

Contemporary Jewellery as Gnosis:
Interpreting alchemy through contemporary jewellery objects

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Declaration

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April 2022

Abstract

This is a practiced based enquiry that concerns itself with the interpretation of the ideas of alchemy through the creation of a range of contemporary jewellery pieces. This study consists of both practice and theory, of which this thesis is the theoretical component.

The alchemical dream was centred around the transmutation of matter into gold, and this remained a central goal in a field of study that spans centuries. Alchemists researched the improvement of matter, and themselves, through formulating theories and applying this in practice. However, the term, alchemy, is difficult to define. Alchemy can be interpreted in several ways, such as pre chemistry, a philosophy of nature or an interpretation of analytical psychology. This depends on the perspective from which it is viewed, be it positivistic, postmodern or anthropological, making it a term that could be seen to have multiple meanings or interpretations.

As the theoretical component of this research, this thesis investigates alchemy from a broad historical perspective. By researching the way information and knowledge could be interpreted through the artefacts that the artist creates, this thesis establishes practice-based research as the correct methodology for this inquiry within the field of contemporary jewellery in a postmodern setting. Through the examination of the work of Ruudt Peters, Inge Marais and Catherine Ferreira, contemporary jewellery is established as a platform from which the concepts of alchemy could be investigated.

This study shows that the practice of contemporary jewellery can be utilised to visually communicate complex terms such as alchemy and its philosophies through the creation of a collection of jewellery.

Keywords: practice-based research, alchemy, contemporary jewellery

Opsomming

Hierdie is 'n praktykgebaseerde navorsingsprojek wat gefokus is op die interpretasie van die idees wat binne die studie van alchemie voorkom deur 'n reeks kontemporêre juweliersware te skep. Die navorsing bestaan uit beide praktiese en teoretiese komponente, waarvan hierdie tesis die teoretiese komponent vorm.

Die alchemistiese droom was gefokus op die verandering van algemene beskikbare materiale na goud, en dit was die sentrale doelwit van hierdie studieveld deur die eeue heen. Die alchemiste het geformuleerde teorieë verken en prakties toegepas in die strewe na verbetering van materiale en hulself. Die term alchemie is moeilik om te definieer en kan op verskeie maniere geïnterpreteer word. Voorbeelde hiervan is 'n pre-chemie, 'n filosofie van die natuur of 'n interpretasie van analitiese sielkunde. Die definisie sal bepaal word deur die perspektief waaruit die studieveld beskou word soos byvoorbeeld positivistiese, postmodernistiese of antropologies, waar die aanslag verskeie betekenis of interpretasies as uitkoms veroorsaak.

Vir die teoretiese komponent van die navorsing word alchemie vanuit 'n breër historiese perspektief ondersoek. Hierdie tesis gebruik praktykgebaseerde navorsing as metodologie vir hierdie ondersoek binne die veld van kontemporêre juweliersware en binne 'n postmodernistiese omgewing om die voorwerpe wat kunstenaars skep te ondersoek en om die manier waarop inligting en kennis geïnterpreteer kan word te bepaal. Die konsepte en idees van alchemie word ondersoek teen die agtergrond van die kontemporêre juweliersware beweging deur te kyk na die werk van juweliers Ruudt Peters, Inge Marais en Catherine Ferreira.

In hierdie studie word die kontemporêre juweliersware beweging gebruik om komplekse terme soos alchemie en sy verskillende filosofieë visueel te kommunikeer deur die skepping van 'n reeks juweliersware.

Sleutelwoorde: praktykgebaseerde navorsing, alchemie, kontemporêre juweliersware

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Introduction

Background

Since 1996, from the age of sixteen, I have been designing and making jewellery. For the past 19 years, I have been involved in the local South African commercial jewellery industry, specialising in manufacturing once-off pieces using high-value materials. I make a living by changing my customers' old or inherited jewellery into new and remodelled pieces that fulfil their current requirements. In the process, I mostly change the shape and design of malleable metals.

After working as a goldsmith from 2002 until 2012, I decided to step away from personally manufacturing jewellery at my workbench in order to coordinate and run my jewellery business. It took me five years to realise how unhappy this made me. After a great deal of internal reflection, I came to realise that I need to create and craft the artefacts with my hands. My enrolment in a Master of Visual Arts is a continuation of a journey in search of artistic inspiration through making objects.

I started my master's degree in 2020, the year that saw global changes due to the outbreak of the COVID-19 pandemic during 2019/2020. The South African government enforced a hard lockdown in the form of self-isolation, with severe restrictions on citizens' movements and activities. Restrictions were lifted by introducing permitted activities incrementally. I mention this as it had a life-changing effect on my work and the way that I conduct my creative research.

For me, the lockdown created an interesting set of restrictions or obstructions in the form of very limited available materials and limited access to certain processes and machinery. This resulted in complete self-reliance and autonomy, along with self-revelation. Through years of repetitive use of my tools, I have an inherent and implicit knowledge of their function and they have become almost like extended body parts. My workshop functions as an extension of myself. I think through my tools; their specific function is no longer something I am consciously aware of. During lockdown, it was the first time I had access to both my jewellery and household DIY tools in the same space, simultaneously. Having always had my jewellery workshop separately, in different premises, I derived a great sense of comfort from having all of 'me' in one location.

The lockdown also created the environment in which I started my creative exploration of clay, because it was readily available. What started as an accidental or incidentally available substance, turned out to be the perfect material for my research and investigative process. In retrospect, I realise that I needed a new medium to explore and through which to express myself creatively, as it gave me a chance to observe how a new practice could be integrated with my existing knowledge of metal and jewellery production.

I have always changed the environments and spaces around me. In my domestic environment, I have physically renovated bathrooms and kitchens, extended rooms, and altered my surroundings through gardening. I have installed a variety of jewellery workshops in both South Africa and Zambia, changing my own and others' workspaces.

My interest lies in how we shape and change the world around us. In the hands of an artist, material transforms through manipulation and distortion. Starting as one substance, when taken through certain processes, that material is altered into something different. Although sometimes taken for granted, the amount of control that we as humans have over materials, intrigues me. I am curious about how these processes translate into artefacts.

My enquiry into material change led me to alchemy. For centuries, alchemists have focused on (and been obsessed with), changing base metals into gold. The alchemical notion of turning the common into the precious, captures my imagination, and the transmutation of lead into gold embodies this fascination. Producing new materials and transforming or improving common, everyday materials, form a central theme within the alchemical tradition.

As alchemy was an arcane practice, both through choice and because of the controversy surrounding it, there is a paucity of information on both its practice and motive. The opinion of Ferdinando Abbri is that "a suitable historical perspective is to be based on the study of alchemy as a specific, centuries-old form of knowledge" (Abbri, 2019:39). The history of alchemy makes it difficult to define the practice. Michela Pereira sees medieval alchemy as "the philosophical search for the agent of material perfection by means of the manipulation of base materials" (Pereira, 1999:336).

Karin Pinkus, in her book, *Alchemical Mercury: A Theory of Ambivalence*, explains alchemy as follows:

"Scholars of alchemy tend to take up one of a number of possible positions toward their subject: Either alchemy is premodern chemistry; or it is a spiritual, ritualistic discourse or set of theories; or it is a practice that may or may not have succeeded in the remote past; it is a form of medico-pharmacological manipulation of elements; or it is some combination of the above" (Pinkus 2009:4).

I am interested in how to interpret and present alchemical ideas such as transformation, and the alchemical notion of improving upon nature in my contemporary jewellery¹ practice. I am fascinated with how artefacts could be interpreted to embody information or knowledge.

1. Susan Cohn believes that contemporary jewellery is a movement that started in the 1950s in reaction to badly manufactured mass items produced at the time of the industrial revolution (Cohn, 2012:222). Bruce Metcalf describes it as a practice where concepts are privileged over materiality, function, or social meaning (Metcalf, 1993). For this enquiry, my personal definition of contemporary jewellery is as follows: it is the medium through which I creatively express myself. I see it as a way in which one can consider ideas around fragility, temporality, meaning and how information is contained within artefacts and objects. I discuss the history and definition of contemporary jewellery in Chapter 2

Associate professor for design at Aalto University in Finland, Maarit Mäkelä, believes that

“The making and the products of making are seen as an essential part of research: they can be conceived both as answers to particular research questions and as artistic or designerly argumentation. As an object made by an artist–researcher, the artefact can also be seen as a method for collecting and preserving information and understanding” (Mäkelä, 2007:157).

Parry writes that in the fourth century BC, the ancient Greek philosopher, Plato, made use of the term *gnosis* when writing about the relationship between knowledge and arts and crafts. He referred to *gnosis* as understanding and *episteme* as the term for knowledge (Parry, 2022). William says that the second century saw the word “*gnostikoi*” being used to refer to various Christian groups that understood salvation as “revelation that reawakens knowledge or *gnosis*.” (Williams, 2022). To me, the seemingly intangible idea of *gnosis* speaks of a personal felt knowledge, something that can only be understood once experienced. This understanding then forms part of your being, an inherent knowing that might be recalled when intuitively arriving at a solution. This felt *gnosis* is an individual comprehension of a situation, philosophy, material or process in a specific setting. I believe this *gnosis* guides me in my creative process when I arrive at solutions without being able to explain the process logically.

Against this background, I set out to explore how contemporary jewellery could be utilised to interpret terms with changeable meanings, leading me to the following research question.

Main research question and aims

I investigate multiple ideas in this research, but my central question is:

How can the practice of contemporary jewellery be utilised to explore alchemy as an abstract term with subjective and variable interpretations?

The aims which guide my research are the following:

- Establish alchemy as a term that is subjective and that could be interpreted in multiple ways.
- Reflect how practice-based research within an arts praxis can be used as a method to interpret the concepts of alchemy
- Establish in which ways contemporary jewellery as a praxis can be related to the philosophies of alchemy
- Investigate how contemporary jewellery could be employed to explore and visually communicate the ideas of alchemy.

