Forming Strata

An exploration of my sculptural practice

Liesl Roos

Forming Strata

An exploration of my sculptural practice

Liesl Roos

Master Thesis

PXL-MAD School of Arts

Master of Arts in Visual Arts

Fine Arts: Sculpture Department

Academic year 2021 – 2022

Supervisor David Huycke



Table of Contents

Abstract	6
Acknowledgements	8
Introduction	11
Practice and process	19
Why the personal?	30
A Discrete and Definite Stratum	40
Assemblages	57
Precarity	70
Presence, Joy & Enjoyment	72
List of Figures	80
Bibliography	84

Abstract

This thesis is an exploration of my sculptural practice. I work with the transformational natures of glass and ceramics, to create experimental organic forms. These sculptural bodies draw inspiration from natural formations. Geological formations reflect the vast timescales of the Earth and show how fleeting our human lifespans are. I reflect on the traces that are left, and connections that come to be, through encounters. I translate this interest into material explorations using casting techniques that embody transformation and interaction. I relate the way in which these sculptural bodies are embedded with traces and memory, to that of my own body. I reflect on my personal history and experience of growing up in South Africa, and combine the sculptural forms with jagged glass panels, printed with imagery. The images I use originate from photographs taken form a family archive. Through combining and layering images, I aim to convey open ended narratives, and reflect on the way in which stories and memories are layered and stored, both within material and our human bodies. I relate personal experiences to collective concerns in relation to ecological change, to develop a narrative of precarity as a collective current state. I am guided by the concept of assemblages to create sculptural compositions. I explore the work of Hannah Rowan and IO Makandal, to strengthen and contextualise my work. Through this body of work I will develop a fractured landscape of sculptural forms, layered with traces, history, and loss.

Acknowledgements

Thank you to David Huycke for your continuous and consistent advice. Your advice helped me to write with clarity and purpose, whilst keeping my artistic practice integral to this thesis.

Thank you to PXL MAD School of Arts for facilitating this master study.

Thank you to the Vlaamse Universiteiten en Hogescholen Raad for the finical support provided to me through the Master Mind scholarship.

Thank you to my husband Rasmus, for your love and support during our move to Belgium and this master study. I am grateful to share life and adapt to a new place with you.

Thank you to my mother Anneliese for always supporting my dreams, goals, and choices. Thank you for keeping the photographic archive that has reinforced my interest in our family's history in South Africa, and has influences my practice so extensively. Thank you to my father, Philip for raising me and for building our home. I will always wish that we had more time together.



Introduction

Through writing this thesis I aim to clarify my practice and position as an artist. I will endeavour to disentangle fragmented thoughts, forms, and images, in order to develop story about impermanence, transformation, interaction, which are the central concepts I explore in my work. By connecting these concepts to natural formations, I aim to offer a moment to reflect on the temporality and fragility of landscapes, to consider the transience of the human experience, and to contemplate the continuous coexistence we are involved in. This thesis is influenced by *The* Mushroom at the end of the world (2015), written by America Anthropologist, Anna Tsing, and a collection of new materialist and object-oriented ontology focussed texts. Writing this thesis will strengthen, support, and enrich the practical component of my master study.

Figure 1. Liesl Roos. Photograph. Stone surface of the Magaliesberg in Pretoria. 2020. (Page 10).

My practice is concerned with precarity and temporality. I reflect on the traces that are left, and connections that come to be, through encounters. I am interested in how we are constantly involved in interactions, how these interactions through time form a history, and how a history becomes embedded in a landscape. In my practice I ask: How are bodies transformed through encounters? What sensuous connections come to be between bodies through interactions? How do we alter, and how are we formed by the landscapes we inhabit? I explore these questions through a sculptural practice, by creating forms that resemble natural formations. These sculptures are created predominantly in glass and ceramics, through using sand as a temporary mould. Glass and ceramics for me embody cyclic transformation while the sand mould reflects temporality and impermanence. Through sand the agency of the materials, and the interaction that occurs between them, is captured through the small details and textures that come to be on the surface of the sculptural pieces.

The sculptures are created within the limits of my body and range from small fragments that fit into the palm of my hand, to larger forms that I am still able to carry and handle. I aim to assemble these pieces of glass and ceramic together to create assemblages. Compositions of smaller elements, which together form a larger body. The sculptural forms will be embedded with cut glass panels, printed with imagery. The images I use are of personal experiences, memories, landscapes, and ancestors. The images are cut up, reassembled, and often repeated to form fragmented traces of stories in space.

I use my own memories and experiences as a place to start exploring temporality, precarity and transformation. My personal and South African history has played an intrinsic role in who I am, and how I perceive encounters. In my practice I am interested in every mark that is made, every inscription, every trace that is left, but also at times lost. The process through which transformation occurs, the mechanics of transformation, for me tell a story of being human in a

precarious environment. "Every event in reality is a kind of inscription in which one object leaves its footprint in another one... The print of a dinosaur's foot in the mud is seen as a foot shaped hole in a rock by humans sixty five million years later. There is some sensuous connection, then, between the dinosaur, the rock and the human, despite their vastly differing timescales" (Morton, 2013: 71).

Through fragments that are reassembled, I aim to engage with an experience of a memory, or a history. I attempt to reassemble thoughts and connections that has become forgotten, but through this process information is inevitably lost. In my work there is therefore tension between preserving and losing information.

In the chapters that follow I will discuss my artistic practice, the personal origin of my work, the natural formations that inspire me, and the theoretical framework that I draw from to strengthen my artistic practice. In the third and fourth

chapter, I reflect on the work of two contemporary female artists to contextualise and strengthen my work and provide me with two varying practices to reflect on. These artists deal with correlating concepts and offer, through their artistic practice, relevant contributions that will assist my conceptual and practical process.

In the first chapter of this thesis, *Practice and Processes*, I will discuss: my artistic practice which is inspired by natural formations and personal history; the significance of assemblage as an approach to build compositions; the materials I work with and their importance; as well as the processes I use and the connection these processes have with time, agency and self-organisation. The predominant process I will discuss is the process of sand casting to develop amorphous, organic sculptural forms. In the second chapter of this thesis, *Why the Personal*? I will discuss the personal aspect of my work in relation to my South Africa background, and the origin of the images I use in the collage component of my work.

In the third chapter of this thesis, A Discrete and Definite Stratum, I will discuss the Anthropocene as a specific space and time we currently find ourselves in, and continue to explore geological formations, which, as visual forms, occur in my work. I will examine why I am drawn to these forms in terms of personal experience, the environment I grew up in, and the place in which I began to develop the casting techniques I continue to use. I briefly discuss termite mounds as another natural formation that inspires my work and explain how an unassuming form can be a colony of diverse interaction and coexistence. In this section I discuss the work of multi-disciplinary British artist Hannah Rowan, who works with glass, water and other materials in order to explore the connection between ecological systems, geology and the human body.

