Visual Enquiries and Idiosyncratic Selections: A Close Reading of Dust

Alésha Bredell

Thesis presented in fulfilment of the requirements for the degree of Master of Visual Studies at Stellenbosch University

Supervisors: Dr Ernst van der Wal & Dr Lizabé Lambrechts

March 2017
DECLARATION

I, the undersigned, hereby declare that the work contained in *Visual Enquiries and Idiosyncratic Selections: A Close Reading of Dust* is my own and that it has not previously, in its entirety or in part, been submitted at any university for a degree. All the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

Alésha Bredell

March 2017
SUMMARY

In the thesis, Visual Enquiries and Idiosyncratic Selections: A Close Reading of Dust, dust from the Ben Segal collection is investigated in order to explore what it may reveal about the idea and structure of the archive. This is achieved by looking at the physical and metaphorical manifestation of dust in the Ben Segal collection. The primary concern is the relationship between visibility and invisibility within the archive as it is linked to notions of ‘dust.’ The secondary focus will be to explore the attribution of significance and insignificance to dust within archival practices, in particular the Ben Segal collection from the Hidden Years Music Archive.

The Ben Segal collection, held at the Documentation Centre for Music at Stellenbosch University since 2013, forms part of the Hidden Music Years Archive. Since the late 1950s Ben Segal avidly collected material that fascinated him and, during his lifetime, the collection grew to include significant items related to South African folk music. With this history of collecting forming the background to my own enquiry, the methodological basis of this thesis is a close reading of the dust that can be found within Ben Segal’s collection. Such a process of close reading draws on both a poststructuralist framework, as well as modes of (scientific) visual analysis, as a means to investigate the meaning and function of dust in the Ben Segal archive.
DEDICATION

I would like to dedicate this thesis to a dear friend and musician (electric guitarist of Black Market Riots), Pierre Joubert, who passed away on 12 May 2014. He would have enjoyed the Hidden Years Music Archive Project immensely, in particular the Ben Segal collection.
ACKNOWLEDGEMENTS

First and foremost, I would like to thank the dust in the Ben Segal collection for insisting on my attention and aggravating my allergies; this project would not have been possible otherwise.

My supervisors, Ernst van der Wal and Lizabé Lambrechts, thank you for your dedication and guidance throughout this project, it is immensely appreciated. Working with both of you has been a privilege and I will forever be grateful for this opportunity. The two of you make a great team.

I am also grateful to the friends and family of Ben Segal, namely Kenneth Segal, David and Frances Marks, for setting time aside to share with me their stories and memories of Ben. Frances Marks, I will cherish our long telephone conversations which were always insightful and intriguing.

My dear partner, Zander, thank you for always being my biggest cheerleader. Thank you for taking care of everything and listening to all my ramblings, enthusiastically I must add. I would also like to thank both my parents, Anton and Sonja Bredell, for their encouragement throughout my entire life to explore and push the limits.

Thank you to all those involved.

Sincerely,

Alesha Bredell
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Alesha Bredell, <em>Dust on Book in the Ben Segal collection.</em> (2015).</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>The National Archives (UK), <em>Blue Wool Dosimeter (Dust Monitor) at The National Archives.</em> (2014).</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Karel Nel, <em>Seam.</em> (2002).</td>
<td>15</td>
</tr>
<tr>
<td>8</td>
<td>David Marks, <em>Ben Segal in his Lounge.</em> (2009).</td>
<td>23</td>
</tr>
<tr>
<td>12</td>
<td>Alesha Bredell, <em>Box with DVDs.</em> (2015).</td>
<td>32</td>
</tr>
<tr>
<td>14</td>
<td>Alesha Bredell, <em>Insect found in the Archive.</em> (2015).</td>
<td>73</td>
</tr>
<tr>
<td>16</td>
<td>Alesha Bredell, <em>Dust on Clothes.</em> (2015).</td>
<td>78</td>
</tr>
<tr>
<td>20</td>
<td>Alesha Bredell, <em>Aluminium Stubs with Nine Dust Samples.</em> (2016).</td>
<td>85</td>
</tr>
</tbody>
</table>
Figure 23: Alesha Bredell, *Merlin Screens*. (2016).

Figure 24: Central Analytical Facility, *Data Excel Sheet*. (2016).

Figure 25: Central Analytical Facility, *SEM Image showing Spectrum points (16-24)*. (2016).

Figure 26: Central Analytical Facility, Chemical Elements Data. (2016).

Figure 27: Alesha Bredell, Grey hair quadriptych. (2016).

Figure 28: Central Analytical Facility, Insect parts. (2016).

Figure 29: Alesha Bredell, Cassette Tapes. (2016).
TABLE OF CONTENTS

Declaration i
Summary ii
Dedication iii
Acknowledgement iv
List of Figures v
Table of Contents vii

CHAPTER ONE:

Introduction 1

CHAPTER TWO: UNPACKING THE ARCHIVE

2.1) Uncovering the Hidden Through Biographical Narrative: Revealing Ben Segal 19

2.1.1) Fragments of Ben Segal 23

2.2) Challenging Archival Structures 29

2.2.1) Interrogating the Archive 30

2.3) Rhizomes in the Archive: Against Hierarchies 38

CHAPTER THREE: A THEORETICAL CLOSE READING OF DUST AS A RHIZOMATIC PHENOMENON

3.1) Objects and Time in Dust 44

3.2) Segal Dust 48
3.3) Notions of Dust 51

3.4) Rhizomes in the Dust 56

3.5) Dust Clouds: Imagination and Blindness 60

CHAPTER FOUR: DUST AS ABJECT

4.1) Abject dust, Abject Archives 67

4.2) Objects in the Dust and Other Things 75

4.3) Micro Visualisation 82

4.4) A Close Reading of Dust 89

CHAPTER FIVE: CONCLUSION 92

Reference List 95

Addendum A
CHAPTER ONE: INTRODUCTION

In this thesis I investigate the dust from the Ben Segal collection in order to explore what it might reveal about notions around ‘visibility’ and ‘invisibility’ within a given archival structure. This is achieved by looking at both the physical as well as conceptual/symbolical manifestation of dust in the Ben Segal collection. In addition, this study also focuses on how notions of ‘significance’ and ‘insignificance’ affect the treatment and reading of dust in the Ben Segal collection from the Hidden Years Music Archive Project (HYMAP) at DOMUS. In 2013 the Ben Segal collection arrived at DOMUS, where it is currently being unpacked. Working as a volunteer for the Ben Segal collection since November 2014, my first and subsequent encounters with the archive have somehow revolved around the dust that can be found in large quantities in this collection. It is from such encounters that this study took its current shape – dust samples were collected during my weekly visits over the course of eight months, which serves as the basis of this research project. As such, this collection of dust provides the physical and conceptual material for this study. Ben Segal as catalyst for the dust, and the initial curator of this collection, is thus also a key focus of this study.

Since the late 1950s Ben Segal avidly collected material that fascinated him. During his lifetime the collection grew to include significant music material relating to the South African music scene including “books, reel-to-reel tapes, vinyls, cassette and VHS tapes, betacams, DVDs and CDs” (Lambrechts, 2015: 67). One can thus imagine that such a collection built over 63 years is quite extensive and, because of his knowledge of, as well as his personal participation in, the alternative music scene in Johannesburg, this collection is vast and can be considered a valuable resource for the study of music.

My own telling of the life and work of Ben Segal through the prism of dust forms but a part of the unravelling and growing story of his archive and my own study is a partial and idiosyncratic account of this archival collection. To a large degree, I am engaging in a postmodern telling of a ‘story’, as I am not necessarily interested in providing a conclusive narrative, but rather in the telling of a small, fragmented tale; in my case, that of dust. I am in

1 The Hidden Years Music Archive (HYMA) contains material collected by David Marks, as the owner of the 3rd Ear Music Company and Record Label. This independent record company was established by Ben Segal and Audrey Smith in 1967, and David Marks took over ownership in 1970 (Lambrechts, 2015: 139). This collection was donated to the Documentation Centre for Music (DOMUS) in November 2013. DOMUS is located in Stellenbosch, Western Cape at the University of Stellenbosch and forms part of Stellenbosch University Library and Information Service.
agreement with David L Martin, author of the book *Curious Visions of Modernity: Enchantment, Magic and the Sacred*, who states in his preface that:

> in writing this book I have attempted to admit and prioritize those things usually deemed ‘improper’ to, or unworthy of, academic study by giving as much room as possible to the fragment, the narrative, the excursion, the fleeting glance, the sympathy, and the resonance (2011: 1).

As ubiquitous as dust is (in general, and even more, it seems in my own experience, in the case of the Ben Segal archive), it has the ability to appear meaningless. Yet, it can be argued that the dust in Segal’s collection can, actually, be considered valuable when viewed in a particular (theoretical and visual) way – the reasons for this becomes clear during the course of this study. By looking at the fragments and the remnants of the archive, in this case dust, that which is often viewed as unworthy will be of prime importance for this research project.

When looking at any (physical) archive, it is worth considering that the objects that are preserved are slowly deteriorating and gradually on their way to becoming part of the larger collection of dust, as “dust is the divisibility of matter. Even the hardest materials erode and become dust” (Amato, 2000: 3). Dust in the archive presents a major problem and the omnipresence of dust, as a result of outside factors or the deterioration of material inside an archive, poses a threat to the content of the collection. ² It is well known that dust can speed up the deterioration process significantly, which is why, secondary to sorting, filing and categorising an archive’s content, dust removal is a constant on the archivist’s priority list. In the book *The Conservation of Library and Archive Property*, the comment is made that “books and archive material kept in certain climatic conditions can be damaged, even completely destroyed, by biological agents” (Di Franco et al., 1985: 119). Furthermore, the writers urge librarians as well as archivists to familiarise themselves with such factors in order to “detect the presence of an infection or infestation in their stocks” (Di Franco et al., 1985: 119).

Nonetheless, in an archive where the dust is as pervasive as in the collection of Ben Segal, one can (in fact, one needs to) afford it a second look. Upon my first visit to the HYMAP archive, the dust was simultaneously overpowersing and devastating.³ Armed with simply a dust mask on my face and surgical gloves over my hands, I started unpacking boxes. The dust most certainly made a greater impression on me that day than it would probably have otherwise,

---

² Kenworth explains that the danger of dust lies in its predilection for “stain[ing] documents, making them difficult to read”, and its ability to “tear or grind the cellulose fibres by abrasive action” (Kenworth, 1985: 34).

³ It must be pointed out that the large quantity of dust in the collection is not the result of archival malpractice but of Ben Segal’s philosophy of never cleaning his collection. See Chapter Three for a more detailed discussion.
due to my serious allergy to dust. While unpacking, seeing as well as feeling the dust on my skin it made me aware of the fact that one can actually collect the dust. With the dust completely covering objects – see Figure 1 – it was quite easy to scrape and collect samples. This idea of collecting the dust soon evolved to include the notion of analysing as well as documenting the dust. I would therefore propose that this process of collecting, analysing and documenting the dust can be viewed as a practical and creative solution to the major problem of dust in this particular archive. Consequently, my fascination with the dust upon my first encounter with the archive led to my interest in both Ben Segal as human subject, as well as his own role in (unsuspectingly) creating his dust-infused collection. Lizabé Lambrechts writes in the article “The house where history ended up: Packing up the Ben Segal archive” that the Ben Segal collection is one of “significance and importance to South African Folk Music studies” (2015: 1). One of the many possible reasons for this collection’s significance and importance is that Ben Segal’s house “became an iconic place for many South African singers/songwriters during the 1960s to the 1980s” (Lambrechts, 2015: 8). Lambrechts elaborates on this by adding that:

in a country where the stories of the majority of South African’s have not been deemed worthwhile to preserve by the institutional archive, careful consideration should be given any potential archive … This material can serve as important connection points to unlock the histories of these musicians – many of which remain untold and hidden in the depths of archives such as these (2015: 22).

I believe that my investigation, documentation and analysis of the dust in this archive (which is arguably the most insignificant aspect of this collection) are responses to the challenge posed in Lambrechts’s article by taking this archival project into the creative domain. Just like the stories of those South African musicians that have remained hidden until today, with Ben Segal recording and sharing their voices, so too the dust is often overlooked and invisible. My aim with this study is to bring the dust, Ben Segal’s life work and possible other invisibilities into the realm of the visible.

To conclude my reasoning in support of this project I highlight a section in the latest book by Hans Ulrich Obrist, Ways of curating, where Obrist speaks about “an unusual species of art: unrealized projects” (2014: 48). Here Obrist lists such projects as: “forgotten projects, directly or indirectly censored projects, misunderstood projects, oppressed projects, lost projects,

---

4 At this stage I am suggesting that this process might be a creative solution, though it might later be revealed as a necessary and even crucial solution to the problem of dust in this as well as other archives of this nature.
unrealized projects" and suggests that such projects are "a reservoir of artistic ideas" (2014: 48). Obrist continues that "the philosopher Gilles Deleuze argued [that] each process of actualisation is surrounded by a constantly thickening fog of virtual possibilities. Missed opportunities and failed projects also fall into this category" (2014: 48). In this regard, one can consider the music recorded and collected by Ben Segal, as well as the various other items he collected, as unrealised projects that have remained hidden and unknown to the greater South African public.5

My involvement in the work of archiving Segal's collection and subsequently writing about its content and the archive are attempts to engage with the 'unrealised' potential of this archive and the broader HYMAP. This project forms part of a larger attempt to unlock this collection, as well as potentially placing Segal's life's work in the realm of the visible. Verne Harris in Exploring Archives: an introduction to archival ideas and practices in South Africa, states that "memory erasure [was] also utilised widely by the apartheid state, with many thousands of oppositional voices being eliminated through means like media censorship," which led to "banning, detention without trial, imprisonment, informal harassment and assassination" (2000: 9). Harris (2000: 9) thus suggests that "bringing the hidden, the marginalised, the exiled, the ‘other’ archive, into the mainstream" is a powerful method of contributing to and ensuring the visibility of transformation discourses in South Africa.6 My own project falls within such an endeavour by bringing the hidden, the overlooked and the invisible into a space where they can be contemplated and discussed by means of academic and theoretical enquiry.

Such a process of looking at the invisible and overlooked resonates with Julia Kristeva's theory of 'abjection', which speaks about that which is rejected and discarded, or deemed improper. Kelly Oliver (1993: 56) explains in her book, Unravelling the double-bind, that the abject is a relationship to a boundary and to the very thing that was 'jettisoned' to the other side of that boundary. An important factor of the abject is that even though an abject(ed) thing has been

---

5 The Hidden Years Music Archive has only recently been made accessible to researchers (November 2016) through the joint efforts of Lizabé Lambrechts, David Marks, Santie de Jongh (Special Collections Librarian at DOMUS) and the assistance of the Music Library team. Various attempts have been made in the past towards realising HYMA. Lambrechts writes that "in 2006 a group of concerned individuals at the University of KwaZulu-Natal (UKZN) in collaboration with Marks, applied for further funding from the NRF, and set up a project through which to apply this funding called the South African Music Archive Project (SAMAP)" (2012: 149). After misunderstanding regarding the ways in which the funding was spent the project was not completely realized: "The frustration at the failure of the project was devastating to the Marks family, who thought they would be able to save this collection in its entirety" (Lambrechts, 2012: 150). After the UKZN project finished, the South African Music Rights Organization (SAMRO) offered Marks storage space for his collection at their own expense, but the collection was never sorted or catalogued (Lambrechts, 2012: 150). Only after the collection was donated to DOMUS in 2013 did the process of sorting, cataloguing and digitisation start in earnest. In November 2016 parts of the collection were made available to researchers for the first time.

6 Dust as metaphor can be readily applied here; a scattered bit of larger whole is being gathered resulting in the visibility of singular narrative.
radically excluded from a normative framework, it can never be completely eradicated, as it lingers at the border of existence (McAfee, 2004: 46). Abjection has to be constantly repeated, thus resulting in a process that never ends. Of importance to my own study is the notion that there are various levels of abjection at play in the archive, with dust being the very thing that is abjected – an issue that will form the basis of my later analysis in the subsequent chapters.

In addition to the abovementioned theoretical framework, Gilles Deleuze and Felix Guattari's theory of the ‘rhizome’ is also significant, as it comments on and compares dominant forms of Western thinking, which place great emphasis on “cause and effect and the creation of hierarchies,” to the image of a tree (Sutton & Martin-Jones, 2008: 3). The literal shape of the tree as well as the notion of the tree as referring to genealogical lineage, where there is “an obvious causal relationship between a single point of origin (the father) and his offspring” (Sutton & Martin-Jones, 2008: 3), relates to the dominant Western model of thinking where a single version of truth is expressed. At the same time, the theory of rhizomatic thinking attempts to rethink this model of thought and does not stand in opposition to it – it rather suggests that there are various ways of thinking and many truths; a single multiplicity (Sutton & Martin-Jones, 2008: 4, 5). I believe that this theory can be readily applied to archival practices, insofar as it can offer a critical perspective on archival methodologies – such as unpacking, sorting, cataloguing and creating inventories – which rely heavily on systematic approaches that create hierarchies when classifying and appraising collections. Through my documentation and reading of the dust, as well as my telling of the story of Ben Segal, I apply a rhizomatic lens to my approach and offer a way of interpreting value and hierarchies within an archive.

Also of note is the work of Jacques Derrida, a philosopher and theorist who is one of the most cited authors on the subject of poststructural thinking, especially as it relates to the archive. 7 His texts Archive Fever (1996) and Memoirs of the Blind (1993) will also inform this study. Derrida draws our attention to blindness in Memoirs of the Blind, where he notes that blindness constitutes a way of seeing. Derrida thus relates ways of seeing to ways of knowing:

> It escapes the field of vision. It precedes or follows vision. Not only because it is not yet visible, but because it does not belong to the realm of the spectacle, of spectacular objectivity (1993: 45).

If one considers this quote in relation to the dust, we may posit that through a different way of looking, through scientific visualisation for example, certain things, that are invisible to the naked eye, or that which we will remain blind to, will become visible. The above quote also relates to ideas around presence and absence, the “never-fully visible, existing only in a fragile state of multiple identities; as marks on a page, as indicators of a contour” (Boukla, 2012: 2).

Within such a larger theoretical framework the process of identifying and reviewing the key literature on the topic led me to an array of sources on archival theories and practices. It is important to mention, however, that very little academic research has as yet been conducted on dust specifically (especially as it relates to the archival environment), and the literature on the subject is therefore scant. The only area where dust is discussed in archival practice manuals is where it is framed broadly amongst other detrimental influences, of which dust is but one abject example. Such a lack of literature necessitated my own methodological enquiry (which will be discussed later in this chapter), which called for a novel approach to the visual and theoretical representation of archival dust.

While literature on the subject was quite limited, four visual examples were found where dust is used as subject matter in photographic work in the archive/museum environment. For example, the artist and photographer Klaus Pickler, who is based in Vienna, photographed dust bunnies that he collected from various locations, such as apartments, museums, shops, the streets and various other places – see Figure 2. Accompanying Pickler’s photographs on his personal website, Josef Hasingler writes that Pickler’s photographs:

urge us to look more closely next time we sweep dust and grime onto a pan.
We always used to call it dirt, blind to this whole universe. Only now do we realize how privileged dust mites actually are. They live in palaces of amazing beauty and it has never once crossed their minds to vanish into a cloud of dust (2014).

Similarly, I am interested in reversing the attitude of blindness towards dust, revealing what is hidden within a supposedly unknown world. My idea of looking at as well as documenting and analysing dust is thus not an isolated project, but it speaks of a growing endeavour to

---

8 Other serious damaging factors include: acid migration, light, heat, humidity, biological agents, environmental pollution, pencils/inks, adhesives, mechanical damage, and fasteners to name a few (Kenworthy, 1985: 29-36). Environmental factors also include: insects, book lice, carpet beetles, cigarette beetles, cockroaches, drugstore beetles, silverfish and vermin (DePew, 1991: 82-86).
understand this phenomenon. In addition, the National Archives of the United Kingdom conduct dust analysis on a regular basis in order to determine what is causing or speeding up the deterioration of certain objects. In this context the documentation of the dust is a means to control and safeguard the content of the archive – see Figure 3. The following is an extract from a blog post from the National Archives in London by the archivist Amy Sampson entitled Behind the scenes from Monday 30 June 2014:

Unsurprisingly, we have dust at The National Archives! I never imagined that dust would become such a significant aspect of my working life. It is something I talk, read and write about on a daily basis. Despite what you might think, it really is quite interesting (honestly). The Dust Project was established to investigate how much of a dust problem we have at The National Archives, as it poses a surprising threat to our collections (2014).

Another similar project is the Art Museum Dust collection: Wearing Away Museum Grounds – Dust bunnies, white lies and new measures – see Figure 4 – which Kelly Cobb and Sean Miller describe as follows:

This Dialog piece details the current collaborative work underway between Sean Miller’s Art Museum Dust Collection and Kelly Cobb’s textile-based studio project Garment/Research. The Art Museum Dust Collection is an ongoing conceptual project that spans more than 13 years and includes dust from art museums worldwide. The Art Museum Dust Collection consists of a plethora of art-related activities and media, including a photographic series utilizing microscopy, dust-collecting actions in museums, dust-collecting equipment, performances, multiples, wearable art, and a miniature gallery featuring an art-museum dust montage mural (2010: 287).

Also of note is the work of Karel Nel – a South African artist who has incorporated scientific enquiry and dust into his artworks – see Figure 5. Nel examines the meaning as well as the materiality of organic matter in his Status of Dust series (Kreamer et al., 2008: 356). In Nel’s work, “science, of course, provides one point of entry, but belief, myth, memory, the unconscious, and the senses, including aesthetic experience, offer equally compelling access” (Kreamer et al., 2008: 356-357). For Nel, this investigation of dust provides an interface between the visible and the invisible, “the known and the unknown, between the graspable and the elusive, between certainty and uncertainty” (Kreamer et al., 2008: 357).

My idea of documenting and analysing the dust of the Ben Segal collection speaks to such broader visual and creative discourses on, and enquiries into, dust. At the same time, I am also
identifying and enquiring into the symbolic significance of dust in a given archive. My project thus differs from the five abovementioned projects, as I combine forms of visual enquiry with various theoretical frameworks to engage with dust in the Ben Segal archival collection. I will therefore construct my research by making use of textual examples (which largely occupy Chapters 2 and 3) as well as visual examples (which form the basis of a microscopic analysis of dust samples in Chapter 4). This combination of research methodologies forms the basis of my enquiry into archival dust.

Consequently, the primary methodology used for this study will be a close reading of dust within a given archival collection. David Schur writes that a close reading “is a method of reading that challenges us to notice things we might not ordinarily observe or think about” (1998: 19). Close reading thus suggests “a practice of reading that is strict, searching, and minute; it remains close or near to the text” (Schur, 1998: 2). In this instance the ‘text’ that I will be ‘reading’ is the dust from the Ben Segal archive, which may “reveal much more” than is overtly visible (Bardzell, 2009: 4). Ultimately, the employment of close reading as methodology has the ability to reveal that which is explicitly visible or implicitly stated. Schur (1998: 6) explains that the use of close reading can reveal that “a work of science might contain striking metaphors; a lyrical poem might be markedly simple rather than bewilderingly archaic”. As such, I deploy close reading as a flexible methodology that allows me to ‘read’, scrutinise and try to understand dust, both as a conceptual/theoretical entity, as well as its visual manifestation as a physical phenomenon.

While the previously mentioned theoretical sources will form the conceptual basis of this study, another method for understanding dust will draw on a more analytical form of visual exploration, which will be a microscopic close reading of collected dust samples from the Ben Segal collection. This mode of analysis is used for its potential to reveal that which is hidden from the human eye by making use of a form of particle analysis. This analysis offers a microscopic perspective on the visual traces that the archive leaves. The dust/particle analysis identifies the particles and assigns them to broad categories, such as “minerals, pollen, insects … bone, hair, hide, feather, skin, blood” (Amato, 2000: 4), as well as the various chemical compositions found in the selected samples. This analysis was conducted by the University of Stellenbosch’s Central Analytical Facilities (CAF). where particle and elemental analyses were

---

9 The Central Analytical Facilities (2016) warrants “optimal utilization of expensive multi-user research equipment in the service of the research community of Stellenbosch University, and the South African research and development sector in general.” The Central Analytical Facilities (CAF) contains “operational units built around logical clusters of equipment and managed by a Staff Scientist, who provides advice to potential users on relevant analytical and sample preparation techniques, perform analyses for clients, train users to perform their own analyses and ensure good maintenance, calibration and performance of the equipment” (CAF, 2016).
conducted on the dust samples by means of scanning electron microscopy (SEM), also known as SEM analysis or SEM microscopy. According to the CAF laboratory:

The targets [of the analysis] can be almost any type of solid materials having resistance to an incident electron beam (<30 kV). Common examples are metal, rock, soil, glass, plastic, polymer, fibre, ceramic, concrete, biological entities, or any combination of these. This capability allows for users to perform SE/CL/BSD imaging and EDS/WDS analysis with least chemical contamination of the target – this aspect is important for some applications which require multiple experiments on a single specimen with minimal interference. If coating is desirable for your applications, the Gold Coater and Carbon Coater are available in the lab (CAF 2016).