This thesis serves as the theoretical component of my research; it examines alchemy, practice-based research and contemporary jewellery. I examine the work of three contemporary jewellery artists and explore my personal relationship with the objects that I create. Jewellery has an indexicality² where the social meaning of a piece of jewellery could differ, depending on where it is worn or how it is presented.

Alchemists aspired to do the work of nature, attempting to control materials by manipulating their natural timeline. I am interested in the alchemical notion of transformation, and the temporality of meaning. I specifically wish to explore the way in which these concepts could be presented through the production of contemporary jewellery objects and the presentation of these objects in a gallery space.

Research methodology and theoretical framework

According to Mouton in *How to be successful in your Masters and Doctoral studies*, the different kinds of studies are classified according to the types of questions they are designed to answer. Research methodology encompasses the tools and procedures used to carry out the research (Mouton, 2001:56). In a broader context, this is a qualitative, non-empirical study, exploring theory through conceptual analysis (Mouton, 2001:57). It is a contemplative enquiry supported by the critical reading of relevant literature.

Sharan Merriam states in her article, *Introduction to Qualitative Research*, that:

“The key to understanding qualitative research lies with the idea that meaning is socially constructed by individuals in interaction with their world. Instead, there are multiple constructions and interpretations of reality that are in flux and change over time. Qualitative researchers are interested in understanding what those specific interpretations are at a particular point in time and a particular context” (Merriam, 2002: 3-4).

The methodology for this enquiry is practice-based research. Writer and researcher, Linda Candy, and digital artist and researcher, Ernest Edmonds, co-authored the article, *Practice-Based Research in the Creative Arts: Foundations and Futures from the Front Line*. In this article they say: “Stated simply, practice-based research is an original investigation undertaken in order to gain new knowledge, partly by means of practice and the outcomes of that practice.” (Candy & Edmonds, 2018: 63). Rebecca Lyle Skains in her article, *Creative Practice as Research*, believes that the analysis of art, film and literature can be used as a viewpoint from which to study culture and humanity, and to gain knowledge of how these works relate to the society that produces them. Practice related researchers move these investigations into a

2. Indexicality refers to expressions where the meaning is dependent on the context within which it is used; for example you, me, today or tomorrow (Braun, 2017).

private sphere by observing and evaluating themselves in their creative process. This can be seen as a method to study both the process and the product (Lyle Skains, 2018:84). As such I research the epistemology of my contemporary jewellery practice. By gaining an understanding of how meaning is constructed during the process of creating jewellery objects, I make sense of my experiences, and describe this through the theoretical component of this project. Theory and practice are closely related and are interdependent and complimentary processes within the research process. This thesis is articulated by, and integrated with, the practical process of producing a collection of contemporary jewellery pieces that culminates in an exhibition.

A postmodern perspective is applied to this research. In the Preface to the Third Edition of *The Routledge Companion to Postmodernism*, Stuart Sim writes: “one of the best ways of describing postmodernism as a philosophical movement would be as a form of scepticism – scepticism about authority, received wisdom, cultural and political norms and so on.” (Sim 2006: 3). He also writes:

“... and postmodernists are invariably critical of universalizing theories (‘grand narratives’ as the philosopher Jean-François Lyotard termed them), as well as being anti-authoritarian in their outlook. To move from the modern to the postmodern is to embrace scepticism about what our culture stands for and strives for” (Sim 2006: vii).

Postmodernism can be seen as a philosophical viewpoint and as a reaction against the assumptions and values of the modern era, according to Western philosophy. Professor of English and Comparative Literature at the University of Toronto, Linda Hutcheon, writes: “It suggests no search for transcendent timeless meaning, but rather a reevaluation of, and a dialogue with the past in the light of the present” (Hutcheon, 1988: 19). Meaning could be said to be constructed by the society within which it exists, therefore, meanings are changeable, depending on the kind of society. It follows that multiple truths can exist in relation to one subject or object. It also implies that meanings are changeable and could be considered fluid.

As an extension of postmodern thought, posthumanism started in the late eighties. Philosopher, lecturer and professor, Francesca Ferrando, writes that posthumanism supports the perception that the human being is a nonfixed and mutable condition. Science and technology are the main interests of this philosophical concern (Ferrando 2013: 26-27).

“Technology arrives at the posthumanist debate through the mediation of feminism, in particular, through Donna Haraway’s cyborg and her dismantling of strict dualisms and boundaries, such as the one between human and non-human animals, biological organisms and machines, the physical and the nonphysical realm; and ultimately, the boundary between technology and the self” (Ferrando, 2013: 28).

Jay David Bolter believes that: “Donna Haraway (1991) has been a key figure in exploring the porous character of these boundaries on the continuum: machine–human–animal” (Bolter: 2016: 2). Humans and nature co-evolve and are co-constitutive to one another. Thus, man is not master over nature but there is an interdependency. Bolter says that “posthumanism designates a series of breaks with foundational assumptions of modern Western culture: in particular, a new way of understanding the human subject in relationship to the natural world in general. Posthumanist theory claims to offer a new epistemology that is not anthropocentric and therefore not centered in Cartesian dualism” (Bolter 2016:1). Thus, posthumanism removes the human from its position as the most important or central element in existence. It is from this framework that I conduct this research.

Literature review

A selection of informative sources provides the background to the history of alchemy, practice-based research, and contemporary jewellery.

In the field of alchemy, I draw inspiration from Mircea Eliade’s book *The Forge and the Crucible* (1978), to gain a deeper understanding of the spirituality of alchemy. Allen³ in *Myth and religion in Mircea Eliade* described Eliade as one of the world’s most influential historian of religion and interpreter of symbols and myths (Allen, 1998: xi).

“According to Eliade, alchemy was not a rudimentary uncritical science, but a traditional spiritual technique with cosmology, initiation, and soteriology. Although there were physical operations trying to transmute nature, the goal arose from the hierophanization⁴ of matter and included not some scientific conquest of nature, but rather the transmutation and the salvation of the alchemist” (Allen, 1998:138).

Lawrence Principe, a professor in humanities at Johns Hopkins University wrote *The secrets of Alchemy*; I viewed this book as a broad introduction to alchemy and a summary of Principe’s knowledge on the subject. In his review of *The secrets of Alchemy in the Renaissance Quarterly* in 2013, Forshaw summarises Principe’s book clearly. Forshaw writes that Principe covers the history of alchemy in Egyptian times, its development in Arabian countries, and its arrival in the Christian West as well as alchemy’s golden age in the sixteenth and seventeenth centuries.

“He introduces the reader to the two central goals of early modern alchemy: metallic transmutation and pharmaceutical medicine. Principe provides a useful selection of important terms, ingredients used in the laboratory, plus examples of the highly metaphorical verbal

3. Douglas Allen interpreted Mircea Eliade’s work in the book *Myth and Religion in Mircea Eliade*. He is sometimes called the leading authority on Eliade (Allen, 1998: iv).

4. Eliade and Sullivan describe the term “as designating the manifestation of the sacred” and “It refers to any manifestation of the sacred in whatever object throughout history” (Eliade and Sullivan, 2005).

language and visual imagery used to communicate the wide variety of theories and practices involved in the various kinds of alchemy — enlivening the story, too, with instructions, for instance, on how to create a basilisk, talk of the homunculus, and notes on the chemical palingenesis of small birds and plants” (Forshaw, 2013:1006).

Ferdinando Abbri, in *Gold and silver: perfection of metals in medieval and early modern alchemy*, writes that he is interested in the specific history of alchemy without the influence of concerns with regards to the origin of chemistry (Abbri, 2019:39). In my thesis, I look at his discussion of the different perspectives from which alchemy has been viewed and interpreted through the ages.

The production of artefacts or art objects as part of research, necessitates that one looks at the interaction between these articles and the surrounding culture and society. Lambros Malafouris’ book, *How things shape the mind: A theory of material engagement* (2013), offers an archaeologist’s view of how objects and artefacts can be considered an extension of our mind and intellect. Through his Material Engagement Theory, he encourages the dismantling of the boundaries “between internal and external, between the mind, body and the material world” and asks for an understanding of the “cognitive life of things” (Nowell, 2015). He indicates the importance of material culture while studying human cognition. I elaborate on his theories in Chapter 1.3.

In his article, *The art object does not embody a form of knowledge*, Stephan Scrivener explores the claim that “the art object is a form of knowledge since it locates the art object as a central and fundamental component of the knowledge acquisition process” (Scrivener, 2002: 2). I draw on his ideas regarding the position of the art object within research.

To investigate practice-based research, I look to the work of Maarit Mäkelä and Julian Klein. Maarit Mäkelä, in her article, *Knowing through making: The role of the artefact in practice-led research*, looks at how objects can present knowledge. In his article, *What is artistic research?*, Julian Klein explores when, and to what degree, artistic research happens. He discusses research as the desire for knowledge and a not-yet-knowing.

A variety of sources informs the discussion around the origin, definition and function of jewellery from a broader perspective. *The New Jewellery* by Peter Dormer and Ralph Turner is an introduction to what, where and why the contemporary jewellery movement started. Bruce Metcalf is a studio jeweller who has produced jewellery pieces that have been internationally exhibited. He is also a writer with widely published writings on crafts and jewellery (Metcalf, 2021). His article, *On the nature of jewellery*, informs me of his opinion of the function and meaning of jewellery (Metcalf, 1993). I draw on *Unexpected Pleasures: The Art and Design of Contemporary Jewellery*, edited by Susan Cohn, as a reference for contemporary

art jewellery (Cohn, 2012). *Thinking Jewellery: On the Way Towards a Theory of Jewellery*, is a conversation in the form of lectures delivered at a conference and deals with the theory of jewellery from different angles and by different authors (Lindemann & Frier, 2011:9). *On Jewellery: A Compendium of International Contemporary Art Jewellery*, was written by writer, curator and art critic, Liesbeth den Besten (2012). In her book, she reflects on the current tendencies within contemporary jewellery (Den Besten, 2012: 6); My research is informed by her interpretation of the meaning and reading of jewellery. She also provides insights into the work of Ruudt Peters, the contemporary jewellery artist that I reflect on in chapter 2.