In the fourth chapter *Assemblages* I expand upon the theoretical framework of new materialism by discussing the concept of assemblages. Assemblages encapsulate the ability

of matter to form networks, and gain power through these collaborative structures. Assemblages help to guide both my thought and creation process. In my artistic practise I reflect on assemblages in order to assemble fragmented forms into sculptural composition, and translate images onto glass sheet, so as to communicate a narrative of impermanence. I will discuss the work of a multi-disciplinary South African artist, IO Makandal, who creates dynamic tactile installations which explore entropy and the tension between natural landscapes and human interaction, resulting in intersectional spaces, or what she refers to as a third landscape. For me IO Makadal's work embodies assemblages as she collects, combines and grows a collection of organic and manmade objects into large, diverse installations.

In the fifth chapter, *Precarity*, I briefly discuss precarity as a current collective state, a condition that influences my sense of being and practice. This chapter is a short precursor to the final chapter. The last chapter *Presence*, *Joy*, *Enjoyment* aims to offer reflection and a conclusion to the thesis, through

reflection of the possibility of joy and enjoyment amidst uncertainty.

Neither this thesis nor my practice seeks to result in a fixed determinism, but rather aims to find a greater flexibility and openness in my artistic practice and everyday interactions. Interactions with materials. Interactions with processes. Interactions with many different kinds of bodies. Figure 2. Liesl Roos. Ceramic forms in progress. 2022. Each piece is approximately 30 x 10 cm. (Page 18).

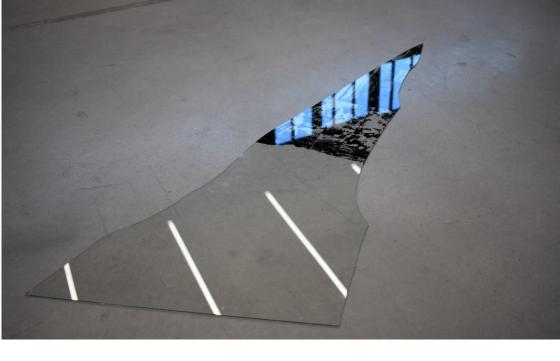
Figure 3. Liesl Roos. Silk screened images on glass. 2022. Approximately 60 x 40 cm. (Page 20).



Practice and process

I explore precarity, interaction and transformation through glass and ceramics by experimenting with their different material states. Through this experimentation I reflect on how different material bodies are formed and transformed through time and experiences. Through image building techniques such as collage, I reflect on my own personal history and how my perception of concrete stability has been transformed into a precarious uncertainty. For my Masters project, I will create an installation that combines the two main aspect of my work, sculpture and collage.

I work within the confines of my body to build and communicate a narrative of interaction, temporality, and loss. The sculptural forms are inspired by natural formations such as geological formations, termite mounds and coral. Unlike their natural counterparts my sculptures are predominantly hollow and amorphous, made with glass and ceramics. These forms will be combined with jagged glass panels with printed



imagery, forming a fragile and dangerous constructed landscape. Natural light will allow the glass panels to connect the sculptural forms through casting shadows and reflections, creating an ephemeral connection. Through layering imagery on glass, I reflect on how bodies are layered with stories and memories through encounters. My work draws from new materialist concepts such as agency and assemblage. I often use the word body in relation to both human and nonhuman, organic and inorganic forms of matter, to reflect their agency. Agency aims to acknowledge the liveliness of seemingly passive objects and the vitality that all forms of matter

possess. Assemblage, which I will discuss in more detail in a later chapter, is a helpful approach for dealing with the fragmented nature of my sculptural elements. The fragmented aspect was at first unintentional in my work and occurred due to pieces cracking, folding, bending in unexpected or uncontrolled ways. Instead of resisting what happened and forcing the materials, I work with these fractured pieces to form an assemblage. When building these assemblages, the challenge lies in achieving a balance between simplicity and complexity, an interesting form which is not overcrowded, and in which individual elements can be appreciated. Through the configuration, individual elements develop and find new connections and relationships, forming a precarious landscape.



Fragmented elements of the amorphous sculptural glass and ceramics forms will be assembled to create varying compositions. These compositions can be rearranged depending on the space. The work will therefore not exist as a fixed installation, but as an open assemblage that can morph and change. An open-ended narrative, an ongoing formation. The fragmented nature of the work reflects on the altered nature of the landscapes we are living in. A similar fragmented quality can be seen in my collage work. I use existing photographs of people, places, memories, landscapes and unknown relatives. These photographs are cut, combined, repeated, and printed on transparent glass panels. Through the imagery in my installation, the viewer will uncover recognisable forms, constructing their own open stories.



Process is an important aspect to my work. It reflects the experience and time in which bodies are formed and undergo transformation. The process is a moment of possibility, anxiety, expansion or collapse. Through processes, bodies are formed, transformed and inscribed on one another. Histories come to be. "The sum total of all the sampling events by which an object inscribes itself on other objects is a history" (Morton, 2013: 71). During the process I work with mineral based materials such sand, plaster, glaze components, glass, slip and or clay, to develop a story of coexisting and interacting with many different types of bodies. I find mineral based materials interesting, as minerals represent the foundational building blocks of all matter.

The processes used in my practice are depended on time and cannot be rushed. Using sand as a temporary mould I create unique and delicate sculptural forms by casting liquid material into a sand negative. Through digging in the sand, a cavity is created and the body will not be seen in a positive form until it is carefully excavated from the sand. Working in this way

provides space for the materials to interact and flow, allowing space for interaction and material agency, without me being in total control. The mould and the cast are very delicate and can easily be destroyed or changed. During this moment the piece lies in flux, on the edge of becoming, or, collapsing. The material qualities of sand for me reflects memory, impermanence and the passage of time. This is because each grain of sand has a history, a past, and a present. Each grain of sand has undergone a long eroding journey from an ancient formation into a small particle, and in turn a solid form of a mountain is slowly craved into sand through elemental forces. Through sand I create new forms which can be seen as artefacts of the material, mineral history. Artefacts of the process of interaction between materials forming new amorphous hollow forms. The hollow quality to me is as if they were traces, remnants, vestiges, or memories of the natural formations which first inspired them. Through this process I explore the relationship and interaction between the materials and my own human presence.

Figure 4. Liesl Roos. Fragmented ceramic forms. 2022. Individual forms approximately 20×10 cm. (Page 21).

Figure 5. Liesl Roos. Amorphous glass and ceramic bodies. 2022. Individual forms approximately $30 \times 20 \times 15$ cm. (Page 22).

Figure 6.Liesl Roos. Ceramic forms in sand mould. 2022. Opening approximately 50 cm in diameter. (Page 25).



