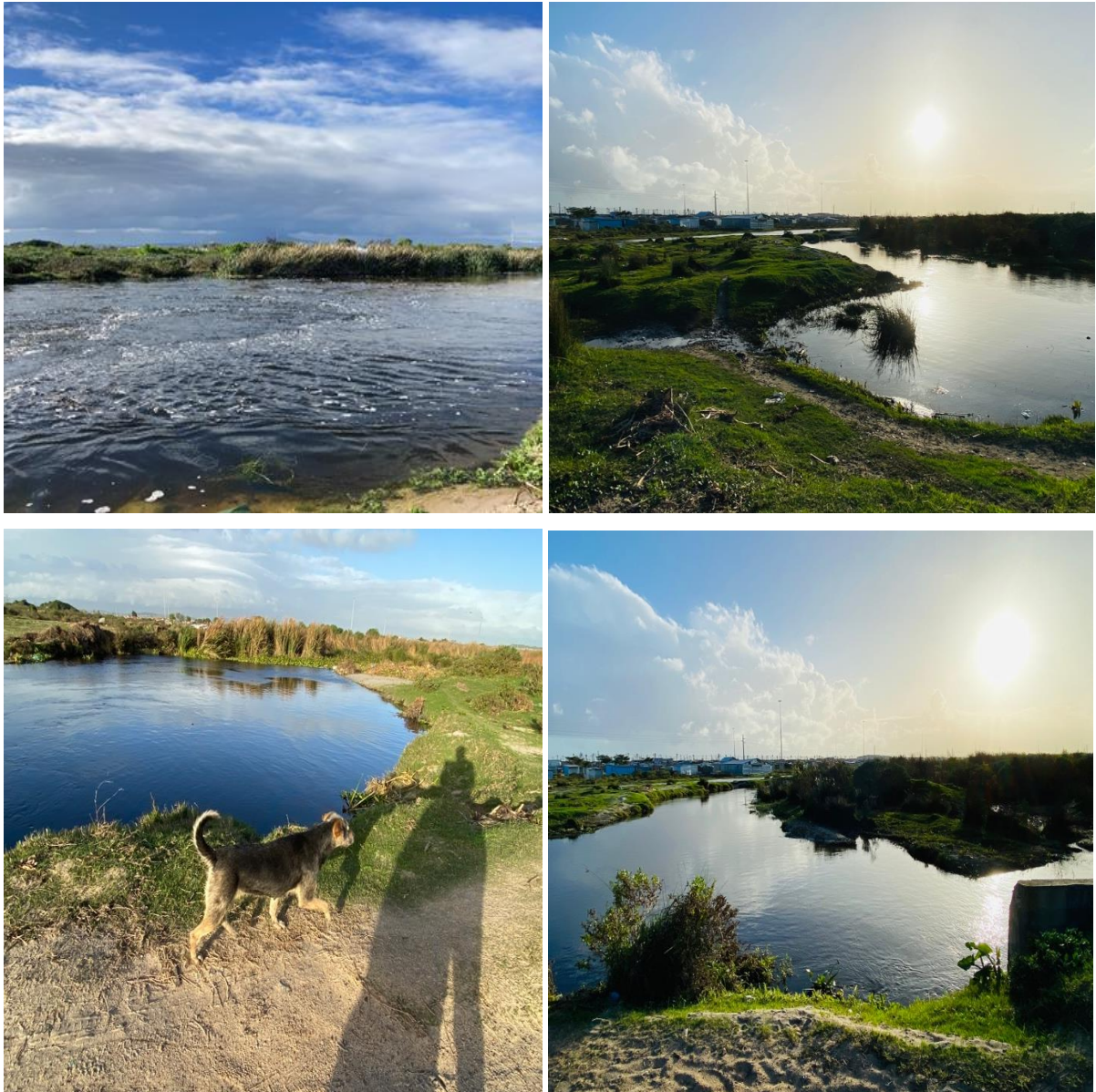


Figure IV: Pictures showing that KWP is saturated with water permanently (Source: Asemahle 2021).

The upgrading of the KWP started in 1996 and continued until 2010 with the intention to provide a green space for local residents and multispecies communities (Swift, 2020). In 2013, the KWP was earmarked for further development by the City of Cape Town's (CoCT) Community Service Directorate, with the focus being on further infrastructure development including the building of ablution facilities, research and supervisory quarters, office accommodation, as well as, the improvement of the waterbody's physical appearance and surrounding landscape to enhance the aesthetic value of the wetland park (*see figure V below for KWP physical appearance*) (PropertyWheel, 2013). Recommendations for zoning and further development of the area were also proposed (PropertyWheel, 2013). To date, most of the planned infrastructure projects have been implemented and the KWP is a beautiful hub

which provides a habitat for fauna and flora amid rapid urban growth, as well as providing a space for residents to engage in recreational activities (Sa-venues.com, 2020). “The KWP can be seen as the CCT’s poster child of what caring for wetlands in the heart of an informal settlement could look like” (see *figure V below*) (Solomon, 2022: 92).



Figure V: Pictures showing physical pleasantness of KWP (source: Asemahle, 2022).



Figure VI: A poster from the urbanscapes website showing the rehabilitated wetlands around Cape Town including KWP (source: Swift 2020, <https://urbanscapes.co.za/2020/06/08/wetland-rehabilitation-and-parks/>).

When thinking of upgrading wetlands, the WaterAid (2021) predominantly focuses on the quality and hygiene, noting within those specific contexts how polluted wetlands are harmful to human health and the ecosystem. For instance, in its 2021 report, the WaterAid argued that in some developing countries, polluted wetlands can result in health issues for people who live near these spaces and that the pollution occupying these waterbodies is not good for the ecosystem. The report further stated that because of water poverty in some developing countries, many people are solely dependent on these polluted waterbodies for drinking and cooking which is why they cannot escape the health issues that may result (WaterAid, 2021).

Organizations and governmental institutions such as the City of Cape Town (CoCT), the World Health Organisation and UNICEF, Urbanscapes, and the Department of Forestry, Fisheries, and the Environment (DFFE) focus on finding techno-scientific and engineering solutions to manage and to decrease pollution in wetlands, most often for human benefit and for the provision of ecosystem services. In 'Anthropocentrism: More than Just a Misunderstood Problem' Kopnina et al., (2018) argued that when human needs are the sole focus on

environmental governance, consequences such as environmental degradation, biodiversity decline, and climate change result. When wetlands become extractable resource, meanings attached to these spaces by humans and the more-than-human, in different contexts, are lost (Gara, 2021). Sometimes the techno-scientific care practices for wetlands are employed so that these waterbodies can contribute towards strengthening the country's economy through ecotourism (Grundling et al., 2017). For instance, the Department of Forestry, Fisheries, and the Environment (2021) implemented a plan of conserving, rehabilitating, restoring, and caring for polluted and degraded wetlands. Interventions that are listed on the plan include building concrete and gabion structures, creating sediment traps, plugging artificial drainage channels, plant propagation, re-vegetation, and bioengineering (Department of Forestry, Fisheries, and the Environment, 2021). Department of Forestry, Fisheries, and the Environment (2021) also believed that building boardwalks, bird hides and interpretive signboards will enhance the recreational, tourism and educational value of rehabilitated wetlands.

Although all these interventions are essential and beneficial to wetland spaces, most of them have pitfalls as they overshadow, overlook, and do not have space for care practices that are outside of the techno-science domain of knowledge. For instance, Solomon (2022:188) stressed that relying on certain ways of knowing waterbodies (i.e., through measurement and technicalities) “allow for the ability to ignore the problem and harm, histories of injustice and extractive relations to the Earth, since they do not fit with the science.” For this reason, this thesis depicts and prioritizes the more-than-techno-scientific and more-than-engineering care practices in KWP which are practised by people and multispecies communities⁶ who live near this urban wetland, to disrupt the normalisation of ignoring the problem and harm, and extractive relations to wetlands. It is important to show these versions and stories of care so that the multiple ways of knowing KWP cannot be dependent on one version of truth. I therefore draw on Bruno Latour's AIME (An Inquiry Into Modes of Existence) theory which argues that rationality must be “woven from more than one thread” and each mode of living and of knowing is “rational or at least none is irrational, none is less fundamental, and the entities associated with each are real” (Latour 2013:491). I acknowledge that there are wetlands which need these types of care that fall under techno-science, for instance, the building of

6 Containing or involving two or more species (see: Kirksey, E. ed., 2014. *The multispecies salon*. Duke University Press).

concrete structures. So, this thesis is neither dismissing techno-science nor labelling it as if it lacks objective validity. Instead, it attempts to decouple and to dispute the notion of techno-science as the ultimate truth at the expense of other ways of living with and of knowing wetlands that are critiqued as superstitious and irrational (Solomon, 2022).

Green (2020) argued that the fundamentalism of science and engineering sometimes manifests in the governmental institutions' decision making. In some cases, the government takes the science and engineering "methods of control and measurement into policy, overshadowing other ontologies" (Green, 2020:16). Through this approach, "the governance might miss what matters to others" (Green, 2020:16). The "others" that Green is referring to are multispecies and communities living in the margins.⁷ The Department of Forestry, Fisheries, and the Environment's (2021) plan of conserving, rehabilitating, restoring, and caring for wetlands, which I also draw on, does not bring up the existing versions of care that are practised by people who live with some of the wetlands they are working with. Thus, they do not include "others" (Green, 2020), instead they listed what they have done and what they are planning to do without meaningful intensive engagement with people who live with urban wetlands and without understanding their ways of living with these spaces.

I argue this because their plan showed the dissemination of their strategies (see The Department of Forestry, Fisheries, and the Environment, 2021), however, there is nothing that shows intensive feedback of what people who live with these spaces think about the department's versions of care. The City of Cape Town (2015) prioritizes stakeholder engagements when caring for wetlands. The problem is how it is done, as a perfunctory means. Solomon (2022) highlighted that in one of the neighbourhoods where she conducted her research, participants acknowledged that they were part of the "engagements," but often times, they did not understand what the officials were saying. They felt like they were being told what would happen rather than consulted or engaged in a conversation (Solomon, 2022).

In KWP, most of the participants I engaged with said they did not know about KWP's development plans and strategies. Instead, they would see people working on the waterbody

⁷ Green, L., 2020. *Rock| water| life: ecology and humanities for a Decolonial South Africa*. Duke University Press.

and assume that there is a project going on. The lack of intensive and inclusive conversations linked to tangible actions - when the government is practising care on wetlands - is one of the major indicators of the shortcomings of techno-scientific approaches. One of my participants noted: “I don’t remember being consulted when KWP was developed, most of us in the neighbourhood did not know what was going on. Even now when there’s an event that involves government officials, we sometimes see the space being busy and just assume something is taking place”. When I asked another participant if she knew about the development projects that took place in KWP she said, “Not really, I assume the city engages more with people who have projects going on in the wetlands or community leaders and committees because it’s always them who know about these things, not the entire neighbourhood.”

Both my participants’ responses, as noted above, made me realise the importance of Kotze’s (2021) point of view which highlights the necessity of understanding social contexts when the government is engaging and working with wetlands. Kotze (2021:5) further stressed that “failure to develop this understanding may result in rehabilitation efforts that ‘fight against the site’ or neglect the underlying causes of degradation.” Overall, this thesis argues that relationships of care in wetlands are complex, thus managing wetlands should not be neutral. Multispecies communities (including the human) who live near these spaces have relationships that include care, among themselves and with the waterbodies. The government institutions which manage these spaces must consider these relationships prior to applying techno-scientific and engineering versions of care. This enables the inclusion of other approaches and versions of care already practised by people and multispecies living within these spaces.

This thesis will show some of the overshadowed relationships of care that take place between KWP and multispecies communities as Marisol de la Cadena (2019) argued in *‘Uncommoning nature: stories from the Anthro-not-seen’* that the modern environmentalism and modern conservation tend to overlook the interconnectedness of environmental bodies both with each other and the humans who live with these bodies. In *‘Bodies of Water’* Neimanis (2017) argued that waterbodies are complex as they consist of toxicity, queerness, coloniality, sexual difference, global capitalism, imagination, desire, and multispecies communities. However, techno-scientific and engineering approaches do not always attend to these or at least they only do so to a certain extent and this thesis is an attempt to look beyond these limiting parameters.

When the human-environment ways of relating are looked at, issues of gender and sexuality often come from a heteronormative understanding of the role of men and women (Seymour, 2020). For instance, Munishi et al., (2012) applied a heteronormative approach of looking at the activities men and women practise in wetlands that are in Kilombero, Morogoro region in Tanzania. Munishi et al., (2012) argued that women prioritized crop farming as means of providing food for their families while men prioritized fishing to gain small income. There was no acknowledgement of queer individuals who live with wetlands (Munishi et al., 2012). How queer individuals relate to the environment have been a largely understudied area within environmental studies (Seymour, 2020) and through my research, I hope to contribute to growing the field. Drawing from Neimanis's (2017) argument mentioned above that waterbodies consist of queerness and sexual difference, telling queer-related stories of care in wetland spaces and employing queer theory when telling such stories in this thesis is also an effort of suggesting that the techno-managerial officials who work with these spaces must engage with such stories. These stories have a potential of evoking the governmental institutions to think outside of their domains of knowledge regarding caring for wetlands. Engaging with and being exposed to diverse experiences opens a possibility of new insights, more creative and innovative progress, and effective collaboration. This does not often happen when the focus is on singular narratives.

Rationale and aim

From 2017 to 2018, Cape Town encountered severe drought with waterbodies such as dams running low, to the point where they almost dried up. The day that this was to occur was referred to as Day Zero. A drought of this magnitude last occurred a century ago (Department of Water and Sanitation, 2018). This event resulted in water being a public concern and water-related issues gaining much attention in Cape Town. The CoCT invested in and has largely given attention to major water supplies, from dams to other alternative sources such as boreholes (Department of Water and Sanitation, 2018). While the CoCT directed their attention to bulk water supply, all the attempts to finding solutions often focused on technical and scientific interventions (Department of Water and Sanitation, 2018). News channels such as eNews Channel Africa (eNCA) invited mostly water experts specializing in Science and Technology Studies (STS) to speak on the issue.

However, there was no diversity in these conversations. Urban rivers and wetlands were not given much attention. Instead, they continued being a “sink for urban” waste as most of them still are to this day (Gara, 2021; Solomon, 2022). I observed that waterbodies in Cape Town are not treated the same way as major water supplies garner more attention than urban waterbodies. Solomon (2022) highlighted that the Cape Town 2017/2018 severe drought (Day Zero) and growing issues around urban waterbodies’ pollution resulted in collaborative work being proposed, which does not happen often, between scientists, engineers, and social scientists. It has been three to four years since the severe drought happened and major water supplies are still protected but there are no continuous conversations that are in the limelight regarding polluted urban waterbodies. Such conversations happen in certain spaces. This is one of the reasons that drew my attention towards doing research in a peri-urban wetland (KWP), to keep conversations about these spaces alive.

The works of van Koppen and Schreiner (2014), Peters and Woodhouse (2019), and Gara (2021) highlighted that in South Africa, the management of waterbodies is largely informed by technical designs, science, and economics. This means governmental institutions responsible for waterbodies prioritize techno-scientific interventions and narrow approaches that do not take into consideration all forms of care for wetlands. This is the reason this thesis aims to challenge the general assumptions that are often made by the forms of governance and management that caring for waterbodies can only be done scientifically. Other ways of caring for waterbodies that are outside the scientific realm are explored in this thesis, specifically in wetland spaces.

This thesis also aims to show that governmental institutions responsible for wetlands need to consider the context of the space and its surroundings and stretch their efforts of care by accommodating the multiple species that live in the space. For instance, care practices employed in pristine remote wetlands are not always suitable for urban wetlands. It is important to reimagine the care practices of urban wetlands by the forms of governance not just for humans and ecosystem services but for multispecies communities as well. This way, the aim is to position other types of care and stories related to wetlands at the fore, so that the techno-scientific environmental forms of governance are not the only forms of knowing, when managing and thinking about KWP.

Thesis structure: the multiple threads of KWP

Throughout the thesis, I consider the various ways of being between the residents living with KWP, the more-than-human bodies that exist in this space, and the KWP itself to explore the complex more-than-techno-science and more-than-engineering approaches of care which manifest in KWP. I outline what I aim to achieve through exploring what kind of activities shape and make these multiple modes of care – by looking at how multispecies communities are caring for KWP, how KWP is caring for multispecies communities, how multispecies communities are caring for one another in this space and vice versa. I also understand some of these care relations from a queer perspective - by telling queer stories of care which I encountered- where heteronormativity is troubled, especially in the context of humans to clarify the pitfalls of the reliance on techno-science by the governmental institutions responsible for these spaces. Telling queer stories is an effort of suggesting the importance of being divergent. In engaging with these multiple ways of being, I draw on Latour's (2013) '*AIME*' and Neimanis's (2017) '*Bodies of water*'. I also draw on the work of several global south scholars - Adichie's (2009) '*Dangers of a single story*', Blaser and de la Cadena's (2018) '*A world of many worlds*', Puig de la Bellacasa's (2011) '*Matters of Care in Technoscience*', and Puig de La Bellacasa's (2017) '*Matters of care: Speculative ethics in more than human worlds.*' All these bodies of literature highlight the shortcomings of relying on a single narrative, especially "stereotypes" that overshadow other complex truths. Such theories deconstruct the notion of one version of care (techno-science) in waterbodies such as wetlands, drawing attention to how intricate care practices are in a world of many worlds such as KWP. As much as this thesis provides diverse stories that highlight various ways of living with a wetland, I do not claim to tell all the truths that exist in KWP. Instead, I tell certain stories that show particular ways of caring that do not fit into techno-science.