A study conducted by Baber et al. (2019), *What the jeweller's hand tells the jeweller's brain: Tool use, creativity, and embodied cognition*, explores how the process of creating jewellery occurs in the area where cognitive creativity and physical performance meet. Along with Piper (2013), they discuss the way that artists engage in the physical process of interacting with materials and how this is a representation of the decisions made by the artist that depends on the information available to them at that specific moment. Beth Legg's (2012) research project, *The materiality of place*, is of value to my understanding of the interaction between the material and myself, my practice and my intuitive creative processes.

Chapter outline

In chapter one, I discuss alchemy from a historical perspective. This discussion establishes the central goal of the transmutation of matter into gold, on both a physical and spiritual level, as a central purpose within the alchemical field. Alchemists researched their subject through both theory and praxis, producing literature and objects. I contemplate how alchemical philosophies were produced and influenced, and how they, in turn, influenced the practical applications within the field. From a postmodern perspective, I establish alchemy as an abstract term with subjective and changeable interpretations. Thereafter, I look at various authors' interpretations of information and knowledge and how they relate this to the objects that artists create. The last section in the chapter concerns itself with practice-based research which also constitutes the methodology of this research. This ascertains that practice-based research can be used as a method to interpret the ideas of alchemy.

In the second chapter, I discuss the meaning of jewellery as a social construct which contributes to group and individual identity. Contemporary jewellery as a movement can be seen as a way for makers to express their ideas. I consider how the practice of contemporary jewellery could be related to that of alchemy, in that both produced research that was concerned with practice and theory. To expand my visual and theoretical vocabulary of how other artists dealt with the ideas of alchemy in their work, I consider how three contemporary jewellery artists incorporated the idea of alchemy into their practice. These artists are Ruudt Peters, Inge Marais, and Catherine Ferreira.

In the final chapter, I examine my practical research to investigate how my contemporary jewellery practice could be employed to explore and visually communicate the ideas of alchemy. I look at how materials influence my creative process. I examine the idea of intuition in my practice and the material transformation that I facilitate within my process in order to relate these ideas to certain notions in alchemy. I discuss the crucible as inspiration in my body of work and look at how three dimensional printing could be related to the ideas of alchemy.

I conclude by reflecting on how the practice of contemporary jewellery can be used in the exploration of the definition of alchemy as a subjective term.

Chapter 1

1.1 Introduction

This chapter starts with a discussion of alchemy, mostly from a historical perspective. It investigates alchemy as seen by Lawrence Principe, Mircea Eliade, Ferdinando Abbri and Karen Pinkus. This discussion allows for insight into the way alchemical philosophies were influenced by the attitudes and ideas of the societies in which they originated, along with the way they conducted their research. The transmutation of matter into gold is a central concern in the field of alchemy and remained so, from ancient and medieval times through to the renaissance and the early modern periods. The alchemical goal of transmutation was researched through practical and theoretical applications.

Thereafter I look at various authors with regards to their thoughts on information and knowledge and how they relate this to the objects that artists create. I research the ideas of postmodern theorist, Paul Lyotard, with regards to information and knowledge. After considering what Stephan Scrivener believes can be expected from an art object, I look at archaeologist Lambros Malafouris's explanation of how information, knowledge and artefacts are viewed through his material engagement theory. Schön(1983) and Cross(1982), inform my opinion with regards to the sites and the role of knowledge in the practice of producing artefacts.

The last section in the chapter concerns itself with practice-based research which also constitutes the methodology of this research. In this chapter, I aim to establish alchemy as a term that could have many possible interpretations, and practice-based research as a methodology that could be used to interpret alchemical ideas as art objects.

1.2 Alchemy

In *The secrets of Alchemy* by Lawrence Principe, the author tries to define what alchemy is. Principe starts his investigation by looking at the origins of alchemy from around the third century BC in Graeco-Egyptian⁵ times. Literature containing recipes to produce imitations of valuable substances, began to circulate. These recipes included instructions on colouring silver to look like gold, or copper to look like silver; making artificial pearls and emeralds; and the production of dyes. At some point, the idea of actually making real gold and silver emerged. If a solution could tinge the surface of silver to look like gold, why shouldn't there be a way to change the metal all the way through? (Principe, 2013:12). A separate stream of thinking was that of Greek natural philosophy. Since the sixth century BC it had questioned: "What is

5. This refers to the period in Egypt's history during which it fell under the influence of Greek culture, following military campaigns by Alexander the Great between 334 and 323 BC (Principe, 2013:12).

matter?” and “How does one thing change into another?” The birth of alchemy was the union of these two traditions, around 300 BC. These philosophies became the basis that guided the practice of alchemy. (Principe, 2013:16). A variety of scholars wrote and practised alchemy in the Mediterranean area from the third century BC until AD 700. After that, alchemy developed extensively in Arabian countries until the fifteenth century. It reached its height in Europe between the sixteenth and eighteenth centuries and declined at the start of the nineteenth century. A renewed interest started in the 1950s, with psychologist Carl Jung reinterpreting it in the realm of analytical psychology (Principe, 2013:12). Principe writes that up until the eighteenth century, philosophical and religious concepts influenced alchemy, turning it into a philosophy of nature that has had an important influence on Western culture. The field of alchemy included a great variety of phenomena apart from chrysopoeia,⁶ but the goal of transmuting a substance into gold or silver remained central and constant through the ages.

It currently flourishes as a contemporary academic subject, with papers and books being written from an ever-increasing number of perspectives, including historical, literary, artistic, cultural, and social angles. Various artist and curators have been inspired by the concept of alchemy and the different parts thereof. A search for the word, alchemy, on a Website like Klinto02 ⁷, results in articles on exhibitions such as: *The Alchemical Egg. Nucleus of a Thoughtful Concept* (Denter, 2017), *The Dream Alchemy* by Yue Tan (Tan, 2020) and *The Alchemy of Contemporary Jewellery* by ELIRD (The Alchemy of Contemporary Jewellery by ELIRD, 2019).

In order to gain a deeper understanding of the spirituality of alchemy, I considered the ideas of the Romanian writer, Mircea Eliade, as espoused in his book, *The Forge and the Crucible*.

“My aim has been to attempt to gain an understanding of the behavior of primitive societies in relation to Matter and to follow the spiritual adventures in which they became involved when they found themselves aware of their power to change the mode of being of substances. It would perhaps have been more worthwhile to study the demiurgic experiences of the primeval potter, since it was, he who was the first to modify the state of matter; these experiences have, however, left little or no trace in the mythological record. I have, therefore, perforce been obliged to take as my starting point, the relationship of primitive man to mineral substances, with special emphasis on the ritualist behavior of the smith and the iron-worker” (Eliade, 1978:7).

Eliade believes that it was the potter that first modified the state of matter, and this motivated a continuation of the use of clay in my practical exploration. Eliade has an anthropological interest in the way society thought about the fact that they could change the state of matter.

6. Chrysopoeia is the process of creating gold from other materials or base metals (Principe, 2013:15). Or the art of making gold (Abbri, 2019:40)

7. Klinto02 is a website that features Art Jewellery from Selected Jewellers, Galleries and Institutions

Post humanist theory considers that there is a mutuality between materials and humans due to the way they influence each other. This denotes that the materials would have influenced the smiths and potters that tried to effect change to those materials.

The Forge and the Crucible takes the reader on an adventure through the history of primitive metal work, starting from the first contact by smiths with meteoric iron, a material that they did not know how to melt. The ancient smiths believed that by imitating the gods in striking their anvils, they were in fact their accessories (Eliade, 1978:32). Eliade contends that some primitive civilisations believed that the entire world, including both natural and manmade objects, could be endowed with a gender (Eliade, 1978:36). It follows that if streams, corridors of mines, and caves are compared to the vagina of the Earth Mother, then everything that lies in the belly of the earth is alive, albeit in a state of gestation (Eliade, 1978:52). Of interest is that smiths and sorcerers were seen as masters of fire (Eliade, 1978:79). The social standing of smiths varied in different societies; sometimes they were elevated to religious figures and other times shunned by the society they served (Eliade, 1978:88). Eliade discusses how the tools themselves could be imbued with mystical properties (Eliade, 1978:100). Eliade dedicates a chapter to the differences between Western and Eastern alchemy, where the spiritual growth of the practitioner is more important than the transformation of matter (Eliade, 1978:109-126). In Indian alchemy, the principles of yoga are followed to change matter and the yogi (Eliade, 1978:141).

In interpreting this, I agree with Allen when he says that Eliade believes that “an understanding of myth and religion will not only allow us to understand traditional religious phenomenon..... but also to understand better the nature of the unconscious, the imagination, dreams, fantasies, ideologies, aesthetic creativity, and other seemingly secular aspects of the contemporary life.” (Allen 1998: 314).

Also of interest is that Allen points out:

“The scientific narrative does not have exclusive privileged access to truth. The mythic narrative, as another autonomous way of constructing a story about truth, history, the human condition, and reality, should not be reduced to scientific, rational, historical and other nonmythical discourses” (Allen: 1998: 315).

The postmodern approach asks that we are open to multiple ways of interpreting information.

Ferdinando Abbri expresses his opinion in the article, *Gold and silver: perfection of metals in medieval and early modern alchemy*, in saying:

“The positivistic ⁸ tradition constructed and conceptualized alchemy as a form of proto-chemistry and emphasised the difference between the empirical contents of the alchemical writings which were to be preserved, and the mystic, Hermetic, metaphysical dimension which was to be dropped out owing to its unscientific features” (Abbri 2019: 40).