During each stage of my process, new marks and traces are made, but in turn some information becomes lost through material translation, for example, from sand to clay, or plaster to glass. The combination of organic forms and sharp-edged panels aim to convey tension. Tension between the human and the landscape, embodiment and loss, expansion and collapse, ancient and transient, preserving memory and losing

information. Through encounters assemblages come to be, and histories are formed. Humans and nonhumans carry a with them. "These personal history histories are...condensations in the indeterminate here and now" (Tsing, 2015: 50). Each participant provides an insight into the connection that exists between humans and the landscape, between one another. Each material tells a story, hold knowledge, about our coexistence. Through encounters, participation and interaction between the landscapes and other bodies, both are inscribed with memories and traces, leaving marks on each other. The traces that are left reveal connection, the relationships we have with the landscapes and spaces we live within. Through encounters, bodies are formed, and traces are left on one another.

Figure 7. Liesl Roos. Cast glass and glaze ceramic forms. 2022. Individual forms approximately 15 x 15 x15 cm. (Page 27).

Figure 8. Liesl Roos. Detail of silkscreen on glass. 2022. Detail approximately 20×15 cm. (Page 27).





Why the personal?

I feel it is important to discuss the personal as my individual history, and that of my country South Africa, has played an intrinsic role in my human experience and this permeates into my practice. The country has experienced so much trauma which lingers on today. Land and identity are two concepts that are embedded in one another, and it is not possible to discuss the experience of growing up in South Africa without reflecting on the country's disturbing history. Due to this history, the South African identity is collectively embedded in trauma. White South Africans are considered by some as European. However, this concept is predominantly rejected by Afrikaans people, who view their identities as embedded in South Africa, in the land, and have a strong connection with the country as their place of origin. There is no international or European ideological centre which provides the Afrikaner identity with stable continuity. "Thus, the post-apartheid White Afrikaner is contending with a profound existential crisis" (Passmoor, 2009: 27). For me there is a connection

between the feelings of instability in relation to my South African identity, an identity plagued by a violent and traumatic history, and the collective experience of uncertainty brought on by ecological change. This is because both of these experiences are rooted in trauma and precarity. Loss and trauma is a collective experience that relates both to personal and historical experiences, as well as the growing loss of environmental stability. Despite this political undertone, I do not wish to make a political statement through my work. I rather wish to follow my intuition, and consider how these contributing aspects provide nuance in my sculptural practice.

I was very fortunate to grow up, and live most of my life in one home, built into the rock of the Magaliesberg, by my father. Through growing up and living in one location for most of my life, the personal and the natural landscape fused together through many years of experiences. I find it interesting how traces of a place can become attached to you like small particles or atoms flowing between your body and the place you live within. When he passed away, life, for us, was

drastically altered and transformed. This experience for me intensified feelings of grief, loss, and trauma.

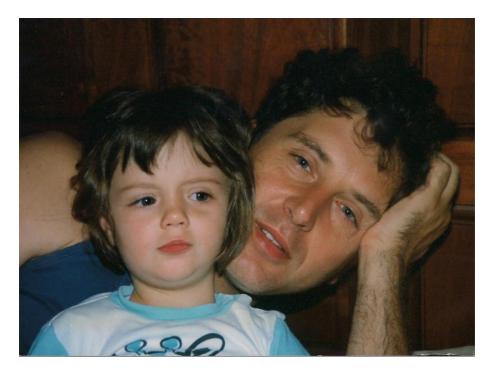


Figure 9. Liesl Roos. Detail of silkscreened images on glass. 2022. Detail approximately 35×25 cm. (Page 28).

Figure 10. Photograph. Liesl & Philip in Pretoria. 1996. (Page 31).

Figure 11. Photograph. Anneliese & Philip in Tshipise. 1980. (Page 32).



The use of personal and archived imagery in my work allows me to reflect on the transient, a sense of loss and polarity. I use a combination of images, photographs taken by myself, photos of close family members showing memories I still recall, and, images of distant relatives, holding traces of an uncanny and forgotten history. These photographs show both people and the landscapes they live in. These images are elements of my history and identity and forms a link to my past. They are a way to consider the temporal and reflect on a perceived existential crisis. What does it mean to be alive, to be here, right now, in this specific body? Each time an

image is transferred from one material into another (the original moment, into a photograph, into a digital format, into the artwork) more information is lost. I therefore explore a loss that occurs, of information, of remembrance, of understanding, through material translation. Through these photographs I encounter a degree of disconnection, a sensation of cognitive dissonance in relation to my Afrikaans culture. I feel that my identity, clearly based on home, culture and country, when young, has become an identity in flux.



Figure 12. Photograph. Anneliese & Henriette in Bloemfontein. 1961. (Page 33).









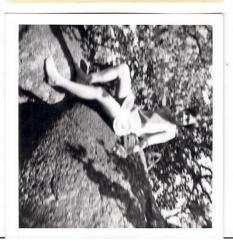






Figure 13. Photograph De Klerk in Vrystaat. 1950. (Page 34).

Figure 14. Photograph. Gawie in Vrystaat. 1949. (Page 34).

Figure 15. Photograph. Anna in Bloemfontein. 1962. (Page 34).

Figure 16. Photograph. Henriette in Bloemfontein. 1965. (Page 34).

Figure 17. Photograph. Henriette in Nelspruit. 1971. (Page 34).

Figure 18. Photograph. Anneliese in Bloemfontein. 1965. (Page 34).

Figure 19. Photograph. Anneliese, Henriette & Johannes in Ilovo Beach. 1972. (Page 35).





Figure 20. Photograph. Johannes, Gawie & Kollie in Tweede Boere Oorlog in Vrystaat. 1890. (Page 36).

Figure 21. Photograph. Anna & Gawie in Vrystaat. 1930. (Page 36).

Figure 22. Photograph. Anneliese, Henriette & Johannes in Kruger National Park. 1971. (Page 37).

Figure 23. Photograph. Anneliese & Kudu in Tshipise. 1977. (Page 38).

Figure 24. Photograph. Anna, Henriette & Anneliese in Upington. 1969. (Page 38).

Figure 25. Photograph. Ilse & Corlia in Port Elizabeth. 1969. (Page 38).



I relate these experiences of flux and transience to the collective experience of ecological degradation. An experience of evolving mass extinction brought on by the Anthropocene. American author, scholar, and professor Donna Haraway writes, "Extinction is a protracted slow death that unravels great tissues of ways of going on in the world for many species ... it is not just human people who mourn the loss of loved ones, of place, of lifeways; other beings mourn as well. Mourning is about dwelling with a loss and so coming to

appreciate what it means, how the world has changed, and how we must ourselves change and renew our relationships if we are to move forward from here. In this context, genuine mourning should open us into an awareness of our dependence on and relationships with those countless others being driven over the edge of extinction ... Grief is a path to understanding entangled shared living and dying" (Haraway, 2016: 38–39). In the following chapter I expand upon natural formations, as organic bodies embedded with time, histories and interactions, which have inspired my artistic practice. Figure 26. Liesl Roos. Photograph. Magaliesberg in Pretoria. 2021. (Page 39).