Chapter one delves into how the South African wetland governmental institutions rely on and implement techno-scientific modes of care in wetland settings. As noted above, I then discuss the shortcomings of this single version of care for wetlands by unpacking conceptual frameworks of scholars such as Adichie (2009), Latour (2013), Neimanis (2017), Puig de la Bellacasa (2017), and De la Cadena and Blaser (2018). The second chapter discusses the research methods that were employed to conduct this research. It was important to have flexible research methods because some of the observed multispecies communities required different methods from others (Majombozi, 2015). For instance, I was not able to interview multispecies

such as the KWP fauna and flora. I was only able to interview humans who live with KWP. I then had to think of other ways of engaging with the fauna and flora (i.e., recording soundscapes, detecting smells, and taking pictures). Since this research involved multispecies communities, I had to be mindful. This approach of mindfulness (including engaging many senses) is unpacked in the second chapter alongside ethical considerations, all of which I suggest are necessarily considered together.

The third chapter unpacks diverse versions of care that multispecies practise with the KWP and with each other. I highlight these relations of care through peoples' stories, shedding light on how the multispecies communities practise care that is beyond techno-scientific versions of care in the context of KWP. I then discuss some of the limitations and shortcomings of the techno-managerial approaches towards wetlands. Toxicity, queerness, sexual difference, and imagination are delved into in the context of multispecies communities (Neimanis, 2017) to show the complexities of care. Lastly, I asked for my participants' thoughts regarding what they think would help techno-science management and versions of care to avoid its shortcomings. As such, part of chapter three discusses my participants' recommendations and some of my suggestions. The fourth chapter consists of stories of more-than-techno-scientific relations of care that were mostly observed among more-than-human multispecies communities. This was done using the senses of sight, sound, and smell. People's voices do appear because human and more-than-non-human communities live together (Tsing 2012). It was important for the wetland and more-than-human communities to tell their own stories; this approach aims to decentralize and disrupt the logic that only techno-science can practise care in wetlands (Coulter, 2016).

CHAPTER ONE

The limitations of only considering one version of “Care” in wetland management.

Conceptual and theoretical framework of the study

Introduction

As noted in the introduction, Cape Town’s Day Zero drought conditions and the growing number of protests for service delivery in the city recently (i.e., proper housing, waste collection, flushing toilets and running water taps), particularly by residents from low socio-economic status neighbourhoods such as Khayelitsha, have highlighted the highly differential ways of how water is managed and thought of in the City of Cape Town (CoCT) (Nleya, 2011; Maxmen, 2018; Solomon, 2022). This is evident through distinct priorities for freshwater and wastewater (Solomon, 2022), which has meant that different waterbodies are managed and governed using different approaches. For instance, dams which provide potable water into homes are protected in vastly separate ways from urban rivers and wetlands (Solomon, 2022). When an object provides an important service (a commodity), it is cared for, its protection is prioritized (Abel and Nelson, 1990; Lesshaftt, 2017). As noted, on the other hand, urban wetlands such as the KWP are used as a “sink for urban waste” (Solomon, 2022). Even though the techno-scientific and engineering approaches make efforts to manage and practise care for KWP, there are still shortcomings because these types of waterbodies are not prioritized as dams that channel water into homes, thus, they receive a “less prioritized” form of care. One of my participants said that one of the reasons she partakes in protests for service delivery, is because if residents would get adequate infrastructure such as flushing toilets and consistent waste collection from the government and the local municipality, there would be less people who dispose of waste in the KWP. Thus, her activism is a form of care, however one that is often portrayed as protest and civil disobedience. One of the purposes of this thesis is therefore to represent the experiences and opinions of residents who live with KWP regarding what they think would be proper care, how they enact care and how this is in relation to the management for this waterbody.

Conceptual frameworks and literature such as ‘*Dangers of a Single Story*’ by Adichie (2009), ‘*An Inquiry Into Modes of Existence (AIME)*’ by Bruno Latour (2013), ‘*Bodies of Water*’ by Neimanis (2017), and ‘*A world of many worlds*’ by De la Cadena and Blaser (2018) set out the

intellectual foundations which argue for an acknowledgement of multiple modes of understanding care in the context of KWP. Modes of care that enable suitable approaches to management and forms of governance of urban wetlands to facilitate the achievement of well-being for multispecies and beings, along with the KWP. My participants have shown that techno-science and engineering approaches of caring for urban wetlands such as fences and building bridges in these spaces, although serving a purpose, are not enough, there is more that can be done. I explore these proposals for varied approaches to caring for the wetland in greater detail in chapter three of the thesis. This chapter will show the limitations of caring and managing wetlands using one approach (i.e., the danger of a single story) (Adichie, 2009). The literature and theories which place emphasis on diverse and multiple ways of knowing as well as the existing diverse understandings of care will be discussed, followed by bodies of knowledge which focus on the importance of deconstructing knowledge production and queering the ways of knowing.

Dangers of limited versions of care (techno-scientific and engineering) for wetlands in marginalised areas.

As briefly highlighted in the introduction, in South Africa, the management of waterbodies is largely informed by technical designs, science, and economic analyses of water supply (Peters and Woodhouse, 2019; van Koppen and Schreiner, 2014; Gara, 2021). This is due to significant investment in Science, Technology, Engineering and Mathematics (STEM) subjects compared to the social sciences and humanities (Peters and Woodhouse, 2019; van Koppen and Schreiner, 2014; Gara, 2021). Solomon (2022:187) also noted that “urban river management in the city is dominated by scientific and engineering approaches and solutions to water quality and quantity problems which emanate from what are claimed to be objective standpoints,” often presented as the most rational approach to water and environmental governance. However, Adichie (2009) argued that “a single story” (i.e., a single narrative) can create stereotypes and the problem with stereotypes is not that they are untrue, but they are incomplete. Adichie (2009) further stated that the consequences of single narratives are that they take away dignities. When waterbodies and their surrounds are objectified and understood as “just space” with no other meanings outside that narrative (Solomon, 2022:187), people and multispecies communities’ modes of existing are taken out (Latour, 2013). This thesis tries of representing “dignities” of the residents and multispecies that live with KWP which are “taken out” (i.e., overshadowed) by the techno-science by telling their intricate stories of how they care for this waterbody

(Adichie, 2009). For instance, one of my participants is a waste collector, he collects used bottles and other types of glass waste in KWP and in Silvertown (*see figure 1.1 below*). He then sells these to a glass company located in Mitchells Plain's town centre which is few kilometres away from Khayelitsha where these bottles get recycled and reused. According to him, this is a form of care as he said, "lo msebenzi ndiwenzayo ucutha ubugxwayiba kwelioxobho lethu, nasekuhlaleni" ("the work that I am doing reduces glass waste in the wetland and in our neighbourhood"). In *'The recycling industry and subsistence waste collectors: A case study of Mitchell's Plain'* Langenhoven and Dyssel (2007) noted that waste collectors play a crucial role in our neighbourhoods by assisting in the management of waste, which if left to accumulate might result in serious health and environmental problems. Such efforts of caring for KWP are not often spoken about and this thesis aims to ensure such stories are not left untold to show that as much as techno-science interventions are in the limelight, they are not the only truth. As noted, some of my participants are involved in service delivery protests and such protests may result in KWP's pollution being reduced since service delivery is an issue that forces residents to dispose of waste in the waterbody in Silvertown. Strikes and protests are labelled as "inefficient and irrational" because of emotions that drive the emergence of such protests (Hristova, 2001:88). I argue that efforts of caring for urban wetlands that are not compatible with certain techno-scientific understandings of care need to be acknowledged and taken seriously, because these are tied to intricate daily experiences of living in poorly serviced areas which in turn has tremendous impacts on the wetland itself, becoming a vicious cycle.



Figure 1.1: A picture of used bottles collected by a resident around the KWP and Silvertown (Source: Asemahle 2021).

As noted in the introduction, techno-scientific and engineering approaches largely focus on providing pleasant physical appearance of the urban wetlands (Grundling et al., 2017; Department of Forestry, Fisheries, and the Environment, 2021); they focus on this type of care without considering modes of living and modes of being that take place between wetlands, humans, and the more-than-human bodies. It is important for the wetland governing bodies and institutions to understand that prioritizing pleasant physical appearance might work in isolated spaces but in urban wetlands there are social, cultural, and economic (to name a few) interactions that take place between the wetland and multispecies communities (including the human). Therefore, it is important for the wetland governing bodies and institutions to diversify their modes of care. Techno-scientific and engineering modes of care will not always work the same way because spaces and contexts differ (Adichie, 2009; Latour, 2013; Green, 2020). For instance, it is always important for wetland government bodies and institutions to understand that even though we are in the post-apartheid South Africa, the legacies of apartheid, discriminative spatial planning are still visible (McDonald and Smith, 2004). To further illustrate this claim, McDonald and Smith (2004) stated that in a study which was conducted by water and waste management sector officials of the city of Cape Town, it was noted that the

distribution of public resources continues to benefit middle class areas with ratios of 2:1, 10:1 and even as high as 100:1, differentiating the historically White suburbs and Black townships. It is important to take note of such marginalization. Drawing from the argument demonstrated by (McDonald and Smith, 2004), Cesaire's (1972) notion of decolonizing the mind becomes relevant (i.e., a deconstruction from oppressive binaries). Wetland management officials need to consider factors such as space, place, and coloniality when managing these spaces instead of being informed by techno-science *only*. Khayelitsha is a black township, it was a zone of social abandonment⁸ and a sacrifice zone⁹ during the apartheid era, as noted, the legacies of apartheid are still there (McDonald and Smith, 2004; Brown-Luthango, 2020). A more complete approach of care for peri-urban wetlands would involve addressing these underlying issues (Kotze, 2021).

Existing theories of more-than-techno-scientific and more-than-engineering understandings of care.

When techno-scientific and engineering managerial bodies engage with wetlands, they focus on catering for humans and how the wetlands service the ecosystem. Thus, their care for wetlands, including their managerial decisions are largely informed by such factors (Finlayson et al., 2015; Grundling et al., 2017; Mathenjwa, 2017; WaterAid, 2021; the Department of Forestry, Fisheries, and the Environment, 2021). An understanding of care that is informed by more than these “objective” factors would help the techno-managerial government to avoid overshadowing and overlooking other understandings of care. In ‘*Politics of care in technoscience*’ Martin et al., (2015:636) argued that fostering other forms of care that exist

8 Zones of social abandonment are spaces that lack medical and governmental attention and are ultimately treated as "dump" sites for the ill, the impoverished, the mentally challenged, the jobless, and the homeless (See: Selimović, I., 2006. VITA: Life in a Zone of Social Abandonment).

9 Sacrifice Zones are “polluted spaces or neighbourhoods where the physical and mental health and the quality of life of human beings are compromised in the name of ‘economic development’ or ‘progress’ for the sake of capitalist interests” (see: de Souza, M.L., 2021. ‘Sacrifice zone’: The environment–territory–place of disposable lives. *Community Development Journal*, 56(2), pp.220).

outside scientific and technological disciplines “will help STS researchers learn how to pay attention to and respond to shifting topologies of power in our rapidly changing worlds.” As noted, in *Matters of Care in Technoscience*’ Maria Puig de la Bellacasa (2011) argued that care should be considered as “an affective state, a material vital doing, and an ethico-political obligation”. Thus, care is more complex than it might initially seem to be, it is important for techno-science to take note that care requires a speculative commitment to neglected things (Puig de la Bellacasa, 2011). Techno-science and STS have influence in world-making, thus, they have to be accountable to and take responsibility for the lives they touch (Puig de la Bellacasa, 2011; Martin et al., 2015). Drawing on Puig de la Bellacasa (2011) and Martin., et al (2015), I argue that when care is practised in wetlands, government, and institutions responsible for these spaces must look at care using a bigger picture rather than depending on a singular thread of rationality which frames care as an application on “just a space” (Latour, 2013; Solomon, 2022). Caring is more about a transformative ethos than an ethical application, the question of “how to care” in each situation needs to be considered (Puig de la Bellacasa, 2011).

In *Matters of Care: Speculative Ethics in More Than Human Worlds*,’ María Puig de la Bellacasa’s (2017) book invites a speculative exploration of the significance of care for thinking and living in more-than-human worlds. Puig de la Bellacasa demonstrated that as much as care is a human trouble - that does not make care a human-only matter.¹⁰ I propose that techno-managerial bodies should not limit wetland management and care to technical designs, science, and economic purposes, but learn to think with the more-than-human worlds as well as those who live with the more-than-human worlds on a daily basis to ensure diversity and inclusivity. In this thesis, versions of care in the context of wetlands are explored with a specific interest in moving away from dominant narratives; rather than accepting common, techno-scientific and engineering narratives and versions of care. I look at care from a multispecies perspective (Kirksey, 2014). I explore how the networks of care operate in the context of KWP and disrupt the narrative that care is a human-only matter. I also disrupt the limiting motives that inform techno-managerial strategies’ versions of care and management by showing complexities of care that I encountered in KWP (Puig de la Bellacasa, 2017). For

10 de La Bellacasa, Maria Puig. *Matters of care: Speculative ethics in more than human worlds*. Vol. 41. U of Minnesota Press, 2017.

instance, I employed Puig de la Bellacasa's (2017) thinking by looking at how multispecies communities (including humans, more-than-humans, and water) practised care among one another (i.e., with a focus on how humans take care of the waterbody and more-than-non-human bodies). As stated in the introduction, when looking at more-than-techno-scientific care practices that manifested between people and KWP, I drew on South African ontologies such as *ina ethe* (give and take) and *isandla sigeza esinye* (one hand washes the other) which are practiced by some South African ethnic groups to care for and to uplift one another drawing from a multispecies framing (Kirksey, 2014; Edwards, 2015). *Ina ethe* and *isandla sigeza esinye* drawn from those identifying as part of the Zulu ethnic group "are social relationships that are constituted through giving and sharing food or any other thing that helps the next person to achieve positive well-being" (Schieffelin 1990: para.1). Schieffelin (1990) further argued that sentiment and affection is expressed through give and take and that such relationships tighten communities including human-to-human bonds. The *ina ethe* and *isandla sihlabma esinye* also applies amongst the Xhosa's, another ethnic group in Southern Africa. I grew up in a village where conviviality and interconnectedness were expressed through these ontologies.

From my personal experiences and observations, these ontologies apply between humans through sharing food and helping one another as Schieffelin (1990) argued. For instance, if our neighbour did not have sugar, she would ask for it from my grandmother. When my grandmother needed something and it may not be necessarily sugar, she would go to our neighbour to ask for help. When the neighbour is returning help, it was not necessarily compensating but it was a form of coexisting, interdependence, and the spirit of living together which also aligns with the notion of *Ubuntu*.¹¹ In the context of this research, when the residents who live with KWP cleaned and picked up waste from this waterbody, one of my participants said they viewed this as helping KWP as the waterbody helps and takes care of them to practise activities such as gardening and crop farming, not as means of compensation but as means of living together, interconnectedness and conviviality with the waterbody. This is an example of a more-than-techno-scientific mode of caring and living with KWP that this thesis argues for.

11 Ubuntu is an eternal African ontology of togetherness and/or oneness – an understanding of the interconnectedness of all life (see Lutz, D.W., 2009. African Ubuntu philosophy and global management. *Journal of business ethics*, 84(3), pp.313-328).

Puig de la Bellacasa further argued that we need an even more radically displaced non-humanist notion of caring than what she already proposed to expand our (more-than-human bodies included) world.¹² Observing and exploring how multispecies communities such as plants, cattle, sheep, goats, and water care for each other and to not limit care to a human-only narrative is important in order to contribute towards Puig de la Bellacasa's proposal of an even more radically displaced non-humanist notion of caring¹³; in this way, we can understand the complexities of care. If government and institutions that are responsible for wetlands would consider what is outside of the factors that inform their versions of care, instances where other complexities of care which do not fit into their realms are overshadowed would decrease.