Abbri believes that this approach is obsolete and that “a suitable historical perspective is to be based on the study of alchemy as a specific centuries’ old form of knowledge” (Abbri, 2019: 40).

Alchemy, as a field of study, can be seen through many different lenses, that are dependant on the traditions and views of the time. Principe is of the opinion that religious writers borrowed freely from alchemical ideas and images and used them as metaphors. In addition, writers on alchemy borrowed freely from theology, making the relationship between the two complex (Principe, 2013:201). Alchemy influenced the way society thought, and in turn was influenced by that same society.

Eliade writes that the alchemist strives to do the work of nature; he aspires to be time, or interfere with time, by manipulating substances (Eliade, 1978: 172). Abbri elaborates on this idea by explaining that metals were considered to be living creatures that grew in the subterranean world. Nature had specific operating times for the metals in her womb, composed of an ascending ladder, the top of which was silver and gold. Late medieval alchemists aspired to modify these times by cooperating with nature, but also to surpass her in the production of these noble metals. (Abbri, 2019: 41). Eliade believes that the alchemical desire to accelerate time was realised in the modern world, if one looks at the exploitation of the earth through mining, and the creation of synthetic products that would have taken nature thousands of years to achieve (Eliade, 1978: 173). An example of this is the creation of synthetic gemstones and laboratory grown diamonds (Jayaraman 2000:1555-1557). The alchemical dream of creating gold has been achieved by scientists at Lawrence Berkeley National Laboratory in a particle accelerator, but the exceptionally high cost of this process makes it economically unviable (Matson, 2014).

Eliade writes that the alchemist was still doing the work of primitive man for whom nature was the source of sacred revelations and a work of ritual.⁹ (Eliade, 1978:174), but there was no place

8. Positivism refers to the view that it is possible and desirable to apply the methods, concepts and procedures of natural sciences to the study of social life (Sage Methods Map, 2022).

9. Rituals in humans are described as a rigid pattern of acts specific to a situation (Bernstein et al., 1966:431). Staal writes that although most participants will not be able to answer why they are participating in a specific ritual, the importance seems to lie in what one does and not in one’s convictions (Staal, 1979:3). Grimes says that during rituals we act according to our traditions, and it can be argued that meaning will arise, regardless of beliefs. Practices such as rituals, as with objects, have a cyclical history that includes meaning making and drifting into meaninglessness (Grimes, 2011:81). Bernstein et al. believe that ritual has educational value and assists in the organising of society.

for ritual in the factories and secularised workplaces of the nineteenth and twentieth centuries. Rituals are an important aspect of the practice of alchemy. Eliade (1978:24) states: “As is often the case, the image, the symbol and the rite anticipate — sometimes even make possible — the practical applications of a discovery.” I interpret this quotation from Eliade as follows. Through ritual, we practise actions that we do not fully understand, or only subconsciously and to a certain degree. And through the doing or the practice, we gain an understanding of the process and the meaning attached to it. Within my own life, physically doing something allows me to interpret and gain a deeper understanding of life around me. I relate this to the idea of gnosis, through the creation of objects in my contemporary jewellery practice and through theoretical research I gain deeper insights into the ideas of alchemy. Furthermore, in this way research, theory and practice become integrated with one another.

Alchemy speaks of certain methodological ideas. Karin Pinkus believes that alchemy cannot be said to exist as a method or practice standing outside of, or beyond writing (Pinkus, 2009:5). Abbri writes that even though the mystical and philosophical component of alchemy increased in importance during the Byzantine era, practical and experimental aspects were never undervalued (Abbri, 2019:41). Making, doing, reading and writing were all part of the history of alchemy and inseparable from one another. Alchemy can be interpreted as a generative productive practice, meaning that it makes ‘things’. Principe is of the opinion that the alchemist’s aim is to give rise to new substances with new properties by combining existing ones (Principe, 2013:79). The range of ideas and practices complicates the answering of what alchemy was about. Recognising the diversity and passion at any given time, over time, however, reveals alchemy’s identity in a fascinating and interesting way (Principe, 2013:218).

The beginning of the fourteenth century saw another genre emerge in alchemy, that of illustration within textbooks. Figure 1 shows an example of an illustration from an alchemical text from the seventeenth century. Initially relatively simple, as an explanation of the text, the illustrations later became quite complex. They were often coded and arcane, and required some interpretive skills to grasp the meaning of the illustration (Principe, 2013:79). Scholars of alchemy now studied both text and illustrations to gain insight into the field.

First and foremost, alchemy was an endeavor of both head and hand. It was both theoretical and practical, textual and experimental, and these two aspects constantly interacted (Principe, 2013:218).

Alchemists produced theories about their subject (matter and its composition) and aligned practical research activities according to this. Examining the practical outcomes then led to the adjustment of theories. At its core, alchemy is dependent on theory and practice.

Alchemy has always been controversial in trying to do what nature does; faster and better. Pinkus says that writers relate the scientifically created cells of a hermaphrodite to alchemy, because they address neither aesthetic nor economic values, but the breaking of a powerful taboo. It is the intentional creation of what would be a very rare occurrence in nature (Pinkus, 2009:14). If gold is currency, creating gold from nothing would disrupt economic stability. Creating the elixir of life would destabilise the idea of life. Successfully improving the individual or transmuting matter, could possibly disrupt the bigger narratives on which we build society.

In summation, the central goal of alchemy is the improvement of matter and the alchemists themselves. They linked theoretical speculation with practical work, promoting a culture of investigation that is important to modern scientific enterprise. The methodology of alchemy could therefore be seen as practice-based research, in that it produced research that is located in both practice and theory.

The goal of transforming matter into gold was never achieved in the alchemist laboratory. Regardless of these successes and failures, a great number of interpretations of alchemy exist. This establishes alchemy as a term that could be seen as changeable and subjective.

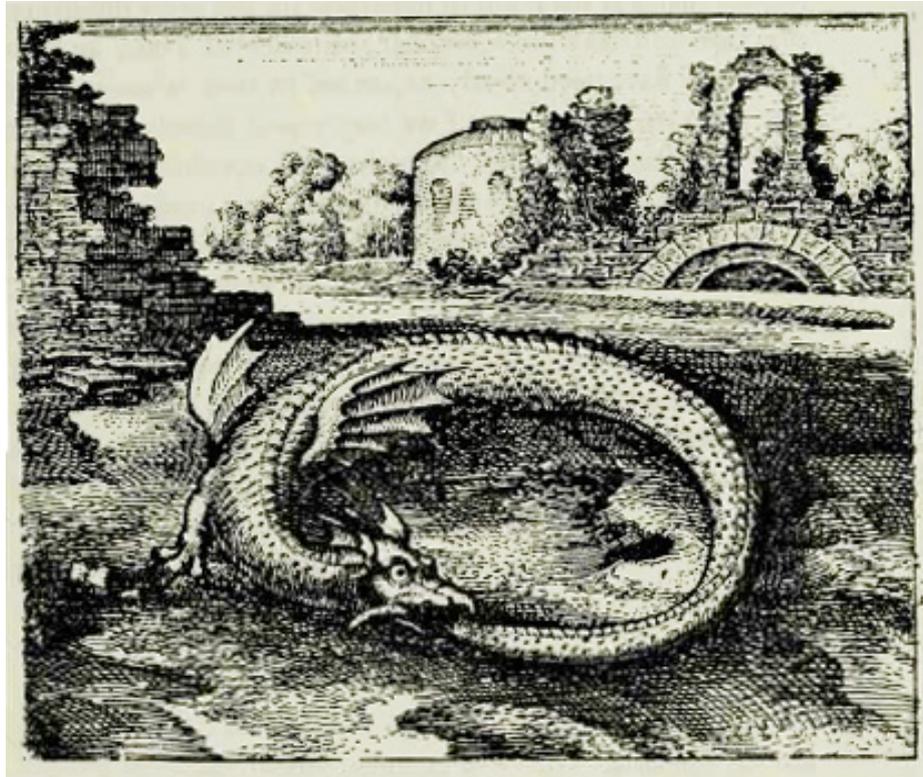


Figure 1. Michael Maier (1687), 'The dragon devouring his tail', in *Scrutinium ... chymicum* (Eliade, 1978:77).

1.3 Information and Knowledge

In this section I look at Lyotard, Scrivener, Malafouris, Schön and Cross's ideas with regards to information and knowledge and how they interpreted these ideas in relationship to objects and artefacts.

The first writer that I investigated in order to gain a better understanding of the position of information and knowledge in a postmodern setting is Jean- François Lyotard. Stuart Sim writes in the first chapter in *The Routledge Companion to Postmodernism*

“Probably the leading figure to be cited is Jean-François Lyotard, whose book, *The Postmodern Condition*, is widely considered to be the most powerful theoretical expression of postmodernism. Lyotard's plea that we should reject the 'grand narratives' (that is, universal theories) of Western culture because they have now lost all their credibility, sums up the ethos of postmodernism, with its disdain for authority in all its many guises” (Sim 2006: 3).

Lyotard is a French philosopher who wrote about a wide variety of subjects including, the human body and modern and postmodern art. In 1979 Paul Lyotard wrote *The Postmodern condition: A report on knowledge*. In this book he predicted that because of technological advancements, the way that knowledge is exteriorised is changing, at least on the part of the knower. He believed that the only research that will be continued in the future is when that information is translatable into computer language (Lyotard, 1979:4). The way information is stored and transmitted is drastically changing, never more so than in the midst of a pandemic. In the contemporary setting, if one thinks about the electronic submission of this master's study, this may well be true. The artefacts produced for a practice-based study will, for the most part, not be kept by the institution as a way of retaining information. Even though there is a practical component to this research, only the pictures submitted within this document will be stored in the form of a digital record. Lyotard believes that knowledge will follow the same route as money, and that it will be of increasing importance as this happens. He contends that knowledge will be produced to be sold, predicting a power battle over the control of knowledge between the state and the economy. He further explains that society can only progress if the messages that it circulates are rich in information and easy to decode. The need for the state, however, to filter information, conceals this. Even in liberal states and companies, not all information (or all money) circulates in the same way. Some information is reserved for decisionmakers, and some is not.