A discrete and definite stratum

I am drawn to geological formations as ancient vessels that are layered with time and history. According to Michael E. Wysession, professor of Earth and planetary Sciences, geology is the language of the earth spoken by rocks (Wysession, 2008). My interest in geological formations developed as I grew up against the foot of the Magalaiesberg Mountain, which anchored me in the landscape.



Figure 27. Liesl Roos. Photograph. Magaliesberg in Pretoria. 2021. (Page 40).

Although it is a modest geological formation in height, this mountain range is older than two billion years, and is one of the oldest mountain ranges on Earth (Carruthers, 2019). This ancient structure embodies a vast passage of time and is of historical and environmental importance to this landscape. Our timescales are so short in comparison to geological processes that it is difficult for us to comprehend deep geologic time. The surface of the earth is constantly subjected to many cycles of rock erosion, lithification, and the deposition of sediment which forms strata (Wysession, 2008).

Geological strata are clearly defined layers of sedimentary rock and are visible as alternating and repeating bands or stripes. Over millions of years, sand, silt, and clay settles on the bottom of a still body of water. This accumulation forms a layer of sediment which slowly hardens into rock. This process is repeated, and additional layers are deposited, forming a map of geological time and events (Wysession, 2008).

Geological formations are made from continuous groups of strata and embody the earth's vast timescale. These ancient formations make us aware of how finite and fleeting our own human timescales are. We are temporary beings in an ancient world, yet we are managing to destabilise ecological structures and systems in a very short amount of time. The ground beneath us is as much alive and a part of the earth's ecological systems as biodiversity is. Geological forms used to be seen as inorganic, however, so many geologic processes happen through the involvement of life (Wysession, 2008).

Humans are involved in the rock cycle all the time. As we breathe, atoms enter and leave our lungs, materials are absorbed into our bodies through our skin. The longer a person stays in one place, the more they become physically, materially entangled with the landscape. As we move from one place to another, we carry part of the rock with us. We are responsible for carrying atoms around the earth. We are constantly participating with the environment on an atomic level (Wysession, 2008). Object-orientated ontologist and

professor, Timothy Morton, writes, "We are all burnt by ultraviolet rays. We all contain water in about the same ratio as Earth does, and salt water in the same ratio that the oceans do. We are poems about the hyperobject Earth" (Morton, 2013: 51). Geology, along with so many of Earth's natural systems, shows us that the line between us and the world we live in is blurred. In comparison with geological formations, the complex organic formations that termites build, reflect interaction, co-existence and interdependence in a more perceptible form and on a more perceivable timescale.

I have always been fascinated by these large mound structures made from sand and soil, which can often be seen in the savannah biome of South Africa. The mounds are tall structures protruding into the air above the long sweeping grass strands. Termite mounds may seem like a pile of dirt, haphazardly constructed, however the termite mound is an extremely complex structure with a network of paths connecting to tunnels, as though it possessed veins. The structure of the mound allows ventilation, providing oxygen

to the inhabitancies. The upwards trajectory of the mound allows wind to flow inside, pushing air though porous soil, and results in the circulation of fresh air inside of the mound (Turner, 2002: 1 -3). American physiologist J. Scott Turner, who was involved in extensive fieldwork in South Africa on the Macrotermes species, compares the mound's ability to inhale and exhale to human lungs, and raises the question "which parts of an extended organism are alive and which are not? In the case of termite mounds, the termites and fungi certainly qualify as living, but so does the mound, in a sense. After all, it does just what our lungs do for us" (Turner, 2002: 4-5). During my internship at the royal Museum of Central Africa, I was shown one of their many scientific departments, the biology wing. In this wing there are cabinets full of a copious amount of collected termite mound structures, which at one point had been taken from different parts of Africa to be studied in Belgium. Before this introduction, I was visually inspired by these formations, but unaware of the fascinating interaction that was occurring within them. Inside of these mounds the Macrotermes termites cultivate the Termitomyces fungi, on

which they are depended for their survival. The termites nurture the fungus, and in turn the fungus supports the mound and termites (Leibniz Institut für Naturstoff Forschung und Infektionsbiologie, Hans Knöll Institut, 2015). The fungus uses the environment of the termite mound to protect itself, whilst regulating the mound for the termites (Tsing, 2015: 143).



Turner (2002: 4 – 5) writes, "The termite colony—insects, fungus, mound, and nest—becomes like any other body that is composed of functionally different parts ... Taken as a whole, the colony is an extended organism ... Isn't this simply a return to ecology's roots as a physiological science concerned with how living things regulate flows of matter, energy, and information through ecosystems?"



Becoming aware of liveliness of nonhuman bodies and the increased precariousness of ecological systems, due to the Anthropocene, was central to exploring natural formations in my practice. Despite the feeling of increasing uncertainty and degradation, there were still many moments of gratitude, enjoyment and beauty. Whilst working outside, with clay, sand and organic matter, I would look up into the expanse of rock that stretched up behind the house and be grateful to be so close to a sliver of protected natural landscape. I would climb up into the small stretch of rock and look out over Pretoria. Over the years the landscape changed dramatically, with more and more modern developments and convenience centres such as large malls springing up everywhere, build in a manner that seemed to disregard the landscape. The landscape systematically became covered in buildings and people. But there were, and are, still pockets of natural areas. Through all this 'progress' and 'modernisation' the landscape becomes less and less accessible.

Figure 28. Liesl Roos. Photograph. Termite mound in Kruger National Park. 2021. (Page 45).

Figure 29. Liesl Roos. Photograph. Termite mound in Kruger National Park. 2021 (Page 46).

Perhaps geological formations gave me a sense of concrete stability during an experience of uncertainty and precarity. Through the Anthropocene however, it has become evident that even geology is affected by precarity. Morton writes, "The Anthropocene is the name given to a geological period in which human-made stuff has created a layer in the Earth's crust: all kinds of plastics, concretes and nucleotides, for example, have formed a discrete and obvious stratum." (2021:6)

An artist which relates to this section and helps to contextualise this chapter is multidisciplinary British artist, Hannah Rowan. Hannah Rowan's work explores the relationship between the human body, water, geology and other environmental systems through sculpture, installation, sound, video and performance. She is influenced by hydrofeminist theory which represents the intersection between feminist theory and ecological systems. Trough

tracing the movement of water within both natural and bodily systems, she reflects what it means to be intimately connected to natural systems, in relation to bodies of water. Rowan states, "Sixty to ninety percent of your bodily matter is composed of water. Water, in this sense, is an entity, individualized as that relatively stable thing you call your body. But water has other logics, other patternings and means of buoying our earthly world, too. Not least, water is a conduit and mode of connection... our watery bodies serve as material media" (Rowan, About). Rowan explores material agency, temporality and transformation through creating ephemeral installations that communicate the transience and fragility of natural systems. "Ice, salt, glass, copper, clay and organic matter melt, burn, leak, dissolve, take root, oxidase, congeal and crystallise in transformative interactions where phases between matter becomes slippery, porous and in flux" (Rowan, About). Rowan explores materials in transient transformative states, reflecting on what is means to exist

during a period of uncertainty, volatile, and collapse. The installations are composed of various sculptural elements and embody the flowing states of matter. "The traces of water are present in the evolving and shifting materials used, allowing for the vibrancy of their matter to animate the passing of time across their surface" (Rowan, 2021).