The importance of multiple ways of knowing towards understanding modes of management and care when thinking with wetlands

In 'Wetland Rehabilitation and Parks' Swift (2020) indicated that the types of management approaches, largely practised by Urbanspaces, one of the institutions responsible for wetlands in Cape Town and involved with KWP management, lean towards more techno-scientific interventions. For instance, Swift (2020, para.1) stated that "Urbanspaces offers all the landscape architectural services. Managing sub-consultants include Hydrological, Stormwater, Electrical and Civil Engineers; Botanical and Freshwater Ecologists; Town Planners; Environmental Assessment Practitioners to rehabilitate wetlands." Swift (2020, para.1) further stated that the entire process of rehabilitating wetlands "included the local community, local Artists were also closely involved and due to the length of the project small business enterprises were developed." Swift (2020) did not specify what role the "local community" played in this process. As noted, one of my participants who has been living in Silvertown for more than ten years said that she was never involved nor invited in meetings which addressed the rehabilitation and the development of KWP. While reading this article I noted although it

12 de La Bellacasa, Maria Puig. *Matters of care: Speculative ethics in more than human worlds*. Vol. 41. U of Minnesota Press, 2017.

13 de La Bellacasa, Maria Puig. *Matters of care: Speculative ethics in more than human worlds*. Vol. 41. U of Minnesota Press, 2017.

mentions that local residents were “involved,” there is no evidence that they were involved in decision making; it seems as if it was only the officials from the fields mentioned by Swift (2020), who made decisions without intensive engagement with local communities. The forms of stakeholder engagement, which are required for such rehabilitation and development projects, often have communities being “spoken to” and being told what would happen, rather than having meaningful collaboration and co-creation for the “benefactors” of the space. Solomon (2022) highlighted that residents living with KWP often felt frustrated with city officials who would claim to be consulting with them, however, when it came to decision making and the application of the projects, their inputs were backgrounded or even erased.

In 2019 when I did fieldwork in Pinati Estate, a neighbourhood located in Lansdowne, Cape Town, I encountered similar issues, where residents were not involved in decisions leading up to the installation of stormwater infrastructure by the City of Cape Town (CoCT). This example, where techno-scientific and engineering management did not engage meaningfully with residents highlights the ways in which these water managers prioritized their own versions of care without understanding the residents’ perspectives and modes of living. Drawing from the works of (Linton, 2010; van Koppen and Schreiner, 2014; Peters and Woodhouse, 2019; Gara, 2021; Solomon, 2022), it is clear that techno-scientific management has a tendency of practising care and managing waterbodies employing the “modern water” approach. Modern water is water that travels through infrastructure such as taps, pipes, and canals (Linton, 2010). It is often presented as if it exists outside its relationships to multispecies worlds (Linton 2010).

I argue that in order for the techno-scientific management to avoid applying the “modern water” logics and to avoid excluding other worlds that coexist with wetlands when implementing strategies and plans of development and care, they must consider that wetlands are worlds that host other intricate worlds. If governing bodies of waterbodies consider that, their shortcomings would decrease because they would properly understand what needs to be done in each situation. Tsing (2012) and Neimanis (2017) argue that we are co-being and co-becoming with water and multispecies worlds, thus, when caring and managing wetlands, human and more-than-human beings cannot be excluded in decision making. In ‘*A world of many worlds*,’ De la Cadena and Blaser (2018:2) argue that “it is important to pay heed not to traverse the worlds of others relying on a map of our own world”. De la Cadena and Blaser (2018) insist that, it is important to acknowledge that other worlds operate differently. To care properly for wetlands, the government, and institutions responsible for wetlands need to

understand how the other worlds that coexist with wetlands operate on their own and with the wetland because that way, those who develop and implement care approaches for wetlands will not view management employing a singular narrative (De la Cadena and Blaser, 2018). To be able to do that, governing bodies of wetlands will need to work together with the more-than-techno-scientific forms of care. In addition, De la Cadena and Blaser (2018) emphasised the importance to account for a world in which many worlds are recognized and seen as valid. To attend to De la Cadena and Blaser (2018), this thesis represents and recognizes the actuality and the existence of other worlds (both human and more-than-human multispecies) that exist in KWP, their agency and ways of living.

Queering the understandings of care and ways of living with wetlands

Waters are never neutral, they are directed by intensities of queerness, sexual difference, imagination, coloniality and desire (Neimanis, 2017). Thus, modes of managing and practising care in wetlands should never be neutral and therefore techno-science should consider the complex “intensities” which “direct” waterbodies (Neimanis, 2017). I insist that techno-science and STS should queer how they understand and practise care in wetlands. In ‘*Queering Management and Organization studies*’ Rumens et al., (2019:596) refer to queer as “a polysemic term, as it is evident in how it has been considered and mobilized in the following ways: (e.g., to describe someone as queer, to refer to queerness) or (e.g., describing ‘politics’ as queer) or (e.g., to queer, engaging in a process of queering).” Queering represents a mode of critical resistance against normativity, offering a representation of alternatives and realities that exist outside of what is considered as “normal” and “natural” (Rumens et al., 2019). Oswald et al., (2009:44) stated that queering requires us to “spoil the effect success of” inequalities which result from “normality.” Queering seeks not to replace one set of foundational assumptions with another, but to render the “normal” and “natural” to be open to interrogation and contestation (Rumens et al., 2019). I propose that techno-sciences need to think beyond their “norms” and deconstruct their approaches through considering modes of knowing water which are outside their norms and coexist with those modes (Latour, 2013). Rumens et al., (2019) frame deconstruction as a disruption of “foundational assumptions” for the purpose of opening new possibilities. I tell queer stories and while telling these stories I employ queer theory as an effort of suggesting the need for diversity which may result new possibilities of managing wetlands. Techno-scientific approaches should question their norms

and understandings of caring for wetlands by having an intensive engagement with water and its surroundings to ensure their approaches do not result in damaging and overlooking other ways of being that are not compatible with their world.

Queer theory helps us to question the falsely bounded categories that give the impression of fixity and permanence where none “naturally” exists (Oswald et al., 2009). Tendencies of techno-scientific approaches which understand care for wetlands in a constructionist lens are problematic because they categorize without questioning their own categories (i.e., self-introspection). One cannot assume everyone falls under the same category (that one type of care is suitable for every space), waterbodies and their surroundings are complex, they entail different meanings. For instance, some of my participants live with KWP in ways that involve their queerness. As such, I tell the overlooked but legitimate stories of how queer individuals practice care on and live with wetlands to resist against the naturalization and normalization of techno-sciences rooted in patriarchy, which I discuss in more detail in Chapter three (Gurrieri and Cherrier, 2013). In ‘*Queering the non/human*’ Giffney and Hird (2016) argued that queering is at its heart a process of wondering, thus, it is important for techno-science to wonder “what” kind of ways of being that exist in a space and with that in mind then think of “how” to care in those contexts (Puig de la Bellacasa, 2011). The purpose of this thesis is not to dismiss techno-scientific approaches, but rather to open up conversations of what possibilities arise when we queer spaces, acknowledging how these are shaped beyond science and technology but also are raced, gendered, and classed spaces (to name a few).

In ‘*Feminism and the Mastery of Nature*’, Plumwood (2002) argued that the dominance and heteronormative logics over nature has been naturalized and that has allowed these logics to be pervasive and accepted.¹⁴ In the context of relationships that humans have with wetlands, as stated in the introduction, Munishi et al., (2012) research looked at relationships that men and women, girls and boys have with these spaces and how these relationships differ based on a heteronormative categorization. It was largely women who had care relations with the wetlands (Munishi et al., 2012). Drawing on Puig de la Bellacasa (2017), this was because heteronormative practice of care assures that women are obligated to care work due to heteronormative standards. This then links to what Plumwood (2002) argued above, that the

14 Plumwood, V., 2002. *Feminism and the Mastery of Nature*. Routledge.

dominance and heteronormative logics over nature exists and has been naturalized and accepted.

Plumwood (2002) then argued that to dismantle these logics of dominance and heteronormativity over nature, drawing on ideas from ecological feminism would be useful because such ideas allow for a disruption of oppressive binaries. However, ecological feminism is limiting because as much as it advocates against the oppression of women, nature, and other marginalized groups of people, it does not reach its full potential because it does not largely put into consideration queer theories and queer experiences (Archambault, 1993; Gaard, 1997; Sargisson, 2001; Brazal, 2021). Even postcolonial ecological feminism has pitfalls because it repeats the oppression that it fights against, as it sometimes equalizes women with nature in the same way as men and lacks consideration from queer perspectives, for example it does not often look at the more-than-human entities drawing from queer perspectives (Sargisson, 2001; Brazal, 2021). Instead of applying the notions of ecological feminism only, this thesis explores queer individuals' relationships with the KWP wetland and how relations of care manifest in such relationships. This aids as a starting point of understanding that queerness exists in waterbodies, so, when thinking with relationships in wetland spaces heteronormative binaries should not dominate as they overshadow and overlook other ways of being.

The notion of queering for this study resulted from interacting with queer individuals who coexisted and/or lived with KWP. I thought to myself I should be open minded regarding gender and sexuality to supplement the diversity and inclusion that this thesis argues for in terms of government's wetland management approaches. These observations then required the decolonisation of the mind proposed by Cesaire (1972), I did this by not categorizing gender using hierarchies which *only* consider cis-men and cis-women. I kept in mind that there are individuals who do not conform to these categorisations. For instance, my participants told me that there are relations and/or activities that took place in KWP based on an individual's gender; looking after cattle around KWP was mostly done by men, women participated more in gardening. I had to think of what is outside those contexts when thinking with relationships of care between KWP and multispecies communities.

This thesis also follows the notions of Plumwood (2002) by not discarding the ideas of ecological feminism but seeks to decouple them from being limiting and using singular narratives when looking at gender and sexuality in environmental concerns. Queer conceptual

frameworks were useful in this thesis because like ecological feminism, they challenge the heteronormative mentality when thinking with nature (Seymour, 2020). Queer ecological theories also “challenge the traditional hierarchical ways of describing the world in binaries such as natural and unnatural” (Seymour, 2020:1). In some cases, when such heteronormative logics are interrogated, multispecies’ spectrums and/or worlds emerge because queer ecology “combines the critical, confrontational thrust of queer found in queer theory with the interest in biological relationships denoted by ‘ecology’ – though this interest is usually more cultural than scientific” (Seymour, 2020:1). The government and institutions that are responsible for wetlands need to apply this decolonial mind-set of not sticking to limiting binaries (Plumwood, 2002), that way overshadowing more-than-techno-scientific versions of care in wetlands will decrease.

Conclusion

This chapter discussed the literatures that show government’s pitfalls of understanding care and managing wetlands depending largely on techno-science. I insisted on the importance of considering domains of knowledge that are outside the techno-science when managing these waterbodies in order for inclusion and diversity to be possible (Latour, 2013). The techno-scientific and engineering modes of care are not discarded, instead it is suggested that the government and institutions responsible for wetlands should understand the relationships of care that take place on the ground and understand what is needed by the wetlands, humans, and more-than-human beings before implementing their policies, plans, and strategies. Notions of multiple ways of knowing from scholars such as Cesaire (1972), Plumwood (2002), Adichie (2009), Latour (2013), Neimanis (2017) and De la Cadena and Blaser (2018) which helped this thesis to avoid a single way of understanding care in wetlands were discussed. Lastly, these literatures and conceptual frameworks will be useful in chapter three and four because I draw on them when telling the diverse ways of how multispecies live with the KWP.

CHAPTER TWO

Entering the field, research methods employed, and ethical considerations

Introduction

“When doing research on multispecies worlds (including the more-than-human) within the social sciences, it is fundamental to employ context-specific multitudinous methodological frameworks” – Eben Kirksey.

This chapter reflects on how I entered the field, how I met my participants, and the roles that each participant played in this thesis. The methods that were employed during my fieldwork process, and some reflections including limitations that I encountered are also discussed. Lastly, ethical considerations that I complied with before entering the field and those that arose in the field are unpacked. Various methods were employed when this research was conducted namely, drawing on existing networks, snowball sampling, google earth, photography, ethnography that included interacting with multispecies around the KWP, having conversations with people, observations (i.e., sight), sound, and smell. In the context of COVID, other methods such as virtual interviews (phone calls and WhatsApp voice notes) were also employed. Following Majombozi’s reminder that “there are methods that would not work for other sites and methods are exposed to changing” (2015:12), upon entering the field, I understood that when a researcher is studying multispecies communities, interactions, and experiences, there must be flexibility in terms of which methods need to be employed based on participants’ preferences. Employing various methods also contributed towards the primary argument of this thesis – that there are intricate ways of being, therefore, using one research approach when exploring these modes would result in shortcomings such as overlooking certain experiences (Latour, 2013; de la Cadena and Blaser, 2018).

Methods and research tools

Google Earth and Google Maps

As much as I am familiar with KWP and Silvertown, Google Earth and Google Maps helped me familiarize myself even more with the settings of KWP. Before I started with ethnographic inquiry and observations, Google Earth and Google Maps provided some ideas and insights of

the multispecies communities that come together in the KWP, for instance, what and who has access to the waterbody. I was able to identify the routes I can take and possible spaces to observe on the waterbody during the fieldwork process before I even went there. I also used Google Earth and Google Maps screenshots here to show specific spaces which I refer to. Lastly, Google Earth was employed to highlight the spots where I recorded sounds that I listened to in order to understand the more-than-human relationships of care further.

Existing Networks, snowball sampling, introducing the participants and their roles in the study

Other methods that played an enormous role when I entered the field were existing networks and snowball sampling because they helped widen the range of participants I engaged with. As noted in the introduction, I lived in Silvertown during my undergraduate studies, and I did research in the same neighbourhood for my honours research. I sustained the relationships I built with the people I used to interact with when I lived there and those who participated in my honours project. I used those networks to contact possible participants for this research and asked if they would be keen to be my participants. Out of the four people I contacted, two people, who I refer to as NYC and Amsterdam, were keen.

Existing networks were not only helpful in getting primary participants (NYC and Amsterdam), but they helped in expanding the number of participants I engaged with, and that is called snowball sampling. Streeton et al., (2004: 37) defined snowball sampling as “a moment where research participants recruit other participants for a study.” Through personal connections, NYC and Amsterdam helped me to get more participants. For instance, NYC and Amsterdam approached Tennessee and Tunisia on my behalf to participate in this study. I interacted with both Tennessee and Tunisia mostly on WhatsApp calls and voice notes (virtual interviews). Both of their contribution to this thesis are the different stories of how people practise care and how they live with KWP.

Meeting Lesotho was different; NYC accompanied me to the KWP most of the time because he was concerned about my safety since I was carrying a phone to take pictures and to record sounds. One day as we were walking to the wetland, NYC and I met Lesotho on the way. NYC and Lesotho know one another from church so they started chatting and NYC introduced me. I explained what I was doing, and Lesotho was interested; she shared that she is part of the

gardening group that is in the KWP wetland setting and told me about stories of care that manifest in this relation with the wetland space. With regards to Mr Mozambique, he also lives in Silvertown, he looked after his cattle around the KWP, and I engaged with him almost every day during my fieldwork process. It all started with seeing one another often around the waterbody and one day we greeted and started conversing. I had conversations with him on how he sees and understands multispecies versions of care that manifest in KWP. Ms Liberia was always sitting outside her home when I did my observations, and I always greeted her and would casually chat with her about my research; then she agreed to participate. She spoke about how poor service delivery for the Silvertown residents resulted in KWP being polluted and how proper service delivery by the government to the residents who live in informal settlements of Silvertown would be a possibility of care for the KWP because pollution would decrease.

Lastly, to clarify some of the themes that are in chapter three and four, I drew on observations made in the past from Silvertown and from different neighbourhoods during my honours project. I consider Ezemvelo and AgriWise Services (i.e., an environmental non-profit organization that cleans wetlands) members' viewpoints on what it means to practise care in wetlands. In addition, I draw on the wetland care and management perceptions of residents from Hyde Park in Mitchells Plain and Pinati Estate in Lansdowne.

Observing multispecies communities: engaging with more-than-human bodies while having on-the-field conversations with participants

Multispecies ethnography was utilized for this research. Multispecies ethnography is an ethnography that focuses on the entanglements that manifest between humans and the more-than-human beings (Tsing, 2012). Tsing (2012) simplified the definition of multispecies ethnography by referring to it as an art of noticing connections in how humans and more-than-human beings assemble and how are they in relation to each other. In multispecies ethnography, multispecies whose lives and deaths are linked to human social worlds are being studied (Tsing, 2012). For this study, this research approach was utilized mostly to observe multispecies communities such as plants, cattle, goat, sheep, pigs, aquatic fauna and flora, the wetland itself and the few participants I managed to spend time with around the KWP waterbody. Multispecies ethnography helped to amplify and deepen my understanding of how the

multispecies communities live with the KWP and with one another and how care manifests in these networks. Understanding certain phenomena when employing multispecies ethnography requires the researcher to utilize their body as a research instrument, examining the sounds, smells, and physical textures as this research method is not necessarily restricted to visual observations.¹⁵ As noted, to observe multispecies, one needs to employ methods that are context-specific to accommodate the multispecies that are being looked at (Kirksey, 2014; Beukes, 2021). In my case, I employed senses such as observation because observation is a sense already as it depends on sight (Martin 2020). In addition, I listened to sounds, detected smells, and had conversations with few participants while in the KWP.