By using this mode of enquiry in combination with theoretical sources, as well as interviews that were conducted with relevant people who were involved with the Ben Segal collection, a form of interdisciplinary interaction is facilitated that addresses the complexities pervading the very phenomenon of archival dust. This mode of interdisciplinary interaction is centred on the methodology of close reading – the latter of which takes various (textual, visual) forms.

Following on this introductory chapter, Chapter Two introduces Ben Segal, whose life forms the backdrop to this study. Fragments of the life of Ben Segal, as told by his friends and family, are explored in order to gain an understanding of the life behind the collection. By focusing on Ben Segal as a catalyst for the dust, I am thus emphasising the personal and subjective influence behind archival meaning-making processes. Proceeding from this basis, I also touch on recent postmodernist/poststructuralist debates in relation to the archive, as well as more traditional archival perspectives that respond to or stand in conflict with such debates. Lastly, this chapter also draws on Deleuze and Guattari’s rhizomatic theory to explain the way that this theory relates to and resonates with archival processes.

Chapter Three will look at the notion of time as a key motivator for processes of preservation and archiving. Furthermore, notions of visibility and invisibility/blindness, and the role of the imaginary within the archive, form the theoretical basis of this chapter. In particular, certain rhizomatic principles, taken from the work from Deleuze and Guattari, are applied to the phenomenon of archival dust. In this chapter the focus is strategically placed on the possibility of establishing different ways of thinking about modes of archivisation, especially when

10 Ben Segal passed away in 2013 and oral interviews with one of his three sons, Kenneth, as well as with David Marks and Fran Marks, who were lifelong friends of Ben Segal, proved to be important sources on his life and collection.
hierarchical thinking (which marks traditional archival practices) is set aside to embrace a more rhizomatic and open structure of archival collection.

In Chapter Four the phenomenon of dust is discussed by applying Kristeva’s theory of abjection to it. Dust as abject entity is discussed, specifically in terms of how such modes of abjection relate to the archive. In response to this theoretical basis, the larger part of Chapter Four is used for the close reading of selected dust samples. The results of the analysis (that is, the visual/scientific data) provide a key point of departure for thinking about how dust can be framed through various lenses (be they visual or theoretical), and how such perspectives speak of different ways of conducting a close reading of archival dust. These thoughts and perspectives will be reflected on and assimilated in my final chapter (Chapter Five), which will be the conclusion of this study.

Within the unfolding chapters, this study attempts to bring a range of theories (be they on dust, archives, rhizomes or abjection) into a space where new ways of thinking about the past and the role of the archivist can be encouraged. Dust, as a seemingly abject and insignificant object, forms the platform for such an endeavour, as it plays a vital role in leading the reader/viewer into the world of the microscopic and invisible, into a place where the minute fragments of the life of Ben Segal can perhaps be seen.
CHAPTER TWO: UNPACKING THE ARCHIVE

In the following chapter Ben Segal as creator of the collection and catalyst for the dust will be discussed in detail. Fragments of Ben’s life, as told by friends and family, will form a partial narrative revealing different aspects of both Ben Segal and his collection. Possible motivations for his excessive collecting as well as my motivation behind this study will be explored. Dust and the rhizomatic potential of collections will be considered as a novel and idiosyncratic approach to archiving.

2.1) Uncovering the Hidden Through Biographical Narrative: Revealing Ben

When I say I don’t remember that day I am not lying. I wish I did but I just don’t. It’s funny the stuff that sticks in your head, stuff you don’t think would be important, not even when it’s right there happening. Sometimes, that’s the stuff that sticks. Sometimes the most important stuff goes away, goes away so bad it’s like it was never there to begin with. I can’t remember that day, but I can tell you forward and backward about a day I was five and my dad bought me a stupid ice cream cone. I can tell you the flavour of the ice cream, it was pink bubble-gum. And even stuff about the girl that scooped it out. Her hair was fire red, red like I’ve never seen before. All that stuff is there, like it was happening right now, but I don’t remember that day, at least not the stuff they want me to. I remember it was the first really hot day of spring, I remember how the sun felt on the back of my neck. That’s about it. Here’s another one of those things that sticks. This one is something a friend of mine said to me: ‘You have to believe that life is more than the sum of its parts, Kiddo.’ I remember it right down to that ‘Kiddo’ part. But when I think about what she said, the same thing always comes into my head. What if you can’t put the pieces back together in the first place? (United States of Leland, 2003).

John Randolph writes in Archive Stories: Facts, Fictions and the Writing of History that archives are not only places or mental maps, but that they are also objects, “or more precisely collections of objects, possessed of a physical nature that is crucial to everything archives make possible” (Burton, 2005: 209). Our readings of archives are therefore also greatly influenced by and based on that which we encounter physically. Biography then, writes Randolph, “suggests itself as a productive metaphor for thinking about the physical history of
an archive and its relationship to lived experiences, including our own” (Burton, 2005: 210). Archives are then “also the subjects of history”, as are the objects found within them, with both archives and objects leading social lives, of sorts (Burton, 2005: 210).

My own reading of the unravelling ‘story’ of the archive and life of Ben Segal is focused on the stories that arise from the dust that can be found in his collection.

As Jean-Paul Sartre concluded in his book *La Nausée*, the writing of the life of another person is an impossibility and that it is “‘pure imagination’, emanating from the biographer, and bearing no resemblance to the supposed subject” (France & St Clair, 2002: 1). Imagination is thus also required in the writing on the Ben Segal archive, as my view of the archive is partial. At the same time, working in the Ben Segal collection and discovering more about his life has made me relentlessly curious to investigate further and to know more. Opening a box and finding the glasses he used to wear, or holding a dust-covered book in my hands that his mother wrote, lead me to ask more questions to friends and family. For me, the stories of Ben Segal as told by family and friends has made the archive and collection come alive, and in so doing helped to make Ben Segal more visible.

Heather L. LaMarre and Kristen D. Landreville in an article, “When is Fiction as Good as Fact?” (2009), compare the perceived relationship between fact and fiction by arguing that a given audience:

> may approach all narratives with an initial credulity and truthfulness unless otherwise prompted to question the narrative’s realism … This is because it takes more mental effort to critically evaluate and disbelieve information than it does to accept it (LaMarre & Landreville, 2009: 552).

In the context of my own study, such a complex relationship can perhaps be seen in the way that both the imagination and fiction weave an intricate narrative in the Ben Segal collection, and that the documents of ‘fact’ and ‘truth’ cannot tell an entire story. For example, Kenneth Segal’s response to my question as to whether his father might have read all (or most) of the books in the collection, was that his impression was that his father did indeed read everything and added that “he read no fiction, he wanted to know the world. He wanted recordings of Arctic winds. He wasn’t interested in fiction at all in any form” (K Segal, Personal Interview, 2 July 2015). Yet I have found and seen plenty of commercial items and novels in the collection, taking the countless comic books as an example, which can be seen in Figures 6 and 7. Here, the archive seems to speak against another account of a given life, and Segal’s collection
points towards conflicting views about how his life was lived, as well as the meaning and use of his archival collection.

The difficulty in the conveyance of a ‘truthful’ account of a life lies not only with the researcher or archivist, but also with

biographers [who] frequently perceive their task in a different light than do the gatekeepers of biographical sources upon which they must rely. The gatekeeper has in mind a pleasing portrait, the biographer looks for possibly unflattering social and psychological processes. One feels responsibility to the subject, the other considers mainly the subject’s responsibility to the world. The gap becomes a dilemma if the gatekeeper holds nearly all the available information on the subject (Perkins 2012: 169).

Even though Perkins writes about biographers in the above quote, archivists and the way in which they influence the archive fulfil a similar role; archivists can be considered the biographers of the archive, to some degree. In the context of my study, the gatekeepers of information and sources are not only the interviewees (the people who help to frame and understand an archival collection), but also various other structures that help (or hinder) the unfolding story of a given life. This can be seen in the actual format of the Ben Segal archive — a structure of more or less 13 tons that exists at a formative stage during which it is being packed out and sorted. This archival structure/organism is scattered, residing in various locations as storage space is not readily available, making it impossible for an archivist/scholar to obtain a comprehensive overview of the archive. Hypothetically, I have access to the entire collection, yet my practical grasp of the content is limited due to the actual size of the collection and the disparate locations of its holdings. For this reason, the biographer’s dilemma that Perkins mentions is similar to that of the archivist in the context of the Segal collection. I have to trust others to assist me with the reconstruction of Ben Segal’s life and the content of the archive, and I am thus in a position where I have to ask questions around the validity and usefulness of the stories and memories of others. At the same time, the very presence of dust within this archive also provides another perspective on his life. Through the investigation of dust, new and different ways of perceiving the collection are also obtained, as hidden stories and clusters of information can be found in the dust itself.

Such a view on the different narratives that frame a given life necessitates an understanding of how biography functions within the local context — that is, how a life is recounted. In recent years, the South African publishing industry has experienced a noticeable surge in
biographical as well as autobiographical publications (Perkins, 2012: 55). At the same time, scholarly biographical writings on musicians and other artists are still lacking (Perkins, 2012: 55). Here, the function of the Ben Segal collection, filled (amongst other things) with recordings of musicians who have as yet not been heard by many, has the possibility of supplying important information that addresses a noticeable gap in the local knowledge economy. Similarly, my own writing attempts to speak to this lack and, even though I am not writing a biography on Ben Segal per se, this study adds, to some degree, to a better understanding of his life.

Within the South African context, such a view of telling the life of another person offers the promise of “throwing new light on a range of different historical periods and problems” as it brings “individuals and groups who had previously been ignored into the framework of historical analysis” (Caine, 2010: 1). Biography and the telling of life stories allow for the seemingly less significant (such as dust in my reading of the archive) to be used as a vital part of this telling process. As Barbara Caine notes, “it is not the light shed on the lives of powerful individuals which is most important, but rather what can be learnt from the lives of less-exalted and ordinary people” (2010: 1). The purpose of exploring seemingly insignificant lives, but also insignificant objects, such as dust, “thus offers an important addition to the understanding of general developments by providing a way of accessing subjective understanding and experience” (Caine, 2010: 1). The focus on dust might have a similar effect, insofar as:

the lives of individuals … become significant because of what they show about the worlds in which they lived and their capacity to reveal facets of that world which are not available in other ways (Caine, 2010: 2).

Such a process of focusing on a given life is also important in the local context. As Mark Gevisser argues, “I find myself going back to it [apartheid South African memories] because it forces me to remember something I must never allow myself to forget” (Gevisser, 2014: 21). The voices, music recorded and objects collected by Ben Segal play a similar function, as their preservation, as well as the study of such objects in their minute detail, fights obliteration and oblivion through the act of remembrance.
2.1.1) Fragments of Ben Segal

Ben Segal as catalyst, collector and original archivist, as well as the actual collection that he created, cannot be viewed in isolation. I came to ‘know’ and be intrigued by Ben Segal through the objects as well as the dust in the archive. As soon as I started unpacking the boxes I started to create an idea of Ben in my mind, an imaginary Ben if you will. I soon started to imagine what he might have looked like, what his voice sounded like, all of which was inaccessible to me upon my first encounter with the archive. When I finally saw a photograph of Ben in the article Lizabé Lambrechts wrote, “The house where history ended up: packing up the Ben Segal Collection” (see Figure 8), I was surprised; he did not look anything like I had imagined. This goes for much of what I uncovered about his life – each encounter with the archive or stories about Ben Segal stimulated my curiosity. Even though much has been uncovered, there is still much more that remains inaccessible, both in reality and in the imaginary.

David Marks (2015), Ben Segal’s close friend and business partner, explains how, with apartheid’s restrictive laws in mind, they “went about doing what [they did] … producing events with all South African musicians, recording, collecting and sharing”. He goes further to say that by being excluded from the mainstream music scene at the time was perhaps “a blessing in disguise” as it allowed them to “focus, broadly, covering every known social aspect connected to music” (David Marks, personal interview, 8 December 2015). Through this they “crossed all colours, classes, codes and cultures throughout the country and Southern Africa – perhaps more by ‘mistake’ than design” (David Marks, personal interview, 8 December 2015). As Marks recalls, “Ben was worried about the Security Police aspect – but we ignored it”, yet one cannot entirely ignore the impact of apartheid on the life of Ben Segal (David Marks, personal interview, 8 December 2015), and, as a result, on his archive. One can argue that in some respects the archival dust therefore carries some of the traces of an apartheid history, insofar as the very archive created by Segal grappled with the restrictions and censorship imposed by the apartheid regime.

11 David Marks was “more involved in the live music events and productions – Ben tended to stay at home mainly, to record and collect stuff – and what I did was be as open and as inclusive as I could be. I would invite ‘the perceived enemy’ to all our events (SABC, Afrikaans media, students etc.)” (David Marks, personal interview, 8 December 2015).
Benjamin Segal, a second-generation Polish Jew, was born on the 3rd of October 1930 and died on the 2nd of November 2013. Segal’s mother, Taibe Segal—see Figure 9—was the daughter of a prominent rabbi in Vilnius and fell in love with and married the son of a carpenter, Ruben Segal (Kenneth Segal, personal interview, 2 July 2015). Soon after his birth in Poland, Ben’s family moved to South Africa, where his father set up a small business (Kenneth Segal, personal interview, 2 July 2015). Kenneth notes that this move probably saved their lives, “because in the Second World War, all the people that stayed in Vilnius were wiped out, and the fact that my grandfather was not accepted by my grandmother’s father [which was one of the reasons why they moved], is how this branch of the family came to be. The fact that he had a socially unacceptable job or profession saved the family” (Kenneth Segal, personal interview, 2 July 2015). After moving to South Africa they lived in Hunter Street in Johannesburg, where many former Eastern European Jews relocated to form a close-knit community (Kenneth Segal, personal interview, 2 July 2015).

As a young man Ben Segal was part of Habonim, a Jewish Zionist youth movement, and according to Kenneth Segal, “it was very lefty” (Personal interview, 2 July 2015). Kenneth Segal remembers his father’s dream to study agriculture, get married and then move to Israel and live on a kibbutz. However, Ben’s father, whom Kenneth Segal recalls as a domineering person, stepped in and persuaded Ben to become his partner in the family upholstery business (Personal interview, 2 July 2015). As Kenneth Segal remembers:

> My father stuck it out in the business that he didn’t like and dedicated most of his off time when he wasn’t at work to music and that was his real passion. So he recorded music, he was head of SAFMA, he discovered a lot of people as far as I understand … he sort of discovered Johnny Clegg, Molombo Jazzman and he was the first person

---

12 Amidst the dust, a book written by Taibe Segal called Troim Un Lebn (1978) was uncovered—see Figure 10. Inside the book there is an inscription that reads “To me dear son Benny with best wishes and love. From your mother.”

13 During the first two and a half decades of the twentieth century huge changes took place in the city known by Russians and Jews as Vilna, by Poles as Wilno, and by Lithuanians as Vilnius (Weeks, 2004).

14 The turbulent 19th and 20th century history of Poland included the “dispersal of Polish people to countries as different in ideology and social structure as the former Soviet Union, the United States, Australia, Argentina, and South Africa” (Drzewiecka & Steyn 2009:118). Consequently “many Polish immigrants could immigrate to apartheid South Africa only because they were white, often specifically recruited for the skills not being developed in the black African populations as a matter of apartheid policy” (Drzewiecka & Steyn 2009:118-119).

15 Habonim Dror is an international “Jewish Zionist youth movement, which exists to take responsibility for the Jewish people, Israeli society and the world” (Habonim 2016). The movement was founded in 1929 in Great Britain and was established by Wellesley Aaron (Habonim 2016).

16 The South African Folk Music Association (SAFMA).
to record a lot [of] people at the time on his [record player]. I think they are in the collection there (Personal interview, 2 July 2015).

Prior to Ben Segal’s recording and collecting days, while still in tertiary education studying agriculture in Pietermaritzburg, he met his future wife (known to me only as Irma). She was very young at the time of their marriage, and as Kenneth Segal notes “I think she was looking for a way to get out of the house” (Personal interview, 2 July 2015). She was about eighteen at the time and became a mother at the age of 19 when she had Arthur, the eldest of the three brothers.

David Marks writes of Irma that she:

 seemed to like some of my songs and sometimes sat in the adjoining dining room, offered tea etc., while Ben recorded in the lounge. When Ben invited the occasional ‘foreign’ or famous folk singer to visit, he’d have his equipment set up in the lounge – legends such as Blind Doc Watson and his son Merle … Irma would apparently often sit in on those recordings. (I can hear her laughing and commenting in the background on some of the recorded tapes.) On my return from the USA, early 1970 – after Ben had officially formed 3rd Ear Music with Audrey Smith, and because I was now a third partner and a director of Third Ear Enterprises – I visited Ben and Irma’s home more frequently; I brought songwriters around, and often assisted in the recordings. Ben had by now invested in a state-of-the-art ReVox A77 tape deck with 2 stereo microphones. I did notice that Irma was seldom around; although the boys (Kenni, Arthur and Bernard, who were often in school uniform) did drift in and out of the lounge. But I think Ben preferred that they not do so when he was recording. Ben did mention that he and Irma were going to split. I had met Fran by then, and she would come with me. Fran and Irma got on fine. Irma did not seem to like many of the new musicians that Ben was recording (David Marks, personal interview, 8 December 2015).

David Marks remarked how they appeared to be “a typically happy middle-class Johannesburg family … with an eccentric father who loved rock ’n roll ’n folk music” (Personal interview, 8 December 2015). With musicians in and out of the house, visiting, recording and some even camping on the front lawn, Ben Segal’s house became a gathering place for artists and musicians (Kenneth Segal, personal interview, 4 July 2015). Kenneth Segal notes that his father’s relationship with his family was one of ups and downs, as they lived with “a

---

17 Kenneth Segal recalls a time when Des and Dawn Lindberg “lived on our lawn for a while, so they were always around when we were kids” (Personal Interview, 4 July 2016).
person who is extremely complex, complicated and very bright with a fantastic sense of humour. It wasn't simple … nothing about him was obvious” (Personal interview, 2 July 2015).

At the same time Ben was considered a very good friend and “always had something to offer, was it advice or companionship”; while he also had a “vast amount of knowledge … he was a very good listener and he could listen to anything and anyone on any subject” (Kenneth Segal, personal interview, 4 July 2015). In one of many telephone conversations I had with Frances Marks, a close friend of Ben Segal, she recounted how Ben Segal would call her, just to play a song, or sometimes even an entire record. In her memory of Segal, she sees him motionlessly entranced by the music, sitting with his hand folded in his lap (Frances Marks, personal interview, 2015).

When David Marks met Ben Segal in 1965 at the Troubadour in Doornfontein Johannesburg, he recalls the “little man who looked like Bram Fischer with ‘bok-baar’, glasses and a tape recorder” (Personal interview, 8 December 2015). David Marks writes that he himself would often carry a tape recorder, “so Ben and I had a recording thing in common from the start” (Personal interview, 8 December 2015). David Marks remarks that he “used to drive up from St. Helena Gold to play at The Troubadour or Nite Beat (in Hillbrow, Johannesburg) on a Friday night and Ben would often come listen” (Personal interview, 8 December 2015). These nights at the Troubadour club did not go unnoticed by the Special Branch:

Like his notorious SB (Special Branch) song in 1968, Colin [Shamley] was way ahead of time – so too were the SB; they warned the TROUBADOUR in Noord Street Doornfontein – stop him singing that dangerous communist-inspired filth or they would close the club down! Do tell! Colin writes … the cracks were starting to show in the National Party … because they were desperate enough to (allegedly) kill their own - Doctor Smit (a Nationalist Member of Parliament for Springs in the 1980s) and his wife

---

18 My telephone conversations with Frances Marks were not part of the initial methodology for this study, yet they became a helpful and invaluable part of the research process. After a few email conversations Frances asked me to phone her, and what was supposed to have been a brief verbal introduction, became an hour and 30 min phone call. In this initial phone call I asked Frances to write down her thoughts as well as respond to a list of questions in writing, as this was the method of response both Frances and David Marks suggested would best suit them. With every phone call I made quick notes, added details to information I already had, as well as made notes of new questions to ask. The intention from the beginning was that Frances would write her thoughts in response. I started writing and used the telephone conversations so long, while waiting for her written notes. Frances later informed me that her writing is slow and that she did not believe she had much to say. I assured her that her voice and stories were of immense value to this study, as these telephone conversations have proven to be.

19 Bram Fischer “led the defence of Nelson Mandela in the Rivonia Trial” in 1964, and “in 1966 Fischer was himself sentenced to life imprisonment in South Africa for his political activities against the policies of apartheid” (Jacana 2013). Prior to his sentencing Fischer “spent nine months underground, in disguise, evading a nationwide manhunt. He was South Africa’s most wanted man, his cause recognised and celebrated around the world” (Jacana 2013).
– both mysteriously executed. Smit was honest & about to issue (some alleged) revelations of massive financial (fraud &) irregularities & secret overseas bank accounts (so what’s new?) The murders were a stark warning to National Party members. The intent behind this song was to get people to ask questions … which they never did … because there was no real effort to trace the killers … to date (2004) the murders remains unsolved (Marks 2004).

In my encounters with the music in the archive, my curiosity to get to know the person who meticulously selected and collected these items grew. I soon realised that the possibility of knowing Ben Segal through his ‘remnants’ is impossible. The realisation of this impossibility was confirmed when David Marks, in response to the question, “What was Ben Segal’s favourite song or musician(s)?”, explicitly answered, “too many to mention” (Personal interview, 8 December 2015). To the same question Kenneth Segal answered: “I think that my father more than anything, especially in his last years of his life, it would be Beethoven” (Personal interview, 2 July 2015). Frances Marks wrote to me in an email that the song “Ancient Dust of Africa” by Edi Niederlander, a singer “whom Ben loved and respected … might well be the song that Ben liked best of all! Ben actually recorded Edi playing this song in his lounge years ago!” (Personal interview, 8 December 2015). The variety of answers this question was rather unsatisfying, influenced perhaps by recent memories or even coaxed by the topic of my research. Perhaps there is no single answer to this question and perhaps Ben Segal himself would also not have been able to answer this question. Ben Segal enjoyed such a great variety of music making it is possibly impossible to choose. Kenneth Segal remarked how they would listen to absolutely everything growing up in their home:

We heard everything, Mendelssohn, I heard a lot of classical music, Bach, a bit of Rachmaninoff, The Beatles, Molombo Jazzmen, David Bowie and it was a mix of everything. My father was interested in everything. It would be swing, jazz, hip hop, Dixieland, Folk music (Personal Interview, 2 July 2015).

Saying that Ben Segal listened to everything is clearly an exaggeration, yet we get a sense of the impression the extensive collection makes on the minds of those who have seen it.

In my conversations with family and friends of Ben Segal, it became apparent that the idea of him as a collector forms an integral part of how he was known. For David Marks, Ben Segal “didn’t collect anything randomly. He knew exactly what he wanted” (Personal interview, 8 December 2015). At the same time, Kenneth believes his father had a tendency for collection that bordered on hoarding – for example, Kenneth told me about his father’s rubber band
and chocolate collections (Personal interview, 4 Julie 2015), while Frances Marks also noted how Ben would collect so many food items that there was not enough cupboard space to actually store it.

Kenneth also notes that his father increasingly hoarded stuff in his later years, arguing that “I think it has to do with once he decided not to be a musician, he decided that he wanted to know about everything and anything there was to know about the area” - as Kenneth argues, he collected “to become the ultimate consumer” (Personal interview, 4 July 2015). According to David Marks, “Ben collected all this ‘stuff’ to share it; not to re-sell it” (Personal interview, 8 December 2015).

For instance, Kenneth Segal recalls that some of his fondest childhood memories of his father include how he would place chocolates underneath their pillows, and also of his father playing the song, “Three Blind Mice”, on the trumpet when his mother was on the telephone (Personal interview, 2 July 2015). Ben Segal’s sense of humour and idiosyncrasies, as noted by friends, come through in the archive. Besides his sense of humour, Kenneth Segal notes that his father “was interested in people. He was into erotica, he had this erotica collection. He had a massive sex toy collection that we threw out. He had all sorts of stuff. He collected alcohol. He liked life” (my emphasis. Personal interview, 4 July 2015).