He then considers who decides what is true and the fact that power and knowledge are two sides of the same coin (Lyotard, 1979:6). Certain things can be interpreted in the asking of a question or stating of a phrase. He sees this as a game that we are all involved in. Because we are all part of a social structure, we pass along information when communicating with others,

and as such, we have a choice in whether to accept or reject information (Lyotard, 1979:15). Concerning Lyotard's discussion on the relaying of information, he says that regardless of one's social standing, one can influence how messages are relayed within one's social setting. Knowledge, though, should be understood from the perspective of the relater, as there will always be some players with more power than others. Lyotard, nevertheless, acknowledges that not all knowledge is represented scientifically. Competing and conflicting with the scientific way of knowing is what he calls 'narrative knowledge'. This narrative knowledge relates to ideas of internal equilibrium and conviviality (Lyotard, 1979:5). These are the ideas that are dealt with in fine arts research.

Scrivener wrote the article, *The art object does not embody a form of knowledge*, in which he argues that knowledge only exists in the minds of humans, but that information can be stored in artefacts. Only by extracting and processing this stored information from artefacts can knowledge be derived from it. He believes that knowledge can be gained in two possible ways: through direct experience and through the messages conveyed to us by others (Scrivener, 2002:6). Knowledge itself belongs to learning, while knowledge extraction and deduction belong to research (Scrivener, 2002:10). It follows that the creation of an art object is a form of research, and the process itself enables knowledge to be extracted (Scrivener, 2002:4). Individuals interpreting the same art object will arrive at different conclusions; art is usually not created to relay specific information or contain knowledge (Scrivener, 2002:7). He believes that seeing an art object as knowledge is superficial; he would rather have that art and its artefacts offer multiple possibilities and potential meanings. He believes it presents different ways of seeing the past, the present and the future (Scrivener, 2002:11). This corresponds with postmodern thinking which believes that meaning and values are socially constructed and therefore variable.

From an archaeological viewpoint, Lambros Malafouris discusses the mind, tools, and marks we make, and the objects we work with from an evolutionary point of view in the book *How things shape the mind: A theory of material engagement*. He suggests that we explore the idea that human intelligence is spread out, beyond the skin, into the culture and the material world (Malafouris, 2013:3). We should not only look for the stuff of the mind inside the head, that is, inside the skull. In archaeology, most of the evidence on the evolution of human intelligence comes from material culture, rather than from abstract ideas and brain tissue (Malafouris, 2013:32). Jewellery is part of this material culture. The jewellery object developed along with human evolution and scientific technological advancement. As technology advances, it is incorporated in the production of jewellery. The ability to artificially create certain substances like synthetic stones and the use of three dimensional printers in the production of jewellery, could be seen as examples of this evolution of technology.

Malafouris explains that in childhood, we actively and constantly think through things and engage with our surrounding material culture. We rarely, however, link this directly to the shaping of our minds and brains (Malafouris, 2013:7). It is typically accepted that thinking happens because of our interactions with the world. Malafouris claims that thinking constitutes the interactions of the brain and body with the world (Malafouris, 2013:38).

“The mind is a leaky organ, forever escaping its natural confines and mingling shamelessly with the body and the world” (Clark, 1997:53, cited in Malafouris, 2013:8).

“Thingness’ and ‘mindedness’ are highly unsettled and ontologically fluid states. They remain formless and plastic, waiting to take the shape of our embodied projections, which inevitably vary in different times and places” (Malafouris, 2013:8).

From these quotes, I infer that Malafouris defends what artists, crafters and makers seem inherently to know, in saying that things mediate, actively shape, and constitute our ways of being in the world.

He further notes that things can bring people together and lead to interactions: “Things develop our mind, they become us” (Malafouris, 2013:234). Objects, artefacts, and tools can be interpreted as having meaning in themselves as an extension of ourselves and our psyches. The logical conclusion is then that these artefacts should be considered as part of the process of the evolution of the individual and society. This confirms that information and thinking have more than one way of being represented.

In the early eighties, Donald A. Schön (1983), wrote an article, *The reflective practitioner*. In this he worked on the assumption that professional practitioners know more than they say, and that they exhibit a kind of knowing that is tacit. Practitioners can reflect on this intuitive knowledge as well as use this intelligence to cope with unique or conflicting situations that arise in practice (Schön, 1983:viii). Schön examines the role of knowledge in action, describing it as actions, recognition, and judgements that we know how to carry out spontaneously; we do not have to think about them before or during their performance. Sometimes the knowledge was learned, and we internalised it; sometimes we may not have been aware of it, but in both cases, we will have difficulty describing the knowing that our action reveals (Schön, 1983:54). I believe these spontaneous reactions can happen because there is a pre-existing gnosis regarding the particular situation.

Nigel Cross (1982) believes that there are three sites of knowledge: in the people (the artist), the process, and the products. The first site of knowledge is the making of an artefact. This is followed by an inherent knowledge of the activity of design and the reflection on that practice. Lastly, knowledge resides in the products or artefacts – in their shapes and materials.

“The objects created (i.e., artefacts) translate messages between concrete objects and abstract requirements. In this way they facilitate the constructive, solution-focused thinking of the artist or the designer – in the same way other, for example, verbal and numerical communication and thinking, facilitate analytic, problem-focused thinking” (Cross, 1982: 225).

As seen in this section, a variety of opinions on how knowledge and information can be interpreted, stored, and communicated, exists. Artefacts can be seen as objects that hold information and meaning. The interpretation of an art object is dependent on the viewer’s perspective and the context within which it is presented.

1.4 Practice-based research

In this section, I investigate how ideas around objects, as discussed in the previous section, could relate to the artifacts that are created during this research.

Danny Butt writes in, *Artistic research in the future academy*, that practice-based and practice-led research are relatively new terms relating to the way research in art and design is done. This term was coined in the 1990s after some debate in academic circles (Butt, 2017:63).

Candy and Edmonds define practice “as the application of an idea, belief or method as opposed to the theories relating to it.” Thereafter they say that research is a “systematic investigation to establish facts, test theories and reach new knowledge or understandings” (Candy & Edmonds, 2018: 64). This type of research approach puts the making of art, and the reflecting on it, at the centre of the research, while still adhering to generic definitions of research such as an “accessible systematic inquiry” according to Gray & Malins in *Visualizing research: A guide to the research process in art and design* (Gray & Malins 2004:3). Nelson believes that in practice-based research, practice is seen as a major method of inquiry and a sizable part of the confirmation of the research (Nelson, 2013:9). The praxis is submitted as the basis for contributing to knowledge; however, this can only be fully understood when accompanied by a critical discussion of the significance and context through a presentation of both the artefact and the text. This makes the implicit artistic knowledge explicit and locates it within the scholarly field (Lyle Skains, 2018:85-86). This view is shared by researchers such as Maarit Mäkelä (2007:159) when she cites Biggs and writes:

“It proposes that what is required is a combination of artefact – for example painting or design – and a critical exegesis that illustrates how the artefact advances knowledge, understanding and insight. This implies that the artefact alone cannot be relied upon to communicate its information” (Mäkelä 2007:159).

I agree with Mäkelä that practice acts as a link to the creative process or subjectively to creativity

itself (Mäkelä, 2007:161). To be able to write about the information the artefact contains a specific context needs to be given. Within practice-based research, the knowledge gained could be seen as subjective, as artists are interpreting their artefacts in a context of their own choosing (Mäkelä, 2007:160). A thing, object or artefact, however, needs to be given context. As noted within practice-based research, this context is given in the form of a written submission.

Marzio compares the Drutt Collection of artworks (mostly jewellery) to Paul Klee's Pedagogical Sketchbook (Strauss, 2007:7). He says that the artworks speak of a belief in the elements of jewellery as subjects in and of themselves. In the same way, I believe that artefacts are elements of research, but can also stand completely independently. Art occupies a different kind of space from other objects; it can be taken out of its original context to a different time and place. Bryson calls this semantically mobile. It changes its meaning according to its latest circumstances and the conditions of its viewing (Bryson, 2001:3).

It can also be said, however, that the maker does not have control over the interpretation of the viewer. Garland-Thomson in her book, *Staring: How we look*, says that we stare at something to make the unknown known, and we celebrate looking as a source of knowledge (Garland-Thomson, 2009:26-27). Meaning making is an activity that occurs within a pre-existing social field with actual power relations. The social frame does not surround the work, but it is part of the work itself (Bryson, 2001:5). This places the making and the presentation of a creative artefact as a substantial part of the research done in practice-based research.

1.5 Conclusion

Alchemy was a field of study that was influenced by the societies that created it and in turn influenced those societies. A great number of interpretations of alchemy exist, depending on the perspective from which it is viewed. This could establish alchemy as a term with subjective and changeable meaning. Information and knowledge, according to postmodernist thought, is a social construct, and therefore changeable, depending on how and who is interpreting it. Objects can be seen as containing information and knowledge, but Scrivener would rather have it that art and its artefacts offer multiple possibilities and potential meanings.

Practice-based research is a method that positions practice as a major part of the inquiry and a sizable part of the confirmation of that research. Theoretical investigations concerning the research are submitted along with the practice. Within art research, the making of art is a major part of the output of the research, however the interpretations of that art, are for the most part, done by the researcher in the theoretical component of the research and submitted in the form of a thesis. The meaning and interpretation of an art object is dependent on the context within which it is viewed, such as an exhibition. As such I conclude that a practice-based arts inquiry can be utilised to reflect and interpret the concepts, ideas and processes of alchemy through the creation of artefacts.