Sight, sound, and smell “are the backbone of any multispecies and sensory ethnography; they also put a researcher’s whole body into conversation with the world around it” (Martin, 2020:1). Using the senses to observe the multispecies care work helped me notice certain experiences and stories that I would have overlooked. In addition, senses made me acknowledge that certain things are unknowable and sometimes overlooked through human experience. This created an opportunity to look at care differently. As noted, I had conversations with my participants while in the field because Martin (2020) asked “whose senses matter?” His work questions whose senses should matter when a researcher is representing data – those of the researcher or those of the participants? The answer to that question was that a researcher must examine the experience of their own body which is also known as sensory introspection (Martin 2020). At the same time, Martin suggested that it is always important to ask participants to describe their sensory experiences to the researcher, which in some cases may be referred to as sensory-ethnographic interview (Martin 2020).

To support Martin’s argument, Peterson and Brennan (2020) emphasized the importance of “listening with” when a researcher employs an ethnography that involves listening to sounds so that the researcher can relate with their participants. “Ethnographers should not observe from a distance; rather, we listen with others, amplify our own situatedness as well as the perspectival quality of experience” (Peterson and Brennan 2020:372). In this study, both my

15 Martin, T., 2020. *Sensory Ethnography*. Ethnography Made Simple, Open Educational Resource (OER) Textbook. [online] Academia.edu. Available at: <https://www.academia.edu/43840571/Sensory_Ethnography> [Accessed 12 May 2021].

sensory experiences and those of the participants mattered. I did not necessarily have sensory-ethnographic interviews with the participants that I was observing and relating to the KWP “with”. Instead, I focused on analysing my own sensory experiences and the sensory experiences of those I engaged with during the multispecies ethnography process which we spoke about through reflections and conversations rather than specific sensory-focused interviews. To add, the notion of relating “with” is not limited to sound ethnography, I extended it to the other senses that I employed for this study, (i.e., smelling with and observing/seeing with).

When looking at the pictures and listening to the sounds, I invite that the reader to be conscious of their synaesthesia so that they can also have the experience of observing “with” me as it was important for this study to observe the senses with other individuals.¹⁶ Synaesthesia plays a role in every kind of media because any kind of media is already a sensory experience and the manner in which the media invokes a different sensory experience is what makes every media synesthetic (Cytowic, 2003). Medias such as films, photography, and sounds “do not need to pipe in smells, waft breezes across the audience, and chill the room to have the audience members feel those various sensations. Our brain’s natural synaesthesia will do it automatically” (Nakamura 2013:135). Which is why it is important for the reader to be aware of their synaesthesia because this thesis is not actively carrying the smells, the breezes and what I saw, but the pictures and sounds attached should provide a fragment of the sensory experience I encountered in the field.

Virtual interviews

COVID dramatically impacted the ethnographers’ primary research methods such as being in the field and interacting with participants in person due to social distancing (Maddox and Lupton, 2020). I was not able to interview most of my participants in person. I managed to have informal conversations with few participants while observing in the field as I have already shown in the section above. I therefore opted to draw extensively on virtual interviews for this study. With virtual interviews, a researcher can conduct real time interviews with participants in a form of dialogue while they are in different locations and contexts (Maddox and Lupton, 2020). By engaging with participants via phone calls and WhatsApp voice notes, the limits

16 Cytowic, R.E., 2003. *The man who tasted shapes*. Imprint Academic.

posed by the required social distancing were somewhat averted and we were able to discuss how they understood and experienced care in the KWP.

A semi-structured interviewing technique was utilized when virtual interviews were taking place. In semi-structured interviews, the researcher is not limited to following the formally structured questions but rather creates a platform for a researcher to ask for clarification when there are ambiguities (Blaxter, 2010). Semi-structured questions also ensured that my participants were free and flexible to a point where they mentioned less spoken about stories that take place around KWP. Additionally, observing the KWP and the more-than-human communities while talking to few participants on the field assisted me with developing questions that were appropriate and related to local residents' experiences for the virtual interviews. I built mostly on what I observed and the conversations I had with the people I observed "with" so that the conversations could flow.

Lastly, I chose to use phone calls and WhatsApp voice notes because some of my participants (Lesotho and Tunisia) told me that they were not going to be fully free if we engaged on Zoom and Microsoft Teams. They both mentioned that because they are employees and students, they mostly used Zoom and Microsoft Teams for intimidating engagements with their employers and/or to attend lectures. Even with myself, there was a time Microsoft Teams overwhelmed me because of online learning, so I understood where they were coming from and respected their preferences. Besides Lesotho and Tunisia, other participants which I had virtual interviews with also highlighted that they were comfortable communicating using phone calls and WhatsApp only. Using phone calls and WhatsApp voice notes helped to obtain detailed information about my participants' experiences, their daily encounters, successes, and struggles, which provide grounded evidence regarding modes of more-than-techno-scientific care that take place in the KWP without resulting any intimidations.

Below I have provided a basic outline of questions that guided me during virtual interviews.

1. Tell me anything you know about the Khayelitsha Wetlands Park.
2. Do you have any relations or interactions with the Khayelitsha Wetlands Park which involve care? If yes, can you describe them and if not, why if I may ask?
3. Do you have any connection with more-than-human species that live with the wetland and how does care manifest in those connections? If yes, can you please explain the connections/entanglements and if no, why?
4. How does gender manifest and how does it influence these relationships of care?

5. How do you feel about the waterbody being polluted and what do you think causes the pollution?
6. Does the wetlands' pollution affect your well-being and the well-being of other multispecies in any way? If yes, explain and if no, why?
7. Do you think the government bodies are doing a great job in managing and caring for KWP? If yes, how so? If no, why is that the case and how can that be avoided?

Photography

In this research, photography was employed in a variety of ways. For me, photographs evoke memories, following Edwards (2012:221) argument that “photography has been classified as a phenomenologically enveloped medium that has sensuous realities which provoke affect and memories on the people who produce the visual object and those who use the visual object.” I took a lot of pictures during the period of my fieldwork because pictures supplement my understanding when I am writing (Pink, 2006). When writing, by looking at a certain picture, I remembered certain details and events that took place in the field. Lastly, I took pictures so that the readers can have an idea of what I am talking about and to supplement the ethnographic chapters.

Data analysis

Flick (2013:3) argued that “data collection is sometimes limited to recording and documenting naturally occurring phenomena, for example by recording interactions. Then qualitative research is concentrated on analysing such recordings.” For this research, I analysed the pictures and recordings I took during my observations of the KWP and multispecies communities with the aim of conveying the relationships that multispecies had with one another and with the waterbody. With WhatsApp voice notes, I sent questions via WhatsApp and my one participant suggested that she answers with voice notes because she was not going to be able to say everything she wanted to say if she typed or answered in text messages. I asked all the other participants to do the same if they were comfortable; many reflected to me that they liked the idea because they also thought texting/messaging would limit how they express themselves. I transcribed the voice notes since they are recordings, and I was able to go back when I felt like I missed certain details. With phone calls I wrote down notes and summaries during the interviews so that during the writing process I can visit those notes for more analysis.

When it comes to language, all participants were bilingual, they all spoke IsiXhosa and English, as do I, and so, there was no language barrier during the virtual interviews.

Jackson (2018) insisted that when a researcher employed sensory ethnography research techniques, it is important to present the research findings with modes of representation that can indicate sensory experiences. In this thesis, I have attached pictures and links of sounds; because if representation of data was limited to words only, I was not going to be able to fully represent the sensory experiences. Again, under people's stories, I applied Jackson's thinking of utilizing creative modes when representing data, by attaching pictures and a poem, so that there are more ways of reflecting rather than depending on words.¹⁷ Lastly, when doing data analysis, "whatever the data are, it is their analysis that, in a decisive way, forms the outcomes of the research" (Flick, 2013:3). For this research, the data analysis indeed formed the outcomes and I had to be transparent while analysing data by checking in with the participants to ensure that I represent them in a correct manner, this is discussed under ethical considerations.

Reflexivity and Positionality

Reflexivity and positionality are fundamental in ethnography; thus, researchers should be aware of their reflexivity and positionality throughout an ethnographic study (Nyamnjoh, 2012). O'Reilly (2008:2) defined reflexivity as "thinking reflexively about who has conducted and written ethnographic research, how, and under what conditions, and what impact these might have on the value of the ethnography produced." Coghlan and Brydon-Miller (2014:2) defined positionality in ethnographic research as "the stance or positioning of the researcher in relation to the social and political context of the study—the community, the organization or the participant group." The stance or position of a researcher in ethnographic research shapes how the research is approached and conducted, and how the voices and findings are acted on and disseminated (Coghlan and Brydon-Miller, 2014).

As noted, having resided in Silvertown before, even though I was an outsider from the Eastern Cape and having called this place home during my undergraduate studies, gave me the status of an insider as I became familiar with the KWP and with the daily life of the township (Geertz,

17 Jackson, T., 2018. *Multisensory ethnography: sensory experience, the sentient body and cultural phenomena* (Doctoral dissertation, University of Leeds).

1973). I acknowledge that this experience of living in Silvertown may have influenced what I saw and what I focused on during the fieldwork process. O'Reilly (2012) in *'Insider Ethnographies. Key concepts in ethnography'* insisted that insider researchers need to be mindful of "researcher bias", so that their personal values and experiences do not influence the research procedures. Doja (2019) also emphasized that when ethnography is done at home, a self-reflexive approach is required because at some point the researcher will be in a position of speaking *of* and *for* the collective self. This aligns with Geertz's (1974) notion of the anthropological authority speaking *of* and *for* the culture under study.

This is the reason during the fieldwork and data analysis process I made sure that my participants' stories and experiences are described first, then I offer my stance and experience as support for my participants' stories, with an aim of being transparent regarding my own opinions. For instance, when raising a certain concern and articulating a certain argument, I use my participants' opinions and answers which I got from the field and then follow by putting forward my own thoughts. "Pre-understandings" of a space when research is conducted by a researcher who holds a status of an insider often help to frame and develop relevant research questions based on rich understandings of the issues under study (Fleming, 2018). I relate to what Fleming (2018) argues, as before entering the field I was aware that pollution in KWP - which is a result of poor service delivery in Silvertown - is a problem that I witnessed when I lived there, thus, it was important for me to prepare questions on topics related to pollution and service delivery. As much as pollution and service delivery were my concerns, I had to acknowledge that there is more to KWP than that. Which is why my questions for interviews were semi-structured in order to give my participants freedom to speak about what is important to them rather than me asking what I am concerned about and familiar with.

An insider researcher may have access to privileged information (some of which may be personal or incidental), which may not necessarily be available to an outsider (Geertz, 1973; O'Reilly, 2012; Fleming, 2018). It was important for me to ensure confidentiality and that I do not exploit such information (see under the ethics sections). I also made sure that my participants determined which "insider information" I must use and which "insider information" I must not use for my research. For instance, I had participants from the LGBTQIA+ community who were open to me about their sexuality and shared their stories of relating with the KWP based on their sexuality. This happened because some of them

mentioned that they have seen me in Silvertown before. I checked in with them and they dictated how I could make use of their stories (see under the ethics sections).

Limitations encountered during the course of this research

As noted under the multispecies ethnography section, ethnographers should not observe from a distance; rather, we relate “with” other individuals to be able to amplify our own situatedness as well as the perspectival quality of experience (Peterson and Brennan, 2020). For this study, this was done to a certain extent. I had to engage with the few participants I had physical contact with while socially distanced due to COVID regulations (NYC, Mr Mozambique, and Ms Liberia). Participant observation requires that a researcher immerses themselves in the daily life of their interlocutors, and to pay attention to what they discuss, practice, their rituals, and gestures. It also requires one to take note of silences and absences, what do these mean and signify. The social distancing and mask wearing mandates sometimes made it difficult to see expressions, hear clearly which in turn could have led to frustration in how we communicated. Sometimes I would not hear what was said by my participants properly because of the distance and the face masks we were wearing, so, I had to ask them to repeat what they said to avoid misrepresentation and misquoting when analysing data. People were also careful not to spend too much time with someone they did not live with. This meant potentially important engagements could have been missed. I had to be mindful of approaching other people who were walking around the waterbody because sometimes people were not wearing their masks and even though some people were wearing masks, they were just uncomfortable and paranoid when interacting with someone they do not know due to COVID. For instance, I once attempted to approach an individual who was feeding his pigs in a pig parlour that is situated in a livestock shelter that is close to KWP and *Emajonini* (the South African Infantry Battalion Base situated next to KWP). The individual shouted “COVID”, and it was a clear indication that he did not want to speak to me due to COVID.

Not being able to observe and walk around the KWP wetland with the participants I held virtual interviews with was quite limiting. It would have been interesting to take walks and observe the waterbody with them while conversing and doing the interviews. Tsing (2012) and Magadla (2021) argued that during a multispecies ethnography, it is important to observe multispecies communities being in one space as it affirms their inter-species relations and/or interactions. That was not the case for the participants that I had virtual interviews, I only listened to their

stories, and I sometimes went back to the field to observe the spaces they referred to. As noted under the section that addresses how I entered the field, NYC ended up being my Research Assistant because he was concerned that I might be a target for robbery if I went to the waterbody alone since I was carrying my phone to take pictures and to record sounds. He suggested that when he had a day off from work, he would accompany me and when he was working, he organised other people to accompany me. Sometimes, it was difficult to organise other people when he was at work and that meant I had to pause my fieldwork and/or observations.

Ethics considered on-the-field and when data was analysed

Khayelitsha Wetlands Park is zoned a public open space (PropertyWheel, 2013; City of Cape Town 2015). However, based on the City of Cape Town new bylaws, one must apply for permission in order to conduct research in a nature reserve and/or a zoned space.¹⁸ Before I started doing my research, I communicated with the Recreation and Parks department of the City of Cape Town to ask for permission to do observations in the KWP. I contacted three officials from the Recreation and Parks department that work closely with the KWP. All said that if I am only doing observations there is no need to apply for permission as long as I have alerted them. The three officials said the only time I am required to apply for permission to do research in KWP is when I am going to take physical samples for testing, and I assured them that my research did not require that. As noted, since this research was conducted during a pandemic, I made sure that social distance was maintained during physical interactions to avoid compromising others' health and mine.

This research was guided by Anthropology Southern Africa's ethical guidelines (2005) and Tiidenberg (2018) research ethics when I interacted with my participants. Following Anthropology Southern Africa's ethical guidelines (2005), I asked for consent from the participants to partake in this research. I made sure all the participants were comfortable during our interactions by avoiding suspicion and fear; I checked-in with them often (Israel, 2014). I made sure that I did not cause any harm to my participants (Anthropology Southern Africa's ethical guidelines, 2005). I accomplished that by asking them whether they would be

18 See: City of Cape Town, 2019: <https://www.capetown.gov.za/City-Connect/Access-information/Submit-a-research-request>).

comfortable if I would include certain details and information in my thesis that I observed while I was with them. Most of the time they said yes and there were moments they would say no, and I respected that. As a researcher, the dignity and well-being of my participants was my responsibility as outlined in Anthropology Southern Africa's ethical guidelines (2005).

Tiidenberg (2018: 22) argued that "anonymity and confidentiality are classic promises made to research respondents in ethnographic research." I followed the importance of anonymity and confidentiality rule by making sure my participants were anonymous when analysing data (Tiidenberg 2018). I used pseudonyms by choosing random cities and countries instead of using my participants' real names when writing this thesis to protect their identity. In 'WhatsApp as a Qualitative Data Collection Method in Descriptive Phenomenological Studies' Mavhandu-Mudzusi et al., (2022) stressed that there are many ethical risks and concerns around the usage of remote data-collection techniques such as WhatsApp. Using WhatsApp holds a potential risk of confidential data being exposed because the researcher has the data on their personal mobile device which they use daily for a lot of things (Mavhandu-Mudzusi et al., 2022). To ensure that I avoided such risks, I made sure that the WhatsApp conversations I had with my participants were properly documented and protected. I transferred them to my personal computer. The documentation did not have my participant's name, I filed them with the pseudonyms I gave to my participants for their safety.

Anthropology Southern Africa's ethical guidelines (2005) instructs researchers and ethnographers that participants have the right to withdraw or withhold their support for research. I ensured my participants knew that they could withdraw or withhold their participation in this research under any circumstances. For instance, there were moments when some of my participants were unavailable for interviews, they notified me, and I respected their wishes. Anthropology Southern Africa's ethical guidelines (2005) also stated that when there are conflicts of interpretation, appropriate action must be taken. As noted, in my field site, my participants were IsiXhosa and English speaking, there was no language barrier because I also speak isiXhosa and English. When transcribing data, I checked in with my participants often to ensure that my transcription represented their voices well before I started using the data.