Above all, Ben Segal was committed to music, as Frances Marks noted. He would frequently visit The Troubadour or Night Beat in Hillbrow on a Friday night to listen to, amongst others, David Marks. The latter remembers how Ben would often record some of his new songs on an Akai portable tape-recorder (Personal interview, 8 December 2015). David Marks recalls how:

Ben would also invite me over to 24 Judith Street … on a Saturday morning or Sunday to record my newest compositions on his portable Akai tape deck and to play me recordings of American singer songwriters that he had collected and knew that I would be influenced or impressed by. He was never wrong. He did the same with other local folk singers – he chose exactly what he knew would turn them on (Personal interview, 8 December 2015).

David Marks remarks that it was at 24 Judith Street in Observatory where Ben Segal “encouraged many of us singer songwriters to realise that it’s not about us, or how we sing … it’s what we sing; we didn’t need to be entertainers as such” (Personal interview, 8 December 2015). For Ben Segal, the point of making music was to share it with others and, as David Marks maintains, “that’s the approach I hold to this day … it allowed me to start singing in
public again after a 40-year lunch break” (Personal interview, 8 December 2015). Ben Segal believed that humanity’s highest achievement above all is music: “He loved birds, because they made music. He couldn’t eat chicken, because they were musicians. That was the way he saw the world” (David Marks, personal interview, 8 December 2015).

Such memories chart a complex narrative of Ben Segal’s life, which is also sedimented in his archive. Through the gathering of these stories, minor details point towards a rich historical narrative, as well as the vastness of Segal’s archive and the memories it houses. The next section proceeds from this biographical basis by looking at some of the important theories relating to the field of archivisation.

### 2.2) Challenging Archival Structures

According to Antoinette Burton (2005: 6):

claims to objectivity associated with the traditional archive pose a challenge which must be met in part by telling stories about provenance, its histories, its effect on its users, and above all, its power to shape all the narratives which are to be ‘found’ there.

Similarly, with this study on the Ben Segal collection (and my utilisation of poststructuralist theories, in particular), I problematise the claim of objectivity that often surfaces in traditional understandings of the archive. In my own approach to the Ben Segal archival collection, the emphasis rather falls on the importance of an idiosyncratic telling of his life story. The use of poststructuralist theories further opens up the possibility to challenge the idea of an objective, finalised archive. Here, the work of Burton resonates with such a theoretical basis insofar as it asserts that history is not “merely a project of fact-retrieval”, but that it can rather be seen as “a set of complex processes of selection, interpretation, and even creative-invention” which is “set in motion by … one’s encounter with the archive” (2005: 8).

Even though this view of the archive as seen in the work of Burton speaks to a larger shift in archival studies from the 1970s onwards, archives have not always been seen as constructed partial producers of knowledge, but were believed to be objective receptacles/holders of factual documents.
As Terry Cook argues, “an archival paradigm shift is indeed occurring” (2001: 4) which will grow and challenge how archivists think and work. Since Cook made these assertions about a paradigm shift occurring within the archival profession, much has changed. It is also important to recognise that this paradigm shift within the archival profession has not been occurring in isolation, but rather forms part of a larger paradigm shift within the humanities and social sciences. The influence of postmodernism can be seen in such disciplines, with archivists also obliged to reformulate archival sciences accordingly (Cook, 2001: 6).

However, this idea of a paradigm shift that coincides with a postmodern approach has been severely criticised by various practising archivists who claim that such shifts are a largely academic exercise (Griffin, 2010: 84). The reason for their criticism is based on the supposed discrepancy between theory and practice. As Heather MacNeil states (2007: 519), the underlying assumption in bridging this discrepancy is the notion that the way we think about the nature of archives has to change first in order to “change the way we act in relation to that nature”. Postmodern writing on archives by authors such as Jacques Derrida and Michel Foucault, as I explore in the following section, challenge the ways in which archives are thought of.

2.2.1) Interrogating the Archive

It is often helpful to look at the etymology of a word as this could enhances our perspective on a given concept, especially a word such as ‘archive’ that is used rather loosely today to refer to a lot of different ‘things’. Deriving from the Greek archeion, the word ‘archive’ is traditionally defined as a “magisterial residence or public office … (1) a place in which public records or other historic documents are kept; and (2) a historic record or document so preserved” (Jenkinson, 1937: 3). Though this definition by Jenkinson can still be accepted as reflecting a general understanding of archives, the term is much more ambiguous as used in present times to refer not only to a physical place or record, but also to cultural practices, such as performances and oral history projects, amongst others. In Refiguring the Archive, Carolyn Hamilton et al. urge the reader to “look beyond the idea of archives as physical records, so as to engage the idea of the taken-for-granted, often implicit, ‘archive’” (Hamilton et al., 2002:

20 Today the word ‘archive(s)’ is often used to refer to a ‘space’ where data are stored or backed up and where you can find ‘older’ information which is anything from a few seconds old to days, months and years.
My engagement with the dust as a hidden and inevitable consequence of the archive is then also an attempt to interrogate the archive by looking beyond the immediate and traditional associations of what can/should be archived.

In line with such questioning of the nature of the archive, Charles Merewether also notes that a defining characteristic of the modern era has been the increasing significance that was given to the archive “as the means by which historical knowledge and forms of remembrance are accumulated, stored and recovered” (2006: 10). Merewether continues that archives are:

created as much by state organizations and institutions as by individuals and groups, the archive, as distinct from a collection or library, constitutes a repository or ordered system of documents and records, both verbal and visual, that is the foundation from which history is written (2006: 10).

Archives are thus central to the construction, spread and maintenance of various histories, inter alia the meta-narrative of Western History. For example, in the 1850s one of archival science’s main theoretical bases was established, which was focused on classification systems. Such systems had already fascinated the Enlightenment era, “when everything had to be clearly defined and ordered in logical schedules” (Duchein, 1992: 19). With an emerging consciousness of archival principles, along with the formation of schools teaching archival studies, archiving was accepted as a specialised profession (Duchein, 1992). Such developments thus aided the shaping of the archival profession as an autonomous, credible profession.21 As a result, the archive emerged as a supposed vessel containing and producing ‘truth’. In this regard, Theodore Schellenberg writes that the daily activities conducted by the archivist are as much practical as they are intellectual (1965: 80). These intellectual and physical tasks take place simultaneously as the archivists, whilst sorting and packing records in/out, are also “analysing the type, provenance, functional origins, and contents of records” (Schellenberg, 1965: 80).

Lambrechts notes that the role of archivists was “historically accepted as the impartial guardians of truth and evidence” (2012: 59). The tasks conducted by archivists, or in my case

21 After the autonomy of the archival profession was established, Duchein (1992) note how constitutional, legal as well as technological and psychological changes of the 1960s and 1970s has affected the organization of archives (1992). In 1992, Duchein wrote that there is a harmonization taking place in the archival profession in Europe which is leading to the “rapid evolution of the archival profession,” as progress in scientific knowledge and technology is accelerating it is consequently influencing the way archives operate (1992: 23). In the same way, the political and social changes within South Africa has and continues to shape the way in which we record, store and construct archival spaces.
as volunteer, the reading of the materials are open to speculation and directly questions claims of ultimate ‘truth.’

In my personal experience working in the Ben Segal archive, where my tasks for the last year have been to list books and DVDs as well as a few VCRs, I can testify to the notion that archival work is very practical. My tasks entailed listing these objects on a Microsoft Excel sheet by typing the title, author, date and publication for books; and for DVDs and VCRs the name, publisher, code, genre – noting whether the DVD is an original or a copy. The exciting part of completing such a seemingly insignificant task is that I had the privilege of seeing so many wonderful books and DVDs before anyone else. Examples of this would be complete DVD collections, namely the James Bond 007 series (see Figure 11), The Simpsons, Family Guy and many more – see Figure 12. I also listed many MAD magazines and even old shopping catalogues. Despite the seeming insignificance of taking note of what is in the archive, even though not everything will form part of the archive in the end, it is indeed of great value to take note of these objects and to recognise their place as part of the unfolding narrative of the archive.

In terms of such functions of producing and capturing history ‘truthfully’, the process of archivisation was often believed to be “a means of access[ing] … the past” (Nesmith, 2002: 27) and ensuring the neutrality of such a recorded past – an idea that has been thoroughly contested in postmodern confrontations with archives. As Terry Cook argues with regards to the idea of factual recollection:

Nothing is neutral. Nothing is impartial. Nothing is objective. Everything is shaped, presented, re-presented, symbolized, signified, signed, constructed by the speaker, photographer, writer, for a set purpose. No text is a mere innocent by-product of action as Jenkinson claimed (Cook, 2001: 7).

From this, one can argue that a single, neutral archival narrative does not exist, but instead there are multiple narratives and histories with infinite purposes serving the interests of various audiences (Cook, 2001). Archiving as the practice of “simply document[ing] or mirror[ing] the world around the archives” through procedures of listing, describing, copying and retrieving records is a misconception, so too the idea of it being a “neutral, inconspicuous, and simply [a] factual way” of doing things (Nesmith, 2002: 27). Derrida notes in this regard that the archive

---

“does not simply record the past”, but that it “constitutes the past, and in view of a future which retrospectively … gives it its so-called final truth” (cited in Hamilton et al., 2002: 40-42). The archive as a constructed centre of knowledge is highlighted, and it is for this reason that Derrida places great emphasis on the role of the archivist in this process of construction.

Derrida writes that the meaning of the archive comes from understanding it as “a domicile, an address, … of the archons, those who command” (Derrida, 1995: 2). For Derrida, the function of the archive and the role the archivist plays in its construction cannot be separated – it is a place and commandment and commencement that is centred on the position of the archivist. The presence of an archivist and/or the “political power of the archons” (Hamilton, 2002: 42) consequently results in the possibility of destruction – the archive is always constructed at the same place where its very existence is threatened, according to Derrida. What is kept in the archive can be erased or lost, with its very locatedness “in a place” posing a threat of permanent loss in itself (Hamilton, 2002: 42). The death drive, the fear of forgetting and losing memories, is thus what leads us to archive in the first place. Yet the pervasive threat of destruction is identified by Derrida as the limitation of the archive:

The fact that the power, and often the social and political power of the archive, which consists in selecting the traces in memory, in marginalising, censoring, destroying, such and such traces through precisely a selection, a filter, and which, of course, is made possible by, let’s say, the finitude, the limitations, let’s say of human power, of space, the place where to accumulate the archive and so on (1998: 43-44).

Such a questioning of the archive as a receptacle for ‘truth’ is also seen in enquiries into its supposedly ‘autonomous’ and ‘impartial’ nature. Verne Harris, for example, notes that archivists’ thinking and decisions in archives are not shaped independently of their societal positions, but are socio-politically entrenched (2000). The rules followed by archivists often maintain a hierarchical agenda in order to serve a given institution’s needs. Derrida also highlights in this regard the archivists’ ‘signature’, their ability to inscribe their own, as well as larger viewpoints, into an archive. As such, the archivist’s (ideological) position should be of concern when looking at any archival structure.23 Here my own position, as well as that of my fellow archivist, cannot be denied.24

23 Commenting on Derrida’s writings on the archive, Susan van Zyl argues that those who authorise archival processes (in other words the archivist), as well as the way in which archives become institutions, should be critically analysed in archival science (Hamilton, 2002: 39).

24 My own position, as well as those of Lizabé Lambrechts, Kenneth Segal, David and Frances Marks, as well as all the other individuals who are involved in this archive-making project, ought to be highlighted. As the archive
For both Derrida and Foucault, the archive constitutes a “central metaphorical construct upon which to fashion their perspectives on human knowledge, memory, and power” (Schwartz & Cook, 2002: 4). Foucault’s definition of the archive in *Archaeology and Knowledge* is of key importance here, especially for his definition of the archive as an historical *a priori*, its condition as “a reality for statements” (Foucault, 1972: 127). Foucault explains that such an historical *a priori* is not a question of why something or some statement exists per se, but rather a proposal to look at how or why such a statement emerged. This is done by looking at:

the law of their [each statement’s] coexistence with others, the specific form of their mode of being, the principles according to which they survive, become transformed, and disappear. An *a priori* not of truths that might never be said, or really given to experience; but the *a priori* of a history that is given, since it is that of things actually said (Foucault, 1972: 127).

For Patrick Ryan, Foucault’s use of the term (*a priori*) points towards an understanding that “the conditions for the possibility of knowledge are historical rather than transcendental” (2009: 52). This is related to Foucault’s own understanding and definition of the archive:

The archive is first the law of what can be said, the system that governs the appearance of statements as unique events. But the archive is also that which determines that all these things said do not accumulate endlessly in an amorphous mass, nor are they inscribed in an unbroken linearity; but they are grouped together in distinct figures, composed together in accordance with multiple relations, maintained or blurred in accordance with specific regularities (1972: 129).

The archive, for Foucault, is then that which “governs what is said or unsaid, recorded or unrecorded” (Merewether, 2006: 11). The visible and the invisible, the tangible and intangible can also be added to that list, as the archive and what can be said about the archive is marked by such a complex relationship between absence and presence. At the same time, Foucault’s understanding of the archive also stresses its ability to accumulate (and determine) those discursive constructions that prevail in any given society (Harris, 2000: 19). Merewether (2006) notes that, in *The Archaeology of Knowledge*, Foucault makes the association between the studying of archives and the practice of learning about the past, or history, through the study of material remainders. The intention is thus to reconstruct and recover the archive so as to expose how our notions of the past are shaped and constructed by the archive. The

and the collection have been under the influence of multiple ‘authors’, its content and meaning are irrevocably shaped by these role players.
emphasis is then, more importantly, on the systems and institutions which create these notions of the past (Merewether, 2006: 11). Foucault adds that:

Between the language (langue) that defines the system of constructing possible sentences, and the corpus that passively collects the words that are spoken, the archive defines a particular level: that of a practice that causes a multiplicity of statements to emerge as so many regular events, and so many things to be dealt with and manipulated (1972: 130).

Foucault argues the archive cannot describe anything in full and, similarly, no historical account can be comprehended in its totality (Merewether, 2006: 29). Archives, as well as subjects, surface in “fragments, regions and levels” and can never be defined entirely (Merewether, 2006: 29). Harris describes the archive as “a window into a process, a window into realities” which, as we have come to understand, only provides “a sliver of a window into a process” (2000: 22). Even if, as Harris continues, archivists were to collect every record generated in a particular country, they would grasp only a very small part of that country’s experience (2000: 22). Archived documents, writes Achille Mbembe, are “pieces of time to be assembled, fragments of life to be placed in order”, all in an effort to construe and formulate a narrative (cited in Hamilton et al., 2002: 21). Such documents are also a “montage of fragments”, which conversely produces an “illusion of totality and continuity” (Hamilton et al, 2002: 21).

Archives are therefore “not passive storehouses of old stuff, but active sites where social power is negotiated, contested, confirmed” (Schwartz & Cook 2002: 1). Archives, as Jane Taylor notes (2002: 243), are also spaces in which hierarchies are reinforced, and archives, whilst ‘trusting’ material traces, should at the same time be sceptical of interpretation. As Hamilton et al. maintain, archives are undoubtedly monuments to specific configurations of power (2002: 7). But Merewether (2006: 13) also notes that there “is no political power without control of the archive, if not memory.” When applied to the local context, the argument can thus be made that that which we remember of our past (what is visible and tangible versus that which is invisible and intangible) is also political. This is all the more reason

25 Joan Schwartz and Terry Cook (2002) note that archives have systematically been explored as institutions which “wield power over the administrative, legal, and fiscal accountability of governments, corporations, and individuals, and engage in powerful public policy debates around the right to know, freedom of information, protection of privacy, copyright and intellectual property” through various postmodern reflections. Archivists do not simply receive and house records, and these records in turn are not a mere reflection of society, but rather “co-create and shape the knowledge in records” and then also the memory of a society (cited in Nesmith, 2002: 27).

26 However, the rejection of notions around the power archivists possess over the construction of history and the failure to explore the factors influencing records, as well as general ignorance and unfounded assumptions, result in what Schwartz and Cook believe to be unproductiveness in the archival field (2001).
to look at the discarded, the seemingly insignificant, in order to ensure that a double violence upon our memory of a political past is not perpetuated. As Burton writes:

> our archival stories should not only recount our work with certain bodies of evidence in particular spaces, but should also include our own political concerns and intellectual preoccupations at the specific moments in which we read, transcribe, paraphrase, and ponder source material (2005: 97).

Power can only be questioned once its monumental structure is acknowledged, and only then can it be held liable by means of open and transparent dialogue, which can potentially lead to improved understanding (Schwartz & Cook, 2002). Achille Mbembe also recognises the correlation between the powers of state and archive, but alerts us to the imminent threat archives pose to the state (cited in Hamilton et al., 2002: 23). The power of the archive can go both ways, Mbembe argues, for the archive can just as well be a weapon to both those in power as well as those who are opposed to such regulatory forces. The Ben Segal archive is a credible example of this. The collection, especially the music of unheard voices silenced by the apartheid regime and of institutions only interested in commercial gain, and the accumulation of such materials, can in one sense be seen as threatening to the very rule which censored such activities. The hidden, unlawful act of bringing together that which the apartheid government deemed ‘improper’ and ‘unworthy’ can now be used as an asset to deepen our understanding of South African history. This example also constitutes a counter-narrative to the dominant apartheid ideologies of that time. As Verne Harris explains:

> Processes of memory erasure were also utilized widely by the apartheid state, with many thousands of oppositional voices being eliminated through means like media censorship, various forms of banning, detention without trial, imprisonment, informal harassment and assassination (2000: 9).

Through private collections, such as the Ben Segal collection, the hidden objects, histories and memories can find their way back into the public sphere where opportunities can be granted to write against the dominant histories of a given past. The stories and voices buried within the collection (even in the dust, as I demonstrate in later chapters) can contain significant and valuable information for the present.

In understanding what constitutes an archive, one can look at the individual document as a ‘bearer of historical content’ and also as a reproduction of:
the needs and desires of its creator, the purpose(s) for its creation, the audience(s) viewing the record, the broader legal, technical, organizational, social, and cultural-intellectual contexts in which the creator and audience operated and in which the document is made meaningful, and the initial intervention and on-going mediation of archivists (Schwartz & Cook, 2002: 3-4).

We therefore cannot assume that the role of the archivist or scholar at any point is objective or devoid of an agenda, as the subjective influence of the creators is always central to the production of the archive. As Donna Haraway states, “truth is made, not found”; even ideas around ‘facts’ can be questioned and she adds that “rational knowledge is a process of on-going critical interpretations among ‘fields’ of interpreters and decoders” (cited in Cook 2002: 12). In addition:

Archives validate our experiences, our perceptions, our narratives, our stories … Users of archives (historians and others) and shapers of archives (records creators, records managers, and archivists) add layers of meaning, layers which become naturalized, internalized, and unquestioned (Schwartz & Cook, 2002: 18).

The creators of the Ben Segal collection, myself included, are all participating in the process of adding meaning and layers to the archive. We therefore ought to remain as critical as possible of each and all interactions with the archive, even the most routine and mundane of tasks. When we start questioning the methods imposed by archivists, we might even come to find other ways of reading the archive and in so doing our experience of the present as well as the past. When we do this, we might allow “several orders or even disorders to flourish among records and archives” (Schwartz & Cook, 2002: 18). I believe that in saying this Schwartz and Cook are not suggesting the maintenance of no order whatsoever, but rather that we use and produce archives that are less concerned with a particular set of best practices, possibly archival systems that are fluid and can adapt to different situations. Preservation strategies, as noted by Harris, “can, at best” intend to save “versions,” offering researchers “a sliver of a sliver of a sliver” which is often only partially defined (2000: 23).

The strategies employed by archivists can never provide a complete or finalised account of any given occurrence or recollection. If one is to continue to uphold the ignorant belief that archives and museums are the main proponents and keepers of memory, then as Harris states “we are in deep, amnesic trouble” (2000: 23). The seemingly insignificant objects of archives, such as the dust, might prove to be just as valuable a source and keeper of memory. As Derrida states, “one is on the lookout, one reflects upon what one sees, reflects what one sees
by delaying the moment of conclusion” (1990: 1). This blindness never allows one to see fully or completely, as the act of seeing and looking always implies that one is inevitably blinded to something that escapes sight and observation. Seeing ‘fully’ in an archive is then an illusion that is impossible to realise.

Such challenges to the archive are taken up in the next sub-section, where Deleuze and Guattari’s concept of the rhizomatic is used as a means to provide another lens through which to consider the interpretation of the archive.

2.3) Rhizomes in the Archive: Against Hierarchies

Deleuze and Guattari’s concept of the rhizome has, to my knowledge, not yet been applied to the study of archives. Rhizomatic theory, as this sub-section shows, assists in the re-imagining as well as the re-structuring of old systems, and it could provide a viable theory for engaging with the archive.

Deleuze and Guattari’s concept of the ‘rhizome’ comments on and compares the dominant Western mode of thinking, which places great emphasis on “cause and effect and the creation of hierarchies” to the image of a tree (Sutton & Martin-Jones, 2008: 3). The literal shape of the tree as well as the notion of the tree refers to genealogical lineage, where there is “an obvious causal relationship between a single point of origin (the father) and his offspring” (Sutton & Martin-Jones, 2008: 3). This notion thus relates to thinking where a single version of truth is expressed that neglects or disregards other possible ‘truths’ (Sutton & Martin-Jones, 2008). The notion of a tree, which is hierarchical in nature, according to Deleuze and Guattari, strongly resembles the structural aspects of the archive. As Brendt Adkins notes, “the tree is a marvel of stable hierarchical organization” where “lines of descent are always clear” (2015: 23). Logic, the organisation of biological species, linguistics and then also archives use trees, as they reveal “the deep structure that lies behind the messiness of reality” (Brendt, 2015: 23). Trees also allow us to determine what is important and what is not, and therefore have great value within human society. For this reason, it makes the idea of thinking without tree-like structures seem almost impossible (Brendt, 2015: 23). Trees can be considered as predictable and make life as well as histories appear coherent and possibly more truthful (Brendt, 2015: 23). This is thus the illusion created by the application of tree-like, structural thinking.
The term rhizome refers conceptually to “an ordered set of relations in which each element relates to every other, without any hierarchical, functional or centralised order imposed on these relations” (Due, 2008: 129). Unlike the tree, the rhizome:

Can shoot out roots from any point, leaves and stems from any point. It has no beginning: no roots. It has no middle: no trunk. And it has no end: no leaves. It is always in the middle, always in process. There is no particular shape it has to take and no particular territory to which it is bound. It can connect from any part of itself to a tree, to the ground, to a fence, to other plants, to itself (May, 2005: 133-134).

A rhizome also promotes transversal connections or communications among heterogeneous locations and events, which are ultimately composed of lines between points (O’Sullivan, 2006). Rhizomatic thinking in this case means to think differently and in opposition to tree-like hierarchical structures, which, as Deleuze and Guattari demonstrate in this first plateau,27 are ubiquitous within Western thought and culture” (O’Sullivan, 2006: 12).28

Rhizomes are not predictable (Brendt, 2015:23). A pack of rats, burrows, potatoes as well as weeds are all examples of rhizomes that, as Deleuze and Guattari state, include “the best and the worst” as there are no clearly delineated hierarchies or clear lines of descent (Deleuze & Guattari 1987: 7). Brendt (2015: 24) notes that the concept of the rhizome is a concept of metaphysics and not one of ontology, as “ontology’s ‘to be’” is replaced by “and…and…and…” Rhizomatic thinking attempts to rethink tree-like thought but does not stand in opposition to it, as a rhizome “may form on the heart of a tree, the hollow of a root, the crook of a branch” (Deleuze & Guattari, 1987: 16). The concept of the rhizome thus suggests that there are various ways of thinking and many truths: a single multiplicity (Sutton & Martin-Jones, 2008: 4, 5).

If the notion of an archival shift is brought into relation with the non-hierarchical nature of rhizomes, Cook’s argument for archives as spaces that move away from “viewing records as static objects, and towards understanding them as dynamic virtual concepts” (2001: 4) is relevant. According to such a view, records are not passive products, but rather “active agents themselves in the formation of human and organizational memory” (Cook, 2001: 4).

27 In their book A Thousand Plateaus the rhizome is the first of multiple plateaus discussed by Deleuze and Guattari.

28 The best example of rhizomatics, according to O’Sullivan (2006: 13), is the emergence of the internet, “as an omnipresent force” allowing for individual freedom and self-organisation. Everything thus has the potential to “be rhizomatically connected to everything else” (O’Sullivan, 2006: 12) and, as I will explore later, this also has relevance in the archival environment.
Cook’s statement that there has to be a shift “away from seeing the context of records creation resting within stable hierarchical organisations to situating records within fluid horizontal networks of work-flow functionality” opens the field to non-hierarchical rhizomatic thinking as a viable method that can be applied to the archive as a means to potentially open it up.

Cook further states that:

for archivists, the paradigm shift requires moving away from identifying themselves as passive guardians of an inherited legacy to celebrating their role in actively shaping collective (or social) memory … archival theoretical discourse is shifting from product to process, from structure to function, from archives to archiving, from record to recording context, from the ‘natural’ residue or passive by-product of administrative activity to consciously constructed and actively mediated ‘archivalisation’ of social memory (2001: 4).