In her installation *Prima Materia*, 2019 (figure 30-32), Rowan created a network of interconnected systems, exploring the shifting states of water. *Prima Materia* refers to the primal, formless, fluid source from which all matter is believed to originate. Her constructed network explores the circulation of time through various material forms, such as water flowing, ice melting, crystals forming and iron rusting, manifesting states of growth or entropy, playing out over different timescales. Timescales are an important consideration in her work, as bodies that come across as inanimate, only operate er different often slower periods of time that are difficult to perceive (Murrell, 2019).





Rowan works within the limits of her body in order to construct installations that are assemblages of sculptural forms, organic matter, tubes, glass tanks, magnifying glasses and lighting devices, creating an almost laboratory, or scientific, stage-like setup meant for observation. This construction reflects an entangled scenario in which transformation can potentially occur, reflecting on current geological and ecological systems, in which events of change are so vastly dispersed that it becomes difficult to comprehend. Rowan therefore seems to extract elements of these systems on which she and the audience can reflect on a more perceptible scale. Examining her work, it is possible to draw connections to time, matter, ecology and geology but alchemy, forensic science, science-fiction also technology. Curator Vanessa Murrell writes, "Hannah Rowan's work explores an ephemeral chain of events unfolding through material states: transformation, growth, reaction, adaptation, evolution and degradation... The artist works on assemblages by adding ... extracting or refining details, building up and taking away or vice versa." As she

explains, "I am interested in working with a wide array of materials and forming intricate connections and assemblages with these elements through a fluid process. Often water plays a role in relation to the material states of these components" (Murrell, 2019).

As discussed in the previous chapter *Practice and Process*, assemblage is a helpful conceptual approach in order to build compositions through assembling fragmented forms into sculptural bodies, and fractured images into collaged imagery. In the chapter that follows I therefore discuss and expand upon a new materialist theoretical framework, by discussing the Anthropocene and assemblage.

Figure 30. Hannah Rowan. *Prima Materia*. Installation. Photography by Ben Westoby. London. 2019. (Page 51).

Figure 31. Hannah Rowan. *Prima Materia*. Installation. Photography by Ben Westoby. London. 2019 (Page 52).

Figure 32. Hannah Rowan. *Prima Materia*. Installation. Photography by Ben Westoby. London. 2019. (Page 53).



Assemblages

In The mushroom and the end of the world, Tsing explains that, although the prefix in Anthropocene means human, the cause of this geological epoch is not due to our human biology, but rather stems from capitalism. (2015: 19) In pursuit of growth and progress, capitalism has been successful in destroying landscapes and ecological systems, turning humans and nonhumans from beings into resources. Although the idea of progress seems out-dated, embedded expectations linger on and influence our outlook and influence on the world. Tsing writes, "We learn over and over that humans are different from the rest of the living world because we look forward while other species, which live day to day, are thus dependent on us. As long as we imagine that humans are made through progress, nonhumans are stuck within this imaginative framework too. Progress is a forward march, drawing other kinds of time into its rhythms. Without that driving beat, we might notice other temporal patterns. Each living thing remakes the world through seasonal pulses of growth, lifetime

reproductive patterns, and geographies of expansion. Within a given species, too, there are multiple time-making projects, as organisms enlist each other and coordinate in making landscapes" (Tsing, 2015: 21).

Tsing (2015: 22) states that altering landscapes is not only a human action. All forms of life require the ability to develop spaces in which living arrangements are possible. Through these arrangements water, air and earth are transformed, a "multispecies world making." Without liveable spaces, species would not be able to continue to survive. However, in the case of humans, living arrangements are tied to the concept of development, growth and progress.

Tsing (2015: 22-23) suggests that the concept of assemblages is a helpful alternative to progress. Assemblages enables ecologists to circumvent perceptions of an ecological communities as fixed. Assemblages allow us to rather focus on the phenomena that occurs between species, resulting in

a multispecies interaction, rather than only seeing a collection of different, independent species, unaltered by one another. The concept of assemblages advocates that matter possesses the capacity to form networks and gain power by means of collaborative structures (Bennett, 2010: 21). As a result of these networks, and the energy that flows between them, assemblages come to be. This line of thought inspired America political theorist, Jane Bennett's book, *The force of Things (2004)* and *Vibrant Matter (2010)*, leading to what Bennett (2010: 108) refers to as vital materialism, "A vital materialist theory of democracy seeks to transform the divide between speaking subjects and mute objects into a set of differential tendencies and variable capacities."

Bennett's (2010: vii) work on vital materialism has both a philosophical and political agenda; political in the sense that she believes nonhuman bodies ought to be treated as lively contributing actants, aiming to encourage greater accountability from humanity. Bennett (2010: 107) asks,

"...what if we loosened the tie between participation and human language use, encountering the world as a swarm of vibrant materials entering and leaving agentic assemblages?" This question Bennett poses resonates with me. Nonhumans operate on different modes of being (Leseberg, 2018: 33) and if we could be more open and more aware, we could cultivate an attentive attitude, which would not only benefit nonhumans but humans as well.

Bennett (2004: 354) describes the world as not mere subjects and objects, but numerous materialities, which are continuously involved in a network of relations that move and change through time. Assemblages do not possess a solid form or structure. Assemblages do not have one materiality, but are comprised of many types of material forms. The assemblage possesses a vibration or pulse that has the capacity to continuously change. This impedes the probability of predicting what the assemblage will develop into and the effects it could produce. Through the assemblages, matter become a diverse force of emerging energies, "Interwoven

rhythms perform a still lively temporal alternative to the unified progress-time we still long to obey" (Tsing, 2015: 34).

New materialism at its core signifies a theoretical turn away from dualist tradition of thinking in terms of binaries or opposites such as human versus inhuman, matter versus mind, culture versus nature, in order to allow for critical engagement with the relationship between human and nonhuman bodies (Connolly, 2013: 399). For interdisciplinary South African artist, IO Makandal, thinking in terms of binaries "diminishes complexity" (Jamal, 2020).

IO Makadal primarily works with installation, drawing, and organic matter. Her work focuses on ecofeminism, which is an intersection between feminist and environmental concerns. Within her work she explores hybrid environments, ecology, and process and entropy within the Anthropocene, a period of environmental flux (Makandal, 2020b).