Chapter 2

2.1 Introduction

There are many ideas and elements that could be integrated under the term 'jewellery'. This chapter aims to clarify the term, jewellery, along with gaining an understanding of contemporary jewellery as a postmodern movement.

I research the work of Ruudt Peters, Inge Marais, and Catherine Ferreira, all of whom conceptually relate their work to alchemy. This is done to expand my visual and conceptual understanding of how other artists integrated alchemical ideas into their practical work

In this chapter, I establish the ways in which contemporary jewellery as a practice can be related to alchemy.

2.2 History of contemporary jewellery

Considering the term 'jewellery' from a wider perspective, Game and Goring (1998) contemplate the meaning of the word in their book, *Jewellery moves: Ornament for the 21st century*. They say that jewellery is a collective noun for a series of relatively small-scale objects which can be attached to clothing or worn directly on the body. It is a concept – adornment – and an object – the jewel. It could be the most ancient art of all and has remained important to humans throughout history. The artist, Manfred Nisslmüller, proposes that any object applied to the human body, has an ornamental function and, in that way, anything can be seen as jewellery (Lindemann & Frier, 2011:13). Bruce Metcalf in his article, *On the nature of jewellery*, believes that jewellery falls between sculpture and garments, linking it to sculpture, because it is a physical object, and garments, because it is inextricable from the living person (Metcalf, 1993).

For this research, I move fluidly between jewellery and sculpture, by seeing them as extensions of each other. This investigation is more concerned with the idea of jewellery as an object, but also with the notion that these objects contain information and meaning.

Liesbeth den Besten, in her book, *On jewellery: A compendium of international contemporary art jewellery*, believes that decorating, embellishing, and signalling can be seen as the main function of jewellery. French theorist, Roland Barthes, was one of the early pioneers of the theory of fashion. He saw fashion as a complex system of signs used to communicate and exchange information. Den Besten argues that jewellery has no practical applications such as implements, utensils or appliances. It is supplementary to man and adds meaning to the person wearing it. Its function is the meaning it adds. She believes that historically, one could identify people's origin by looking at their clothing and jewellery. A specific piece of material would locate you in

a specific village or town. A wedding ring, for instance, would tell a suiter to go away, and a tiara is a sign of royalty, while a mayoral chain would signal your office. Expensive materials denote the more affluent members of society, while others signify poorer members. These signifiers are not written down; they are intuitively known by others (Den Besten, 2012:24). Lindemann and Frier, in their book, *Thinking Jewellery: On the way towards a theory of jewellery*, believe that jewellery plays a role in generating an identity¹⁰ for the individual, the group and society (Lindemann & Frier, 2011:15). Metcalf believes that the most important subtext of jewellery is to mark social identity and status (Metcalf, 1993). Jewellery can make us stand apart or blend into a group.

Ewington, in the chapter, Now and then: Thinking about the contemporary in art and jewelry, in the book *Contemporary jewelry in perspective* writes:

“In many ways, too, because jewelry’s social uses are clearly identifiable (though prone to slippage between them), it offers an exceptionally rich set of stories and practices for examining dialogue between continuity and change” (Ewington, 2013:222).

In chapter 1 the idea that objects contain information is explored, so it follows that the wearing of jewellery could be seen as a way of sharing information. From a postmodern perspective, this information is not absolute, it could have a variety of interpretations from different perspectives.

Consider the value of gold, for example; no material is intrinsically valuable (Game & Goring, 1998:9). History professor, Herbert, wrote *Red gold of Africa: Copper in precolonial history and culture*, that details the history of the working and use of copper throughout Africa. In this text, she argues that historically, copper was more valued than gold in certain areas of Africa. On a continent that was viewed as synonymous with gold by the outside world, archaeologists found very few gold artefacts, other than in those areas with a long history of contact with Arabian and European influences. Attaching significant monetary value to gold only started to occur in postcolonial times; she therefore, believes, this speaks of a borrowed value system (Herbert, 1984: xix). I agree with Den Besten when she writes that jewellery is not about content, it is about the values that society or mankind attributes to it (Den Besten, 2012:17). The value of the materials that jewellery is traditionally made in, is determined by the society within which it is located. Lindemann and Frier believe that jewellery has an influence on how the viewer perceives the wearer because of these values attributed to it (Lindemann & Frier, 2011:19). I see this as an alchemical idea: you can transform the image you present of yourself to the world through the ritual of putting on jewellery.

To understand this enquiry, one needs to come to terms with the concept of contemporary

10. Styles of Jewellery can indicate subcultures such as bikers, punks, goths and hippies or religious convictions. Zulu and Ndebele beads, for instance, could be used to express culture.

jewellery. Cohn states that contemporary jewellery started at a time when all the major art movements were engaged in the broad cultural re-evaluation of Modernism (Cohn, 2012:222). Peter Childs, in his book, *Modernism*, says that Modernism could be said to be a period, genre or style, or a combination of these with a timeframe broadly between the 1890s and the 1930s (Childs, 2000: 12). It could be seen as the tradition of the new (Childs, 2000: 1-2). Maria Todorova writes in *Modernism: The Creation of Nation States*, that “most other authors consider modernism as the cultural response to the challenges of the modern condition”. This modern condition incorporates industrialisation, urbanization, and the emergence of an industrial economy. Modernism could be seen as a state of mind that is in opposition to tradition (Todorova, 2010: 5). Childs says that in art, it could be said that it undermined realism in movements like Post-Impressionism, Expressionism, Cubism, Symbolism, Dada, Futurism and Surrealism (Childs, 2000: 22).

In *Contemporary jewelry: A critical assessment*, Turner describes Art Nouveau¹¹ as a movement that protested against the poor quality of the mass-produced work manufactured after the Industrial Revolution.¹² After the deliberate separation of fine arts from applied arts, that started around the fifteenth century,¹³ Art Nouveau did much to ameliorate the differentiation between art and craft. Following on this, Bauhaus, the Glasgow School of Art, and the Vienna secession in Austria, all worked towards reconciling the two (Turner, 1976:14-20). Metcalf believes that these schools emphasised design over the ascribed social meaning¹⁴ and from around the 1940s, the art world’s ideas of privileging a concept (over materiality, function, or social meaning), were adopted by the generation of jewellers educated at these schools (Metcalf, 1993). Cohn says that starting in the 1950s, contemporary jewellery was considered part of a larger collection of responses to the badly manufactured items that were mass-produced during the Industrial Revolution, and this allowed it to become established as a movement. Unlike the other art movements of the time, it was working in the shadow of an established industry, and this allowed for cultural resistance from a unique perspective (Cohn, 2012:222). According to Den Besten, ideas around the value of jewellery had been challenged since the turn of the nineteenth century, but these ideological changes only became apparent in the 1960s (Den Besten, 2012:99).

11. The Art Nouveau art movement flourished in Europe between 1890 and 1910. It was an attempt to create a new style that was not dependent on the imitation of history as in the previous century. Its characteristics are the use of long, sinuous, organic lines. It was employed in architecture, interior design, jewellery, glass design, posters, and illustration (Encyclopaedia Britannica, 2019).

12. The Industrial Revolution of 1760 to 1840, which started in Britain, refers to the change from an agricultural and handicraft economy to that of industry and machine manufacturing (Encyclopaedia Britannica, 2021a).

13. Fine artists in Italy claimed theoretical knowledge as the differentiating factor between the two. They contended that fine arts were superior to applied arts or crafts. This distinction became deeply ingrained in our culture (Turner, 1976:14).

14. Social meaning refers to the meanings discussed in the previous section. In this instance it refers to the monetary value of the materials.

Dormer and Turner, along with Ilse-Neuman, defined contemporary jewellery as a movement that challenges and subverts conventional, commercial jewellery. To a large extent, it originated from a reaction against the mass-produced jewellery sold in department stores in the Western world. These designs, for the most part, showcased the precious metal and stones they were manufactured from (Dormer & Turner, 1994:7; Ilse-Neuman, 2009:9). This locates contemporary jewellery within a postmodern tradition. Joani Groenewald states in her thesis: “This type of jewellery can be seen as a reflection of the postmodern tradition of breaking down boundaries and questioning assumptions, specifically because it does not wish to confine jewellery to a clear set of rules in terms of form and function” (Groenewald, 2015: 15). It is hard, however, to find a contemporary jeweller whose *raison d’être* for his craft is a loathing of Cartier (Den Besten, 2006). While most resources note the freedom of material¹⁵ choice within the practice, I, however, agree with Bruce Metcalf, in saying that this might be a slightly narrow European viewpoint and that jewellery has, through the ages, included a great variety of materials (Metcalf, 1993). Rabey writes that contemporary jewellery does, however, push the boundaries, always searching for more radical materials and ideas, sometimes to the extent where conceptual ideas about material cost motivate artists such as Sruli Recht¹⁶ to use his own skin as part of a ring as can be seen in figure 2 (Rabey, 2018).

Cohn is of the opinion that the practice of contemporary jewellery requires the blurring of lines between art and craft, and fine arts and applied arts, incorporating overlapping artistic disciplines, approaches, and technologies (Cohn, 2012:213). Sackville, in the introduction to the book, *New directions in jewellery II*, says that contemporary jewellery is a medium through which the makers can express themselves and comment on a great variety of things, including, but not limited to, culture, fashion, customs, rituals, and our relationship with objects. Their works of art are imbued with meaning. The makers examine broader issues like the relationship between the body and jewellery, and how jewellery is integrated into society (Sackville, 2006:10). According to Metcalf, contemporary jewellery is a multi-layered, multi-meaning practice. He believes that the only real restriction inherent to jewellery is that it must relate to the human body.