Anthropology Southern Africa's ethical guidelines (2005) emphasized that research may reveal people's vulnerabilities or render them vulnerable. In such cases, researchers have the responsibility to ensure that people are not made vulnerable by the research or its products. I

made sure that my interactions did not put my participants in a position of vulnerability. I made sure that I did not make them feel like I am in a position of power when interacting with them. I did not interact or converse directly with children, instead, my participants told me stories about children in their families and in the neighbourhood, and they did not disclose any identities. I interacted with few individuals from the LGBTQIA+ community to listen to their relations of care with KWP and their experiences of living with this waterbody. The LGBTQIA+ community is a marginalized community that faces prejudice especially in South African villages and Peri-urban areas¹⁹. I made sure that I did not put these individuals in a vulnerable position by disclosing their identities and by not including certain details that can make them easily traceable. I am an LGBTQIA+ member myself, and being an insider (Geertz, 1973) informed how I interacted with these individuals because they considered me as a safe platform and of course we all created certain boundaries. Furthermore, "it is a researcher's responsibility to inform respondents about the purpose of the study."²⁰ With that in mind, I made sure that my participants did not get an impression that I am in a position to help them with the challenges that they were facing which may be linked to my research question during the fieldwork process. I made it clear that I did this research to write up a thesis and they had no problem with that. Instead, we agreed to discuss the possibilities and alternatives that would help the governmental institutions responsible for wetlands to avoid overshadowing other versions of care that take place in KWP (see chapter three).

Working with multispecies communities (i.e., both human and more-than-human bodies) requires an ethnographer to extend ethical considerations to "the worlding projects that might not be recognised in human terms" (Koster, 2019:20). When thinking with multispecies communities, "post-humanist ethics" are required (Barad, 2007:392). Post-humanist ethics are ethical concerns that extend to more-than-human worlds, for instance, non-human bodies such as fauna and flora are considered (Barad 2007:392). As a "visibilizer" (Jackson, 2018) of

19 Harrisberg, K., 2021. *LGBTQ+ South Africans Resist 'War on Queerness' as Activists Demand Justice After Killings*. [online] Global Citizen. Available at: <<https://www.globalcitizen.org/en/content/fear-lgbt-south-africans-war-on-queerness/>> [Accessed 9 June 2022].

20 Africa, A.S., 2005. Ethical guidelines and principles of conduct for anthropologists. *Anthropology Southern Africa*, 28(3&4), pp.142-143.

diverse versions of care relations among multispecies that take place in the KWP setting, I had to look at and illustrate these stories while considering ethical concerns that accommodated every multispecies body I encountered and that required me to acknowledge and reflect on my role (Jackson, 2018; Koster, 2019). “Post-humanist ethics” are ethics that involve a recognition of responsibility and accountability towards mutual relationships that take place between humans and non-humans (Barad, 2007:392). In my case, I acknowledge that this thesis is an attempt at showing my recognition of the responsibility and accountability towards the mutual relationships that take place between humans and non-humans, by telling certain stories of complex care relations that take place between multispecies communities in the KWP waterbody (Koster, 2019).

Conclusion

This chapter provided a broad discussion of how the field was entered, and the techniques that were employed to conduct this research. An account of why these specific research techniques were employed was also explored. Lastly, a discussion of ethical considerations was also provided. Overall, when I was doing fieldwork, my research methods had to vary since this study involved multispecies communities because when doing a multispecies ethnography, it is important to accommodate all the multispecies you are working with (Martin, 2020). Majombozi’s reminder that “there are methods that would not work for other sites and methods are exposed to changing” (2015:12) is very important when one is dealing with multispecies spheres. Lastly, a researcher who holds a status of an insider and/or Anthropology done at home can be conducted without any biases when proper procedures and ethical considerations are applied, this research manifests that (Geertz, 1973; Geertz, 1974; Doja, 2019).

CHAPTER THREE

People's stories on networks of care that manifest in KWP

Introduction

“Care is a human trouble, but this does not make of care a human-only matter. Affirming the absurdity of disentangling human and nonhuman relations of care and the ethicalities involved requires decentering human agencies, as well as remaining close to the predicaments and inheritances of situated human doings.” - María Puig de la Bellacasa.

When considering techno-scientific and engineering versions of care that are implemented in wetlands by the local government, Puig de la Bellacasa's (2017) argument that care is a human trouble becomes relevant. Care is made a *wetland-only* matter when techno-science and engineering become the focus of policy and governance. Techno-managerial governing bodies focus on these waterbodies as ecosystem services where consideration for what benefits humans is the major focus (Grundling et al., 2017; WaterAid, 2021; Department of Forestry, Fisheries, and the Environment, 2021). For instance, Department of Forestry, Fisheries, and the Environment (2021) demonstrated that rehabilitated wetlands are high value for the ecosystem as they provide a range of resources such as timber for building. The Department of Forestry, Fisheries, and the Environment (2021) further stated that their plan is to keep “working for wetlands” and to keep implementing their techno-scientific plans because wetlands guarantee food supply as human beings consume an average of 19kg of fish from wetlands each year. Thus, sustaining their techno-scientific and their engineering modes of care on wetlands is of benefit for people's livelihoods (Department of Forestry, Fisheries, and the Environment, 2021). This means that the techno-managerial practices approach care in one way; in a way that wetland waterbodies are obliged to care.

The techno-scientific versions of care in wetland settings make it seem as if their versions of care - installing infrastructures such as fences in wetlands and controlling how people interact with these spaces - are the only care that matter (Grundling et al., 2017; Department of Forestry, Fisheries, and the Environment, 2021). This chapter argues that care is not a *wetland-only* matter in the context of KWP. There are more-than-techno-scientific approaches of care that people and multispecies who live with KWP practise which are not centred on KWP being the *only* caregiver. People and multispecies reciprocate efforts of care towards KWP. These efforts are illustrated through telling stories of how KWP and its surrounds care for people and how

people reciprocate care towards these beings (i.e., KWP and multispecies). This thesis attempts to suggest that the government and institutions that manage wetlands must acknowledge the more-than-techno-scientific care, and this would be possible through deconstructing and queering their singular binaries, for instance, engaging with and opening space for knowing other ways of being before implementing their technical designs. I will tell queer stories of living with KWP as an approach of opening a new possibility for inclusivity and recognition for other domains of knowledge that are outside techno-science (Cesaire, 1972; Seymour, 2020).

A story about relationships of more-than-techno-scientific care between KWP and multispecies communities drawing from the notions of “ina ethe” (give and take) and “isandla sihlamba esinye” (one hand washes the other)





Figure 3.1: Pictures of Lesotho's group's gardening plot (Source: Asemahle 2021).

I attended to stories that framed care as a matter of multispecies being interconnected as means of representing the more-than-techno-scientific and reciprocated care practices in wetland settings. The first story that did not frame care as the *wetland-only* matter - where a wetland is only framed as an ecosystem service and serving people's needs - is a story I encountered in KWP from the interview I had with Lesotho regarding the gardening project that she is involved in. Lesotho explained that she is part of a small gardening group which plants vegetables and herbs organically. The group consists of eight women, and they all live in Silvertown, close to KWP.

Lesotho explained that she formed the gardening group after she heard about a programme that was facilitated by the Department of Agriculture from her high school mentor who is part of Zendalo Organics and Projects. This programme provided *umgquba* (manure), *imbewu* (seeds), *izithole* (seedlings), ploughing tools and gardening training to young adults who are interested in backyard organic gardening. Lesotho said instead of using her own backyard with her group, they decided to use a small plot that is inside the fence of KWP in order for them to easily access the wetland water to water and take care of their garden.

Throughout our conversations, I noticed that Lesotho places a high value on volunteering and helping in her neighbourhood. She shared a story that in December 2020 she asked for

donations of clothes, stationery, school uniforms and whatever people would offer or help with on social media so that she can help few households in her neighbourhood as means of showing *Ubuntu*. She said this became a huge success. Lesotho further stated that she started the gardening group not for her own personal gains but to help in her neighbourhood, to show *Ubuntu* and the spirit of interconnectedness especially to those who are struggling to get employment. The vegetables that they harvest from their gardening project help the individuals who are in the garden group and certain residents of Silvertown. For instance, Lesotho said that one of their members lost her job due to COVID hard lockdowns in 2020 but she was able to support her family with the vegetables she harvested from their gardening plot. She took some vegetables home and sold some to get small income to sustain her living. Lesotho mentioned that they do not only help their own families in the gardening group, but they also help their neighbours too when they are able to.

Lesotho told me that while her intentions of starting the gardening project were means of showing care and *Ubuntu* to the people she was able to reach in Silvertown, she found herself being cared for by the KWP. She said, “the wetland’s breezes and soundscapes help me to refresh my mind after having an intense day at work/school”, this can be referred to as ecological therapy²¹. She continued saying that being surrounded by her women-only gardening group helped her to express her femininity fully, in ways she is not able to in the presence of ‘men’. “It is a safe space for me and my girls where we are just being ourselves, at peace and not being sexualized by random men”, she said. Lesotho also mentioned that “I am aware that anyone can come to us and say or do whatever they want to because we are using a public space, but we have not experienced that, and we work during the day when there is daylight for the sake of our safety.”

I then asked how she understands care relations in the KWP setting, since she interacts often with the waterbody due to the gardening project. She answered, “It’s so hilarious and surreal how your research made me realise how complex care is, I started this programme as means of

21 “Wetland settings entail the mental health benefits of experiencing the natural environment and its therapeutic value, including ecological therapy” (see: Dale, P.E.R. and Connelly, R., 2012. Wetlands and human health: an overview. *Wetlands ecology and management*, 20(3), pp.166).

caring for my people, but I am realising the care and the effort of *ubuntu* I am putting out there found its way back to me through a wetland which helps me to relax”. Lesotho further said that, because the land that they use for gardening on the wetland never disappoints them and that their vegetables always thrive because of the land’s fertility, they always make sure that they clean their plot and the surrounding areas to show appreciation and care to the wetland since the wetland is taking care of them. This translates the South African ontologies such as *ina ethe* (give and take) and *isandla sigeza esinye* (one hand washes the other) in an environmental lens which I drew on in chapter one, the interconnectedness and the spirit of *Ubuntu* is shown through caring for the waterbody because the waterbody cares (Schieffelin, 1990; Edwards, 2015). This, I suggest, is a form of reciprocated care.

Lesotho told me that she personally felt obliged to keep their plot in the KWP setting clean because of the success of their gardening project. This aligns with the obligations of care that Lesshaft (2017) speaks of, that in matters of care, certain individuals care because they feel obliged to and that comes from the nature of the relationship, they have with one another or with a certain “object”. She also mentioned that “Amagqabi wemifuno nezithole zethu xa zikhula zibaluhlaza, ndicinga lonto yenza umhlaba wondleke negxobho libelihle” (“when our seedlings and vegetables are growing, they have green leaves in most cases, and I think the green leaves provide nutrition for the wetland soil and the wetland’s appearance become pleasant”). Lesotho referred to this as natural care that humans and the more-than-human partake in. After the interview I had with Lesotho, I went back to the field to observe her garden plot and I noticed that the gardening plot was one of the green spots around KWP and it was not littered (*see figure 3.1 above*).

Lesotho’s story above demonstrates that certain individuals can have a reciprocal relationship of care with wetlands, with one another and other beings that gather around the wetland. The reciprocated care relationship demonstrated above is different from how the Department of Forestry, Fisheries, and the Environment (2021) frames care relations with wetlands (i.e., wetlands servicing the ecosystem and providing humans’ needs). In KWP, Lesotho’s gardening group did not make care a *wetland-only* matter; their relationship did not assume that a wetland must care for them, but rather, they considered the wetland needed to be cared for as it cares for them. As Puig de la Bellacasa (2017) would frame it, they are caring for the carer.

In Abdulle's (2019) narrative this is gratitude for one's "caretaker", where reciprocating compassion is framed as a form of care (Abdulle, 2019). The wetland was not viewed as "just space" (Solomon, 2022). It was not objectified or thingified²² - or framed as a thing that has to provide as the Department of Forestry, Fisheries and the Environment (2021) frames it. For instance, The Department of Forestry, Fisheries, and the Environment (2021) stated in their report that everyone (referring to humans only) has the right to use wetland natural resources while promoting justifiable economic and social development. There were shortcomings in terms of considering the well-being of the wetland besides employing and promoting the techno-managerial strategies to manage and care for wetlands. I insist that it would have been better if The Department of Forestry, Fisheries, and the Environment (2021) considered the complexities of care and looked at what is outside of their ways of knowing and the factors that they consider before practising care. For instance, looking at care in wetland settings from Lesotho's lens. When the techno-managerial governing bodies circulate such commodifying and thingifying narratives, other narratives which are beyond that are overlooked (Green, 2020). It is important for the overlooked narratives to be out there in order for the government and institutions responsible for wetlands to recognize and acknowledge them so that they can think about them when they are framing plans and strategies for wetlands. That way, the dignities of people who live with these spaces and multispecies' dignities will not be taken away (Adichie, 2009).

Stories on attempting to care for a waterbody in a marginalised neighbourhood through protests and activism

To expand the techno-managerial approaches' shortcomings of understanding care in wetland spaces using narrow perspectives, as already indicated, there are parts of KWP that are polluted more than others. During my fieldwork I spoke to Ms Liberia. I asked what she thinks causes the pollution in KWP. She said that certain parts of the waterbody are used as dumping sites especially by people who live in the informal settlements of Silvertown. It is largely residents

22 Césaire's theory of 'thingification' centres on the commodification of the oppressed, the oppressor transforming the oppressed into an object solely for the needs of the oppressor (see Césaire, A., 1972. *Discourse on Colonialism*. 1955. *Trans. Joan Pinkham*. New York: *Monthly Review Press*).

who do not have access to services such as drains, toilets and waste collection. They sometimes dispose waste in the wetland to maintain hygiene inside their homes, said Ms Liberia. I asked her if there are negative impacts that result from the pollution, she said “andinakukwazi ukuphendula lombuzo wakho, ndiyafika apha ezinye izinto andikaziboni” (“I cannot answer your question, I am new here, I haven’t witnessed a lot of things”).

When I spoke to Tennessee, she told me that she has been staying in Silvertown for almost ten years. She said that every year since then, there are always health-related concerns voiced by the residents because of the polluted parts of KWP. She explained that her younger brother once had a skin rash, only to find out he had swum in KWP. They had to take him to the Town II clinic, adjacent to Silvertown. “This happened not so long ago, but my younger brother still has marks on his body, surely the pollution there is hectic”, said Tennessee. Green et al., (2018) told a similar story regarding the residents of Sandvlei along the Kuils River which is below KWP where an accidental dip of a foot into the waterbody resulted in sores and staphylococcal skin infections appearing on the skin a few days later. In some ways this may be a result of low-socio economic status neighbourhoods being spaces of neglect and zones of social abandonment (Selimović, 2006) which is signified by the wetland pollution due to poor service delivery (McDonald and Smith, 2004; Brown-Luthango, 2020). During the fieldwork process, I noticed that in KWP there are children who play next to the waterbody almost every day without parental supervision, some children easily access the space because it is closer to where they live and due to the type of housing such as shacks and not having proper yards that may restrict their movement.

I asked Ms Liberia and Tennessee if there are any efforts they make as residents to reduce the pollution. Tennessee said that there are protests every now and then in the neighbourhood where the residents who live in the informal settlements of Silvertown demand service delivery from the local municipality especially toilets because the communal toilets are not enough and are sometimes unsafe. She said if there would be enough flushing toilets, the pollution levels would reduce on the wetland as people would not use the wetland to practice open defecation and to dispose waste that can be flushed. Protests for service delivery are quite popular in

Khayelitsha as a whole²³. In fact, when I lived in Silvertown, I witnessed several protests, specifically around poor service delivery. During my undergraduate studies I took a Golden Arrow bus to campus. Once, on my way home, the bus I was in was stoned and burnt by a group of protesting residents as they were closing roads, luckily everyone in the bus got out safe.

The protests and activism are a form of care practice as some residents of Silvertown are aware that they would pollute the wetland less when they have the service deliveries that they need. As much as Abdulle (2019) draws on care and activism in a political perspective in ‘*Collective Care and Activism*’, she pointed out that activism provides care and compassion. Abdulle (2019) argues that when activists are in the process of protesting, it is either because they care “about or for”, in this context the care is for KWP and humans’ needs. Of course, when caring for one specie, other multispecies benefit as multispecies are interconnected (Tsing, 2012). Thus, the relationship between poor service delivery and pollution makes protesting a part of caring for the waterbodies. People do not know these connections all the time and so making people more conscientious would help advocacy and care for waterbodies.

Abdulle (2019) argued that when one is concerned and cares, they are active and that translates to activism although it is to a certain extent. Thinking with Abdulle’s (2019) narrative of care, both Tennessee and Ms Liberia can come across as activists as they care and are concerned about KWP. As I encountered activism as care practice for waterbodies in KWP, it was not the first time witnessing it. In 2019 during my Honours year, I engaged with members of a non-profit organization (NPO) called Ezemvelo and AgriWise Services, which looks after a wetland and retention pond that is fenced within the premises of Intsebenziswano High School. The members said they take care of these waterbodies by cleaning them as they were used by residents to dispose waste because of poor service delivery in informal settlements of Browns Farm, Phillipi.

23 Mlamla, S., 2020. *Buses, truck torched and roads blocked in Khayelitsha service delivery protest*. [online] IOL. Available at: <https://www.iol.co.za/capeargus/news/buses-truck-torched-and-roads-blocked-in-khayelitsha-service-delivery-protest-1b292b10-ae56-40e3-8ce4-d72ab908c1e3> [Accessed 11 June 2022].