Figure 33. IO Makandal. *Terra Visions*. Installation with drawing on paper, carpet, stones, weeds. Cape Town. 2020. (Page 62). (Makandal, 2020a).

Existing in this specific time, "we need to be attentive to the co-dependent interoperability of all living organisms. This is the grounding premise of Makandal's 2020 showing at Everard Read's Circa Gallery, Terra Visions" writes Cape Townbased academic and cultural theorist, Ashraf Jamal. Makandal explores a sympoetic approach. Sympoiesis is a concept that reflects systems as being collectively creating or generating. In other words, systems are not self-defined, or self-contained units with specific temporal or spatial boundaries, but rather, systems evolve collectively, resulting in unexpected changes as in an assemblage (Haraway, 2016: 33). Through this she aims to engage with the "the sympoetic processes of living with dying" (Jamal, 2020).

In this exhibition Makandal created multiple installations stretching across several floors, in which 'nature' is the primary focus (Jamal, 2020). Fusing together organic and inorganic objects and materials, the "installations become constellations of matter in space, suspended for a moment in time-contemplating humans' relationship to things,



production, waste, and consumerism. [She is concerned with] chance, order and chaos and how, when [she sets up] a designated space in time to elevate the mundane material it can begin to jostle up against each other in a struggle for power" (Kalashnikovv Gallery).

Through Terra Visions (Figure 33-35), Makandal enables further interaction and entanglement between herself and nonhumans, through exploring soil. Using her own compost heap as a starting point for this exhibition, she focussed on the complex multispecies interactions that occur within a healthy soil producing system. Through composting she aims to mitigate the deadening of soil which functions as the immune system of earth. "This diversity in biomass is what is imperative to making life on terra thrive" (Everard Read, 2020). Reflecting on soil health demonstrates the diverse interactions that occurs within the Earth, which are of grave importance, but are often forgotten or overlooked. "Makandal takes her cue from feminist writers Donna J. Haraway and Anna Tsing, who both write about the urgent need to fabulate possible futures on a damaged earth in the time of capitalist chaos and environmental shift" (Everard Read, 2020).

When creating these installations, she uses entropy to guide her process. For Makadal entropy is a vital force, absorbing challenges and steering chaos whilst allowing room for changes to occur. The installation combines weeds protruding from glass vases, concrete blocks, rusted metal rods, dreamcatchers, and two woven carpets, presented in varying stages of digestion and transformation. The carpets, which have their own histories and cultural backgrounds, are first rain drenched and sun dried, rolled up and left to "cure" and then covered with compost. The carpets are transformed through this process of interaction that occurs between the material fibres of the carpets and the bacteria and microscopic organisms that live within the compost (Jamal, 2020).

Weeds are an intrinsic source of inspiration for Makandal, and for her they evoke "entropic impermanence" (Jamal, 2020).

Makandal states, "The spaces which weeds occupy form a third landscape, a generative in-between ground left to mutate and thrive beyond human activity and design" (Jamal, 2020). For Makandal the third landscape finds new meaning within the South African contexts. She collects weeds and wildflowers that form part of her installations from areas such as District Six in Cape Town. Locations such as District Six embody the third landscape as a place of "destroyed culture" spaces which have been "abandoned, rendered inexistent, superfluous, and yet, despite all, an integral present-absence in the city's psyche." In South Africa the third landscape can be found in the buffer zones of "uitvalgrond" which have been created through separate development during Apartheid. For Makandal she does not assume a political stance but seeks an "evocation of an inter-zone that cannot be suppressed." Ashraf Jamal writes, these zones "defines our psychic makeup, the unsaid that plagues us" (Jamal, 2020).

Figure 34. IO Makandal. *Terra Visions*. Installation with drawing on paper, stones, weeds. Cape Town. 2020. (Page 67). (Makandal, 2020a).

The concept of the "third landscapes" allows us to reconsider spaces that have been destroyed, forgotten, or altered (Jamal, 2020). For Makandal, placing weeds in her installations, offers these plants a similar opportunity. Weeds are seen as undesirable, as something to remove. Using weeds in her installations provide the audience an opportunity to reconsider their value and importance. Weeds are disturbing, entropic and resilient. Weeds embody instability and contamination, "In her world vision everything is contaminated, every element and dimension [is] a part of a greater more enriching weave, which is unsurprising given that for Makandal all things, organic and inorganic, humanhewn or natural, are interwoven" (Jamal, 2020). For Makandal weeds are the interconnectedness to all that we cannot control. "To contaminate, to keep things intertwined in a transformative mutualism is to be sticky with the trouble on terra, now. How else does one envision these speculative futures, if not to look through and think with the earth, with every non-human thing and being in and on earth to create terra visions" (Jamal, 2020).





Precarity

Tsing (2015) reflects on precarity, disturbance and what she refers to as "contaminated diversity." Living through the Anthropocene, the period of human induced disturbance, Tsing (2012) suggests that it is useful to not only reflect on what has deteriorated but also on what has emerged, namely contaminated diversity. This term refers to the way in which life has developed over the last century, biologically and culturally, a "collaborative adaptation to human-disturbed ecosystems." It questions what is left in the debris of colonialism and capitalism, and what new possibilities have emerged. "Instead of merely cataloguing diversity, we need to tell the histories in which diversity emerges—that is, acknowledge it's lively and, thus, contaminated forms" (Tsing, 2012: 95). "If we are looking for collaborative partners for a liveable earth, we must consider contaminated diversity and slow disturbance. This means telling histories of the cultural and biological synergies through which diversity continues to emerge, even in ruins" (Tsing, 2012: 97).

Tsing (2015: 4) argues that only through appreciating precarity as a collective current state and cultivating "arts of noticing" through opening our imagination (2015: 37), will we be able to grasp our current predicament, "a patchy unpredictability" (2015: 5). Perhaps precarity, indeterminacy and that which we imagine to be unimportant, is vital for a collaborative survival. Our survival however, cannot be taken for granted, "...everything is in flux, including our ability to survive" (Tsing, 2015: 20). Living in precarity, or "precarious survival" (Tsing, 2015: 29) pushes us to acknowledge our vulnerability and dependence on others. Through precarity we are required to change with circumstances. Our only means of survival however lies in collaboration. "We change through our collaborations both within and across species. The important stuff for life on earth happens in those transformations" (Tsing, 2015: 27-29).

Figure 35. IO Makandal. *Terra Visions*. Drawing on paper in Cape Town. MAKANDAL. IO. 2020. (Page 68). (Makandal, 2020a).

Presence, Joy, Enjoyment

I use my personal experience of growing up in South Africa and my Afrikaans identity to reflect on the experience of temporality and precarity. I relate personal experiences to collective ecological concerns in order to develop a fractured landscape that consists of bodies layered with traces, history, and loss. My work can be seen as personal or autobiographical and yet there are recognisable elements that aim to convey open-ended narrative, which the viewer could relate to.