Den Besten agrees with this in stating that “jewellery is quite different from fine art while being mobile, wearable and therefore semantically changing according to the context and conditions under which it is viewed” (Den Besten, 2006). Both art and jewellery have meaning that can be interpreted. Contemporary art jewellery contains the planned or accidental intentions of the maker. The wearer, however, influences the piece with their personality, garments, and movement, and the viewer interprets this from their personal perspective

15. The liberalisation of jewellery has incorporated the use of every conceivable material, including wood, paper, and plastic. This is in contrast to the predominant use of precious metals by the commercial jewellery industry.

16. Iceland-based fashion designer, Sruli Recht, had a piece of his own skin surgically removed, preserved, and set around a 24ct ring in 2013 (Howarth, 2013).



Figure 2. Sruli Recht, 2012. *Forget Me Knot*, ring, 24-karat gold, leather from the artist's abdomen. Photo Marino Thorlacius (Rabey, 2018)

(Den Besten, 2012:104). The participants of the triangle are thus in an ongoing and indefinite discourse with one another (Den Besten, 2012:105).

In my jewellery practice, I produce well finished once off pieces, a process that I regard as a way of exploring the ideas around alchemy. As an art practice, I create jewellery objects and sculptural pieces from ceramics and plastic that might not be seen as precious. I make use of available materials that I find most applicable to my research. I utilise technologies that are both centuries old, such as silversmithing and ceramics, and the relatively new technologies of three-dimensional printing. I combine these techniques and materials freely, and as such I see my practice as being located within contemporary jewellery.

2.3 Reflections on contemporary jewellery artists

The previous section established that jewellery could convey meaning with regards to the identity of the wearer, according to the values that society ascribes to that jewellery object. Contemporary jewellery, when located in a postmodern practice, can ask questions, provoke action, and comment on society. I now look at other artists working within the field of contemporary

jewellery. These artists use contemporary jewellery as a platform on which to investigate the ideas of alchemy and to explore how these ideas can be conveyed, in a visual way, when displayed to an audience.

I discuss the following contemporary jewellery artists; Ruudt Peters, Inge Marais and Catherine Ferreira. They have all dealt with the idea of alchemy in their work and it is therefore pertinent to this study. Looking at the work of these artists has helped me to understand and extend my perception of alchemy and contemporary jewellery and therefore aided my vocabulary in both language and visual referencing. I look for points of similarities between these artists' work and my own, and I discuss how I draw inspiration from their ideas and work in Chapter 3.

2.3.1 Ruudt Peters

I explore the work of the prominent Dutch contemporary jewellery artist, Ruudt Peters¹⁷.

Den Besten describes Ruudt Peters as a prolific artist with a long career, moving between the mediums of sculpture and art jewellery. He became one of the first postmodern jewellers in the Netherlands in the 1980s and draws inspiration from history and philosophy (Den Besten, 2012:151). Peters investigates subjects like alchemy and hermeneutics,¹⁸ Neoplatonism,¹⁹ and Kabbalah.²⁰ For Peters, these subjects do not represent 'The Truth', but he sees them as creative resources (Den Besten, 2008:45).

According to Burrows and Wentzel, he is considered to produce deeply intellectual jewellery pieces. Peters sees jewellery as his laboratory and as such he can use jewellery to contemplate and research life, the human body, the microcosm and the macrocosm (Burrows & Wentzel, 2007:494). Den Besten believes there is a willingness to experiment and to discover new techniques in his work (Den Besten, 2008:45). In an interview with Ruudt Peters, Marna Elenskaya mentions that Peter's fascination with alchemy started around 1994

17. Peters has influenced the development of contemporary jewellery both as an artist and as a professor, at prestigious universities in Europe such as the Gerrit Rietveld Academie in Amsterdam, the Netherlands; Konstfack (University of Arts, Crafts and Design) in Stockholm, Sweden; and the Alchimia Contemporary Jewellery School in Florence, Italy.

18. Hermeneutics is a way of interpreting problems that arise when dealing with meaningful human actions and the products of such actions, most importantly texts (Mantzavinos, 2020).

19. Neoplatonism is a philosophical school of thought where mindful consciousness is considered more important than accepting the physical realm as the ultimate reality. In short, it is mind over matter (Wildberg, 2019).

20. Kabbalah refers to the oral tradition of esoteric Jewish mysticism that offers a way of approaching God (Encyclopædia Britannica, 2008b).

with a solo exhibition in that year called *Ouroboros*²¹; it was exhibited in Galerie Marzee²² in the Netherlands (Elenskaya & Decker, 2017:98).

Figure 3 shows one of his pieces from this exhibition. For this series, he combined handmade metal shapes with natural objects, and then dipped them completely in a single paint colour. He juxtaposes manmade and natural items. The idea is that the added layer of paint wears off as the ring is worn, revealing the underlying structures. This process serves as an indicator of the passing of time, forming part of the process of becoming more precious to the wearer. Monica Gaspar is of the opinion that he is addressing the idea of impermanence, making the act of wearing the jewellery fatal to its existence. She believes this comes from the notion that jewellery could be seen as a currency because it follows that jewellery can be transformed into money at any time by being melted or taken apart (Gaspar, 2013:61). Gaspar writes:

“Even though contemporary jewelry makers have rejected the issue of pure monetary exchange and have replaced it with artistic and intellectual value, the compulsion towards banishment and transformation has remained a fascinating topic and a source of inspiration.”

As a postmodern jeweller, Peters rejects traditional ideas of jewellery, but at the same time is inspired by these ideas. The title of the exhibition, *Ouroboros*, is a direct reference to a symbol in alchemy that can be interpreted to mean constant renewal (Principe, 2013:27). Eastern alchemy was largely concerned with the alchemist’s search for immortality (Principe, 2013:8), so it is interesting that the writer, Gaspar, chooses Peters’ work to relate to impermanence.

Figure 4 show a image of when the pieces were first exhibited, he pinned them to the beams of the roof in Gallerie Marzee, and they could only be viewed by climbing a ladder positioned below them. In alchemy, the ladder²³ is a symbol of reaching for the divine. Den Besten is of the opinion that this discouraged visitors, rather than enticing them to look at the pieces²⁴ (Den Besten, 2012:52). By asking the audience to climb the ladder, they had to earn the right to

21. *Ouroboros* is a symbol depicting a serpent or dragon swallowing its own tail. It is often discussed in alchemical texts. If one follows ancient Greek philosophers with regard to matter, they theorised that there is a single underlying substrate for all substances. From this idea it follows that one thing can be turned into another, because at the deepest level they are all the same. The serpent is seen as continually consuming itself and reproducing itself from itself (Principe, 2013:27). Figure 1 shows an illustration of an *ouroboros*.

22. Galerie Marzee is the largest independent gallery (where?) for contemporary jewellery (Galerie Marzee, 2022).

23. In a discussion regarding the Neoplatonic notions in alchemy, Principe explains that the “ladder of nature” is where “everything in existence from inanimate matter to the transcendent One is linked in a hierarchical chain” (Principe, 2013: 207).

24. These pieces were exhibited again in a more accessible position within the mineral collection at the National Museum of Parque. Den Besten is of the opinion that this serves as an example that the true value of an installation is to provide the proper context for the jewellery, rather than to make a bold sculptural statement (Den Besten, 2012:52).



Figure 3. Ruudt Peters, 1994: *Kazakstan*. ring, silver, hematite, paint 26 x 46 x 120 mm. (Elenskaya, 2017: 99).

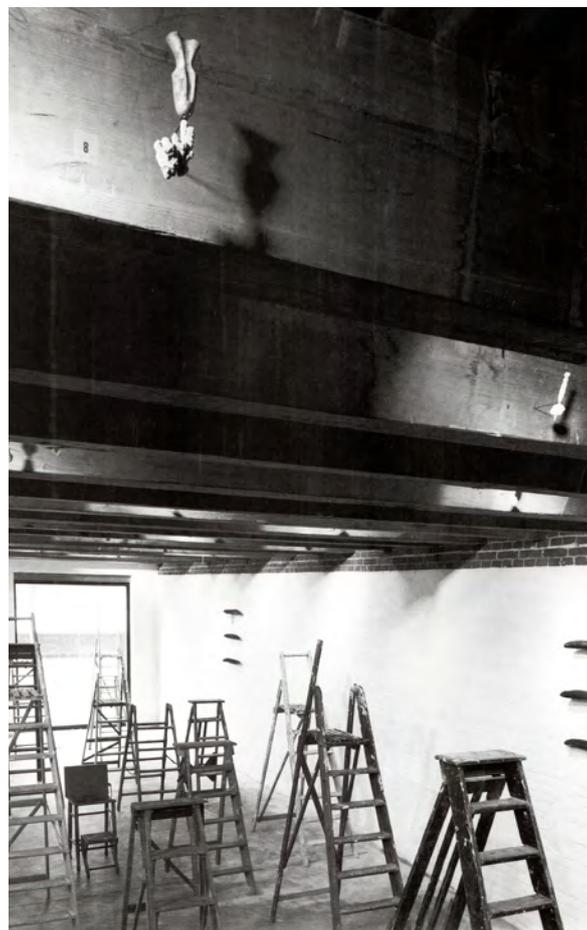


Figure 4. Galerie Marzee Ouroboros exhibition. Image: Winnifred Limburg (Elenskaya, 2017:108).

view the pieces. Peters engages his audience by having them decide if they want to climb the ladders or not, and through the act of getting involved, the pieces gain a personal meaning for those that decide to do so (Den Besten: 2002:4). This meaning would become individualised and personal to each viewer because of their unique perspective, with some finding it exciting to climb a ladder while others would experience it as a challenge.