The main question Deleuze and Guattari pose with the development of their concept of the rhizome is: How does one create something new? When trees only produce more trees, how can one escape that line of thought? The solution for Deleuze and Guattari is to apply rhizomatic thinking. Archival structures, such as labelling for example, are similar to what Deleuze and Guattari calls ‘tracing’ as “the tree articulates and hierarchizes tracings; tracings are like the leaves of a tree” (Deleuze & Guattari, 1987: 13). They go further to suggest that one should make a map, not a tracing, for a map “is open and connectable in all of its dimensions; it is detachable, reversible, susceptible to constant modification” (Deleuze & Guattari, 1987: 14). Also, “a map has multiple entryways, as opposed to the tracing, which always comes back ‘to the same,’” in essence creating copies (Deleuze & Guattari, 1987: 14). Tracing or the principle of decalcomania29 “injects redundancies and propagates them” (Deleuze & Guattari, 1987: 15). Our tendency to view things as stable and complete entities over “processes of transformation,” is what Deleuze and Guattari labelled “perpetual semiotics” (Brednt, 2015: 32). When we bring this back to archival structures, it might be difficult to see beyond the archive’s structural rigidity, as it is that rigidity that actually allows it to be so useful. It is important not to infer that Deleuze and Guattari are suggesting that rhizomes are purely good and better than trees (Brendt 2015: 30). Rather, if we want to create something new, insert a new way of thinking, then we “need to find a way of putting

29 Decalcomania, from the word ‘decal’ refers to “the process of transferring ready-made pictures onto a surface”, which Brednts suggest would today be understood as a ‘sticker’ (2015: 29). Stickers, as Brendt explains, “are safe. They do not risk anything, but they keep reproducing the same image of thought over and over again” (Brendt 2015: 29). It is thus apparent that rigid archival structures can easily produce stickers.
the tracing on the map” (Brendt, 2015: 30). The rigid structures, the rules and logical thinking can be placed onto a system with open structures that can allow for expansion and transfiguring. In order to do this, Deleuze and Guattari point out that one has to find the lines of flight, which in turn requires a new way of seeing (Brendt, 2015: 32). The principles of cartography and decalcomania are just two of the six principles or “approximate characteristics” Deleuze and Guattari employ in order to create or see a rhizome (Adkins, 2015).

Due explains that a rhizomatic process is made up of partial processes, “which are not integrated within a structure”, and that the knowledge causing the processes cannot be influenced or predicted (2008: 129). The reason for this is that the rhizomatic process is “epistemologically immanent” as it “excludes an external definition of its course of development” and “ontologically… characterised by not possessing a reproducible structure of relations” (Due, 2008: 129). Every process is therefore unique and cannot be copied; each process is different even in an attempt to re-create it. The same can then be said for the formation of a history, as each re-telling or attempt at re-constructing the past is futilely insufficient in its attempt and claim to truthful deliverance.30

A rhizome, as we have established, is a heterogeneous structure, and accordingly an apparently single collection can also be regarded as a heterogeneous structure. Multiplicities from various origins placed, found or forced together is a fundamental property visible in an archive. Categorisation and classification create illusions of conformity and coherence within the archival structure. The illusion, for example, is that the entire narrative of the archive, history and life of Ben Segal is neatly confined within the walls of the archive. The nature of the Ben Segal collection, as it was originally found, packed and currently stored, does not allow for such neat and clear categorisation. Yet, the illusion of structure, order and form is ever present in the processes used to organise this collection. The structure of a tree in archival practice, as useful as it may be, cannot be viewed as the ultimate and only method for the safekeeping and production of history.

Joseph Deadato states, in this regard, that the postmodern archivist’s first task “is to rethink established principles and reformulate them in ways that incorporate new understandings of arrangement and description” (n.d: 55). The applications and methodologies of such new understandings cannot be implemented if we are continuously generating traces, or work with

30 Deleuze and Guattari’s theories and concepts are often described as being surprisingly positive, regardless of their complexities, which is why, in the light of rhizomatics, a re-telling or re-construction of the past always has new possibilities. Even the past is then part of an endless process of becoming.
tree-like thinking. In this line of thinking archival principles, such as respect des fonds, provenance\textsuperscript{31} and appraisal\textsuperscript{32}, traditionally used “to arrange and describe records” (Deadato n.d. 55), are still being pursued regardless of their lack of practical viability. Principles such as the ones just mentioned are all examples of ‘stickers’, each with its own set of rules and ‘best’ methods which ought to be followed. As Deadato points out:

Not only is the process highly selective and culturally subjective, but it also negates possible alternative arrangements and misleads the user into assuming that the archivists’ order is natural and absolute. In short, the process of arrangement and description constructs a metanarrative of the record, which privileges one reading of the record – one version of reality – over all others (Deadato, n.d: 56).

The main challenge is not the principles in and of themselves, as they were “well-intentioned attempts to limit potential meddling on the part of the archivist,” but rather that even “the strictest adherence to these rules” restricts users of the archive from making new connections and forming new narratives (Deadato, n.d: 56). This can also be seen in the case of the principle of provenance, where the determination of what “is believed to be significant … assigning names and access points,” constructs and shapes the way in which the records will be viewed by researchers (Deadato, n.d: 56).

According to a postmodern perspective on such processes, records are not regarded as “neutral windows into the past” as “archives reflect realities perceived by the archivers” (Deadato, n.d: 56). Ultimately, ‘stickers’ or tracings, are not the problem, but as Deleuze and Guattari suggest, “the tracing should always be put back onto the map” (Deleuze and Guattari, 198: 14). The task at hand is not to do away with archival principles completely, but to transform them, make them new for more open-ended readings of archival content. These principles must be transformed or renewed in such a way that they can be used as guides to get to point x on a map, while recognising and making room for multiple ways of finding or getting to point x. Through the employment of such methods, one might find multiple x points, which lead to an infinite number of possibilities and locations. Deadato (n.d.: 59) writes that “postmodernists assert that records contain many potential stories,” but archivists have the power to decide which stories will be told and which will not. This notion of multiple

\textsuperscript{31} The term ‘provenance’ refers to the origin of documents as well as the “original creator(s) of the documents” (Lambrechts, 2012: 16). Provenance or respect des fonds requires records of different origins to be kept separate (Lambrechts, 2012).

\textsuperscript{32} Appraisal is the process of deciding what to keep and what not to keep (Ford, 1990: 42). It also refers to the determination of the “intrinsic value or long-term preservation and potential use of records …, giving credence to the various selection practices in archives” (Lambrechts, 2012: 16).
approaches to history can then be explored through the visualisation of the inherent and imminent rhizomatic structures of the archive and, as the next chapter shows, specifically of archival dust.

Due writes that rhizomatic thinking is more in line with permeation than with forces that establish a hierarchical stance:

for the semiotics of the state always consists in representing relations according to a central and hierarchical viewpoint that is external to the set of relations that is to be represented. Rhizomatic relations, on the other hand, are rigorously immanent. This immanence entails that nothing we may say about a rhizomatic process, no list of attributes we may ascribe to it, would ever be able to define that process (2008: 129).

The fluidity of rhizomatic principles within systems, structures or relations is in opposition to established principles of state rule, seeing that “immanence opposes transcendence” (Due, 2008: 129). However, from within, from the dust, the archive can be opened up, leading to exploration of multiple versions of the past.
CHAPTER THREE: A THEORETICAL CLOSE READING OF DUST AS A RHIZOMATIC PHENOMENON

This chapter discusses the notion of time, and how it relates to the archive, collections and dust. The focus will fall predominantly on Ben Segal and his relation to the dust. Rhizomatic theory, on non-hierarchical structures, is applied as an entry point into the archive, and dust is explored further through the notions of visibility and blindness. Through exploring the imaginary and the subjective influences that shape archival collections, it will be argued that dust should hold a valued position as part of the unfolding story of Ben Segal and subsequently also of his collection.

3.1) Objects and Time in Dust

Objects exist and if we pay them more attention than we do people it is because they exist more than those people. Dead objects live on. Living people are often dead already. I'm looking for reasons to live happily. And, if I now push this analysis further, I think there is a reason for living simply in memory and in the facility for stopping to enjoy the present, that is, to catch a fleeting reason to be alive (Godard, 2004: 50).

In archives the notion of time is a prevalent and major factor. Memory, the past and the present, the time available for tasks to be completed as well as the effect of time (past, present and future) on the objects in the archive all fall under this vast notion of time. In a practical sense the direction of time, from past to present, is a visible experience and the passage of time is one of the most obvious reasons for collecting. As Derrida argues, we collect with a distant notion of an anticipated future as “the archive has always been a pledge, and like a pledge … a token of the future” (1996: 18). In the present and future, the past exists through such tokens.

While collecting is a tangible form of investigation “into an aspect of human experience” (Pearce, 1995: 4), archiving is the attempt to keep such experiences safe for that imagined future. Archiving may be considered as an attempt to preserve ‘time’ through objects for a possible future. The passage of time, being one of the reasons for an archive existing in the first place, also works against itself. With this passage and attempts at preservation come the
deterioration of objects – an occurrence that acts as a constant reminder that we cannot really preserve objects against the passage of time. It is also a reminder of death: “you are also here in it, as a figure of the future; as is your future death, which has been archived a priori” (Lippit, 2005: 6).

In time, all objects cease to exist, yet often objects outlast people. In the present these objects serve multiple purposes; as reminders, tokens or as information. In the context of my own study, Ben Segal as a living human entity no longer exists, yet his presence and his mind are visible when looking at and interacting with the objects he collected. Lippit reminds us of our smallness after death by stating that “in the vast archive of an infinitely divisible space and time, you are an atom: singular and indivisible: a ‘hypothetical body, so infinitely small as to be incapable of further division’ (Oxford English Dictionary)” (Lippit, 2005: 6). Lippit adds that:

> Because of the indivisibility of atoms, atomism relies … on images. Your death imagines you as a hypothesis. Atomic space emerges from a universe divided infinitely to the point of a hypothetical irreducibility. The logic of the atom, the atomology, sustains a paradox: infinite divisibility that ends, despite the endless nature of atomic division, in a hypothetical figure, small and indivisible, and also perhaps invisible.

> Gilles Deleuze calls this effect of ‘pure becoming’ the paradox of infinite identity (2005: 6).

The remnants of Segal’s dust, those small particles that he left behind in his collection, have potentially taken on a new ‘life’. Such a new ‘life’ is influenced by the archivists’ and unexpected visitors’ presence and movement; the wind of a door opening or even the transportation of boxes from one location to the next. The transferal of dust from location to location maps the multiple interactions, connecting time and space with human interaction. The connections are made possible through the interactions of objects with other objects, as well as objects with subjects in an infinite transaction, with the dust as the remains of such interactions. Ben Segal is thus also connected to the present day on a purely physical (albeit microscopic) level, as that which he has left behind (the flakes of his skin, for example) floats and settles in the archive.

There are few spaces where the connection between objects and time is as pertinent as in an archive. In the book *Objects of Time: How Things Shape Temporality*, Kevin Birth writes about the capability of objects that tell time, such as clocks and calendars, but he adds that we have also “become dependent upon objects for thinking about time” (Birth, 2012: 1). In relation to
the passage of time, “we delude ourselves into thinking that these objects’ cycles transparently represent the rotation of the Earth and its revolution around the Sun” and as archivists we do the same in the archive (Birth, 2012: 2). We categorise certain objects chronologically and historically in their ‘correct’ time slots. As researchers we spend a lot of time clarifying and making certain of the times and dates of events, hoping that our conversations with others match up with documents in the archive to corroborate our stories, in an attempt to give them absolute validation. However, as Birth reminds us, “time is a domain that spans disciplinary boundaries – a subject without limits on which limits have been imposed” (Birth, 2012: 33). In the archive we gravitate towards the perpetuation of such limits, the limit and impossibility of framing time:

The anachronism is an event that repeats, or is out of sequence. As that which refuses the uniqueness of every event within a temporal sequence, the anachronism is the disruption of chronology. In also refusing the ‘directionality of past and future history’ the idea that historical time moves in a single direction on the time-line (the most clear spatialisation of time), it also refuses what the time-line guarantees: historical progress. The anachronism and the figure of the time traveller have the potential to collapse the sequence past-present-future that defines our concept of history as chronological and linear, hence disrupting the city’s contemporary image of itself, more often than not a projection into the future that represses the potential to really experience the past in the present (Malcomess & Kreutzfeldt, 2013: n.pag.).

By treating time in the archive as an anachronism, accepting the disruption of, while refusing the predictable direction of historical time, we gain the possibility of a less repressed view of a collection, a life or an object. How can the objects, the recordings and so forth found in Ben Segal’s collection, from a past that sought to abolish/restrict it from memory, be relevant to the present, and how are we, as archivists and scholars, perhaps perpetuating a similar violence?

As Susan Pearce also argues, “objects have a brutally physical existence, each occupying its own place in time and space” (1995: 14). She continues by saying that objects intrinsically retain a link with their ‘original’ context (Pearce, 1995: 14), which then postulates and perpetuates a genealogy. Archives and their content thus exist or manifest on multiple levels, from the brutally physical to the barely discernible, from the small to the big, the seemingly

---

33 This view of objects is continued within the archive, where limits of a precise lineage following the historical time-line are perpetuated, leaving little space for alternative connections to be made. Some objects or pieces of evidence, if you will, in the archive can possibly contradict others, or the findings of the interviews. This leaves archivists or scholars with a dilemma with time-line inconsistencies. Similarly, to recognize and accept the subjective role of the archivist or scholar, possible anachronisms ought to be embraced just the same.
insignificant to the important, the minute to the gigantic, and the barely visible to that which might seem blatantly obvious.

Objects, in their own processes of becoming, are not perpetually ‘haunted’ by their past when they exist in an archival space, but are rather the manifestation of infinite possible connections. Pearce also states that objects are socially significant as their meanings are created by ordering them, placing “them in sets, both mentally and physically” (Pearce, 1995: 14). This is possible as a word, as is the case with objects, “only has meaning in relation to other words amongst which it will be embedded through socially meaningful organisation” (Pearce, 1995: 14). This is the task that the archivisation of objects requires: placing objects into their physical positions whilst also placing them into certain contexts and social understandings.

Such ideas around archival infinity are echoed in Akira Lippit’s (2005: 6) proposal for an imaginary archive as a space where:

Every word written and unwritten, yet and never to be written, [is] endlessly divided: [it is] a record of every event that has occurred, will occur, and will never occur. Future histories and histories of the future, minutely detailed and timeless, an archive of timeless time and history, of the untimely nature of both. Each moment divided into endless variations, infinitely. You are also here, in it, as a figure of the future; as is your future, your future death, which has arrived \textit{a priori}. (You are in the universe, but you are also a figure of the universe itself).

This proposal for an infinite, open-ended archive can be linked to the occurrence of archival dust, especially if we start imagining the connections between the dust and the journeys it has undergone to get to where it now resides. Similarly, we cannot define or limit the number of possibilities encapsulated in the Ben Segal collection, especially when thinking about the immeasurable particles of dust it contains. The number of possibilities encapsulated in this archive are endless and open. However, these connections and multiple layers of possible journeys already taken (or that which will still take place) cannot be limited to chronological time-lines, but can be read as multiple lines on a map, so to speak. Through the connections made possible in and from the dust, dust can be used as a tool through which to embrace anachronistic time.
3. 2) Segal Dust

For Caroline McCracken-Flesher, “to archive is to be anxious” and she notes:

building the archive beseeches completeness, but is predicated on fragmentation; fragments indicate the impossibility of completion, but reveal the excess in irreconcilable objects; disparate objects invite constraint, but that provokes the randomness and uncontainability of a fractured multiple reality (2015: 71).

A collection is never complete, and one could be warranted for reading a form of anxiety in collecting in the face of a fragmented existence. Similar anxieties mark the archivist’s task when a collection is archived through sorting, appraisal and cataloguing. Here, however, the prerogative is informed by an anxiety to keep safe and preserve, to prevent deterioration, to discard harmful objects like staples, insects and dust.

This sense of incompleteness and anxiety expressed by collecting could possibly speak of what various theorists have identified as desire. One of the earliest thinkers on this topic, namely Plato, was the “first to articulate the concept of desire in a systematic way” and distinguished between two directions of desire, that of positive desire or negative desire (Kahn cited in Silverman, 2000: 186). Ultimately, Plato’s formulation of desire is centred on lack, since “desire enters the picture as a sign only, a mark of ‘man’s ‘essential’ or ‘ontic’ incompleteness” (Silverman, 2000: 186). Deleuze and Guattari rework this trajectory of desire, as desire for them “is transformed into an activity, a process of production which, by assembling singularities, ‘manufactures effects’” (Silverman, 2000: 186).

Ben Segal was driven by a desire to obtain information and then to share that knowledge or those objects, to listen to the music collected and to ultimately enjoy these items, without necessarily thinking about what this might all mean for a future generation. The early recordings Segal made for 3rd Ear Music were perhaps made with the explicit intent to preserve, but not the house and all Segal’s possessions, which are now also part of the collection being sorted.

With dust there is a similar desire, only in the case of dust this desire is not to keep or gain, but to frantically discard. As will be discussed in Chapter Four, the process of abjection could be regarded as desire resulting in excess, consequently creating a new desire which makes the process of abjection a necessity. McCracken-Flesher writes that:
this archive betokens neither completion nor even containment. Its heaps of random stuff, ideas and arguments reified into documents and artefacts, erupting in fragments and out of order, actively contribute to the chaos only figuratively constrained by the process of collection (2015: 82).

From the fragmented and random material of the archive we make sense of the past in the present. If one is to consider the emergence of various marginalised voices in recent historiography, then one will notice the impact that seemingly insignificant objects have had on the unfolding of these histories. As Joan Thirsk writes, “starch, needles, pins, cooking pots, kettles, frying pans, lace, soap, vinegar, stockings do not appear on their [the male historians’] shopping lists, but they regularly appear on mine. They may ignore them, but could they and their families do without them?” (1979: 22). By looking at these lists or other seemingly insignificant objects, historians are granted access to aspects of worlds that might not have been considered before.

There is thus credence in the investigation of the miniature, the detail of the seemingly insignificant. Every sample, every object or newspaper clipping and even dust speck could form part of a miniature understanding, which might unlock larger questions in the archive and lead to new ways of reading the archive:

The miniature hints that the world of things can open itself to reveal a secret life – indeed, to reveal a set of actions and hence a narrativity and history outside the given field of perception (McCracken-Flesher, 2015: 89).

The secret lives that are possibly recollected in archival dust are a reminder of the archive as “a place where collection betokens lack”, as we might never truly access or fully grasp the secret lives the way the collector did (McCracken-Flesher, 2015: 89). In an interview with Kenneth Segal, he recalls a visit to his father when he was in the hospital:

He asked me what I was doing and I said I was lecturing about the French Revolution at the time, and he couldn’t speak, so he was whispering and he said to me: ‘Go home, walk inside, in the study or just before the study, there’s a shelf with a row of twenty books and behind the 5th row from the bottom second third or fourth book from the end take out the book behind that of Simon Shemmer called The Citizen and that is a very good book, you can use it for your lectures’. So he knew every single book. He knew all the content and I’m sure that if he didn’t read all the books to the end, he knew exactly what was there and he knew the gist of what was going on there. My impression was he read everything (Personal interview, 2 July 2015).
As stated previously, the Ben Segal collection is an extensive collection, still in the process of being sorted and catalogued. In its excess, it also speaks to the mind of the collector. McCracken-Flesher writes in this regard that “it is the nature of the archive to be incomplete and thereby excessive. On the edge of fragmentation and dispersal into unknown archives” (2015: 89). This can be seen in the case of the Ben Segal collection, which was created when his belongings were sorted and packed up after his death. During this time his three sons discarded a lot of items they thought of as worthless, or took items from the collection for personal reasons. There are thus certain absences in this collection of items that were once present but are no longer there. McCracken-Flesher writes that “absence in the archive represents not nothing, but rather the space left by what is gone” (McCracken-Flesher, 2015: 89). The absences in the archive are therefore not ‘nothing’, but gaps left open to the imagination and for further questioning.

One might also argue that, when something is invisible or even not present, we can use other methods as a means of enquiry into such invisibilities/absences:

Vision was and is a martinet and an aggressor, encroaching on the realms of the other senses. Record events in chronological order on parchment or paper and you have a time machine. You can observe beginnings simultaneously. You can alter time’s direction, and you can halt time so as to examine individual events. If you are an accountant, you can proceed backward to find a mistake; you can construct a balance sheet like a still photograph of the whistling storm of transactions (Crosby, 1997: 227).

As a collector one leaves clues to the past which can lead to new findings and new directions for the future. Ben Segal had a philosophy that if you leave dust undisturbed for three years, it does not accumulate or become less, but stays exactly the same (Kenneth Segal, personal interview, 2 July 2015). Dust thus became a large part of the collection and reflects something of the philosophy of the collector. The overwhelming presence and visibility/accumulation of the seemingly insignificant dust forming part of the Ben Segal collection provided the impetus to consider this collection in a new and different way. Dust, when gathered or accumulated in large quantities, thus becomes visible.

34 This comment originally appeared in Quentin Crisp’s The Naked Civil Servant: “There is no need to do any housework at all. After the first four years the dirt doesn’t get any worse” (1968). This notion of dust is then borrowed, interestingly, from another context. Intellectual dust, so to speak. In the movie An Englishman in New York (2009), the sequel to Naked Civil Servant, Quentin Crisp, played by John Hurt, remarks: “Don’t bother, housework is a mistake […] it will only raise two decades’ worth of dust […] He who so famously said that after the first four years the dust doesn’t get any worse, he was wrong, the dust took its awful revenge” (59:36 – 59: 59)
Frances Marks told me a different story about the reason for the dust, claiming that after Ben Segal’s divorce from Irma, he did not allow certain areas of the house to be touched or cleaned. The dust had to be left undisturbed. The decision to keep the dust intact thus functioned as an archive or repository of the past.

Inhaling the dust through our nostrils, we are inhaling bits of the past, of Ben Segal and of memory into our lungs. As Tim Hallet reminds us:

objects degenerate, but nothing ‘degrades’ more than human beings. We shed hair, dandruff and skin. Our outer layer of skin – the stratum corneum – is shed every three days. That is seven billion scales of skin per person. Some estimate that dead skin constitutes 90 percent of household dust … Unintentionally we swallow these bits of skin, cannibals by necessity, though not by choice. Through the course of living and breathing, we are the world (2002: 4-5).

3.3) Notions of Dust

Colby Chamberlain (2009) writes that “it was Marcel Duchamp who brought dust into the museum”, referring to his work The Bride Stripped Bare by Her Bachelors, Even or Large Glass (1920) at his New York studio where Duchamp hung a sign stating “Dust breeding. To be respected” (Chamberlain, 2009: 1). Later the artist and photographer Man Ray photographed the glass where “a thick film of dust had settled on the surface” (Chamberlain, 2009: 1). Chamberlin further notes that Duchamp created work by doing nothing, “dust, typically the trace of neglect, was instead the product of purposeful inactivity” (2009: 1). This section will explore the notion that it is not only through inactivity, neglect or ‘doing nothing’ that dust is accumulated, but that it is also accumulated through infinite connections between objects and various elements.

When we hear the word ‘dust’, we are already predisposed to have an idea of what it means. Many find it dull and uninteresting. Dust is what we exhaustively try to get rid of as well as an unavoidable consequence of domestic life. We rarely think about dust and simply ascribe it to the category of waste and dirt. In the book Dust: A History of the Small and Invisible, Joseph Amato explores the history of dust and takes a very close look at how notions of dust have evolved throughout the centuries.
A concept synonymous with that of ‘dust’ is ‘smallness’, as "dust has been the first and most common measure of smallness" (Amato, 2000: 3). Amato goes further to state that dust can be considered the "divisibility of matter" and that "even the hardest materials erode and become dust" (2000: 3). Each object deteriorates or erodes at a different tempo, but nonetheless every object does so eventually:

The ivory of a piano key and the coins of the realm become smooth and worn over time, adding themselves, bit by bit, to dust. Softer materials abundantly supply the microscopic stuff that flows around the islands of perceptible and palpable objects. An average puff of a cigarette has been estimated to contain 4 billion particles of dust. The vapour that condenses on a dry plate - water dust, so to speak - is 500,000 times thinner than a sheet of writing paper. A grain of musk perfumes a room for years, and a single grain of indigo colours a ton of water (Amato, 2000: 3).