Growing up and living in the natural landscape of South Africa, specifically in the Magaliesberg, is a fundamental source of inspiration for me. I am filled with many memories and stories, a body formed and forming during a specific time and in a specific place. Through continuously leaving that place called home, I have developed the necessary distances to reflect on these experiences. I hold on to the personal, as the position I am able to speak from, perceive experiences, and convey thoughts and emotions to the viewer. My body of

work will consist of multiple sculptural forms that consists of fragmented elements, which have been composed into an assemblage. As the audience moves through the installation their presence will become an interaction between their body and the material bodies I work with. The personal experience of the temporal, transient and lost, has evolved into a global sense of anxiety and my work aims to reflect on that. Ancient processes have come to feel more temporal and fragile. Through interacting with matter, specifically glass and ceramics, I am interested in understanding my place within the continuous flow of change.

I find a moment of presence and joy through my practice. I feel aware of being a part of a larger assemblage of different materialities, of existing in a transitory present, surrounded by ancient natural cycles and processes. I feel an appreciation for the materials and their different forms; for the interactions that occur between matter, movement, process, and time. During the creation process the material bodies undergo alternating states through cyclic transformations.

This experience draws me back into the realisation that I am a part of the unstable flowing earth. My work is an artefact of the process of interaction. An expression agency communicated by materials.

Through this thesis I have explored my artistic practice, in order to understand the origin and meaning of my work. I discussed the processes and materials I work with, and, I have uncovered and developed layers of meaning in my work. I discussed the importance of the personal aspect in my work and how memories are retained in the material bodies I work with, similar to how memories are retained in my own.

Through writing this thesis and outlining the importance of personal experiences, memory, and identity, has reinforced the importance of the personal or autobiographical element in my work. Following the personal has been liberating in that I am able to make what I choose to, I am able to trust my choices, and follow my inner vision towards my final masters project.

I explored natural formation that inspire my practice, reflecting predominantly on geological processes, such as strata formation, and the Magaliesberg. Strata formation is a slow, layered process. It relates to my artistic practice but to the human experience as well. Soft materials slowly turning into stone. This process relates to my practical work, as I recreate a similar process, which however occurs on my human timescale. It is from this chapter which the rest of my thesis developed and it provided a foundation for my writing. In future projects I would like to venture deeper into the mineral compositions and chemistry of special effects glazes. I would like to explore the history of the Magaliesberg to come to know more about the stories and histories of this environment and place.

For this thesis I reflected my personal experience of growing up against the Magaliesberg, and how this formation was fundamental in my human experience and artistic practice. Geological formations led me to explore termite mounds, another type of natural formation. Termite mounds not only provide visual inspiration but provide an insight into the complex systems of interaction and coexistence in the natural world that humans often overlook.

I explored concepts within new materialism, and I predominantly expanded upon the concept of assemblage. Assemblage became a guide, a method, for assembling and creating compositions in my work. Whether this approach has fully been successful remains to be seen as I am still in the process of creating my final work. It has however given me confidence and a clear direction to think about and present my work. Reflecting on the work of Hannah Rowan and IO Makandal, has shown me how differently similar concepts can be expressed based on different physical or environmental contexts and personal experience.

More than anything, this thesis has given me the confidence to believe in my work, in my ability to form connections and translate concepts into sculptural form. To form strata. In the practical component of my work, the sand-casting process has been very challenging. Many pieces cracked. The time it took for pieces to dry was very long, taking between three to four weeks. Experimenting with this process in South Africa yielded different results, with pieces dying much faster in only a few days. I have therefore learnt the importance of environmental conditions for my slip casts. I have learnt to have more patience as rushing a piece would lead to disaster. I am very happy with the texture, detail and final outcome of the casted pieces, and I believe it has been the right direction for me, despite the challenges and time constraints for completing this masters within one year. Despite my failures, I am making decisions to combine the smaller elements I have into a larger composition. Through exploring an assemblage method, I will create different compositions of the sculptural elements. In the following weeks it will become clear how effective this approach has been, and, I believe through experimenting with my presentation, new possibilities will open for the future of my work.

This project has shown me the importance of being present. I want to be present, appreciative, and open, while living through this period in which landscapes have become altered and fractured. I wish to nurture an appreciation for the seemingly unimportant, that in fact, can result in unforeseen consequence. I want to find joy and enjoyment amidst the anxiety of indeterminacy and uncertainty, through my artistic practice. I want to be aware of the constant coexistence that is occurring between a multitude of ongoing "configurations of places, times matters and meanings" (Haraway, 2016: 1). I am grateful that there are still pleasures amidst the terrors of indeterminacy, although, "there might not be a collective happy ending" (Tsing, 2015: 21). Through my practice I find presence, joy and enjoyment despite these terrors.

Figure 36. Liesl Roos. Silkscreened images on glass. 2022. Detail approximately 55 x 35 cm. (Page 78).

Figure 37. Liesl Roos. Cast glass, ceramics and printed glass. 2022. Approximately 1 x 2 m (Page 79).





List of figures

Figure 1. Liesl Roos. Photograph. Stone surface of the Magaliesberg in Pretoria. 2020. (Page 10).

Figure 2. Liesl Roos. Ceramic forms in progress. 2022. Each piece is approximately 30×10 cm. (Page 18).

Figure 3. Liesl Roos. Silk screened images on glass. 2022. Approximately 60 x 40 cm. (Page 20).

Figure 4. Liesl Roos. Fragmented ceramic forms. 2022. Individual forms approximately 20×10 cm. (Page 21).

Figure 5. Liesl Roos. Amorphous glass and ceramic bodies. 2022. Individual forms approximately 30 x 20 x15 cm. (Page 22).

Figure 6.Liesl Roos. Ceramic forms in sand mould. 2022. Opening approximately 50 cm in diameter. (Page 25).

Figure 7. Liesl Roos. Cast glass and glaze ceramic forms. 2022. Individual forms approximately 15 x 15 x15 cm. (Page 27).

Figure 8. Liesl Roos. Detail of silkscreen on glass. 2022. Detail approximately 20 x 15 cm. (Page 27).

Figure 9. Liesl Roos. Detail of silkscreened images on glass. 2022. Detail approximately 35×25 cm. (Page 28).