This NPO also practises gardening activities right next to the retention pond. One of the founding members who I refer to as Togo said that they also educate residents who live close to these urban wetlands in Browns farm so that care is practised for the waterbodies not only by Ezemvelo and AgriWise Services but by residents too. This type of care aligns with Tronto's (2005:217) statement on '*Care as the work of citizens: A modest proposal*' which insist care is what is done to "maintain and to repair our environment so that we can live in it as well as possible in a complex, life sustaining web." When thinking with care in the contexts of wetlands, the techno-managerial governing bodies of wetlands need to be open to complexities of care so that the rationality is interwoven from multiple threads - complexities of care need to be taken into consideration as there is no one way of caring (Latour, 2013; Puig de la Bellacasa, 2017).

Water snakes and Drowning incidents as care practices

Practices of care are not limited to a singular approach in KWP, there is another mode I encountered. While listening to KWP residents' stories of care, a common theme of drowning arose in interviews with Lesotho and Tunisia. Tunisia told me about a boy who drowned in the KWP waterbody in 2020. She was not able to remember the exact date and month, but she was certain it was towards the end of 2020. She said there was a group of boys rolling tyres and running after these tyres. Apparently, the tyres sunk in the wetland. One of the boys went in the water trying to take out the tyres. Tunisia emphasized that "wayesemncinci lamntana" ("the child was very young"). She said the boy was not able to swim and he drowned. Tunisia said that the other boys tried to seek help and when elders and the ambulance arrived it was too late, the boy had passed on. Tunisia pointed out that certain parts of the KWP are deep and few people go to those parts of the waterbody.

Lesotho narrated another story about drowning. "Before this incident happened, I remember it was a Saturday morning and I was busking in the sun. A group of boys gathered in the street I live in. Two boys who are from the same household are my neighbours. Their four friends lived down my street at that time", said Lesotho. Lesotho mentioned that when the boys reported what happened, they said that they went to the KWP and started playing soccer. It was very hot that day, and they were sweating from playing soccer. They decided to swim in the water that was next to the playing field. They took breaks in between as they were swimming. When they were about to leave, they decided to swim for the last time. This time around, one of the boys

started drowning. The other boys tried to save him, but they were all young. They were not able to help so they went to ask for help from *ebahlalini abakufutshane* (nearby residents of Silvertown). When the elders finally arrived, it was too late, the boy did not survive, said Lesotho. After being told the above stories regarding drowning by two participants, I looked for more stories on the internet and found a story regarding a drowning incident which happened in a waterbody that forms part of the Kuils River, not very far from the KWP. Two boys were found in a waterbody between Old Faure Road and the N2 highway in Mfuleni after floating clothing was spotted (Isaacs, 2020). Isaacs (2020: para.1) mentioned that “the Khayelitsha Development Forum's member said the discovery of the boys' bodies has left the community devastated.”

I then asked Tunisia and Lesotho what they think leads to these drowning incidents besides children not being watched by elders. Tunisia said:

“Phambi kokuba ndize eKapa ndakhulela eLady Frere, kukho idama ekuthiwa kusequnubeni phaya, abantu bayoyika usondela kuba kukho abantu abakhe ba tshona kulo basweleka, kukho inkolelo yesiXhosa yokuba umntu xa etshone emanzini ze wasweleka, sube ebizwe zizinyanya zakhe ezingamagqirha eziphantsi kwamanzi so nalapha ke isenoba yilonto because abantu abanintsi apha ngamaXhosa and basuka e Eastern Cape. Kwamna ndiyoyika ukuya kwindawo ezinamanzi ezinzulu, andisondeli kwakwezi zalapha”

(“Before coming to Cape Town, I grew up in Lady Frere in the Eastern Cape, there is a dam called eQunububeni [Iqunube is a strawberry in English], people are scared to go nearby the dam because there are people who have drowned and passed on in the dam. There is a Xhosa belief that when someone drowns in a waterbody and passes on, they have been called by their ancestors who were traditional healers who live under the water. So, that might be the case in the context of KWP because people who live here are dominantly Xhosa and some of them are from the Eastern Cape. Even myself I fear deep waterbodies because of such stories, I do not go to the deep parts of KWP”).

During my fieldwork observations, I noticed there was no constant movement on the parts of KWP that look deep, and there were no children swimming though NYC said children drown even if the spot they are swimming in is not too deep. Going back to what was said by Tunisia, Madolo’s (2019) article on ‘*My second calling to the river*’ outlined that among people who speak isiXhosa, if a person comes from a family full of *abantu abamhlophe* (people with a

calling to become traditional healers), then playing in and being nearby a river is dangerous. Madolo (2019) said she was told by a family member she was not allowed to swim whether in a river, dam, or sea because her family is full of *abantu abamhlophe*. Madolo (2019) stated that it was believed that if a person has a gift of becoming a traditional healer and they have not accepted it yet, they will get pulled in while swimming to join the ancestors and emerge as a traditional healer underwater.

I am familiar with similar beliefs as I am from the Eastern Cape. However, the ways in which I came to understand this belief is quite different to Madolo's (that when one drowns, they emerge as a traditional healer) and more similar to Tunisia's (that one drowns in a waterbody and passes on, they join their underwater ancestors). Where I come from there is a dam called Xonxa and traditional healers use that specific dam for their rituals and people who do not have a gift of becoming traditional healers do not get closer to that dam because they fear that they would drown. Thus, stories about drowning and underwater ancestors are quite familiar among the Xhosa ethnic group. Beliefs such as this one on drowning may result in a certain type of care for the KWP. For example, people being distant to the deep parts of KWP means that there will be less movement in that part of the waterbody and such spots may be less polluted. This opens a possibility of the well-being of that specific part of the wetland to flourish as it would be often clean.

Other beliefs and ontologies that may be a form care for wetlands were not limited to drowning and underwater ancestors' stories. Lesotho mentioned that there are individuals who believe that there is a big water snake that lives in the KWP waterbody. Cohen's (2015) work highlighted a phenomenon in the ravines and other places associated with water in Kamiesberg landscape in the Northern Cape of South Africa that there was a *waterslang* (watersnake) that was believed to be powerful and dangerous. "People taught children about the dangers of going too close to certain water fountains through watersnakes' stories" (Cohen, 2015:37). Lesotho said this water snake that is believed to be in KWP is called *Intlwathi* and I was not surprised that water snake had a name because in my village a water snake is called *Izilenzi*. Lesotho told me that she knows some elders who are very distant and never go to the KWP because of the belief that there is a water snake. "One of my neighbours go as far as telling her grandchildren that there is a water snake e-Pholas (a nickname for KWP) and it has evil spirits. Her grandchildren fear the space, and she is even scared to go nearby Pholas herself", said Lesotho.

Cohen (2015) stated that in some African beliefs, water snakes are indeed associated with evil spirits even though it is acknowledged that some water snakes are not dangerous (Cohen, 2015). Lesotho said that she thinks it is possible that those who live in the informal settlements of Silvertown who do not have basic hygiene services such as drains, and flushing toilets probably do not use the KWP spaces that are associated with water snakes because of fear. With Lesotho's opinion in mind, I asked Ms Liberia if she uses the spaces where it is believed there are water snakes to dispose waste or for open defecation or whatever the case may be since she lives in informal settlements and does not have basic hygienic facilities. She said she does not because she is scared of the beliefs that are associated with water snakes, “andisondele nokusondela kulandawo kuthwa ine nyoka. Inyoka zase manzini zinobungozi kwaye zihamba nomoya omdaka” (“I do not go closer to the space that is believed to have water snakes; water snakes are dangerous, and they contain evil spirits”).

Critiques of conservation efforts highlight that erecting fences and controlling access cut off important relations of care and kin (Solomon, 2022). Solomon (2022) further highlights how this is particularly evident when dominant practices of conservation obscure (and make illegal) some important care practices that incorporate beliefs, and other ontological perspectives. For instance, the beliefs such as the ones above where drowning incidents, believing in underwater ancestors and water snakes result in less movement in certain parts of KWP which possibly contribute towards the conservation of this waterbody. Keeping this in mind, when the Department of Forestry, Fisheries, and the Environment (2021) identifies “fencing wetlands to control access” as a way of caring for and managing wetlands in their plans and strategies of working for wetlands, a tension between lived realities and policy/management plans becomes evident.

Queering spaces: paying heed to gender and sexuality for new possible ways of knowing and managing wetlands

The first step to avoid limited techno-scientific management of wetlands and understandings of care would require government institutions such as the Department of Forestry, Fisheries, and the Environment, the CoCT and Urbanscapes to look at care and management for these spaces from a queer perspective. For instance, when I was listening to varying stories of care relations in KWP, I picked up that there was a thread which involved gender and sexuality. There were stories I encountered regarding how an individual's gender role and sexuality

shapes their relationship with the KWP waterbody (whether the relationship involves care or not). Paying attention to such stories opens new possibilities of avoiding limiting ways of knowing.

Gender roles are socially constructed and determined by cultural norms (Ebron, 2006). Gender roles inform how men/boys and women/girls live in, interact with, and navigate the world, for instance, how labour is divided in and outside the home, and how division of access to and control over resources occurs (Ebron, 2006). Gender roles are performed, learned, and enacted through social phenomena and social relationships (Ebron, 2006). After this observation, I noted that these threads of gender in KWP resonate with a study discussed in chapter one by Munishi et al., (2012). Munishi et al., (2012) pointed out that there were different roles that men and women occupied when it comes to utilizing and interacting with wetlands in Kilombero, Tanzania. I then asked my participants whether they think gender and sexuality impact their relationships of care with the KWP. As noted, while doing this, unlike Munishi et al., (2012), I did not focus on the heteronormative binaries which focus on men and women. I looked at what was outside that, stories that involve queer individuals as well, to be precise.

Some of my participants outlined that there are differences influenced by gender in terms of relating and being with the KWP. For instance, I asked Mr Mozambique who identifies as a man whether he has a relationship of care with the waterbody and how his gender impact this relationship. Mr Mozambique said that there is no other relationship he has with the wetland other than looking after his cattle graze and drink from the waterbody. He said as a man who originates from a traditional village in the Eastern Cape, having cattle symbolized wealth and power for him. “Noba ndihlala eDolophini na, iinkomo zibalulekile kum” (“even though I am living in an urban neighbourhood, having cattle is important to me”), said Mr Mozambique. Even Shava and Masuku (2019:5) in an article titled ‘*Living currency: The multiple roles of livestock in livelihood sustenance and exchange in the context of rural indigenous communities in southern Africa*’ confirm that “within traditional community settings, livestock has always signified the wealth of a man”. I then asked Mr Mozambique for further clarification whether him being a man had an influence in this kind of relating and coexisting with KWP. He replied “apho ndisuka khona, imfuyo yoluswa nga madoda namakhwenkwe” (“where I come from, it is only men and boys who look after cattle”).

With Lesotho's gardening group, I noticed that it was a women-only group. I then asked Lesotho whether gender and sexuality played a role in how they live with KWP. She said that she thinks the reason gardening and crop farming is dominated by women in KWP was because some Xhosa people in Cape Town originate from the Eastern Cape. Where she grew up in Centane in the Eastern Cape, women used to harvest food in gardens and in the farming fields (*Emasimini* - in her words) to cook for men/boys who are looking after cattle. She said that this division is associated with gender roles and hierarchies. This gender division outlined by Lesotho goes back to what was argued by Munishi et al., (2012) that different genders attach different values in terms of how they interact with wetlands and multispecies assemblages in wetland spaces.

With NYC and Amsterdam, a same-sex partnership who identified as queer men, they both told me that their relationship with the KWP is that this waterbody provides a queer friendly safe-space for them as same-sex couples are not fully accepted in Silvertown. According to Glassmann (2012:23) "queer friendly spaces are unique places in which queerness, as opposed to cis heterosexuality, is embraced and perceived to be a norm". To provide more contexts on NYC and Amsterdam's claim that there is discrimination against LGBTQIA+ members in Silvertown, one day I was walking to NYC's place from a nearest shopping centre when I greeted a queer individual who was very expressive of themselves. As I walked past this individual, a random man whom I had neither seen nor interacted with before approached me and said "Ukuzenza umfazi kodwa udalwe wayindoda akulunganga kwaye akusiyo ntando ka Thixo" ("making yourself a woman meanwhile God made you a man is wrong, and it is against God's will"). I gave this man a pretentious smile and did not comment as I was offended as a member of the LGBTQIA+. I assume he did not know that. He continued saying "ayidalwanga lento bayenzayo" ("what they are doing is an unnatural act") and I continued with the pretentious smile without saying a word. After that encounter, I had a better understanding of what it means and what it is like to be a member of LGBTQIA+ living in Silvertown as I witnessed homophobia for the first time after living there for a while.

NYC shared how certain less populated areas and parts of KWP are an alternative queer friendly space for him and his boyfriend. He said that they sometimes hang out around the waterbody, host picnics, and express their sexuality without anybody's interference. They do not experience the discrimination that takes place in the neighbourhood's busy spaces. As we were having this conversation, NYC said "I know you are asking yourself why I am

comfortable with sharing, you might think what I am about to say is problematic, but we are very discreet and masculine – no one notices”. NYC said that since the KWP waterbody gives them this space when they need to be outdoors, they pick up the waste on the waterbody indicating a reciprocation of care. He positioned the space he can access near the waterbody as caring for him, thus, he is also obliged to care, mirroring Puig de la Bellacasa’s (2017) the idea of “caring for the carer”. As we were having this conversation, Amsterdam, who referred to himself as “queertive” (i.e., creative), insisted that we come up with something creative as a representation for their relationship with KWP. While we were brainstorming, I suggested a poem that I would attach on my thesis. Below is the poem we brainstormed during our interactions. I wrote it and Amsterdam edited it.

The wetland does not discriminate nor shame.

As they live taxing lives,

He beats up oneself, she criticizes, and they carry the blame.

He hurts, her self-esteem weakens, and they lose all trust.

We forget that we more than enough.

Living their lives seeking a place to feel safe and confident,

A place that will not persecute and discriminate.

Imagine silence and tranquillity, no form of violence.

Imagine the peace from soothing breezes with no form of harm.

Water plants, a water lily, no reservations just pure beauty.

In this space, she received no indignity, he received no ill-treatment.

They are always welcomed and never shamed.

They found a place to be themselves with no consternation of being hailed with hatred.

I guess they are alike, this waterbody is different from other landscapes and so are
they as the waterbody does not see difference, does not discriminate but allows
diversity.

-A short poem by Asemahle, edited by Amsterdam

After reading on how gender dynamics occur in wetlands and observing that it is largely heteronormative (Munishi et al., 2012), as noted in chapter one, when listening to how gender influenced people's care relations in KWP, I had to keep in mind the work of Césaire (1972), to decolonize the mind when entering spaces. Here I try to represent queer stories to avoid what I am critiquing in this thesis, (i.e., dangers of overshadowing and overlooking other versions of care that exist outside the techno-scientific versions of care). By telling queer stories regarding relationships of care in wetland settings, I am showing that it is possible for the government and institutions practising techno-scientific versions of care in wetlands to think beyond techno-scientific governance, when they employ their approaches and ways of knowing. In order for the techno-scientific strategies not to overshadow other versions of care and to overcome the existing shortcomings, they will have to intertwine rationality from more than one thread by acknowledging that there are many ways of understanding care and of being with wetlands out there (Latour, 2013). Instead of prioritizing techno-scientific approaches, they must listen to and engage with more-than-techno-scientific realms and see how they can coexist (Adichie, 2009; Latour, 2013 and de Caladena 2015).

In '*Queer Fallout: Samuel R. Delany and the Ecology of Cruising*', Ensor (2017) concurs that, rather than analogizing environmental stewardship to the forms of care that we already know how to practice, how about we listen to others that are not in our limiting realms as scientifically trained environmentalists? To avoid this issue of overshadowing other ways of being, what if the techno-scientific versions of care conceived of an environmentalism without techno-scientific environmentalism that is dominant — where the techno-scientific versions of care of wetlands think far less about their fields (engineering, architecture, conservationists, environmental monitors) and think far more about what makes multispecies communities in

wetland spaces, the position of multispecies communities, the gestures and entanglements that come to define them, and, yes, the things that they (fail to) do? (Ensor, 2017).