In archives soft materials such as paper are often found with a lot of dust surrounding them, and this is very much the case in the Ben Segal collection. Whilst unpacking boxes in the Ben Segal collection, the boxes with books always have visible balls of dust left in the bottom of the box, not to mention the dust webs on the top of the books. In the book Fragile Objects, Soft Matter, Hard Science, and the Thrill of Discovery, Jacques Badoz and Pierre-Gilles de Gennes (1996: 89) write that:

A little Arabic gum stabilizes Chinese ink for a full year. A few drops of shampoo generate a cloud of lather. Traces of oxygen in the air transform heva sap into rubber. A tiny battery is enough to update the display of a watch. Every one of these cases epitomizes the essence of soft matter. Soft matter is exactly like the clay of the sculptor, which, through an extremely weak action, can be changed, shaped, and organized.

Soft matter and tiny particles can thus have a great and significant impact and even sustain life, since “there can be no life without soft matter” as “every biological structure (the molecules containing the genetic code, proteins, membranes) is founded on that very concept” (Badoz & Gennes, 1996: 90). Dust found in the archive is also not dead matter, as it is not only the broken off pieces from the larger wholes, but rather living organisms in a larger colony of dust. In the vast kingdom(s) of dust we can “observe and understand large social systems through the examination of the smallest conditions of life” (Fine & Hallett, 2002: 4). From the dust new life is formed – in dust, insects can breed and chemicals can react to one another. Dust, as a small and fragile object, is an essential foundation of life (Badoz &
Gennes, 1996: 91). Barbara Adam (2004) also argues in this regard that nothing can be produced from nothing, and that the process of becoming is “nothing but different mixtures of the same, infinitely small, indestructible ‘germs’ which are the absolute, unchangeable essence of the universe” (Adam, 2004: 25). Adam concurs that there is no change, “only movement, relocation, and recombination of the unit parts into different forms” (Adam, 2004: 25). Dust is part of this history of flux and change, as the invisible to the visible together form part of the unravelling notion we call time, unequivocally moving through the ages.

Dust is amorphous and “found within all things, solid, liquid, or vaporous” (Amato, 2000: 3). When we imagine dust, or even the ‘life’ of a single dust speck, we can imagine how it “flies over the highest mountains and crosses the widest seas” and how it “fills the still air of home and the busy air of streets” (Amato, 2000: 3). As it moves it also “comes to rest everywhere in nature and on the human body”; it can even “enter the pores of human skin” or “come to rest in the ocean’s depths” (Amato, 2000: 3). If we can follow such a journey of a given dust speck, morphing in and out of various forms, being part of objects at times and floating freely in air or water at others, we see a complex picture of our environs and the larger world. When we talk about dust, we are thus referring to an omnipresent entity, as dust is not one thing or in one space:

Dust is everywhere because its source is everything. Its more remote origins in time and space are in the Big Bang, collapsing stars, and the dark line across the centre of the Milky Way, which, according to astronomer Donald Brownlee, ‘is a line of dirt perhaps 65,200 light years across, and 3,832x1017 miles long.’ Here on earth, dust comes from everywhere under the sun: minerals, seeds, pollen, insects, moulds, lichens, and even bacteria. Its sources also include bone, hair, hide, feather, skin, blood and excrement. And things of human fabrications, too numerous to mention, also cover the earth and fill the atmosphere with dust (Amato, 2000: 4).

Dust might even be considered one of the smallest things the human eye can see, or that humans are observant of. In the microscopic world of science and medicine we see that the small can act as an indicator of the large (Fine & Hallett, 2002). Tim Hallett writes that the word ‘dust’ as a verb has “diametrically opposite meanings” (Fine & Hallett, 2002: 6). As a noun, Hallett (2002: 7) explains that “bits of earth represent the archetypal form of dust. What is most significant is that dust is not simply a thing (or set of things, since it is a collective noun), but it is invested with social meaning”.
In the *Collins English Dictionary* (2006: 261) the word ‘dust’ is explained as “small dry particles of earth, sand, or dirt”, and as “fine dry pulverized particles of matter” in Webster’s *New Collegiate Dictionary* (Fine & Hallett, 2002: 7). This is the standard definition used in various dictionaries. The *Online Etymology Dictionary* (2001) gives a slightly more varied explanation where the dust, from the Proto-Germanic *dunstaz* draws on the Old High German *tunst*, meaning ‘storm’ or ‘breath’. In these entomological traces of the word ‘dust’ we can recognise the notion of movement, change and connections. Dust, as in ‘smoke’ or ‘vapour’, also draws on the Sanskrit *dhu*, meaning ‘shake’. The *Online Etymological Dictionary* (2001) also states that the word ‘dust’ means “that to which living matter decays”. Other associations with dust include the “trivial, meagre, petty, scanty, and picayune” (Amato, 2000: 4). Dust is therefore associated with the insignificant or that which does not deserve more attention than the effort to banish or minimise its visibility. This attitude towards dust is, one could argue, superficial, as its effect on human life can be drastic. While dust in and of itself cannot do much, it is in its connection with other elements that its abilities become heightened; “dust as an element cannot claim the glory of light, the subtlety of air, the solidity of earth, or the vitality of water, even though it envelops galaxies, circles planets, and hides in the bedrooms of kings and queens” (Amato, 2000: 5).

Dust fulfils, for example, an important and significant function in the larger atmosphere and universe, as “its refracting power helps account for why and how humans see light itself” and it explains the colours we see in the sky (Amato, 2000: 5). It also explains “why so little light – visible radiation – reaches the earth in its long trek from the sun” (Amato, 2000: 5). We need dust in order to survive; the tiny particles containing the world “are part of the earth's making and unmaking” (Amato, 2000: 5). It is that from which everything came, and to which everything dissolves and resolves back into – a constant process of becoming.

Hallett also writes that dust is “socially situated and culturally meaningful” and can be seen as a cultural marker which is used to construct social order (Fine & Hallett, 2002: 12). It might be unusual to think of dust as a marker for social order, but upon further inspection one can think of the effect dust has on human life and attitudes. For example, a wife is often judged on the impression and cleanliness of her house and, as Hallett writes:

> A moral evaluation of the woman’s character in her office as housewife is easily ascertained simply by running a finger over a shelf, feeling and observing whether dust was collected. This assessment may be shared by the woman herself – with cleanliness becoming a compulsion – as the moral of cleanliness has been inscribed in her very soul. That this is a matter of impression management is evident in the fact that
the public spaces of homes are typically more dust-free than the private spaces. Yet, concern with the control of dust is a luxury, not emphasized in earlier centuries (prior to the mid-nineteenth century) or in pre-industrial communities (2002: 3).

Dust thus becomes a loaded term with both visible and less visible social repercussions. Hallett remarks that dust is not only something that happens, but rather something that an individual as well as groups must deal with; “as groups deal with dust, they reproduce the larger cultures in which they are embedded, they demonstrate processes of contention and control, and they negotiate meanings through similar processes that occur in larger units” (Fine & Hallett, 2002: 12). The archive has specific ways and measures it uses to control, limit or detect dust. Materials that do not appear to be of great value (items with multiple copies, wrapping paper that keep fragile items in safe storage, for example) are all readily discarded. It is unrealistic to keep everything in the archive; one cannot have too many copies or items that can easily be found elsewhere as the limitation of space is also a pressing concern.

Archival dust can just as easily become part of the assigned category of things that ought to be immediately discarded, especially since it is regarded as a corrosive element harmful to archival materials and attractive to insects. However, dust is a cumulative part of those very same materials, a collection of objects that could reveal the DNA of collectors or visitors or the journeys of objects to the archive.

On discussing the dust that was created during the events of 11 September 2001, Hallett writes that:

The dust is a metaphor of destruction and simultaneously of resoluteness and inspiration. Those massive towers became nothing more than piles of dust and debris, yet it was meaningful dust and debris. We looked at the limits of the visual to find the strength of our social order (Fine & Hallett, 2002: 29).

Similarly, the dust from the Ben Segal collection is meaningful and socially significant as it was accumulated in this specific archive. Archives bestow value upon the objects that they preserve and even seemingly insignificant objects gain meaning because of their archival context. Dust is both created through archival processes of preservation and accumulated in the archive. Such ideas regarding archival dust are also bolstered when looking from a rhizomatic perspective, which is the focus of the next section.
3.4) Rhizomes in the dust

Rhizomatic theory, on non-hierarchical structures, can be readily applied to the dust as an entry point into the archive. This notion will be explored by looking at the six principles in the formation of rhizomes, namely: connection and heterogeneity, multiplicity, a signifying rupture, cartography and decalcomania.

The first principle for the formation of a rhizome is that of connection and heterogeneity, where “any point of a rhizome can be connected to anything other, and must be. This is very different from the tree or root, which plots a point, fixes an order” (Deleuze & Guattari, 1987: 7). This principle requires that connections be made through experimentation, as opposed to being based solely on hierarchies (Adkins, 2015). Rhizomes multiply connections as they create something new, and these new connections are referred to by Deleuze and Guattari as “lines of flight” or “the tendency towards change” (Adkins, 2015: 24). The principle of connection can then be defined as promiscuous and non-hierarchical (Adkins, 2015). Deleuze and Guattari explain that the rhizome:

ceaselessly establishes connections between semiotic chains, organizations of power, and circumstances relative to the arts, sciences, and social struggles. A semiotic chain is like a tuber agglomerating very diverse acts, not only linguistic, but also perceptive, mimetic, gestural, and cognitive: there is no language in itself, nor are there any linguistic universals, only a throng of dialectics, patios, slangs, and specialized languages. There is no ideal speaker-listener, any more than there is a homogeneous linguistic community (Deleuze & Guattari, 1987: 7).

There is, however, another principle accompanying the principle of connection, namely the principle of heterogeneity, which requires connections to be made “among widely diverse things” (Adkins, 2015: 24). This interconnection of diverse things is then also known as an assemblage (Adkins, 2015). Dust is an assemblage of wildly diverse things, connected under the guise of discarded remnants. The heterogeneity of dust is the main point of departure in the next chapter where, with the help of microscopic visual analyses, I investigate what the dust is made up of.

35 According to Deleuze and Guattari, lines of flight “change in nature and connect with other multiplicities” (1987: 9-10). Lines of flight also “marks: the reality of a finite number of dimensions that the multiplicity effectively fills,” in other words, defining the possibilities for escape and marking the threshold of change from which these lines, or in French fuite as noted by Brian Massumi (1987), flee, flow or leak. Massumi notes that flight or fuite does not relate to flying (1987).
Moreover, the collecting of the dust, the gathering of multiple heterogeneous particles in this specific archive, can be argued to be a line of flight between the archive and the dust. The archive, consisting of multiple collections, slowly deteriorates and erodes into multiple tiny pieces, which are then made into an entirely new collection. The seemingly insignificant dust accompanies and encloses all the items in the Ben Segal collection.

Heterogeneity already alludes to the notion of multiplicity. For Deleuze and Guattari, a multiplicity “has neither subject nor object, only determinations, magnitudes, and dimensions that cannot increase in number without the multiplicity changing in nature” (Deleuze & Guattari, 1987: 9). Multiplicities are rhizomatic and their purpose or function is to “expose arborescent pseudo-multiplicities for what they are. There is no unity to serve as a pivot in the object, or to divide in the subject. There is not even the unity to abort in the object or ‘return’ in the subject” (Deleuze & Guattari, 1987: 8-9). Any such divisions would then reveal the tree-like structure as a pseudo-multiplicity. A true multiplicity is always rhizomatic.

In the context of Deleuze and Guattari, the principle of multiplicity highlights the notion of the creation of the new. If the multiple is simply a reflection of the one, then the creation of the new is not possible (Adkins, 2015). This happens when “the many are just parts of a greater whole, which is of course organized arborescently” (Adkins, 2015: 25). In the context of my own study, the word ‘dust’ is an attempt, to some degree, at singularising a multiplicity. Even when we use the word ‘dust’, or view a collection of dust, it is never just one thing. Dust is and will always will be a complex, omnipresent and socially loaded concept. For this reason, the dust in the archive and in its collected form is a good example of a rhizomatic multiplicity; “a multiplicity … is not a discrete, static unity, but something constantly entering into and breaking off combinations from other multiplicities” (Adkins, 2015: 26).

The content of numerous archives also constitutes various multiplicities, which then hold the possibility for the new to be created at any moment, even from seemingly static and rigid hierarchical collections. By facilitating the development of the rhizomatic in the tree-like structure of the archive, the very idea of multiplicity (instead of autonomy) is invoked. As Deleuze and Guattari maintain, one must therefore look for possible lines of flight within a singular multiplicity. While these authors do not venture into much detail as to what a signifying rupture is, they rather choose to explain how it ought to function and the purpose it serves. They explain that a rhizome may be broken or shattered at some point, “but it will start up again on one of its old lines, or on new lines” (Deleuze & Guatarri, 1987: 10). The reason for this is that:
every rhizome contains lines of segmentarity according to which it is stratified, territorialized, organized, signified, attributed etc., as well as lines of deterritorialization down to which it constantly flees. There is a rupture in the rhizome whenever segmentary lines explode into a line of flight, but the line of flight is part of the rhizome (Deleuze & Guattari, 1987: 10).

In order to explain how this plays out in a rhizomatic process, Deleuze and Guattari use the natural occurrence of the orchid and the wasp:

The orchid deterritorialization by forming an image, a tracing of wasp; but the wasp reterritorializes on that image. The wasp is nevertheless deterritorialized, becoming a piece in the orchid’s reproductive apparatus. But it reterritorializes the orchid by transferring its pollen. Wasp and orchid, as heterogeneous elements, form a rhizome (Deleuze & Guattari, 1987: 11).

Similarly, archives and the dust that they carry form a heterogeneous rhizome with endless multiplicities. In the same way, the archival content (which forms part of a scholar’s research), the archive and whoever enters it form a rhizome of sorts. The reason for this is that “there is always an outside where they form a rhizome with something else – with the wind, an animal, human beings” (Deleuze & Guattari, 1987: 11). While working with the dust-covered objects in the archive, dust particles filled the air and made their way onto my clothing and my hands and into my eyes, nostrils, hair and lungs. I carried the dust with me when I left the archival holdings and the dust was, in this process, redistributed to other spaces and onto other objects. These instances of contact with the dust are, I argue, an example of lines of flight, of setting new processes into motion.36

The next principle, namely ‘a signifying rupture’,37 also opposes the arborescent view required for an assemblage, namely collection and division:

Collection is the principle by which ‘scattered particulars’ are brought under one idea. Division is the principle of ‘dividing things again by classes, where the natural joints are, and not trying to break any part of the manner of a bad carver’. While we might

36 Viewing dust under a microscope might be considered another line of flight – a point I will return to in Chapter Four.

37 In order to explain the principle of a signifying rupture, Deleuze and Guattari use the example of ants as a form of animal rhizome, a formation that rebounds in spite of being destroyed (1987: 10). They explain that a rhizome “might be broken” but that it will start again, on either old or new lines: “there is a rupture in a rhizome whenever segmentary lines explode into a line of flight, but the line of flight is part of the rhizome. These lines always tie back to one another” (1987: 10).
see the previous principle of multiplicity as aimed at the principle of collection, the principle of a signifying rupture is aimed at the principle of division (Adkins, 2015: 27).

Deleuze and Guattari’s issue is not so much with collection and division as it is with what gets collected and divided (Adkins, 2015). The notions of collection and division stem from Socrates’s *Phaedrus* where “one collects scattered particulars under a single idea in order to gain clarity and consistency, and by the same token one divides in order to understand naturally … constituent parts” (Adkins, 2015: 27). Natural divisions, as archival categories have us believe, do not exist, rather categories and hierarchies determine divisions.

Deleuze and Guattari reject such divisions, the reason being that “the drive to divide nature neatly at the joints obscures a rhizomatic account of the same process” (Adkins, 2015: 27). They explain how systems that are seemingly separate operate in a co-dependent manner, with each needing the other in order to exist. In the same way, no archival dust can exist without the archive. The reverse also holds true, as there can be no archive or collection without the threat of destruction and decomposition. Erosion and dust then become a sort of necessary drive leading to the need for preservation of rare and fragile objects.

Rhizomes thus “do not function according to representation. Nothing in a rhizome represents something else. There are only connections. Sometimes these connections are transformative, that is, create a line of flight” (Adkins, 2015: 28). The dust in its minute particles is an inescapable by-product that represents a line of flight from which new and meaningful possibilities might emerge. There is thus a transformative connection between the dust and the archive.

Adkins (2015) explains how the wasp and orchid example portrays a transformative connection which evolved over years. As Adkins states, “the orchid’s line of flight is becoming-wasp, and the wasp’s line of flight is becoming-orchid” (2015: 29). In the same way it can be argued that the archive is in a process of becoming dust and the dust in a process of becoming part of the archive. Deleuze and Guattari (1987: 11) write that “wasp and orchid, as heterogeneous elements, form a rhizome”, and in a similar way, I argue, archives and dust, which are made up of heterogeneous elements, form a rhizome.38

38 Also see Deleuze and Guattari’s explanation of ruptured lines, as exemplified by the rupturing of ant formations, which are always redrawn. The redrawning of these lines, as lines on a map, for example, does not inconvertibly restore the line as it was prior to the rupture, but does in fact redefine or reinvent the space.
The goal of rhizomatic thinking is to look for the lines of flight by seeing things in processes of transformation, rather than as stable and complete entities (Adkins, 2015). Everything in the archive, from the documents to the finest particle of dust, is in a process of becoming. What it is becoming, or growing into, is not always clear and visible. Each item is in a process of decomposition, some items more rapidly than others. Given the complexity of such divergent forces, rhizomatic thinking is very seldom consciously incorporated into our lives and work, as one perhaps think it to be too difficult, too chaotic and unpredictable. One cannot control a rhizome in much the same way as one cannot control dust – we can limit it or block it in certain areas, but we cannot stop dust from inevitably forming/appearing. The rhizomatic process – as well as the dust rhizome, I argue – is a “model that is perpetually in construction or collapsing, and of a process that is perpetually prolonging itself, breaking off and starting up again” (Deleuze & Guattari, 1987: 22). As the particles breaks off from an object, eroding into smaller pieces, away from its supposed stable form, it is starting to be part of the new dimension, of the invisible and dust. As it is with the dust, “a rhizome has no beginning or end; it is always in the middle, between things, interbeing, intermezzo” (Deleuze & Guattari, 1987: 27). We cannot point to a moment in time or to a point within a process and claim to know where the rhizome begins. All of the processes prior to the line of flight form part of the rhizomatic process, as questions such as: “Where are you going? Where are you coming from? What are you heading for?” are “all totally useless questions” (Deleuze & Guatarri, 1987: 27). It is not possible to say where and when the dust in this archive originated, or if it can ever be contained or stopped. The dust and the archive are both caught in an endless rhizomatic process of becoming.

3.5) Dust Clouds – Imagination and Blindness

From the very start of working as a volunteer in the HYMAP archive and being exposed to the content bit by bit through unpacking boxes, listing books and DVDs, and photographing cassette and VHS tapes, I have formed an idea in my mind of what exactly this archive is to me. These imaginary notions of the archive are shaped by what is visible or invisible to me as a volunteer and scholar. As a result of my subjectivity, there is a limit to that which is apparent to me – a notion that has become more and more clear during my weekly visits to the archive. For this reason, the historically subjective role of the archivist has increasingly been highlighted
in my contact with the archive. Antoinette Burton argues in this regard that debates embracing “the challenges of ‘telling the truth about history’ have had very real political and material consequences,” such as the Truth and Reconciliation Commission questioning archival ‘evidence’ with specific “relation to factual or forensic truth” (2005: 1-2). Burton further writes that:

Our emphasis on the need for archive stories – narratives about how archives are created, drawn upon, and experienced by those who use them to write history – follows in the first instance from a move in the Western academy (and also beyond it) to recognize that all archives are ‘figured.’ That is, they all have dynamic relationships, not just to the past and the present, but to the fate of regimes, the physical environment, the serendipity of bureaucrats, and the care and neglect of archivists as well (2005:6).

The role of those who use or form archives as well as the processes archives undergo is thus relentlessly subjective and open to an array of possible influences. Knowledge produced and histories written are thus always susceptible to reinterpretations.

‘Knowing’ and ‘seeing’, and the human understanding of these terms/capacities, form an inescapable relationship when attempting to explain or interpret something (Bradford, 2008). The archive as a construct relies heavily on knowing and seeing in order to explain and interpret events of the past. To see is thus an important part in order to claim what one knows, assuming that we can trust our sight. David Bradford (2008: 1) also argues that the “apparently self-evident opposition between seen and not-seen, lit and unlit” is an illusion, and what he calls a “necessary fantasy.” The relationship between knowing and seeing “is a connection that permeates religion, preoccupies philosophy, and pervades everyday speech” (Bradford, 2008: 1). Martin Jay also echoes this sentiment by maintaining that:

the human eye has a blind spot where the optic nerve connects to the retina. Normally ignored because vision of the other eye compensates for it, the blind spot’s existence nonetheless suggests a metaphoric ‘hole’ in vision […] Finally, we are often fooled by visual experience that turns out to be illusory, an inclination generated perhaps by our overwhelming, habitual belief in its apparent reliability (1994: 8).

---

39 For similar work that focuses on the subjective role of the archivist see Harris (1998).
The idea of blindness accompanying sight is a notable aspect of human scopic regimes, which are heavily reliant on empiricism. We are thus, as Jay notes, to some extent fooled by visual experiences, as much of what we see can be manipulated and read or interpreted in multiple ways. What we see and what we know are thus not mutually exclusive. As Bradford (2008: 3) writes:

> There is at the heart of seeing incompleteness and separation. The image or representation contains a lost as well as a recalled part of the gaze. Artistic depiction exceeds the memory of the gaze, and its excess is precisely invisible. Even the photograph occludes certain details, outside and beyond the frame.

In the archive there is plenty that we cannot see and it is perhaps even more so in the case of dust. In my mind I have an idea or image of what the dust might be, of what I hope to find and what I imagine it to be – such mental images are, as I demonstrate in Chapter 4, quite different to the images created when looking at dust through a microscope. Even when we employ multiple ways of seeing (in the context of this study that would imply different tools for ‘reading’ dust), Bradford (2008: 3) reminds us that “representation is built upon invisibility” – upon that which we deliberately or accidently do not see.

Esther Pereen argues in this regard that the lack of visibility (of a given object/thing) can be translated into an “extreme form of vulnerability”, as such invisibility speaks of “disempowerment, of being considered insignificant and expandable, and therefore overlooked” (2014: 33). The blindness and invisibility I refer to in relation to the archive and the archivist or scholar are best described by Derrida (1992: 89):

> One can always reveal to the gaze something that still remains secret because its secret is accessible only to senses other than sight. For example, there might be some writing that I can’t decipher (a letter in Chinese or Hebrew, or simply some undecipherable handwriting) but that remains perfectly visible in spite of its being sealed to most readers. It isn’t hidden but it is encoded or encrypted.

In the context of my own study, such an idea applies in the following way: The Ben Segal collection is still in its formative stages with some materials still being unpacked from the boxes they arrived in when transported from his house. The objects and content of the boxes that are

---

40 Derrida also notes that blindness constitutes that which is hidden or inaccessible to the eye or hand, as it “is not necessarily encrypted in the derivative senses of the word – ciphered, coded, to be interpreted – in contrast to being hidden in the shadows” (Derrida, 1992: 89). It is thus clear that blindness does not simply refer to not seeing.
not yet unpacked or opened are, as yet, invisible to me as scholar. The knowledge of the archive, of Ben Segal and all the items within it, is therefore still very limited. Although large parts of the archive are still not visible, over time more parts of the archive will be revealed, former invisibilities will perhaps be brought to the surface and into the realm of the visible.

In this regard, Derrida's ideas on two orders of invisibility is noteworthy. The first order of the invisible is described by Derrida as the "visible in-visible":

There is a visible in-visible, an invisible of the order of the visible that I can keep in secret by keeping it out of sight. This invisibility can be artificially kept from sight while remaining with what one can call exteriority … whatever one conceals in this way becomes invisible but remains within the order of visibility; it remains constitutively visible (1992: 90).

The dark brown clumps of dust, layers on items or that which is left at the bottom of the box, can be regard as the visible in-visible. The dust we 'see' is a grey-brown mass of heavier materials in their accumulated form, making it visible to the eye. This can then also include the objects in the objects yet to be uncovered. We can also see airborne dust floating in the air with the help of light, or with alternative methods for seeing (such as microscopic tools, which I draw on in the next chapter). There is, however, a second order which Derrida defines as “absolute invisibility”:

The absolutely non-visible that refers to whatever falls outside of the register of sight, namely the sonorous, the musical, the vocal or phonic (and hence the phonological or discursive in the strict sense), but also the tactile and odoriferous. And desire, like curiosity, like the experience of modesty … and the unveiling of secrecy … or the fact of 'seeing in secret,' all those movements that take secrecy beyond the secret necessarily comes into play (Derrida, 1992: 90).