- Figure 10. Photograph. Liesl & Philip in Pretoria. 1996. (Page 31).
- Figure 11. Photograph. Anneliese & Philip in Tshipise. 1980. (Page 32).
- Figure 12. Photograph. Anneliese & Henriette in Bloemfontein. 1961. (Page 33).
- Figure 13. Photograph. De Klerk in Vrystaat. 1950. (Page 34).
- Figure 14. Photograph. Gawie in Vrystaat. 1949. (Page 34).
- Figure 15. Photograph. Anna in Bloemfontein. 1962. (Page 34).
- Figure 16. Photograph. Henriette in Bloemfontein. 1965. (Page 34).
- Figure 17. Photograph. Henriette in Nelspruit. 1971. (Page 34).
- Figure 18. Photograph. Anneliese in Bloemfontein. 1965. (Page 34).
- Figure 19. Photograph. Anneliese, Henriette & Johannes in Ilovo Beach. 1972. (Page 35).
- Figure 20. Photograph. Johannes, Gawie & Kollie in Tweede Boere Oorlog in Vrystaat. 1890. (Page 36).
- Figure 21. Photograph. Anna & Gawie in Vrystaat. 1930. (Page 36).
- Figure 22. Photograph. Anneliese, Henriette & Johannes in Kruger National Park. 1971. (Page 37).
- Figure 23. Photograph. Anneliese & Kudu in Tshipise. 1977. (Page 38).

Figure 24. Photograph. Anna, Henriette & Anneliese in Upington. 1969. (Page 38).

Figure 25. Photograph. Ilse & Corlia in Port Elizabeth. 1969. (Page 38).

Figure 26. Liesl Roos. Photograph. Magaliesberg in Pretoria. 2021 (Page 39).

Figure 27. Liesl Roos. Photograph. Magaliesberg in Pretoria. 2021. (Page 40).

Figure 28. Liesl Roos. Photograph. Termite mound in Kruger National Park. 2021. (Page 45).

Figure 29. Liesl Roos. Photograph. Termite mound in Kruger National Park. 2021 (Page 46).

Figure 30. Hannah Rowan. *Prima Materia*. Installation with glass, metal, water, plastic tubes. Photography by Ben Westoby. London. 2019. (Page 51). [Online] Available from: https://www.hannah-rowan.com/work#/prima-materia [Accessed 27/03/2022].

Figure 31. Hannah Rowan. *Prima Materia*. Installation with glass, metal, water, plastic tubes. Photography by Ben Westoby. London. 2019 (Page 52). [Online] Available from: https://www.hannah-rowan.com/work#/prima-materia [Accessed 27/03/2022].

Figure 32. Hannah Rowan. *Prima Materia*. . Installation with glass, metal, water, plastic tubes. Photography by Ben Westoby. London. 2019. (Page

53). [Online] Available from: https://www.hannah-rowan.com/work#/prima-materia [Accessed 27/03/2022].

Figure 33. IO Makandal. *Terra Visions*. Installation with drawing on paper, carpet, stones, weeds. Cape Town. 2020. (Page 62). [Online] Available from: https://iomakandal.com/Terra-Visions [Accessed 28/03/2022].

Figure 34. IO Makandal. *Terra Visions*. Installation with drawing on paper, carpet, stones, weeds. Cape Town. 2020. (Page 67). [Online] Available from: https://iomakandal.com/Terra-Visions [Accessed 28/03/2022].

Figure 35. IO Makandal. *Terra Visions*. Drawing on paper. Cape Town. MAKANDAL. IO. 2020. (Page 68). [Online] Available from: https://iomakandal.com/Terra-Visions [Accessed 28/03/2022].

Figure 36. Liesl Roos. Silkscreened images on glass. 2022. Detail approximately 55 x 35 cm. (Page 78).

Figure 37. Liesl Roos. Cast glass, ceramics and printed glass. 2022. Approximately 1 x 2 m (Page 79).

Bibliography

ASHRAF, J. 2020. *Rewilding – IO Makandal*. [Online] Available from: https://iomakandal.com/Terra-Visions [Accessed 27/03/2022].

BENNETT, J. 2004. *The force of things: steps toward an ecology of matter.* Political Theory, 32, Jun: 347-372. BENNETT, J. 2010. *Vibrant matter a political ecology of things.* Durham & London: Duke University Press.

CARRUTHERS, V. 2019. Cradle of Life: Evolution of life and landscape in the Cradle of Humankind and Magaliesberg Biosphere. South Africa: Penguin Random House. EBook. CONNOLLY, W. E. 2013. The 'new materialism' and the fragility of things. Millennium: Journal of International Studies, 41(3), Jun: 399-412.

EVERARD READ. 2020. *IO Makandal: Terra Visions*. [Online] Available from: https://www.everard-read-capetown.co.za/exhibition/217/press_release/ [Accessed 26/03/2022].

HARAWAY, D. 2016. *Staying with the trouble.* Durham and London: Duke University Press.

KALASHNIKOVV GALLERY. *IO Makandal.* [Online] Available from: https://kalashnikovv.com/artists/io-makandal [Accessed 26/03/2022].

LEIBNIZ INSTITUT FÜR NATURSTOFF FORSCHUNG UND INFEKTIONSBIOLOGIE, HANS KNÖLL INSTITUT. 2015. *Termite Fungiculture – a Hidden Treasure Trove English.* YouTube, 18 May 2015, https://www.youtube.com/watch?v=7tWKwQ1yCuo.

LESEBERG, R. P. 2018. *Mycelia*. Amsterdam: Self-published.

MAKANDAL, IO. 2020b. [Online] Available from:

https://iomakandal.com. [Accessed 26/03/2022].

MORTON, T. 2013a. *Hyperobjects philosophy and ecology after the end of the world.* Minneapolis: University of Minnesota Press.

 ${\sf MORTON, T.~2013b.}\ \textit{Realist magic: objects, ontology, causality.}$

London: Penguin Random House UK.

MORTON, T. 2021. *All art is ecological*. London: Open Humanities Press.

MURRELL, V. 2019. *Prima Materia*. [Online] Available from: https://www.hannah-rowan.com/work#/prima-materia [Accessed 22/03/2022].

PASSMOOR, R. 2009. *Understanding whiteness in South Africa with specific reference to the art of Brett Murray.* Pietermaritzburg: University of KwaZulu-Natal.

ROWAN, H. 2021. *Chrysalis*. [Online] Available from: https://www.hannah-rowan.com/work#/chrysalis-1 [Accessed 22/03/2022].

ROWAN, H. *About*. [Online] Available from: https://www.hannahrowan.com/contact-1 [Accessed 22/03/2022].

TSING, A. 2012. Contaminated Diversity in 'Slow Disturbance':

Potential Collaborators for a Liveable Earth. Why Do We Value

Diversity? Biocultural Diversity in a Global Context. RCC

Perspectives 2012. 9: 95–97

TSING, A. 2015. *The mushroom at the end of the world*. Princeton: Princeton University Press.

TURNER, J. S. 2002. A Superorganism's Fuzzy Boundaries. The breathing termite mounds of southern Africa raise the question, Where does "animate" end and "inanimate" begin? North Carolina: Natural History Magazine. Jul/Aug.

WYSESSION, M. E. 2008. *How the Earth Works*. Virginia: The Great Courses. The Teaching Company. Audiobook.