The importance of partnering with local non-profit organisations and conversing with residents

After reflecting on the stories and observations on ontologies, gender, and sexuality discussed in this chapter, I insist that the government bodies, institutions responsible for wetlands and techno-managerial officials should start partnering with local NPOs and converse with local communities before implementing their strategies and plans of caring and managing wetlands. Togo, a participant whom I mentioned briefly in chapter one and two, a co-founder Ezemvelo and AgriWise Services said that they do not get enough support and recognition from government and other well established environmental institutions which manage wetlands. As noted in chapter one, in the context of KWP, as much as government and institutions which were involved in rehabilitating and developing this waterbody made efforts to have stakeholder engagements (City of Cape Town, 2015), Tennessee, who is one of my participants, said that she has been living in Silvertown for a very long time and she was never part of these engagements. She knew nothing about what was going on in this waterbody even though she lives with it. This shows that more efforts of having intensive stakeholder engagements need to be done. Civil society organisations such as Ezemvelo and AgriWise Services, which rehabilitates polluted wetlands and practise gardening in the wetlands that are in Philippi, Browns Farm, as briefly discussed in the previous chapters, need to be given more support by local government institutions and well-established environmental organisations. Since they engage with local communities from an insider perspective, they understand how to care for the wetlands in the neighbourhoods they work with. A multilateral communication is essential in order for government and well-established institutions to avoid epistemologically traversing the worlds of others relying on an epistemological map of their own worlds (de la Cadena, 2015).

How can this be done? Tennessee suggested that there must be more inclusive and intensive conversations and that residents who live adjacent to wetlands must be informed and invited to participate when there are projects and developments that take place in KWP. This will enhance both the knowledge of residents and the forms of governance enacted on these spaces. Even under the Allocation of Responsibilities section on Management of urban storm water impacts

policy (2009), it is stated that local residents must also take a responsibility when it comes to protecting wetlands and infrastructures such as storm-water ponds, but when techno-scientific versions of care are implemented, residents are not considered much.

Le Grange (2018) on *'Decolonising, Africanising, indigenising, and internationalising curriculum studies: Opportunities to (re) imagine the field'* suggested that when change is needed, there must be commitment to complicated conversations. "In such conversations, indigenisation, different knowledge traditions and Africanising are sometimes invoked" (Le Grange, 2018:6). This is possible, because in the work that I do for the Future Water Institute (UCT), I have seen the members of this institute mediating the City of Cape Town officials and the residents of Pinati Estate. To give more context as this case was mentioned briefly in chapter one and two, there was a development implemented by the City of Cape Town (specifically the stormwater department), which involved installing storm water infrastructure around Cape Town. The residents of Pinati Estate claimed that when this development was implemented in their neighbourhood they were never approached. Meanwhile Cape Town officials claimed that they circulated posters and there was a meeting, to which very few people attended. With concerns of this development, the residents of Pinati Estate approached the Future Water Institute for help. The Future Water Institute deputy director organized a meeting between the residents and the City of Cape Town officials where each party raised its concerns.

This was not the only time I saw the possibility of different ways of understanding and caring coming to the fore. In the beginning of 2020, an exchange landscape student from Copenhagen University, Denmark who worked with the Future Water Institute (UCT) wanted to do an experiment on a wetland located in Hyde Park, Mitchell's Plain as part of her work for a Master's degree. The Future Water Institute members organised a meeting with the residents to understand how the residents live with the waterbody and what kind of advancements they would like to see on the waterbody. I was present in that meeting and a lot of brainstorming took place. The point of sharing this story is to show that the government and the institutions that practise techno-scientific care can have conversations with people who live with these spaces and ask "how to care" so that other ontologies are not overshadowed or overlooked (Puig de la Bellacasa, 2017; Green, 2020). The conversations can also include understanding the multispecies relationships that take place in these spaces as humans and the more-than-humans are an interspecies (Tsing, 2012). Complicated conversations are learning spaces in which negotiations and productivity can result because complicated conversations assemble those with differences (Le Grange, 2018).

Another suggestion is that the government bodies and the institutions that practise techno-scientific versions of care on urban wetlands should start considering basic service delivery - such as providing toilets, wastewater drains and consistent waste collection as a form of caring for urban wetlands. Neighbourhoods such as Silvertown have existed for decades yet there is still poor service delivery after almost 28 years since apartheid ended, the government is failing. "Service delivery is one way to reduce pollution in KWP, such is not consistent here that's why people end up polluting the wetland. There are days where waste wouldn't be collected for a whole week and dogs would drag some of it in the streets. The trucks which collect waste do not reach the informal settlements that are next to the KWP, and people end up throwing waste in the wetland," said NYC. NYC, Amsterdam, Lesotho, and Tennessee suggested that the CoCT needs to be reliable and consistent in delivering basic services that are lacking in Silvertown and the surrounding neighbourhoods especially in the informal settlement neighbourhoods. That way residents who live with this urban wetland would dispose less waste on the waterbody and the pollution would decrease. Tennessee and Tunisia said that if the CoCT, Western Cape government and South African government in general can be consistent in delivering basic services such as toilet facilities, drainage, and waste collection, people who live adjacent to KWP would be less likely to dispose of waste on the KWP. If the government and institutions responsible for wetlands can try and view this as a form of care, pollution would possibly decrease, and the CoCT could work hand in hand with residents because the participants think this would make a huge difference.

Government bodies and the institutions responsible for wetlands need to work together with residents and non-profit organizations similar to Ezemvelo and AgriWise Services whose work focuses on decreasing pollution on wetland and practising crop farming on wetlands to keep wetlands lively and in good condition. Partnerships with government bodies such as CoCT and well-established institutions that manage wetlands, would make a difference. When I spoke to the co-founder of Ezemvelo, she insisted that if they did not have limited funds, they would enhance their project and reach as many urban wetlands in Cape Town as they can. This organisation does not just practice care in Browns Farm, it speaks to residents, educate them about wetlands in general and suggest better ways on how residents can live better with these wetlands in order to reduce pollution. Such civil society organisations that practice care on wetlands and rehabilitates polluted waterbodies through engaging local communities from an insider perspective need financial and other resources support.

Lastly, as much as there is a need to adopt alternative approaches of caring for wetlands, financial implications for such a process must be considered. Solomon (2022) provided a practical example of such pitfalls where she demonstrated what happened to the Genius of Space project in a neighbourhood named Langrug which is located on “government land in Franschhoek, one of the wealthiest towns in South Africa” (Solomon, 2022: 183). The Genius of Space project focused on and employed context specific wetland solutions and management approaches. “The Genius of Space Project uses biomimicry principles to clean up grey water, stormwater and solid waste” (Solomon, 2022: 183). However, Solomon (2022) noted that the Project progress has slowed recently due to financial limitations and other issues such as politics and power dynamics. While such obstacles arise in these more nuanced approaches, that does not invalidate their potential.

Additionally, Solomon (2022) highlighted that in this project, practitioners set up workshops with residents, local municipalities, and provincial government stakeholders and conducted walkabouts to understand the residents’ daily lives before they employed their approaches of caring in these waterbodies. Such effort and initiatives from The Genius of Space Project practitioners can be considered as queering the management²⁴ of the waterbodies because they did not manage the spaces that they work with using solely their mode of knowing and/or caring (i.e., what they - themselves – think is appropriate). In ‘*Diversity management discourse meets queer theory*’ Bendel et al., (2008) suggested that queering management practices means deconstructing, reconstructing, and revising the homogenous approaches and ideas employed by those who are in power and responsible for managing and organising in government, society, academy, and/or workplace. Bendel et al., (2008) further argued that queering the management practices does not necessary mean having a group of queer individuals as managers, but by diversifying approaches and practices to encompass considerations for other types of bodies, ways of being in the world, and acknowledging that there are a multiplicity of potential approaches, the idea of management can be ‘queered’; in some ways this also links to practices of adaptive management²⁵. Queering and diversifying management also represents

24 Parker, M., 2002. Queering management and organization. *Gender, Work & Organization*, 9(2), pp.146-166.

25 In adaptive management, the old approaches of management have moved into newer practices of setting up ways to change the management approaches as necessary according to

an inner truth of individuals that can be characterised using different diversity dimensions (e.g., age, disability, ethnicity, gender, religion, and sexual orientation) (Bendel et al., 2008). For instance, the multispecies communities that live with KWP are diverse and have different experiences. Thus, queering management in the context of wetlands may refer to the inclusivity of multispecies and people who “do not have a seat at the table” (i.e., in the board meetings held by wetland management bodies). It may also refer to giving residents who have different experiences of living with these waterbodies a platform to have a voice in terms of evaluating and having an opinion regarding wetland management approaches that may be employed. This is possible, for instance, The Genius of Space project discussed above, understood the context of the neighbourhood they worked with by interacting and merging with different stakeholders to avoid overshadowing other ways of knowing (Solomon, 2022). The government bodies responsible for practicing care in KWP must consider this approach. Parker (2002) emphasized that hierarchies in management are unhelpful, thus, in the context of KWP, dismantling the homogenous management approaches and employing inclusive and divergent approaches is essential.

Conclusion

This chapter drew on stories which do not frame care a *wetland-only* matter. Stories where care is reciprocated in wetland settings - how wetlands care for residents and multispecies and how residents and multispecies care for wetlands – vice versa - were discussed. I frame these versions of care as more-than-techno-scientific care. These are often overlooked and overshadowed by the techno-managerial government bodies. I articulated such stories in an effort towards urging government to open a space for other ways of knowing in order for new possibilities of managing wetlands to manifest. Here I draw on gender and sexuality stories to further suggest the deconstruction of singular binaries when managing wetlands. That way, there will be inclusivity of other ways of caring. Governments need to acknowledge these stories and efforts so that they are known, this will help to decouple the mentality that the

the responses of the local environment, peoples, and flows. (See Galatowitsch, S. and Bohnen, J., 2021. Long-term recovery of a restored palustrine wetland: the role of monitoring and adaptive management. *Wetlands*, 41(6), pp.1-15)

techno-version and engineering version are the only modes of care for wetlands. After all, people are practising care even if it means picking up small bits of waste as Amsterdam and NYC did.

CHAPTER FOUR

Observing, listening, and smelling care relations between multispecies worlds in KWP.

Introduction

“The repression of animals’ abilities to engage in care work, both result from human choices and actions. These dynamics are socially constructed; they stem from humans’ political, economic, and ethical choices, not from innate, automatic, or essential processes” - Kendra Coulter.

In ‘*Beyond human to humane: A multispecies analysis of care work, its repression, and its potential*’, Coulter (2016) advocates against the invisibility of animals’ care work. As shown above, Coulter (2016) argues that human decisions and actions result in the invisibility of animals’ capabilities to engage in care work. This is a social construct which is influenced by “human’s political, economic, and ethical choice, not from natural processes” (Coulter, 2016:200).

During my fieldwork in KWP, I noted that in wetlands the techno-scientific and engineering versions of care practiced by landscapers, architects, engineers, environmental practitioners, and conservationists have a tendency of portraying their installations of infrastructures such as fences, concrete, and water controls as the best - and often the only - way to care for wetlands. As noted, – often - those modes of care are implemented for the benefit of humans and the ecosystem (PropertyWheel, 2013; Swift, 2020; Grundling et al., 2017; Department of Forestry, Fisheries, and the Environment, 2021). Techno-science pays slight attention to how the multispecies and wetlands participate in care practices that are innate and automatic besides commending wetlands for being sponges that absorb water during floods and how this can be supported through technologies and engineering approaches (Coulter, 2016; Grundling et al., 2017; Department of Forestry, Fisheries, and the Environment 2021). The efforts of caring prioritized by techno-science are essential, but the focus cannot always be on what wetlands can provide for humans and the ecosystem and how to sustain such “services”.

The purpose of this chapter is to provide stories and observations which I encountered in KWP of how the multispecies communities (including the more-than-human) engage in care work

that is outside of techno-scientific domains of knowledge. For instance, I noted that KWP flora support fauna's well-being and that of the wetland – cattle graze the grass, the plants and the lawn make the wetland lively and vibrant. I felt the need to look at how the more-than-human bodies practice care among themselves, with the wetland and with humans because in most cases similar to wetlands, the more-than-human bodies that live with wetlands are often looked at as objects that are supposed to benefit humans, ecotourism and service the ecosystem. How they live with one another is not often looked at (Department of Forestry, Fisheries, and the Environment, 2021). For instance, wetlands' fauna and flora provide vast natural views for tourists whether they are driving or on the ground (Grundling et al., 2017). I work to show the symbiotic multispecies relations of care drawing on Coulter's (2016) work by avoiding what the techno-scientific and engineering versions of care have been doing; for example, how such techno/engineering approaches repress organic multispecies versions of care through their "control".

I am not framing care relations in wetlands as a *human-only* matter as every living and non-living being is capable of practising care (Puig de la Bellacasa, 2017). In that way, ways of understanding caring practices in wetland settings will be interwoven from more than one thread (Latour, 2013). I will represent the symbiotic relations and more-than-human's stories by listening to sounds, detecting smells, and doing observations (i.e., as sight is already a sense) (Jackson, 2018). As noted in chapter two (i.e., methods), when senses are used as a research tool, it is important to apply the senses with other individuals so that as a researcher you can relate with these individuals (Peterson and Brennan, 2020). When I was observing the wetlands while employing the senses, I sometimes had conversations about what I observed with Mr Mozambique, NYC, and Ms Liberia. DeLuca (2016) emphasized that when listening to natural soundscapes, it is important to delineate the boundaries between human and non-human species, hence my participants were with me in most cases. So, the views of Mr Mozambique, NYC, Ms Liberia, and Lesotho will feature in this chapter.

Sight: A relationship of care between more-than-human communities

Key to this chapter is observing the complexities of symbiotic care (Green, 2013; Puig de la Bellacasa, 2017) with the sense of sight. The conversations that I had with NYC, Mr Mozambique and Ms Liberia kept on referring to the water flows that we often saw, the moist

soil, the blossoming plants, and pastures, the long green grass, and the shiny hides of cattle, and lastly, the goats that were grazing in the waterbody. My participants and I viewed the co-existence between these more-than-human beings as symbiotic relations and as forms of care (Green, 2013). For instance, NYC said “if there were no water flows that made the soil moist, the grass on the wetland was not going to grow properly. It would have been dry. I personally think water flows and moist soil which result the grass to grow so that cattle, sheep, and goats can graze is some sort of natural care relation between the parties involved in this process.”

I asked NYC “how did you make these connections between these networks, it’s something I never thought of even though it’s a message I wanted to send out on my thesis, that innate care exist between more-than-human species and wetlands.” He replied, “I took an Agriculture course in Boland College which I did not even finish, I enjoyed chapter that was focused on grazing.” Conley (2016) insisted that in most cases care takes place between human-to-human and sometimes as a response to an event. For instance, when there was #UCTFire, people’s response to that event was a form of care, according to Conley (2016) – (humans caring for the more-than-human or for an “object” to be specific). Conley (2016) framed this as if it is only humans who are able to care for more-than-human multispecies communities while Puig de la Bellacasa (2017) insisted that care is not a human-only matter.

After the conversation I had with NYC while observing the KWP, I noted that care manifested differently from the one described by Conley (2016). We observed more-than-human beings doing care work among themselves, which is in line with Coulter (2016). The fact that the KWP waterbody was providing water, which moistened soil, allowing plants and pastures to grow and blossom symbolized symbiotic care between these beings (Green, 2013). This relationship of care that NYC and I observed was complex. For instance, after the wetland water and moist soil helped the green plants and pastures to grow - cattle, goats and sheep grazed these plants for survival.

To provide more clarity on the above argument, Mr. Mozambique said that he would let his cattle graze around the waterbody for the whole day and at 6pm he would take the cattle to drink water and then take them to their kraal. All the cattle looked like they were in a healthy state with shiny hides. The green grass, pastures, plants, and water flows that are in the KWP provided nutrients for the cattle’s well-being to flourish and that is how this waterbody cared for these species. Mr. Mozambique said that without the grazing pastures and flora, his cattle

were not going to be able to survive. Mr. Mozambique said even during the seasons when the grass and pastures are dry, it is not a strain. His task is to find better pastures around the wetland setting that are not severely affected by dry seasons for his cattle to graze. He said he does not necessarily have to change locations and find other alternatives to feed his cattle. Again, even though this relationship is monitored by a human being, it is between the KWP waterbody, its beings, and the cattle and this shows that care is indeed complex (Puig de la Bellacasa, 2017). These are the types of symbiotic relations that are often overlooked (Green, 2013).

This example with Mr. Mozambique shows that the more-than-human bodies practice care work. Even if humans monitor such symbiotic relations, they were not going to exist without the bodies involved. Techno-managerial governance needs to take note of such relations before applying their techniques to ensure that certain relations of care that already exist in these spaces are not disrupted, but instead are supported. Techno-managerial governance needs to understand that care is not just an application, but it is more about a transformative ethos (Puig de la Bellacasa, 2011). For instance, Mr Mozambique said the fence that is next to the roads is important as it protects the more-than-human species of KWP that are not often monitored. He continued saying that certain structures that control movement around the wetland concern him. For instance, certain fences and controls that are in isolated spaces of KWP may endanger certain animals that are not monitored. Techno-managerial governance needs to think with these spaces intensively in order to practise care that is compatible with symbiotic relations.

Sounding out more-than-human care relations in KWP

During the data collection process, I thought that it was essential to record sounds that take place around the KWP waterbody. I recorded these sounds as a way of telling multispecies and more-than-human stories of care; intending to draw out ways of caring that are often overlooked or dominated by the techno-scientific versions of care that tend to control these spaces while framing their controls as care (Green, 2020). Below, different sounds that took place around KWP during my observations are presented, followed by an analysis which shows how these sounds represented care work between more-than-human bodies living in KWP.