When we cannot see, if we are denied the pleasure of seeing, or if we know we are not seeing then there is often an instinctive desire to see. This curiosity has been one of the main driving factors in my research into and involvement with the archive. Curiosity is also the instigator of my interest in the dust and Ben Segal. Barbara Benedict (2001) is of the opinion that:

curiosity at the start of the seventeenth century was considered an impulse that was thrillingly if threateningly out of control. Unlicensed, undirected, and spontaneous, it seemed to many writers and social thinkers to resemble the madness of the Furies or
the hubris of Eve. They often portrayed curiosity as feminine because it was illegitimate, a force that operated outside the world of law and order (Benedict, 2001: 25).

These characteristics of the curious are also a reminder of the way in which rhizomes function and the ways in which they move. Curiosity in the archive is a great asset and motivator to push new frontiers and discovery. The impulsive nature of curiosity might not have been valued throughout history, but it has always been a great incentive:

Whether praised or damned, the curious personality is characterized by a drive for knowledge that entails scientific objectification ... cataloguing, the 'discovery' of new truths, impious peeping, collection and witnessing of objects and subjects that destabilize art and nature, and an investigation beyond temporal and material borders that is either heroic or deluded (Benedict, 2001: 71).

Benedict also argues that curiosity influenced early collectors and that it offered them a form of resistance to “the cultural march toward systematization, classification” as collections became increasingly “specialized along class lines” (2001: 202). Poorer individuals accumulated natural objects, and wealthier people collected art and antiques (Benedict, 2001). Natural as well as cultural collections sought to collect “the past in objects or texts [that] verifies the collector's or reader's identity as owner of that past” (Benedict, 2001: 202). The notion of owning the past might be a limited prospect, though one can agree that the collector shapes and influences current and future perspectives of a given past by means of the objects they chose to preserve. These perspectives that are shaped about the past create what Tess Takashika calls 'imaginary archives.' In her book The Imaginary Archive: Current Practice, Takahashi (2007: 180) explains that:

These imaginary archives often envision unrecorded pasts, produce other means of legitimizing information, make old systems signify differently, and imagine as yet undetermined futures through the evocation of everyday people's personal experiences of suffering, displacement, and loss.

Current or widespread notions of the past can thus be challenged through reimagining them. Alternative archives and archives from private collectors are thus of great significance and importance. Carolyn Steedman writes in Romance in the Archive that the “artistic and intellectual deconstruction of the archive operates as a prescription and a manifesto – an alternative form of medicine for a sick and feverish culture plagued by forgetting” (Steedman:
The past is remembered differently by different groups and individuals. There is no single right way of remembering the past.

For this reason, archives, with their disparate and even contradictory stories and information, may shed light on intimate experiences and lives during a turbulent time in South Africa’s history. Steedman further writes that “finding things: the idea of finding things: loss, the search for what has been lost, the dream of finding it, and of plenitude ... is connected to nostalgia” (Steedman: 2008: 6). Therefore, even the dust in the archive is of significance as it connotes both the 'lost' as well as that which constitutes plenitude. Steedman (2008: 7) notes that “whatever it is you find, it is not Nothing. If you are a historian or just plain old historically inclined, what you take away from the archive is the nothing made into something.” A close reading of the dust can then be considered to be the act of making the seemingly 'nothing', the insignificant, into something worthy to be contemplated and recognised as a valuable part of the process of becoming archive.

The analysis and close reading of the dust particles, in connection to the archive and archival content and structure, are thus possibly a conglomeration of how truth and fiction co-exist. There is also a boundary to fiction. More than any boundary there is the boundary of the self, of the archivist and scholar:

A shadow made possible only by the imaginary and hypothetical space always left vacant by the archive. A surplus space of images that can never be filled. You are there, you are the limit and the surplus of the archive – an irreducible, atomic shadow of the archive (Lippit, 2005: 7).

As a volunteer working in the archive, I try to make sense of the archive, of Ben Segal, yet my presence limits what I can uncover about the archive as well as the life of Segal. Lippit further explains that another form of life emerges from one’s own shadow, which is excluded from the archive “that includes everything” (Lippit, 2005: 7). Similarly, my own interaction with the archive is limited as I am ultimately my own 'shadow(s).’ The shadow establishes an invisible realm we are incapable of seeing. This is the impossibility of the subjective that no-one can transcend. For further insight, in an attempt to bridge this limit, we rely on alternative methods to aid our impaired sight into the archive, and into the past.

My own attempt at reading the archive, and in so doing the past, encapsulates the various concepts touched on in this chapter. In my own collecting of the dust, emphasis is placed on the value and significance of the dust as part of the unfolding story of the Ben Segal collection. Dust as rhizomatic entity and structure within an archival structure opens up possibilities and
challenges hierarchies. Looking at the dust, as a collection in its own right and as part of the larger collection, as well as looking at the dust I have collected through a microscopic lens, requires an undermining of established archival hierarchies. Yet the dust, as well as the cultural significance it might hold, is worth exploring. Ultimately this subjective endeavour as well as my physical presence are added to the dust, and in so doing my subjective influence has an impact on the Ben Segal collection and how it will be read by future participants.
CHAPTER FOUR: DUST AS ABJET

In this chapter dust will be explored as an abject entity in order to highlight the potential of applying visual and microscopic enquiries to archival projects. In order to discuss the physicality of the dust I will briefly introduce Kristeva's theory of abjection. Concurrently, this theory-based close reading of the dust, or even Kristevan close reading, is inspired by my practical experience of the dust while working in the archive. The theory of abjection thus provides the point of departure into a more practical discussion of the dust as well as forays into visual and scientific enquiry.

4.1) Abject dust, abject archive

In the following section I will be focusing on Julia Kristeva’s theory of abjection in relation to the dust that I sourced from the Ben Segal collection. In order to adequately explain the abject there are a few key preliminary concepts that I will explore, such as the semiotic and the symbolic, the thetic break, the semiotic chora, negativity and rejection. Following Kristeva’s lead, these preliminary concepts will follow on one another. The dust from the Ben Segal archive will be central in my discussions to each of these concepts. Even though Kristeva’s theories are written in psychoanalytical terms as a means of explaining the formation of the subject through various developmental phases, they can nonetheless be readily applied to other fields of enquiry. In order to stay close to Kristeva’s texts, I will build on the ideas encapsulated in her account of the developmental phases in order to discuss their significance for archives. Finally, the dust from the Ben Segal archive will be explored by applying the theory of abjection to it.

Various scholars have applied Kristeva’s theory and concept of abjection to a wide range of topics. In ‘Dicks are for chicks’: Latino boys, masculinity, and the abjection of homosexuality Richard Mora applies social constructivist theories and the concept of abjection to examine how and why a group of low-income, USA-born Dominican and Puerto Rican middle-school boys constructed masculine identities by invoking and rejecting homosexuality (2014: 340). Marcus Wood (2013) in Valency and Abjection in the Lynching Postcard: A Test Case in the Reclamation of Black Visual Culture, focuses on white power, white guilt and white terror by providing a new standpoint which demands that “we see in these [images] […] both an iconic and an aesthetic status which circles around an abject reliquary import.” The theory of abjection has also been applied to a variety of feminist writings dealing with the female body.

41
In her writings and as a practicing psychoanalyst, Julia Kristeva focuses on the concept of the 'speaking being' (McAfee, 2004: 14). Kristeva thus merges theories of subjectivity and language in a corresponding relationship (McAfee, 2004: 14). The collectors and archivists, as subjects behind the meaning-making process of the archive, cannot be set apart from the knowledge produced from this process.

According to Kristeva, there are two modes of signification, namely the semiotic and the symbolic. The semiotic is the "extra-verbal ways in which bodily energy and affects make their way into language" (McAfee, 2004: 17). The semiotic is not only expressed verbally, but also in the way through which the subject comes across to others by means of gesture, tone, body language and facial expression. These expressions of the subject could also be conveyed through art, music, dance and poetry (McAfee, 2004: 15, 16). Kristeva defines the semiotic as the primary space which is indifferent to language, as "rhythmic, unfettered, irreducible to its intelligible verbal translation; it is musical, anterior to judgement, but restrained by single guarantee: syntax" (1984: 29). The semiotic also has the ability to change or influence meaning regardless of the actual words being spoken or written. The semiotic in the archive is perhaps what we look for when unravelling the story of an individual. This could constitute the personal, the emotional, as well as that which is more readily open to various interpretations and possible readings. The multiple and open interpretations and readings based on the semiotic mode of signification, could also then be understood as that which we attempt to eradicate or greatly limit in terms of the human interaction and involvement of archivists, scholars and visitors.

---

42 Julia Kristeva is a French linguistic philosopher and psychoanalyst who was born in Bulgaria in 1941 (Lechte & Zournazi, 2003: 1). As a student, she was introduced to Russian Formalism as well as the works of the 21st-century social and literary philosopher, Mikhail Bakhtin. In the Christmas of 1965 Kristeva went to Paris as a bursary student, where she attended the seminars of Roland Barthes and joined the editorial board of the Tel Quel (Lechte & Zournazi, 2003: 2).

43 Kristeva defines the speaking being as those who use language and those who are constituted through their use of language. Language for Kristeva is the discursive and signifying system in which “the speaking subject makes and unmakes himself” (McAfee, 2004: 14).

44 In order to access her work, it is crucial to view these two theories simultaneously, as neither can stand alone (McAfee, 2004: 14). Kristeva views language not as a separate static entity, but rather as part of a dynamic signifying process. The signifying process is the way in which bodily drives and energy are expressed through the use of language and how these expressions shape one’s experience (McAfee, 2004: 15).

45 Semiotics is known as “the science/study of signs” (words, images, sounds, gestures and objects) founded by linguistic theorist Ferdinand de Saussure (Chandler 2013).

46 The extra-verbal is that which is outside of speech and language. It transcends language (McAfee 2004: 17).

47 The semiotic thus inevitably makes its way into the archive when decisions regarding what is significant and worthy of preservation, versus that which is not, are being made, regardless of the numerous attempts made to limit subjective effect. The mood of the archivist on a given day, decisions by an institution based on prejudice or...
Following the semiotic, the second mode of signification is the symbolic. The symbolic is characterised in Kristeva’s work as the clear, logical and orderly modes of signifying, where any form of doubt and uncertainty in expression can be evaded (McAfee, 2004: 16-7). The symbolic is constituted by the formal rules of a specific language and their subsequent boundaries, as well as through the language used by disciplines in science and logic (McAfee, 2004: 17).

Archival practices of categorisation, rules and procedures to be followed are thus part of what constitutes the symbolic within the archive. The symbolic is also a major driving force behind the traditional understanding of the standards that an archive must uphold: logic, objectivity and truth. For the argument proposed here, these concepts hold true as the institutions and bodies of knowledge production, guarding information or access to fragments of the past still require objective and logical truth in order to influence as well as establish, power.

It might be presumed that the semiotic and the symbolic are polar opposites, such as emotion versus logic, for example. Kristeva, however, reveals how these supposed ‘dichotomies’ are related (McAfee, 2004: 17). McAfee explains that “what we have is a symbolic mode of signification (the words in whatever semantic order they are given) that is energised by a semiotic dimension” (2004: 17, 18). Therefore, the semiotic is the body, life and energy that penetrates the static, logical, grammatical form of language, giving it life and a multiplicity of meanings. It is also important to note that the semiotic and the symbolic need one another as they produce meaning when used together, seeing that language would have had little meaning if we only spoke in terms of the symbolic (McAfee, 2004: 18).

The semiotic and the symbolic are thus evidence of the emotional, more subjective aspects and the supposed rational and objective aspects operating in simultaneous unity. The archive is thus

personal interest, the impression an object makes, all influence what is preserved, what is discarded, and how these objects are categorised. The semiotic is thus a given feature wherever human interaction is concerned.

---

48 The symbolic is the second mode of signification where the speaker attempts to “speak with as little ambiguity as possible”, while depending on grammar and syntax as a stable system of signification (McAfee 2004: 17).

49 Since the 1980s various work performed in the humanities has shattered or at least challenged such notions. In Refiguring the Archive (2002: 7), Hamilton writes that the archives “is always already refugured” since technology as well as preservation and the use of archives are always changing. Hamilton goes further to say that “the archive is porous to societal processes and discourses” and even more so in South Africa, where “formal conduits need to be put in place” (2002: 7). More than ever, the emergence of the hidden as well as the radical restructuring of the archive, and therefore our approaches towards history, is in dire need of transformation.
not immune to the inner workings of Kristeva’s formulation of the concept of the semiotic and symbolic. The thetic break\(^{50}\) is then just as relevant to the archive:

> WE SHALL [emphasis in original] distinguish the semiotic (drives and their articulations) from the realm of signification, which is always that of a proposition or judgment, in other words, a realm of positions. This positionality … is structured as a break in the signifying process, establishing the identification of the subject and its object as preconditions of propositionally. We shall call this break, which produces the positing of signification, a thetic phase. All enunciation, whether of a word or of a sentence, is thetic. It requires an identification; in other words, the subject must separate from and through his image, from and through his objects. This image and objects must first be posited in a space that becomes symbolic because it connects the two separated positions, recording them or redistributing them in an open combinatorial system (Kristeva, 1984: 43).

It might be difficult to detect the thetic\(^{51}\) in a well-organised archive where everything appears logical, as it does in the symbolic. Yet in an archive such as the Ben Segal collection, where the archive is still being packed out, sorted and items still being discovered, the thetic is even more apparent. The presence of the semiotic within the archive, as subjective influence is ever-present. Within the Ben Segal collection, where dust and various other seemingly insignificant objects such as pens, cable ties and discarded shoes are scattered throughout and in-between that which is readily regarded as significant, the thetic makes its way into the archive. That break might occur when we find objects, such as Ben Segal’s reading glasses (see Figure 13), that might not be considered as being of great value in an archive prioritising music (and other items to that effect), yet nonetheless carry value for a biographical project.

The excess or build up, which ultimately leads to the necessity for rejection\(^{52}\) also features within the archive. An archive, through connections and assemblages creates excess, fulfilled

---

\(^{50}\) The thetic phase is the signifying process acting as a break or threshold, where “the subject separates from the object.” The word ‘thetic’ means: positing or position, especially in relation to the ‘subject-object relation.’ Kristeva focuses on the process leading up to the thetic (Lechte & Zournazi, 2003: 211).

\(^{51}\) The thetic phase/break is what Kristeva refers to as the disruption in, or the limit of, the symbolic. She explains that the semiotic, all the drives and intonations, is that which brings about the thetic break (Oliver, 1993: 40). The thetic break is a process within the body where a breaking or rejection takes place at a threshold.

\(^{52}\) Kristeva explains that rejection is not merely a release or an expulsion, but rather an accumulation. Furthering the developmental notion, the concept of rejection must also be understood as a necessary process in the anal stage, though the pleasure described here is not limited to anal pleasure but also oral pleasure, as oral pleasure will be a motivating factor for the subject to speak (Oliver, 1993: 45). Her reasoning is that rejection happens before and after the symbolic order as signification is a process and not a motionless structure (Oliver, 1993: 45). In due course the material rejection arrives at an edge where it produces “thetic heterogeneity where rejection develops into desire” (Oliver, 1993: 45).
desire if you will, thus making abjection or a release essential. For Kristeva, the abject or abjection can be summarised as being desire’s corresponding item – only desire is the positive force of attraction with abjection therefore being the negative (Lechte & Zournazi, 2003: 210). Collecting, as a driving force behind desire, constantly attempting to gain more in terms of objects or information, is excessive in its nature. The abject, thus as negative desire, is expelled after excess or satiation, of sorts, has taken place.

The reason for the importance and value of Kristeva’s formation of the abject is her application of negative desire to the development of subjectivity (Lechte & Zournazi, 2003: 210). Negative desire, the abject, creates and establishes the borders and the formation of a unit. This feature of the abject is cardinal in the establishment and creation of a distinctive archive. Yet the abject has two affects as it “fascinates and repels” on an intuitive as well as on a social and moral level (Lechte & Zournazi, 2003: 210). This can include the following: The collector’s need to have, and the having too much; spaces, rooms and cupboards spilling over onto windowsills and in bathtubs; the archivist’s fascination of unpacking and discovering, and the repulsion brought on by anxiety over limited storage space, time constraints and deterioration. During this process Segal’s collection of dust became equally fascinating and repulsive – at once responsible for my severe archival discomfort and allergies as well as fascination with what it is and what it may reveal.

Kristeva’s notion of abjection thus plays an integral role in the transformation of a collection into an archive. In the case of the Ben Segal collection, with far too many items to store, including various commercial items that are available elsewhere, the archive is still in the process of being established. This continuous process of rejection or abjection of objects leads to the creation of borders that remains tenuous (see McAfee 2004: 45). The archive’s ‘I’ is still being established. If it were not for the process of abjection, it might have been difficult to distinguish between an archive and a hoarder’s nest. The process of sorting and the creation of boundaries is a key aspect of archiving realised through the process of abjection. The

---

53 Desire for Kristeva happens when “the first phase of separation from the mother occurs; the mother thus becomes the lost object of desire” (Lechte & Zournazi, 2003: 212).

54 In order to explain the process that guarantees the necessary back and forth movement between the semiotic and the symbolic, Kristeva employs the concept of negativity (Oliver, 1993: 40). Estelle Barrett explains that negativity “can be understood as the processes of semiotic motility and charges, or ‘death-drive’, a force that impels movement towards an undifferentiated or archaic phase that precedes the subject’s entry into language” (2011: 14). Negativity thus defines movement of heterogeneous matter and drives and is therefore also closely related to rejection (Oliver, 1993: 43). Rejection for Kristeva constitutes a particular type of negativity which operates as the rational and physical driver of signification; rejection being the parting or splitting of matter (Oliver, 1993: 43).
process of abjection provides the necessary formations for borders to be realised by the subject as a subject. The process of abjection thus occurs through *jettisoning* that which appears to be part of the self or unit. The abject here is that which is spat out or violently rejected by oneself, such as sour milk, excrement and vomit (McAfee, 2004: 46), or dust and 'insignificant' items in terms of the archive.

In order for the archive to have clear and defined borders, that which is threatening to those borders, threatening the very existence of the archive, must be jettisoned. The dust, a threat to the existence of the archive in various ways, must be discarded. The dust is an integral part of the archive; not only was it in a sense collected by Ben Segal, but as I have established in the preceding chapters, there can be no archive without this very threat. Derrida makes this clear in *Archive Fever*, where he writes that:

> There would indeed be no archive desire without the radical finitude, without the possibility of a forgetfulness which does not limit itself to repression. Above all, and this is the most serious, beyond or within this simple limit called finiteness or finitude, there is no archive fever without the threat of this death drive, this aggression and destruction drive. This threat is in-finite, it sweeps away the logic of finitude and the simple factual limits, the transcendental aesthetics, one might say, the spatio-temporal conditions of conservation. Let us rather say that it abuses them. Such an abuse opens the ethico-political dimension of the problem (1995: 19).

There would thus be no archive fever, no reason or driving force behind the desire to collect or preserve without there being a threat of destruction, loss or ‘death’. As Lambrechts writes, “the constant battle against time urges us on to discover the archive's secrets and still unexplored depths before it is lost forever” (2015: 173). The excess of the dust, of the abject matter, is then key in there being a reason to archive in the first place. Collecting the dust, the very threat encapsulated by the passage of time, can then be regarded as an ‘object’ of sorts, which is part of the archive. One can even argue that the dust ought to be preserved as part of the archive, as significant and valuable.

An important factor of the abjection process is that even though the abject object or the abjected thing has been radically excluded, the process of abjection can never be completely finalised as it lingers at the border of existence (McAfee, 2004: 46). The dust will always remain no matter how many attempts are mustered to eradicate it. The process of deterioration will consequently also never end. Dust is part of an endless process of becoming, growing more with or without interactions. The presence of the dust then contributes to the
fragility of objects in the archive, seeing that the dust and more specifically compounds found within the dust threaten the existence of certain objects. Found within and among the dust are various forms of infestation such as moths, woodworms, silverfish and cockroaches to name a few. J.H. Hodson in *The Administration of Archives* writes that:

> Moulds grow inevitably when the atmosphere is above a certain relative humidity; insect infestation is largely a matter of chance. The contents of one box may be attacked while a dozen adjacent ones are unaffected. Insects are liable to be discovered unexpectedly … insect parasites cause destruction of an irreparable kind, Insects may be active in storage boxes of the best and most modern repositories: their attack is thus the more insidious (1972: 101).

The insects within the kingdom of dust are thus direct threats to the objects within. Even though one can eliminate as much as possible from the collection, both dust and insects will always remain and reproduce – see Figure 14.

The abject, such as dust and insects, thus persistently challenges fragile margins and borders (McAfee, 2004: 46). It does not respect borders, it challenges unity and identity, be it a subject or specific archival entity as well as threatening the existence of “clean and proper bodies,” (McAfee, 2004: 46). The notion of ‘clean and proper bodies’ is thus linked to the abject as that which is excessive and must therefore be discarded or removed. The dust or objects that do not readily carry value in term of establishing an archive are seen as that which must be abjected, as it does not fit into possibly traditional notions of ‘clean and proper’ archives. The archive as a ‘clean and proper’ structure, perceived to contain the building blocks of history, is threatened by that which seemingly does not belong, be it the dust or insignificant objects crowding the space.

Kelly Oliver (1993: 56) explains that the abject is a relationship to a boundary, the very thing that was ‘jettisoned’ to the other side of the boundary. The abject is thus a threat to the symbolic, which relies on its borders, as the abject object threatens these borders of the symbolic:

> There looms, within abjection, one of those violent, dark revolts of being, directed against a threat that seems to emanate from an exorbitant outside or inside, ejected beyond the scope of the possible, the tolerable, the thinkable. It lies there, quite close, but it cannot be assimilated. It beseeches, worries, and fascinates desire, which, nevertheless, does not let itself be seduced. Apprehensive, desire turns aside; sickened, it rejects. A certainty protects it from the shameful – a certainty of which it is proud.
holds on to it. But simultaneously, just the same, that impetus, that spasm, that leap is
drawn toward an elsewhere as tempting as it is condemned. Unflaggingly, like an
inescapable boomerang, a vortex of summons and repulsion places the one haunted
by it literally beside himself (Kristeva, 1982: 2).

There are always these items which we find exceptionally trying to classify under one clear
and specific category. Items such as these challenge the logical order archival structures have
come to rely on. Notions of inside versus outside, that which is considered significant and
valuable and that which is not, thus encapsulates Kristeva’s explanation of the abject. Certain
items, objects or forms of social acceptability are easily grouped, whereas others fall
somewhere in between, where distinctions are challenging ‘clean and proper’ ideals.

Of importance to the South African context, which necessarily frames the Ben Segal collection,
is the apartheid government’s use of racial order as one of the most prominent restrictions for
establishing their own ‘clean and proper’ ideals. This encompassed the control of the music
allowed into the public sphere, ultimately controlling what history ought to remember and
what not; what is considered ‘clean and proper’ and what is not. Michael Drewett writes in
‘Stop this filth’: The censorship of Roger Lucey’s music in apartheid South Africa that:

> The police played a prominent role in monitoring the activities of musicians, especially
when performing in townships or when the musicians were regarded as politicised (see
inter alia Coplan 1979 and 1985, Andersson 1981, and Hamm 1990 for the
extensive debate on repression and censorship in black communities under apartheid).
Some musicians with a counter-hegemonic message, such as Johnny Clegg and Juluka,
experienced police harassment at their concerts, especially when concerts were
declared ‘illegal gatherings’ and stopped midway (2005: 57).

Music made by the marginalised, as well as those who did not readily promote the
Nationalist’s Afrikaner ideals (separation of races, white minority rule and sustained control
over all racial groups), were not only excluded from the dominant cultural consciousness but
actively banned. This can then be considered as an attempt at banishing that which appears
to be or can be considered abject, yet as Kristeva points out: “from its place of banishment,
the abject does not cease challenging its master” (Kristeva, 19482: 2). The abject thus always
escapes confinement or identification.

The dust, similar to the signifying process, is as much part of the archive as any of the other
processes and objects that attempt to define it. This semiotic reading of the archive could thus
make it possible to argue for the inclusion of dust within the archive, as a valuable and
significant aspect of the unfolding story as well as future studies of the archive. Dust as a sort of semiotic indicator, abjected object as well as a token for the ongoing process of abjection, can then form part of the established archive.

4.2) Objects in the dust and other things

Regardless of its abject status, and its inherently unavoidable presence in the Ben Segal collection, dust can be regarded as valuable and it is worth a closer look. In the following section, the fascinating aspects of dust as physical matter will be explored through a brief historical overview. Various modes of visualising dust will be mentioned before moving into a discussion of the microscopic and the implications of “seeing” the dust from the Ben Segal collection through scientific methods.

According to various creation myths, including Abrahamic, Egyptian as well as Chinese belief systems, dust or clay is said to be the initial compound for human life. This was the prevalent belief prior to Alfred Lotka’s book, *Elements of Physical Biology*, insisting that humans are “indeed, earth-born, but yet not altogether common clay” (1925: 197). All things considered, combinations of elements as well as chemicals have in one way or another been indispensable to the formation of life.

The nature of life has been a longstanding point of enquiry puzzling humans for centuries. They wondered how “living things are similar to and different from non-living things, both natural and artificial, and whether the characteristics that are universal in familiar Earth life are genuinely essential to all possible forms of life” (Bedau & Cleland, 2010: 1). In the 17th century Descartes attacked the obstinate Aristotelian belief that “life is intrinsically teleological” (Bedau & Cleland, 2010: 1). As artificial mechanisms, such as clocks, church organs and fountains, were popular during Descartes time, he claimed that such ‘organisms’ are exceptionally complex machines (Bedau & Cleland, 2010: 1). As soon as the origin or extent of natural life emerges, philosophical questions arise and along with that questions such as “What is accidental to life and what is not? Are there steps we can take to free our view of life being biased by the accidents of our epistemic circumstances?” (Bedau & Cleland, 2010: 113). The fundamental problem of the origin of life is that it is difficult to find investigators “who agree on even the broad outline of the events that occurred so long ago” (Bedau & Cleland, 2010: 121). Yet we persist to attempt to find solutions to these supposed impossible
questions. The guidance of the study of the small and invisible, such as the dust, has proven to be helpful in unravelling these questions. The realisation of the power of the small has led us to the discovery of knowledge which defines the modern world. One such discovery is the structure of DNA:

Extraordinary discoveries inspire extraordinary claims. Thus, James Watson reported that immediately after he and Frances Crick uncovered the structure of DNA, Crick ‘winged into the Eagle [pub] to tell everyone within hearing that we had discovered the secret of life.’ Their structure – an elegant double helix – almost merited such enthusiasm. Its proportions permitted information storage in a language in which four chemicals, called bases, played the same role as 26 letters in the English language” (Bedau & Cleland, 2010: 129).

In the book Life Itself: Exploring the Realm of the Living Cell Boyce Rensberger writes about a laboratory that would have been unfathomable a hundred years ago:

Inside Rob Hay’s stainless steel tank are about 60 billion life-forms gathered from all over the planet. They wait in chilly repose. They neither eat nor sleep. They do not breathe. Not even the simplest chemical reactions of metabolism take place inside their bodies … Reach into the tank and take out one of the 30,000 hermetically sealed glass vials, or ampoules, each about an inch long and each holing about two million of the inanimate creatures in less than a teaspoonful of frozen fluid. Now let it warm to body temperature. From their icy limbo, the tiny creatures will undergo a resurrection in minutes. They will, in the language of an age that could not have imagined what is routine in almost every biomedical laboratory today, ‘come back to life’ (Rensberger, 1996: 3)

Today we have the resources, knowledge and technology to manipulate and alter the smallest aspects of our beings.

As discussed in the previous chapter, dust was considered to be the smallest of things before the twentieth century. Through scientific discovery and innovation, the relation between “smallness and dust [has] diverged” as we “found new invisible orders in the world and within the human body” (Amato, 2000: 92). From dust, notions of the small evolved to include invisible entities such as “atoms and microbes”, which “medieval peoples attributed to the heavens – and more” (Amato, 2000: 92). Lucretius, a first century Roman atomist made it his primary commitment to “dispel the powers and deeds of abundant and fickle gods” and consequently “transferred responsibility for human misery from heaven to an insupplicable
atomic microcosm” (Amato, 2000: 93). The atom was considered the smallest indivisible kernel known to mankind until the end of the 19th century, when significant new knowledge was revealed:


These discoveries all played a small yet significant role in the discoveries that led to the conception of “nuclear physics and to a whole new microcosm” (Amato, 2000: 94). The world of the small and invisible grew larger and more visible with each discovery. The scale of the miniature and invisible world “is represented by the discovery of the hydrogen atom, which has a diameter of $10^{-10}$ meter, and the atomic nucleus, a mere $10^{-16}$ meter across” (Amato, 2000: 94). The supposedly indivisible became larger and known to be infinitely divisible, as physicists today “investigate ‘things’ that have no mass at all and occupy no space” (Amato, 2000: 94-95). To get an idea of this miniature world Amato explains that “if traveling inward to the realm of $10^{-16}$ meter were equal to traveling $10^{16}$ meters in space, the distance traversed would equal traveling to the sun and back 3,250 times” (Amato, 2000: 95).

Through these discoveries scientists have come to understand that the unseen world is as unpredictable as the visible. The small and invisible led to a greater understanding of the way in which things work on a larger scale:

In contrast to the old materialist model of the atomic world, which posited matter as a bunch of billiard balls moving around empty space and occasionally bumping into each other, this new realm of the invisible is complex, diverse, and subtle, its form and motion often indicated only by faint and ephemeral traces recorded on the most refined machines and then statistically generalized (Amato, 2000: 95-96).

Furthermore, the atomic bomb and germ theory opened up this understanding of the power of the small as it became common knowledge that everything “from the largest organ to the dust on the head of a pin – was teeming with microorganisms” (Amato, 2000: 97). Such knowledge and investigation into the micro world led researchers to the discovery of “subatomic particles and microorganisms” (Amato, 2000: 105-106). From dust, as the smallest of particles visible to the naked human eye, knowledge of the invisible world transformed immensely:
Once an unchallenged kingdom, dust was both a mixture and the sum of all small things. Its omnipresence was assured by the divisibility of matter. In this century, dust, like the European peasant of the old rural order, has been swept to the margins of life … The differentiation of dust went hand and hand with scientific investigation, industrial production, and public health regulation. ‘It is the invisible we have to guard against,’ declared Robert Hessler in his 1912 book *Dusty Air and Ill Health*, which set as its goal the identification of dusts that cause disease (Amato, 2000: 106).

Anyone who has worked a day in an archive will agree with Hessler, as dust fills your nostrils, lungs, eyes and invisible layers cover and irritate your skin (see Figure 15) seeping into and attaching onto everything see Figure 16. The first thing I would do when I get home from working in the archive was to take my clothes off at the front door so as not to infest my living space with the dust. The dust as abject, resting on the borders of one’s skin and clothes, demands attention. The consequence of the small and invisible dust was in fact rather visible.

Even though dust led scientists and observers to greater knowledge of the infinitely small, there was still plenty that dust could reveal about our human understanding of the world, as “Hessler sought to associate specific sicknesses with certain dusts” (Amato, 2000: 107). Differentiation was to be made by various scientists, including “volcanologists, meteorologists, soil scientists, industrial doctors, and sanitarians” as to the different particulars of dust (Amato, 2000: 107). Such specific differentiation “required chemical and mineralogical analyses and the determination of particle size, velocities, and flocculation patterns” (Amato, 2000: 107). It was clear that the world of the small and invisible was as information dense as the cosmological world greater and larger than we can possibly imagine.

Even though the specificity of dust has been explored by various scientific fields, able to explain dust down to its most basic chemical composition, dust in general falls under this larger group we call ‘things’ when we do not talk about it in a scientific context. The word ‘things’ and dust as things floating about are then virtually synonymous. Bill Brown writes in *Thing Theory* that the word ‘thing’ holds an audacious ambiguity:

> It denotes a massive generality as well as particularities, even your particularly prized possession … The word designates the concrete yet ambiguous within the everyday: ‘Put it by that green thing in the hall.’ It functions to overcome the loss of other words or as a place holder for some future specifying operation … It designates an amorphous characteristic or a frankly irresolvable enigma … *things* is a word that tends, especially at its most banal, to index a certain limit of liminality, to hover over the
threshold between the nameable and unnameable. The figureable and infigurable, the identifiable and unidentifiable (2001: 4-5).

Dust also holds this liminal position of ‘thingness.’ When we see dust floating in the air with the aid of light, what are we looking at? Are we looking at the wing of an insect, shavings of paper from the books or even our own skin particles? When we look at dust in this way, with the naked eye, we cannot identify with such certainty what we are looking at exactly. We are rather looking at ‘things’ floating about. In an archival collection filled with objects such as books, paper and boxes with an entire history it brings along with it, the dust, the things caked onto the objects have an almost infinite possibility of sources:

You could imagine things … as what is excessive in objects, as what exceeds their mere materialization as objects or their mere utilization as objects – their force as a sensuous presence or as a metaphysical presence, the magic by which objects become values, fetishes, idols, and totems. Temporalized as the before and after of the object, thingness amounts to latency (the not yet formed or the not yet formable) and to an excess (what remains physically or metaphysically irreducible to objects). But this temporality obscures the all-at-onceness, the simultaneity, of the object/thing dialect and the fact, all at once, the thing seems to name the object just as it is even as it names some thing else … They lie both at hand and somewhere outside the theoretical field, beyond a certain limit, as a recognizable yet illegible remainder or as the entifiable that is unspecifiable (author’s emphasis, Brown, 2001: 5)

Dust is at once one thing and simultaneously something else and therefore also excessive in nature. John Plotz in an article “Can the Sofa Speak? A Look at Thing Theory” writes that the word ‘thing’ sums up “imponderable, slightly creepy what-is-ness” (Plotz, 2005: 110). The word ‘thing’ is also “the term of choice for the extreme cases when nouns otherwise fail us: witness the thingamagummy and the thingamabob” (Plotz, 2005: 110). Thing theory is thus useful as it focuses or steps in upon our failure to name or classify something specifically:

Thing theory highlights, or ought to highlight, approaches to the margins – of language, of cognition, of material substance. ‘Things’ do not lie beyond the bounds of reason, to be sure (that would be absurd or paradoxical, or flat out impossible), but at times they may seem to. That seeming is significant: these are limit cases at which our ordinary categories for classifying signs and substances, meaning and materiality, appear to break down (Plotz, 2005: 110).
Mere things, such as dust in an archive, continually pose a problem, “because of the specific unspecificity that ‘things’ denotes” (Brown, 2001: 3). The specificity of dust, as distinguished by various scientific fields, might then be of significance to an archival collection, especially if particles or life within the dust is specifically harmful. The relation between dust and object, object and thing is thus intensified in an archive. And in particular, an archival collection that has survived a history that sought to restrict it, such as the Ben Segal collection.

Objects, then, are not innocent by-products of life, in the way that some things are by-products, excess fragments of objects. By fixing our gaze on the dust particles, reading them closely under a microscope, we are also obliterating the possible innocence of the dust. Brown further writes that as things course through our lives:

we look through objects (to see what they disclose about history, society, nature, or culture above all, what they disclose about us), but we only catch a glimpse of things. We look through objects because there are codes by which our interpretive attention makes them meaningful, because there is a discourse of objectivity that allows us to use them as facts. A thing, in contrast, can hardly function as a window. We begin to confront the thingness of objects when they stop working for us: when the drill breaks, when the car stalls, when the windows get filthy, when their flow within the circuits of production and distribution, consumption and exhibition, has been arrested, however momentarily (2001: 4).

Thing theory then functions similarly to abjection – it forces one to pause, to take notice. It is thus necessary for us to look at the dust more closely, to distinguish between dust as things and dust as information. Kristie Miller in Thing and Object makes a clear distinction between object and thing:

It is true that things are ontologically innocent, in the sense that unrestricted compositionalists use the term: nothing more is required for their existence than the existence of some particulars. The arrangement of, and relations between, those particulars, is irrelevant to whether a thing exists, and to what sort of thing it is. A thing exists just so long as the particulars that are part of that thing exist (2008: 88).

Things then become objects when we recognise name and notice them. There is thus a relation in our connectivity to objects, as Miller writes that object are those things which persons are inclined to care about. Thus “different things at different times have to have just the right properties and be related to one another in just the right way to bring into existence an object” (Miller, 2008: 88). Consequently, things are not nothing, things as possibly insignificant
Dust explosions\textsuperscript{55} could, for example, be read as the disregarded turned delinquent. Dennis Hendershot in an article “Dust Explosions” (2008) writes that “any solid material which can burn, is capable of creating a dust explosion hazard if the particle size is small enough” (2008: 32). A dust explosion is thus the flammable particles “suspended in [the] air or another oxidizing atmosphere at the proper concentration” in a confined or pressurised space where there is an ignition source (Hendershot, 2008: 32). According to scientists who specialise in dust explosions, dust is a particulate matter which has been “airborne and passes a 75-um BS test sieve” (Field, 1982: 1). According to such scientific viewpoints, dust therefore has a definite specificity and its consequences worsen with the “decrease in particle size” (Field, 1982: 1). In Books in Peril: Proceedings of the Symposium on the Preservation of Library and Archival Materials in South Africa, held in 1986, P.E. Westra \textit{et al.} write that:

\begin{quote}
Dust has an abrasive action which damages the surface of material, but particles also become embedded in the paper fibres, causing their eventual breakdown. If moisture is present, permanent staining can occur. Oily dust particles make ugly marks on paper. Both the above are difficult to remove (1986: 63).
\end{quote}

Dust then has a definite and lasting effect on the archival objects. In an archive such as the Ben Segal collection, the uncontrolled and unstable environment it came from has greatly added to the deterioration of material, consequently leading to the dust being broken down into smaller particles. In its minutest particles, dust can be broken down into elemental chemical compositions. In the next section the dust analysis from the samples taken from the Ben Segal collection is used for its potential to reveal the underlying elemental and chemical compositions found in this collection. With scientific and visual enquiry combined, deep-seated information might be revealed. In the next section I elaborate on scientific visualisation as a means to understand and frame dust.

\textsuperscript{55} Fayed and Otten write in the book \textit{Handbook of powder technology} that dust explosions result “when finely divided combustible matter is dispersed into an atmosphere containing sufficient oxygen to permit combustion and a source of ignition of appropriate energy. Dust explosions have certain similarities to gas explosions, especially with regard to the chemical processes involved and in cases where the particle size of the dust is less than 5um” (1982: 5-6).
4.3) Micro Visualisation


The majority of persons, if asked what were the uses of dust, would reply that they did not know it had any, but they were sure it was a great nuisance. It is true that dust, in our towns and in our houses is often not only a nuisance but a serious source of disease; while in many countries it produces ophthalmia, often resulting in total blindness [...] But though we can thus minimize the dangers and the inconveniences arising from the grosser forms of dust, we cannot wholly abolish it; and it is, indeed, fortunate we cannot do so, since it has now been discovered that it is to the presence of dust we owe much of the beauty, and perhaps even the very habitability, of the earth we live upon. Few of the fairy tales of science are more marvellous than these recent discoveries as to the varied effects and important uses of dust in the economy of nature (1898: 68-69).

What we see, and the way in which we see is affected or influenced by what we know or believe. As I have extensively argued throughout this thesis, what we see and what we know are subjective formulations influenced by multiple factors. If we say that neither documents nor science can be taken as absolutely objective truth and every reading is therefore subjective, the very idea of certain, fool-proof convictions is, to some degree, problematised. Visibility is one such factor in a set of multiple factors to lead us to trustworthy convictions, while emphasising and recognising its inherently subjective nature. In the archive the writing of history as well as in the conducting of scientific analysis, we are always looking at the relation between things and not just at one thing on its own (Berger, 1973).

Visibility\(^56\) thus relies on our ability to be curious, to ask questions or to simply observe. Observation thus merges visual theorisation/enquiry and the sciences. In the archive observation is a key component to an archivist’s or scholar’s process. Observation requires one to look, to make connections and to arrive at certain possibilities:

Observation is the most pervasive and fundamental practice of all the modern sciences, both natural and human ... Observation educates senses, calibrates

\(^{56}\) This notion of visibility does not exclude the blind, as visibility or ‘seeing’ does not necessarily equate to visibility as in ‘eyesight.'
judgement, picks out objects of scientific inquiry, and forges ‘thought collectives.’ Its instruments include not only the naked sense, but also tools such as the telescope and microscope, the questionnaire, the photographic plate, the glassed-in beehive, the Geiger counter, and a myriad of other ingenious inventions designed to make the invisible visible, the evanescent permanent, the abstract concrete (Daston & Lunbeck, 2011: 1).

Multiple sensory observations and experiences were inescapably part of performing my weekly tasks in the archive and were therefore a constant reminder of the dust in all activities performed in the archive. As a volunteer working in the archive and Ben Segal collection, one of my weekly duties, as mentioned previously, was to make lists of the items in the given boxes – see Figure 17. These items, such as books, magazines, DVD’s or cassette tapes were listed on Excel sheets.

While listing the various objects of the collection, my attention was always drawn back to the dust. This constant, inescapable presence of the dust fuelled my desire to ‘see’ more than my eyes could necessarily ensure would be visible on their own. Here scientific tools proved to be helpful for seeing more, to assist by “focus[ing] and circumscrib[ing] the observer’s attention” (Daston & Lunbeck, 2011: 100). Scientific enquiry can be viewed as an attempt at making sense of the chaotic and indescribable, with the goal being to provide evidence “for the bare existence of phenomena, for or against a hypothesis, for the significance of this or that detail in the broader context of inquiry” (Daston & Lunbeck, 2011: 115). Both in abstract and practical terms, my aim with the dust analysis is to provide such ‘evidence’ (or rather, to see what such an idea of ‘evidence’ might look like).

This process started with my own idiosyncratic selection of dust from the Ben Segal collection, which was mainly taken from the top of books, or from the bottom of a box after the contents had been packed out. Collecting the dust was marked by chance, as the dust collected was reliant on the boxes that were brought down from the storage room. My own reading of the dust can therefore not be seen as comprehensive in any way, as it is but a practical account that is marked by various determining factors over which I had little control.

Given these idiosyncrasies, it is also important to mention that the employment of scientific tools for the close reading of archival material is not an attempt at obtaining objective information or results, but rather a means of investigating how such tools impact on a visual understanding of dust. The employment of scientific analysis is, as I will demonstrate in this chapter, quite speculative and it does not constitute any claim towards objective, final
‘truthfulness’. It rather poses a question on how different lenses (that is, ways of looking) potentially impact on my understanding of archival dust.

Such varying (and perhaps even conflicting) lenses also raise the question as to how the scientific potentially complicates as much as supplements the theoretical and poststructuralist lenses that have thus far been used throughout this study. Initially the scientific analysis was prompted by a curiosity to know what information or even secrets might be locked within the seemingly invisible, micro worlds of the dust. While such methodological differences (between the theoretical and largely poststructuralist, and the scientific and microscopic) might seem to be incompatible in some respects, they also speak directly to one another (particularly on the topic of the abject, as I will demonstrate). Samuel Chambers’s use of fugitive theory as an attempt to rethink cross-disciplinary interaction and exchange also provides an important framework for thinking about methodological interdisciplinarity, as he insists on “contrapuntal relations between and among disciplines” as central to research practice (2006: 22).

Chambers writes that “theory must be considered in a significantly less linear way than has traditionally been the case” (2006: 22) – an idea that resonates strongly with Deleuze and Guattari’s non-hierarchical, rhizomatic approach. In implementing fugitive theory, Chambers argues that “one will deliver to other fields as much as one takes from them”, making it in a sense a more ethical exchange (2006: 30). One might deduce from Chambers’s argument that one seeks refuge in various, sometimes contradictory theories/methodologies in order to address complex problems/issues. Linking the archival field with scientific and visual enquiry, one might suggest, can then be understood as a possible means to put fugitive theory into practice.

The scientific and the visual, on the other hand, are no strangers to one another. In the book Brought to light: Photography and the invisible 1840-1900, Corey Keller writes that the camera, including telescopes and microscopes, is a “powerfully modern tool for scientific observation” (Keller, 2008: 20). One major reason Keller gives for this statement is the camera’s or microscope’s ability to make invisible phenomena visible (Keller, 2008). These looking devices allow us to see beyond the threshold of immediate perception.

---

57 Chambers, with specific reference to cultural politics, suggest that practice “turns into the application of theory” and that fugitive theory “can travel between fields, genres, or disciplines” (2006: 23). Chambers goes further to encourage the erosion of disciplinary borders. Through my own study and the amalgamation of scientific and visual enquiry in the archival field, I too am suggesting that these borders can be lifted in order to explore one’s subject matter through a multiplicity of lenses.

58 From the inception of photography in modern society problems and contradictions regarding photography’s unique relationship to the truth, nature and the visible world arose (Keller, 2008).
With such a conceptual framework in mind, I set off on my journey of visually analysing the collected dust samples.

The analysis process started with the preparation of the samples by cutting and applying small strips of double-sided carbon tape onto 12X3mm aluminium stubs — see Figure 18.

I then used a tweezer and an NT cutter blade to extract and separate dust clusters or particles from each other — see Figure 19. For one sample I carefully extracted a grey hair, for another a wing of an insect from my container filled with dust. I created a total of nine samples — see Figure 20 — most of which were idiosyncratic selections, as I was adding more dust to emptier samples or extracting from others that had open areas. One of the conditions for creating a good sample (that is, to guarantee that the sample is readable by the computer program) is to ensure that the sample is level and not too thick. From here all nine samples were transported into the S150A Sputter Coater\(^59\) that added a layer of pure gold over the specimens — see Figure 21. The layer of gold applied over the samples is too fine to see with the naked eye. Professor Teri Odom from the Department of Chemistry at Northwestern University Illinois explains that:

SEM imaging involves bombarding a material with an electron beam, the surface of the sample will accumulate charge if the electrons are not allowed to escape from the surface via a conductive path. If there is no such path, the image formed by the SEM will be very poor. Charging can also lead to excessive heating of the sample, causing material degradation. Insulating and semiconducting materials, i.e. ceramics, polymers, and organics, should be coated with a conductive material to prevent surface charging. Usually specimens are coated with either a metal or carbon (Chemgroups.northwestern.edu 2016).

After the application of the gold (Au) coating, the samples are ready to be transported into the Carl Zeiss\(^60\) SEM — see Figure 22. The microscopes attached to the computer, known as MERLIN\(^61\) — see Figure 23 — have two monitors from where the microscopic view is displayed.

---

59 Sputter coating is the standard method for preparing non-conducting or poorly-conducting specimens prior to observation in a scanning electron microscope (Quorumtech.com 2016).

60 Scanning Electron Microscopes (SEM) works as follows: “(SEM) scans a sample with a focused electron beam and deliver images with information about the samples' topography and composition. CSEMs (conventional SEMs with a thermic electron source) and FE-SEMs (field emission SEMs with a field emission electron source) from Zeiss deliver high resolution surface information and superior materials contrast” (Zeiss 2016).

61 The MERLIN with the GEMINI II column “combines ultra-fast analytics, high resolution imaging using advanced detection modes, and future assured configuration flexibility on one single system. Thanks to the pre-aligned GEMINI II optics imaging setting such as voltage or probe current can be seamlessly adjusted across orders of magnitudes to match your application and sample with next to no need for
This is where the process became exciting, as it was with this perspective that the samples could be viewed in depth, being magnified up to 300 000 nanometres, one at a time from various angles. Here one can spend hours scrolling through the imagery, magnifying these pictures endlessly and selecting areas for chemical composition analysis. The MERLIN compiles the chemical composition analysis automatically; from here the data are saved onto an Excel sheet – see Figure 24.

The data results from the analysis revealed, as mentioned before, the chemical composition as selected on the screen of a specific ‘spectrum’ point on the sample – see Figure 25. From a single sample one can make multiple selections, as each point can reveal something different. The data of my samples revealed that the majority of the dust contains organic material, such as small particles of sand (feldspar, quartz and pyroxene) and fragments of insects, twigs and leaves, amongst other things. Organic material’s chemical composition, though possibly heterogeneous and intricate in nature, would in oversimplified terms consist mainly of carbon (C), oxygen, (O) and trace amounts of nitrogen (N) and chlorine (Cl). Carbon and oxygen are two elements that are present in all of the samples. The data also revealed the presence of sulphur (S) in most of the chemical compositions, which can possibly be ascribed to the chemical breakdown and deterioration of the archival material.

The report from the CAF lab describes one of the samples – see Figures 25 and 26 – as follows:

The samples were analysed using backscattered electron images concurrently with EDS\textsuperscript{62} (Energy Dispersive X-Ray Spectroscopy). The results of the electron and X-Ray analysis indicate the sample was made up of the following phases: paper, organic material and inorganic mineral phases. The paper material makes up the largest portion of the phases present in the sample. The chemical analysis of the various paper phases show spectral signatures of Sulphur and Chlorine which indicate the presence of these elements as a constituent of these phases or as elements occurring on the surface realignment. Even novice users will enjoy optimum results. System optimization for high current density, probe currents up to 300 nA, and superior resolution at high beam currents, guarantees fast results in nano-analytics. Receive maximum information from your sample with parallel on-axis in-lens secondary electron (SE) and energy selective backscattered (EsB) detection capable of identifying smallest differences in materials composition" (Zeiss 2016).