These sounds provide context on how more-than-humans live with one another and with the waterbody, giving “voice” to more-than-human and the waterbody itself. Here they get to tell their stories with their own sounds. Even though wetlands are controlled with fences, bridges,

and other measures, these sounds show that multispecies are not separated from one-another. Multispecies do not live in different worlds and sometimes do not often conform to the water controls that are labelled as care that divide them. They somehow find ways to assemble (Tsing, 2012; Neimanis, 2017). For instance, while I was listening to sounds, I heard birds' tweet loud almost every second, sometimes swimming in the waterbody (*Listen to figure 4.2 below*). This may sound far-fetched, but I am certain birds had relationships that involved freedom of movement with the KWP before certain technical water controls were installed. Even now that these controls are there, the relationships that these birds had with KWP may have shifted because of the controls but they are still there. This then leads to my point that natural and innate care relations that happen between more-than-human beings in wetlands must not be overlooked as such relations have to be considered and given credit rather than techno-science always dominating (Latour, 2013; Coulter, 2016).



Figure 4.1: A google earth snapshot of where I recorded the sound of water flows and other soundscapes while walking around KWP (Source: Asemahle 2021).

Link to access sound: https://uctcloud-my.sharepoint.com/:u:/g/personal/sbnase001_myuct_ac_za/ESMkrqRipR1Jt_2t8bZUs3QBK_MGT4YhRCRrgUPGdaZdcAA?e=yd49S9

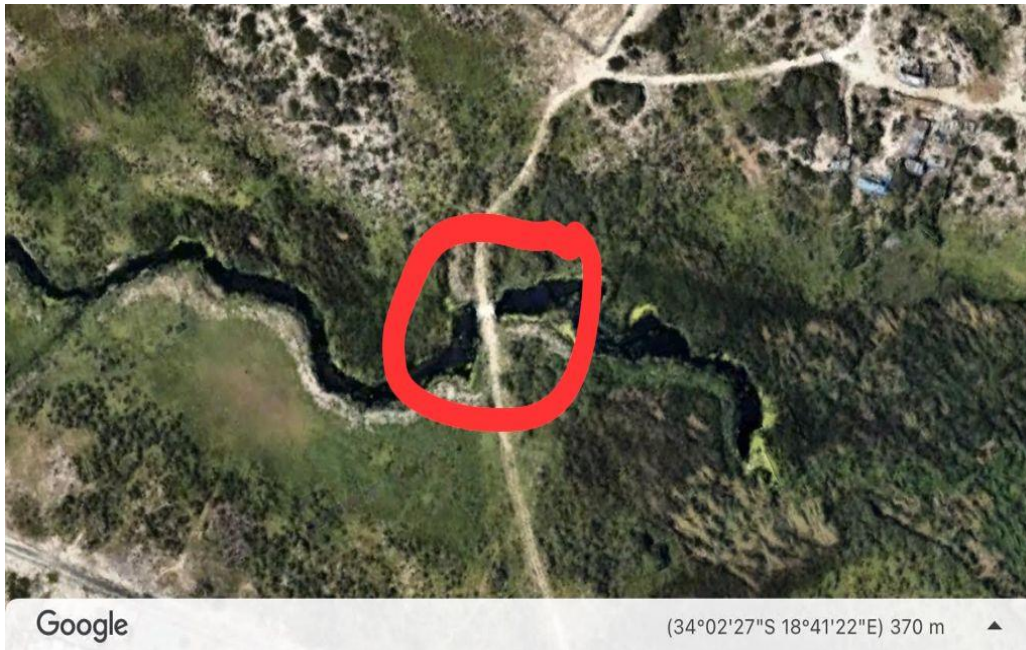


Figure 4.2: A google earth snapshot of where I recorded the tweets of birds and sounds of animals such as sheep and goats (Source: Asemahle 2021).

Link to access sound: https://uctcloud-my.sharepoint.com/:u:/g/personal/sbnase001_myuct_ac_za/EfiRTAVIGcpNhjcODByC7N8B9-Cob7vUXsAv7VAe7IPahQ?e=d7seuZ

The sounds on the figures above were recorded in different spaces to comply with notion of intertwining rationality using different threads (Latour, 2013). I did not want to depend on one sound and one space. I wanted to have variety of sounds to use for analysis and to support my argument. This was also done to avoid telling a single story and creating a stereotype by depending on one truth when there are multiple truths (Adichie, 2009). When looking at stories of care, soundscapes reflect the earth’s acoustic and natural assemblage of organisms (Pijanowski et al., 2011). In the context of research, soundscapes reflected symbiotic and altruistic relationships between multispecies.

As noted above, flora and water ensured the survival of fauna. Fauna’s presence created liveliness. As one can hear from the sounds attached above, the coexistence of the trickling water flows, moos of cattle, bleating of goats, the chatter of sheep, human voices and birds mixing together, reflects Tsing’s (2012) argument that human and multispecies are co-constitutive. These sounds were telling a story of the lack of separation between multispecies. They are a fusion and inter-bodies, and thus, care is bound to take place amongst them. The sounds of animals and water flows also represented liveliness of the wetland. With the notion of care in mind, when there is liveliness it means there is nurture and according to Lesshaftt

(2017) nurturing is a form of caring. Additionally, by hosting and allowing different soundscapes (i.e., the trickling water flows, moos of cattle, bleating of goats, the chatter of sheep, human voices, and birds) mixing together, the KWP waterbody portrayed conviviality. Conviviality refers to coexisting, interconnectedness, interdependence, living with and togetherness (Bentley, 2019). In conviviality the relationship of care exists (Bentley, 2019). Additionally, as much as urban soundscapes such as car sounds drive away animals (Levenhagen et al., 2020), in KWP, I noticed that sounds were rotating based on time. In the early morning when I accompanied NYC for his jogs, sounds of water flows, air breeze, and water fauna always dominated (*Listen to figure 4.1 above*).

During the day, there would be car sounds and people playing music, but still, one would hear birds in the mix, as well as other species. At night, again it would be dominantly sounds of water fauna. When the natural sounds bonded over the time rotation, this showed that they have ways of living among themselves that are complex. These sounds show that there are more ways that multispecies and more-than-human practice care, care that is beyond techno-science control. This type of care has to be represented and commended without being thought of as an ecosystem service by techno-managerial bodies of governance (Coulter, 2016). The interdependence and symbiosis that take place between more-than-human contributes towards the well-being of KWP. The well-being does not depend only on the techno-scientific approaches, it is influenced by other threads as well and that symbolizes care (Neimanis, 2017).

An attempt at detecting care relations using the sense of smell which led to detecting arts of living with plastic and water toxicities.

With the sense of smell, I had quite different observations compared to sight and sound. Instead, I observed the arts of multispecies living with damaged landscapes (Tsing et al., 2017). One day, during my fieldwork when NYC and I were walking around the KWP, there were smells of human faeces wafting in our direction. As we continued walking, we noticed an individual who was helping themselves on the long lawns of the wetland (open defecation). At the sight of this, NYC and I reasoned together that the individual we saw is likely not the only one using the long grasses of the wetland for open defecation. It was also clear that the residents

utilized certain parts of the KWP waterbody to dispose waste and perform other (ablution) activities.

For instance, there were different smells of solid and liquid waste such as vegetable peels, urine, and grey/wastewater which all contributed to the different “smellscapes” around the waterbody. NYC showed concern regarding the lives of aquatic species that live in this wetland after we both encountered greywater, urine, and plastic waste. Malik et al., (2020) argued that when aquatic plants are coexisting with wastewater and other pollutants, they can become overcrowded and die. When these aquatic plants die, the decomposing bacteria uses up more oxygen and negatively affects other forms of aquatic species, such as fishes suffocate. Some pollutions in wetlands can strangle, suffocate, and starve aquatic fauna (Malik et al., 2020). Malik et al., (2020) further argued that domestic effluent (especially soapy water), increased by human activities, can destroy aquatic species.

When wetland waterbodies are destructed, habitats of many birds and fish get destroyed and natural filters capable of degrading many pollutants get removed (Malik et al., 2020). Faecal and organic pollution on wetland waterbodies increases the risk of infection of various diseases for aquatic fauna and humans (Finlayson et al., 2015). Mr. Mozambique was concerned about terrestrial assemblages, making links between his cattle on land, and water pollution, which in turn reflects acknowledgement that these species are negatively affected by the pollution in KWP. Mr Mozambique said, “La manzi amdaka kweli gxobho inokuba achaphazela yonke indawo, kodwa mna ndiyazikhetha iindawo zokuseza iinkomo zam, ixhala lam yile mfuyo ingagadwayo nabantwana abaqubha apha” (“this polluted water probably spreads and affects the entire waterbody, but I choose carefully where my cattle drink. I am more worried about the livestock that is not monitored and the children who swim in this waterbody”).

The interconnectedness of multispecies reflects in damaged landscapes (Tsing et al., 2017). In *Arts of living on a damaged planet: Ghosts and monsters of the Anthropocene* Tsing et al., (2017) argue that pollution has negative impacts on the more-than-human beings and on the planet, pushing us further and further to climate change. In both the “Monsters” and “Ghosts” sections of this book, Tsing et al., (2017) confront the damage that humans have caused on this planet and how they continue to do so. The plastic, chemical toxins, and other types of waste that are in the KWP landscapes can be seen as monsters and ghosts; the former, in the sense that they engulf every part of multispecies existence and the latter (ghosts), in terms of how

they are made up of remnants of animals that lived millions of years ago (Tsing et al., 2017). Tsing et al., (2017) further unpacks this argument by demonstrating that with modernity, humans are taught the importance of individualism. Instead of working as a collective, the individual works alone for progress and they forget about what surrounds them (Tsing et al., 2017). With this mind-set of individualism, the connections that humans have with more-than-human species are often overlooked and forgotten because the focus is always on ‘grooming’ oneself without thinking about the surrounding worlds.

With government bodies responsible for managing and governing wetlands, the mentality of “working for wetlands” only to extract from them may be the result of individualism because often, techno-science and STS reasoning does not have space to thread nor intertwine rationality drawing from other ways of knowing (Latour, 2013; Gara, 2021; Solomon, 2022). Wetland policies designed by government focus on fulfilling their own motives (i.e., ecotourism, pleasant physical appearance, and ecosystem service) without thinking of what is beyond these factors and what surrounds them. Such mentality needs to be deconstructed as wetlands are more than a “just space”.

Conclusion

This chapter has shown that the more-than-human beings have their own unique ways of practising care which are symbiotic and often overlooked (Green, 2013). Using the senses of sight and sound, this symbiosis was made visible. For instance, sounds were listened to and were recorded, then an analysis of how the soundscapes reflected care were discussed. My participants’ insights show how sounds reflected care. For instance, Mr Mozambique, NYC, and I agreed that the trickling water flows, moos of cattle, bleating of goats, the chatter of sheep, human voices and birds mixing together, reflects interdependence and interconnectedness. This was evoked by Coulter’s (2016) point that more-than-human abilities and participation in care work are often repressed. I articulated the more-than-human modes of practising care I encountered in KWP. I then challenged the notions of wetland governing bodies prioritizing their own versions of care and overlooking what exists outside them. This was provided as means of showing that when managing and caring for wetlands, approaches and strategies that are employed should not be techno-scientific *only*.

It is important to ask and understand how to care in each context (Puig de la Bellacasa, 2011). In the words of Latour (2013), rationality has to be interwoven from more than one thread. Other networks must be considered so that limitations can be avoided when managing these spaces (Adichie, 2009; Latour, 2013). With smell it was different, smell shed light on what disrupted the more-than-human relations of care. Different pollutions that are in KWP were looked at with the focus of what consequences they would result in the KWP.

CONCLUSION: A CALL FOR RETHINKING URBAN WETLAND MANAGEMENT

The governing institutions responsible for urban wetlands in Cape Town largely depend on techno-scientific approaches that stem from "earth mastery" ideologies in order to manage and to practise care on these spaces. These approaches are employed to command, control and predict the flows of water. However, techno-scientific approaches frequently neglect and overlook other alternatives of relating to and knowing water - particularly wetlands - which are outside of their domains of knowledge. In most cases, techno-scientific approaches frame their ways of knowing water as the only truth. This thesis argued that there are more-than-techno-scientific ways of relating to and knowing water which include multiple versions of care and reciprocity grounded in African ontologies, queering worlds, and multispecies coexistence. In this thesis, the overlooked and overshadowed modes of caring for wetlands were presented through people's stories by showing that people practice more-than-techno-scientific modes of care, and by showing that not everyone extracts from wetlands. I outlined other ways of caring and being in relation with wetlands and the multispecies communities therein. For instance, African ontologies such as *ina ethe* and *isandla sigeza esinye* exist where in the context of KWP people are taken care of by this waterbody and then people reciprocate this care, not as compensation but as appreciation and recognition of interconnectedness and *ubuntu*. The more-than-human efforts of practicing care are not often in the limelight. This thesis also looked at how more-than-humans practice care among one another and with humans in KWP. For instance, KWP grass and plants nourishes cattle that graze in this space and sounds of water flows offer psychological relaxation to people that have relations with this space (detailed in chapter three and four).

Managing wetlands with singular approaches which are detached from multiple worlds that coexist with these spaces is dangerous as intricate relationships which are important to people and multispecies communities are taken out and/or erased (Blaser and de la Cadena, 2018). These intricate relationships are also important to wetlands themselves as they contribute towards their liveliness and well-being. Depending on the context, wetlands are frequently creating different relationships and meanings, thus, there is no one way of understanding care and management in these spaces. It is important for the City of Cape Town (CoCT) to acknowledge that wetlands are indeed complex, thus, they should avoid understanding them from a single narrative. Therefore, this thesis calls for a paradigm shift and rethinking of KWP

management. This can be done through queering and deconstructing techno-scientific ways of knowing wetlands, meaning that understanding and taking into consideration of what exists outside of techno-science. For instance, understanding that there are queer people who live with wetlands therefore ways of managing wetlands must be diversified (detailed in chapter three). This is a step towards understanding not every way of being can be equated to techno-science. Understanding that wetlands are not “just spaces” to provide ecosystem service for the environment and eco-tourism is key to a more complete picture of the world.

To understand context-specific ways of managing and practising care on wetlands will require more than the CoCT’s perfunctory “stakeholder engagement” which were highlighted by my participants that the city usually organises. Meaningful engagements with people and multispecies communities that live with wetlands are some of the ways of reimagining and rethinking KWP management as this will make space and acknowledge the multiple relationships that are outside of techno-scientific interventions. Paradigm shift and rethinking cannot happen overnight. But when is it urgent enough to start the process? The Cape Town wetland governing bodies should start employing the approaches of engagement used by the Future Water Institute (UCT) (detailed in chapter three). They should understand how people, wetlands and multispecies communities coexist, that way it will be possible to understand how to care in each situation (Kotze, 2015; Puig de la Bellacasa, 2011 and 2017).

This thesis emphasized that waters are never neutral, and it avoided understanding ways of living with KWP using a neutral approach (Neimanis, 2017). Thus, managing these spaces and practising care on them should never be neutral. Another attempt of avoiding understanding wetland care and management using limiting approaches within the wetland governing bodies would be applying what this thesis followed (i.e., using inclusive approaches and multiple ways of knowing to gather knowledge at KWP). To also be aware that rationality must be “woven from more than one thread” and each mode of living and of knowing is “rational or at least none is irrational, none is less fundamental, and the entities associated with each are real” (Latour 2013:491).

In the introduction where the description of KWP and the surrounding neighbourhoods is provided, the main argument (i.e. that techno-scientific versions of care are not the only modes of caring for wetlands, there are more-than-techno-scientific practised by people and the more-than-human which are influenced by a variety of things, for instance, gender, African ontologies and ways of living to name a few), the rationale and the aim were delved into. In

chapter one, after unpacking how the South African wetland governmental institutions rely on and implement techno-scientific modes of care in wetlands, I discussed the shortcomings of single narratives. Then after I raised the importance of multiple ways of knowing, drawing from conceptual frameworks of scholars such as Adichie (2009), Latour (2013), Neimanis (2017), Puig de la Bellacasa (2017), and De la Cadena and Blaser (2018). The second chapter focused on the research methods that were employed to conduct this research, the importance of employing flexible research methods to avoid overlooking certain experiences that are not in the limelight. Data was collected in a way that is flexible as means of emphasizing that there are multiple ways of being therefore ways of listening to stories and experiences must be accommodating to such. Ethical considerations were also unpacked. In the ethnographic chapters (chapter three and four), while unpacking stories of living with and practising care on the KWP, I understood that peoples' and multispecies' experiences differ therefore every story and every experience is valid. All this effort was done to show that wetlands' relations are intricate, being flexible, mindful and being open to diversity while listening to stories is important. All the research findings represent the urgent need for citizen science and more inclusive approaches to wetland management. This thesis builds a foundation for further "self-introspection" in techno-scientific approaches of wetlands in order for the paradigm shifting to be possible.

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