\textsuperscript{62} EDS (Energy Dispersive X-Ray Spectroscopy) spectrum is included in the results. The other fragments were too small for accurate quantification by EDS. The analysis indicates that the fragment contains the elements silicon, oxygen, sodium, aluminium, calcium and potassium. The peak height (Y-axis) is proportionate to the number of X-Rays counted by the detector and represents X-Ray energy at which the X-Rays are counted. The energy of X-Rays emitted by atoms is characteristic of a particular element. The X-ray counts and energies are quantified using the Oxford Aztec software.
of these phases. Other highly decomposed phases which have the following morphological features, (you can also describe the morphology in the caption to the BSE image) have spectral signatures which indicate the presence of the following elements C, Si, Fe, Ca. Organic material is also observed in the samples. These phases are identified by the morphology which are dominantly consistent with the morphology of insect body parts. The chemical signature of these phases are also consistent with typical organic material with high carbon and oxygen spectral peaks. Small mineral phases are observed, predominantly feldspar (Si, Al, K, Na) and quartz (Si, O) with some minor silicon and magnesium-rich mineral phases (Si, Mg) observed. These are typical constituents of common aerosols (CAF 2016).

Such results and information are thus helpful to an archival collection if it becomes part of an archivist’s practice to conduct meticulous particle analysis, as is the case in the National Archives in London (discussed in Chapter One). To be of use, the sampling and analysis ought to become routine practice in the archival space. At this stage the dust analysis confirmed what we had already known, that there is dust in the archive, particles consisting of heterogeneous matter, and that the archive is deteriorating at an alarming rate.

The analysis results ultimately leave one with a list of elements accompanying the images – see Figure 26. Such lists of elements and chemical compositions can be considered to be another form of (or part of) the archive, where various other lists already exist and are in the process of being created. This variety of lists, including sorting lists, catalogues, inventories, digital file lists and now also these lists produced by the scientific analyses, all provide quantifiable information that allow various levels of access to the collection. Umberto Eco writes in *The Infinity of Lists* that:

> We seldom give definitions by essence, but more frequently by lists of properties. And this is why all the lists that define something through a non-finite series of properties, even though apparently vertiginous, seem to be closer to the way in which in everyday life (and not in science departments) we define and recognize things (2009: 221).  

---

63 Eco notes that the model of definition by properties relates to what Deleuze and Guattari calls a rhizome (2009: 238) and that “asemantic representation by essence presupposes as a background a tree of the genealogical type, a series of embedded classes and subclasses,” thus resulting in hierarchical structuring (2009: 231). Lists in the archive, and particularly in the Ben Segal collection where Segal has also created multiple lists of his own, can be of great value when approaching the archive in terms of rhizomatic thinking. Ben Segal created many lists, one example in particular is of a tape containing, according to Segal, “the worst songs in the world” – see Figure 29.
However, armed with yet another list, my attempt to reveal the hidden and supposedly invisible within a specific archival collection remains somewhat thwarted. This microscopic viewpoint and its subsequent results reveal another perspective that is, on the face of it, quite obscure and impenetrable. As the images reveal, even a close-up view of the dust samples does not open the archival dust to absolute, final knowledge and empirical control. To some degree, it is not clear what exactly one is looking at when looking at these microscopic images, and the dust remains somewhat mysterious and inaccessible. At the same time, this idiosyncratic view of the Ben Segal dust does in fact add a layer or dimension of visual and textual information to the collection which would otherwise not have been known.

What then is the value of these lists and analysis for the Ben Segal collection in particular? Besides the numerical data, as mentioned before, this specific SEM analysis provided me with scientific imagery/visuals that adds to (as well as performs, so to speak) my understanding of the abject. One of the characteristics of the abject that is highlighted in this visual/microscopic reading of dust is that the abject simultaneously fascinates and repels. As Kristeva writes: “It beseeches, worries, and fascinates desire … Unflaggingly, like an inescapable boomerang, a vortex of summons and repulsion places the one haunted by it literally beside himself” (1982: 1). This paradox of being fascinated, drawn in by what we are or often repulsed by is what these images encapsulate. To me, the value of these images lies in the excess that they communicate, their representation of that which cannot be controlled or properly known. Kristeva goes further to write that the abject “draws me toward the place where meaning collapses” (1982: 2). Perhaps finding or searching for further meaning in the dust is as forlorn an endeavour as searching for ‘truth’ in these fragments.

Looking at these microscopic images of the dust – see Figures 27 and 28 – as fascinating and detailed as they might be, it becomes evident that they constitute layers and levels of understanding and visibility that are not readily accessible. As seen in Figure 25, these images are black and white, and not in the full colour range that these samples, in reality, might possess.\(^64\) Besides the absence of possible colours in these sampled images, the shapes and forms of the particles are indiscernible. Even though the analysis reveals what the chemical compositions of the areas are, the concepts nitrogen or oxygen, for example, do not have an identifiable shape. Once again, the actual ‘what-it-is-ness,’ as Plotz’s comment in the previous section explained, does not pertain to anything specific or knowable.

\(^{64}\) The specific machinery/programs used in the SEM analysis only provides a black and white view. There are other microscopic visualizations that provides full colour images. Unfortunately, I did not have access to such equipment.
Excess thus reigns, both within the dust samples and images as well is in the archive. While the dust analysis might serve as an attempt to impose order, it also point towards yet another way of looking and reading that can never be complete or comprehensive. On some level my analysis of the dust can be regarded as an attempt to give form and shape to the dust in its chaotic form. At the same time such a practice of giving shape, which is an archival endeavour, always works with that which is too much and cannot be controlled or tamed, be it through lenses and photographs, or the creation of data, lists and categories.

4.4) A close reading of dust

The dust analysis has allowed a view of the dust that would not have been possible without 21st-century technology, such as scanning electron microscopy (SEM). A close reading of dust through the lens of a microscope, resulting in riveting visuals, has constructed a distinctive view of the Ben Segal collection. What started out as an exploration of the insignificant, the fragmented ruins of a collection, developed and unfolded into a variegated view of this collection.

Ernst van Alphen states that:

Collecting … is ‘the imaginative process of association turned material.’ Meaning production is no longer performed automatically and unconsciously but it is ultimately a form of association, that is, a form of connecting and joining together (cited in Holly & Smith, 2008: 66)

The inclination to search or aim for objectivity is thus an attempt to find coherence within the chaotic. Van Alphen goes on to say that the act of collecting and archiving, introduces “meaning, order, boundaries, coherence, and reason into what is disparate and confused, contingent and without contours” (Holly & Smith, 2008: 66). These attempts to close off, as we have seen in the writings of Kristeva on the process of abjection, are a necessary and important aspect in the process of subject formation, and therefore also of any specific archive or collection.

In my reading of the Ben Segal collection and dust analysis, I collected and organised that very border, and have consequently attempted to make sense of that which will always
escape meaning and order. The questions asked might not lead to direct answers, yet it is the very questioning that destabilises notions of truth and objectivity.

Undoubtedly, the visualisation resulting from the dust analysis is unexpected and, as William Myers writes in Bio Art: Altered Realities, “often these images of biology have unmistakable aesthetic qualities: contrast, variation, intricacy, and fractal-like repetition” (Myers, 2015: 148). The effects of these images “have long served to illuminate concepts and exercise imaginations” as visualisations alter “perspective and, much like figurative language, highlight similarities or patterns where none had seemed to exist, and form bridges of meaning” (Myers, 2015: 148). As Deleuze and Guattari noted, connections are made by given assemblages, and as assemblages emerge from heterogeneous matter, these connections have endless possibilities, such as a list as a result of the analysis – see Figure 26.

The physical effects of the dust ultimately deconstruct the archive/archival content. The objects, materials or structures wane over time, yet the chemical structures remain or form new connections leading to new possibilities and effects, as structures of materials “determine physical properties, reactions with other components of the biosphere, and response to the various sources of energy” (Mills & White, 1987: x). Endless processes of becoming are created, with material taking on new forms and breaking down again.

The association of the scientific with the notion of certainty is thus particularly curious, as “it is clear that the more we seem to know, the more there remains to know, and the less things are knowable, graspable, or certain” (Kreamer et al., 2008: 357). Through my own process of analysing the dust in the Stellenbosch University SEM lab, I have found the scientific processes speculative. One such example is the preparation of the specimen, as much of this process remains random. Much is left to chance, specifically the particles selected from my sample which is placed onto the mounting disk for analysis – see Figures 18 and 20.

At the end of the process, where the results show the chemical compositions of the data analysed by the computer, consisting of the particles selected and placed onto the specimen, the theorisation of this data is speculative, to some extent. As I am not a scientist, my own interpretation and use of these specific scientific modes of analysis is ambiguous for various reasons. Though the results of the analysis were clear and specific, they were to some extent incomprehensible to me, which would not be the case for trained scientists and scholars. The visual results of the analysis thus left me with remnants that I could not immediately decipher.

By engaging with Kristeva’s work on the abject, my own ambiguous reading of the analysis process might pertain to the relationship of the semiotic and the symbolic working together.
simultaneously; my reading could, however, also be understood as the possibility of connections to be made when hierarchical thinking is set aside, thus connections being made from fragments, in the process of theoretical, visual and scientific enquiry. This process, my own close reading of the dust, is thus encapsulated by the employment of both the microscopic and scientific reading as well as the theoretical and poststructuralist reading in order to look at complex material. The extension of microscopic analysis thus encourages my own close reading of the dust.

In The Big Archive: Art From Bureaucracy Sven Spieker writes that:

> Chance is organized, yet its precise morphology can be detected only by accident (literally). The archive does not give access to history: it is, or aims to be, the condition of historicity itself. The archive therefore is not simply the departure, a cipher from the condition of innovation; it gives a name to the way in which the new is also a return, an iteration in the true sense of that word (2008: 174).

We attempt to navigate history through ordering and following rules considered to be the most accurate in order to access the somewhat inaccessible, at least inaccessible in the sense that we cannot have a comprehensive view of history. Through chance encounters, as Spieker mentions, we stumble across a fragment that takes us into unexplored territory. These chance encounters might not always lead to something valuable or significant; nonetheless, we might find value along the way which might lead to new or further discoveries. Even if we then come to organise and categorise in a given way, whilst our thinking remains open and at the ready for the possibilities of connections to be drawn where we might not expect, and if we vehemently question given categorisations, new understandings of a given past might emerge; even possibly from the dust.

The close reading of the dust was developed and bolstered by the microscopic analysis, a close reading in its own right. My encounter with the dust was initiated by chance and has, along the way, led to multiple new exit or entry points still open for discovery. These journeys, guided by the dust, will be summarised in the concluding chapter.
CHAPTER FIVE: CONCLUSION

It is at work everywhere, functioning smoothly at times, at other times in fits and starts. It breaths, it heats, it eats. It shits and fucks...Everywhere it is machines – real ones, not figurative ones: machines driving other machines, machines being driven by other machines, with all the necessary couplings and connections. An organ-machine is plugged into an energy-source-machine: the one produces a flow that the other interrupts (Deleuze & Guattari, 1984: 1).

As this study maintains, the collector is a gathering machine, the archivist and scholar a meaning-making machine and, perhaps then, the archive can be viewed as a dust-making machine.

In my own attempts to conduct a close reading of the dust found in the Ben Segal collection, I focused on the visibility and invisibility of the dust, and what it might mean or reveal about Ben Segal's own compulsion to archive and collect. Consequently, my intention was to explore notions of significance and insignificance in relation to archival structures, in particular the immanent hierarchical structures present in archivisation, and how this might relate to the Ben Segal collection. From this initial aim, various additional concepts emerged, such as discussions on objectivity and subjectivity, and how they relate to the role of the archivists and scholars as the keepers of objects from the past. Through the employment of poststructuralist philosophical theories, such as Deleuze and Guattari’s rhizomatic theory and Julia Kristeva’s theory of abjection, my investigation of archivisation was led by my reading and analysis of dust. This was ultimately achieved by means of both theoretical and practical interventions, the latter of which featured visual/scientific modes of enquiry. The results of these modes of enquiry revealed that the dust as object (be it from a theoretical or practical perspective) is difficult to access and, like the very concept of ‘the abject’, the visual results stemming from the project described in Chapter Four somehow escapes meaning.

In my own research project, the curiosity or desire to know and see has been a key motivator – a desire to see the archival content, as much seemed hidden from me as a result of the excessiveness, the chaotic and messy nature of the Ben Segal collection. The process of making the hidden visible, of uncovering as well as confronting blindness, has been difficult as, even with the employment of visual and scientific analytic methods, the dust remained somewhat impenetrable.
This notion of the inaccessibility of or partial access to dust – to “a sliver of a window into a process” as Verne Harris (2000: 22) notes – also embodies the limits of the human subject’s own ability to know. At the same time, such archival slivers demonstrate that nothing is neutral, impartial or objective, since everything is “shaped, presented, re-presented, symbolized, signified, signed, constructed by the speaker,” including the role and effects of archivists and scholars, as producers and shapers of the past (Cook, 2001: 7). As I have argued, in line with poststructuralist thinking on the subject, there is no single narrative but rather multiple narratives and histories with infinite purposes and even possibilities (Cook, 2001).

Deleuze and Guattari’s rhizomatic theory also supports this notion, as rhizomatic thinking vehemently questions hierarchical thinking, which is rampant within archival structures. Through the open-ended nature of rhizomes, driven by the desire towards production and change, rhizomatic theory has proven to be a possible solution towards transforming or ‘refiguring’ archival spaces. Achille Mbembe argues that we are presented with pieces of time through archived documents to be assembled, and “a montage of fragments thus creates an illusion of totality and continuity” (cited in Hamilton et al., 2002: 21). At the same time, the concept of the rhizome suggests that there are various ways of thinking and many truths; a single multiplicity (Sutton & Martin-Jones, 2008: 4, 5). The notion of a single multiplicity in relation to non-hierarchical thinking is thus valuable to archival collections, such as the Ben Segal collection where, amongst all the ‘stuff,’ there are indeed significant items to be found in order to unlock or access parts of South African music history. If it was not for the Ben Segal’s excessive impulse to collect, the hidden voices, stories and histories might not have the possibility of being revealed.

For this reason, the application of rhizomatic thinking is essential as a unique and unconventional collection requires an idiosyncratic approach. Rhizomatic thinking potentially produces unique results and, with each rhizomatic process being different from another, the notion of totality and ultimate historical truth within an archive can be creatively contested. One is thus left with partial aspects, fragments, ruins – dust – out of which to construct but one in many narratives of a given history.

Be it in Freud’s (1920) writing on the ‘death drive’ or Derrida’s ‘archive fever’ (1995), the need and desire to collect and guard knowledge is exemplified by objects slowly deteriorating and turning into dust. As I have explored, without the archive there can be no archival dust. There can be no collection without the threat of destruction and decomposition, with erosion and dust becoming the necessary drive, of sorts, that actually encourages the preservation of rare and fragile objects. The dust in itself can thus be regarded as valuable
insofar as it is a material trace of the very process that fuels archivisation. Dust and archives are tied together in a mutual relationship in which they simultaneously work with and against one another.

Yet, since the dust does in fact pose a serious threat to the items within the collection, it cannot merely be tolerated or left as is. As mentioned in the introductory chapter, my own collecting of dust can arguably be regarded as a creative solution to the imminent threat that dust poses to a collection. Removing the dust from where it is found and placing it in some form of ‘storage’ reduces its effect on a given collection to some extent. As I have also mentioned, this creative solution soon turned into a curiosity to try and see what lies within the smallest components of the archive.

This curiosity inspired my own creative application of various close reading practices – first a theoretical reading, in which I drew on a range of texts and theories that all pertain to archives, collecting, dust, as well as structures (such as rhizomes) and reactions (such as the abject) that relate to these areas. Secondly, I tried to follow the journey of dust into the domain of the visual and microscopic, where the seemingly invisibly became visible. This, I argue, can be seen as another form of close reading. As such, my own investigation used dust as a conceptual and physical matter in order to draw on a range of methodologies, all of which centre on the idea that something (be it a text or an object) can be intimately studied or ‘read’. What I have found through the process and combination of these practical and theoretical readings of the dust in the Ben Segal collection is that dust is a very difficult object to really ‘know’. In my attempt to ‘penetrate’ the abject domain of dust by means of both practical/visual and theoretical enquiries (through the application of different lenses, so to speak), the dust yet again escaped meaning and was revealed to be somewhat unexplainable and difficult to penetrate/access. When looking at this particular phenomenon, one can argue that meaning is ultimately not produced solely from the objective reading of objects, but rather from a multiplicity of readings. From subjective influences to interpretive data, archives are storehouses of infinite potential for the production of the new, as well as the reinterpretation of the past, whilst possibly embracing multiple entry points leading in many different directions.


McCracken-Flesher, C. 2015. Anxiety in the Archive: From the Antiquary to the Absent Author. *Scottish Literary Review*, 7(2): 75-94


ADDENDUM A
LIST OF FIGURES

Figure 1: Alesha Bredell, Dust on Book in the Ben Segal collection. (2015). 3

Figure 2: Klaus Pichler, Bed Articles Store. (2015). 6

Figure 3: The National Archives (UK), Blue Wool Dosimeter (Dust Monitor) at The National Archives. (2014). 7

Figure 4: Sean Miller. Art Museum Dust Microscopy. (2009). 7

Figure 5: Karel Nel, Seam. (2002). 7

Figure 6: Alesha Bredell, Comic Book in the Ben Segal Collection. (2015). 12

Figure 7: Alesha Bredell, MAD Magazine in the Ben Segal Collection. (2015). 12

Figure 8: David Marks, Ben Segal in his Lounge. (2009). 15

Figure 9: Alesha Bredell, Taibe Segal. (2015). 15


Figure 11: Alesha Bredell, James Bond 007 Complete Collection. (2015). 24

Figure 12: Alesha Bredell, Box with DVD's. (2015). 24

Figure 13: Alesha Bredell, Ben Segal’s Glasses. (2015). 62

Figure 14: Alesha Bredell, Insect found in the Archive. (2015). 65

Figure 15: Alesha Bredell, Rash from the Dust. (2015). 70

Figure 16: Alesha Bredell, Dust on Clothes. (2015). 70

Figure 17: Alesha Bredell, Excel List of Movie Titles. (2015). 75

Figure 18: Alesha Bredell, Aluminum Stubs with Double-sided Carbon Tape. (2016). 77

Figure 19: Alesha Bredell, Selecting the Dust Sample. (2016). 77

Figure 20: Alesha Bredell, Aluminum Stubs with Nine Dust Samples. (2016). 77
Figure 21: Alesha Bredell, Sputter Coater. (2016).

Figure 22: Alesha Bredell, Zeiss SEM. (2016).

Figure 23: Alesha Bredell, Merlin Screens. (2016).

Figure 24: Central Analytical Facility, Data Excel Sheet. (2016).

Figure 25: Central Analytical Facility, SEM Image showing Spectrum points (16-24). (2016).

Figure 26: Central Analytical Facility, Chemical Elements Data. (2016).

Figure 27: Alesha Bredell, Cassette Tapes. (2016).

Figure 28: Alesha Bredell, Grey hair quadiptych. (2016).

Figure 29: Central Analytical Facility, Insect parts. (2016).
Figure 1: Alesha Bredell, *Dust on Book in the Ben Segal collection*. (2015). Digital Photograph, HYMAP, Stellenbosch. (Bredell 2016).
Figure 4: Sean Miller. *Art Museum Dust Microscopy.* (2009). Digital Photograph, Collection: Musée du Louvre, Paris. (Kelly Cobb & Sean Miller 2010). viewed 15 March 2015,
Figure 6: Alesha Bredell, Comic Book in the Ben Segal Collection. (2015). IPhone Photograph, HYMAP, Stellenbosch. (Bredell 2016).
Figure 7: Alesha Bredell, *MAD Magazine in the Ben Segal Collection.* (2015). IPhone Photograph, HYMAP, Stellenbosch. (Bredell 2016).
Figure 8: David Marks, *Ben Segal in his Lounge*. (2009). Digital Photograph, (Marks 2009).
Figure 9: Alesha Bredell, Taibe Segal. (2015). IPhone Photograph, HYMAP, Stellenbosch. (Bredell 2016).
Figure 12: Alesha Bredell, Box with DVD’s. (2015). IPhone Photograph, HYMAP, Stellenbosch. (Bredell 2016).
Figure 14: Alesha Bredell, *Insect found in the Archive* (2015). IPhone Photograph, HYMAP, Stellenbosch. (Bredell 2016).
Figure 15: Alesha Bredell, *Rash from the Dust.* (2015). IPhone Photograph, HYMAP, Stellenbosch. (Bredell 2016).
Figure 16: Alesha Bredell, *Dust on Clothes.* (2015). IPhone Photograph, HYMAP, Stellenbosch. (Bredell 2016).
Figure 17: Alesha Bredell, *Excel List of Movie Titles.* (2015). IPhone Photograph, HYMAP, Stellenbosch. (Bredell 2016).
Figure 18: Alesha Bredell, *Aluminum Stubs with Double-sided Carbon Tape.* (2016). IPhone Photograph, Central Analytical Facility, Stellenbosch. (Bredell 2016).
Figure 19: Alesha Bredell, Selecting the Dust Sample. (2016). IPhone Photograph, Central Analytical Facility, Stellenbosch. (Bredell 2016).
Figure 20: Alesha Bredell, *Aluminum Stubs with Nine Dust Samples*. (2016). IPhone Photograph, Central Analytical Facility, Stellenbosch. (Bredell 2016).
Figure 21: Alesha Bredell, *Sputter Coater.* (2016). IPhone Photograph, Central Analytical Facility, Stellenbosch. (Bredell 2016).
Figure 22: Alesha Bredell, Zeiss SEM. (2016). IPhone Photograph, Central Analytical Facility, Stellenbosch. (Bredell 2016).
Figure 24: Central Analytical Facility, *Data Excel Sheet*. (2016). Excel Document Sample, Central Analytical Facility, Stellenbosch. (Bredell 2016).

<table>
<thead>
<tr>
<th>Result Type</th>
<th>Statistics</th>
<th>N</th>
<th>O</th>
<th>Na</th>
<th>Mg</th>
<th>Al</th>
<th>Si</th>
<th>S</th>
<th>Cl</th>
<th>K</th>
<th>Ca</th>
<th>Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max</td>
<td></td>
<td>11.69</td>
<td>53.52</td>
<td>2.64</td>
<td>7.53</td>
<td>3.74</td>
<td>17.23</td>
<td>5.24</td>
<td>3.63</td>
<td>2.58</td>
<td>10.24</td>
<td>6.44</td>
</tr>
<tr>
<td>Min</td>
<td></td>
<td>0</td>
<td>42.18</td>
<td>1.06</td>
<td>6.08</td>
<td>0.61</td>
<td>11.35</td>
<td>4.23</td>
<td>0.42</td>
<td>1.35</td>
<td>0.65</td>
<td>0.94</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>5.04</td>
<td>50.05</td>
<td>1.85</td>
<td>6.6</td>
<td>2.17</td>
<td>14.23</td>
<td>4.77</td>
<td>2.03</td>
<td>2.26</td>
<td>5.44</td>
<td>3.69</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td></td>
<td>8.26</td>
<td>12.26</td>
<td>1.11</td>
<td>1.02</td>
<td>2.22</td>
<td>4.15</td>
<td>0.67</td>
<td>2.27</td>
<td>0.45</td>
<td>6.78</td>
<td>3.69</td>
</tr>
</tbody>
</table>

Spectrum Label: Spectrum 4

<table>
<thead>
<tr>
<th>Spectrum 4</th>
<th>paper heart</th>
<th>N</th>
<th>O</th>
<th>Na</th>
<th>Mg</th>
<th>Al</th>
<th>Si</th>
<th>S</th>
<th>Cl</th>
<th>K</th>
<th>Ca</th>
<th>Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td>0</td>
<td>11.69</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>42.18</td>
<td>53.52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Na</td>
<td>2.64</td>
<td>1.06</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mg</td>
<td>6.08</td>
<td>7.53</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al</td>
<td>3.74</td>
<td>0.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Si</td>
<td>17.23</td>
<td>11.35</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td>5.24</td>
<td>4.29</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cl</td>
<td>3.63</td>
<td>0.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K</td>
<td>2.58</td>
<td>1.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ca</td>
<td>10.24</td>
<td>0.65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fe</td>
<td>6.44</td>
<td>0.94</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 25: Central Analytical Facility, *SEM image showing Spectrum points (16-24)*. (2016). Excel Document Sample, Central Analytical Facility, Stellenbosch. (Bredell 2016).
Figure 26: Central Analytical Facility, *Chemical Elements Data*. (2016). Excel Document Sample, Central Analytical Facility, Stellenbosch. (Bredell 2016).
Figure 27: Alesha Bredell, *Cassette Tapes.* (2016). IPhone Photograph, HYMAP, Stellenbosch. (Bredell 2016).