Figure 5 shows the *Prima Materia* necklace from Peters' range Lapis.²⁵ Here, Peters has transformed his alchemical ideas into a piece of contemporary jewellery. In his interview with Elenskaya, Peters says that he followed the instructions from an alchemical text that reads "grind the stone to a very fine powder" (Elenskaya, 2018:98). He ground minerals into powder and poured this, together with liquid resin, into moulds, creating his own stones. This led to the formation of jade shaped like agate and tourmaline that has the shape of a garnet crystal.²⁶ It references natural and manmade objects. You cannot mistake the components as natural, because you will never find a tourmaline in the shape of a garnet. The objects he produces speaks to the ideas of alchemy by giving rise to new substances with new properties through the combination of existing ones. This could be related to Eliade's thoughts regarding the fact that the alchemist strived to accelerate the natural tempo of nature. Synthetic products offer the possibility of eliminating time through the creation of substances which would have taken nature thousands of years to produce (Eliade, 1978:173). Ruudt Peters visually presents this through the practice of contemporary jewellery by offering a different way of seeing the creation of a new synthetic material .

Den Besten describes these pieces as radical because of the treatment of the 'eternal' materials which she sees as uncompromising and disrespectful (Den Besten, 2012:152). The aim of some commercial jewellery pieces may be seen as the showcasing of precious stones and materials. Before mounting the gem, it is handled with care, avoiding scratches that could damage the commercial value of the gemstone. By grinding up the stones, Peters renders them worthless from this perspective. In doing so, he subverts and questions the value of these objects. Like the alchemists, Peters tries to make sense of the world around him through his practice. Alchemists questioned how one thing changes into another. Here he asks, what is the real value of a substance, and how can he change these meanings? This questioning of values could be seen as postmodern in that it questions the assumptions of values within society.

25. The name Lapis is the Latin name for stone. This could be a reference to the philosopher's stone in alchemy. It is said to be a substance that is capable of turning lead into gold, and this is the goal of many alchemical texts and practices.

26. One of the ways to identify uncut precious and semiprecious stones is to look at the crystal structure. This refers to the pattern in which the atoms are arranged, making the shape of each mineral unique. Garnets have a specific shape that differs from that of tourmaline.

Ruudt Peters' piece, *Prima Materia*, had a direct influence on one of the pieces I produced during this research. I discuss this in Chapter 3.

Since his solo exhibition *Inferno* in 1991 at Galerie modern Schmuck in Frankfurt, Germany, Peters' exhibitions have mostly been accompanied by a booklet that contains an essay, pictures of the work, and the artist's impressions (Den Besten, 2008:43). This correlates with alchemy, in that both are producing praxes, texts and illustrations to explain the context of the work. Peters used contemporary jewellery as a platform on which to investigate the ideas of alchemy as he visually interprets these ideas into objects.



Figure 5. Ruudt Peters, 1997: *Prima Materia*. Necklace lead, tin, zinc, copper, silver, gold, 250 x 250 x 45mm. Rotasa Collection, Marzee Collection (Elenskaya, 2017:115).

2.3.2 Inge Marais

The next artist I investigate is jewellery artist, Inge Marais,²⁷ who used alchemy as the main metaphor to explain her approach to her work. She says that alchemy is concerned with both physical and spiritual transformation, and that this inspires and motivates her art jewellery practice. She investigates iconography to gain perspective of the metaphorical change that material can undergo. She sees the process of manipulating materials as a ritual that is transformative for the artist, and views herself as the agent that brings about the change in the materials with which she works (Marais, 2008:2).

The cubes in Figure 6 are in a shape that Marais constructs repetitively. She finds comfort in this form because of the various personal connotations she has with the shape. Marais selects her materials carefully and explains in detail why she has chosen a substance or material. She discusses these specific connotations for the materials that she utilises in her practice saying she might see silver as male when combined with copper, but as female when combined with gold (Marais, 2008:12). In alchemy, materials are endowed with gender, and placed on an ascending ladder, the top of which was silver and gold. Marais might be seen to have constructed her own hierarchical ladder for metals. Marais believes a transformation occurs, when the meaning attached to a material, changes. She relates this to the transformation of matter and sees this as an alchemical principle. She concludes that the meaning of these materials is precarious and that this changes according to the combination used in each piece (Marais, 2008:58-61).

In Figure 7, Marais works with opposites to explore transformation. She places an insect, that she sees as worthless, perishable, organic and complex, in her brooch. She combines this with materials that she believes have value, are durable, speak of simplicity, and are inorganic (Marais, 2008:32). To her, this effects a transformation, as the insect gains value because of its relationship with the other, more valuable elements in the piece. To her, the placing of one object next to the other, causes them to acquire each other's values. These constructs of value are subjective and based on arbitrary and changeable ideas (Marais, 2008:33).

I agree that value is based on personal and collective experiences. Postmodernist theory asserts that the value of an item depends on the perspective from which it is viewed. No material has inherent value, it only has the value that society ascribes to it. From this standpoint I could also argue that the insect is not worthless. It could, for instance, be of great value in an entomological collection, if the species were to become extinct. As such, I concur with her that the idea of value is idiosyncratic. The theories of post humanism subscribe to the idea that humans, nature and the materials and technologies utilised in the creation of objects co evolved and influenced

27. Inge Marais is a former postgraduate student at Stellenbosch University. She completed her master's studies in 2008.

each other, creating an interdependency. In my contemporary jewellery practice, I work with available materials that were inspired by my research of alchemy, but I see all the materials as equal and am inspired by the properties of those materials.

In Figure 8, Marais incorporated cockroach wings in a Consol jar. She explores the possible shifts in responses that one experiences towards these insects when they are presented in a different way. She is, however, also giving the insect a more enduring quality. As mentioned in Chapter 1, alchemists aspired to interfere with time, by manipulating substances (Eliade, 1978:187). I believe she is also interfering with time, by preserving the organic, degradable insect, changing it into something with more permanence.

As a result of personal associations, Marais finds comfort in her ritualistic repetitive practice (Marais, 2008:28). Because of these attached meanings, she sees her practice as a spiritually transformative process.



Figure 6. Inge Marais, *Asetaat blokkies* (2004 -). Consol bottle, acetate, mixed media, bottle: 100 x 100 x 200 mm, blocks: 12 x 12 x 12 mm. (Marais, 2008:30).



Figure 7. Inge Marais, 2005: *Perdeby*. Hornet, acetate, copper with enamel, sterling silver, 70 x 20 x 15mm. (Marais, 2008:33).



Figure 8. Inge Marais, 2005: *Kakkerlakman*. Clay, steel wire, cockroach wings, Consol jar, 95 x 40 x 40mm. (Marais, 2008:21).

2.3.3 Catherine Ferreira

The artist, Catherine Ferreira, investigated how salt can be used as a medium in her jewellery practice, so as to challenge traditional perceptions within the field of jewellery. In this regard, she specifically relies on the use of salt to question how certain materials such as gemstones and minerals have become synonymous with traditional views of jewellery. The unconventional use of salt in her work functions as a means to challenge the boundaries or restrictions that influence the use of materials, as well as perceptions of value, that influence the commercial jewellery industry (specifically pertaining to Western or Westernized ideals).

In this regard Ferreira states that: "Salt was the catalyst that changed my practice to an interdisciplinary one, situated between art jewellery, alchemy, metallurgy and chemistry" (Ferreira, 2016 ii). Ferreira draws on the terms of transformation, transmutation, 'Prime Matter', elixir and the philosopher's stone.²⁸ Her art practice consists of making saturated salt solutions²⁹ and then submerging materials, like thread, steel and copper in glass containers. This brings about the formation of salt crystals on the surface of the chosen material, as seen in the brooch, Occhi, in Figure 9.



Figure 9. Catherine Ferreira, June/July 2011: Salt Crystallized Occhi: A *Brooch*. Fine salt, blank pure cotton perlé thread size 16, and silver. Stellenbosch and Kimberley (Ferreira, 2016:29).

28. She sees salt as the philosopher's stone, and as such, the transmuting agent, since it is salt that activates and reinforces the transformation of matter.

29. The process involves dissolving salt into hot water until it contains the maximum amount of salt that it can absorb. This process included the dissolving of table salt, Epsom salt and Rochelle salt.

Ferreira works from a new materialist³⁰ approach. Some of the work is sculptural and cannot be worn as pieces of jewellery, but she works from a contemporary jewellery perspective. This results in dealing with concepts relative to the field of jewellery. In her research, she is concerned with issues of wearability, durability, the body, and the definition of contemporary jewellery (Ferreira, 2016:2).

Ferreira believes that time is an important factor in her work, as the work is based on natural processes. Reactants develop at their own pace within the environment in which they are situated. Ferreira argues that her work is seasonal; she performs some tasks in winter, and some in summer, and the climate has an influence on the rate of the reaction of the materials in the solution (Ferreira, 2016:35). She sees her role as “a participating vital materialist, creating moments of connection between human and non-human bodies” (Ferreira, 2016:52). She does, nevertheless, mention that the artificial environments that she creates are aimed at speeding up the corrosion process (Ferreira, 2016:78). This aspect of her work is reminiscent of the fact that alchemists aimed to manipulate substances so as to accelerate what would have taken nature thousands of years to achieve (Eliade, 1978:174). This creates an interesting tension between the artificial, manmade, organic, and natural.

Ferreira discovers similarities between the way she displays her work in progress and the storing of chemicals in paintings of alchemist workshops. The image in Figure 10 evokes the idea of a laboratory experiment (Ferreira, 2016:61) that is strikingly like the cupboard at the back of the painting of Franz Christoph Janneck’s, *The Uroscopy*, from the eighteenth century (Figure 11). She relates herself and her practice to Teniers’ paintings saying, “I too am a scholar at work, experimenting in my studio and constantly discovering and acquiring new knowledge from my materials and processes” (Ferreira, 2016:62). I correlate this with the way alchemical scholars studied both illustrations and texts to gain implicit knowledge.

Figure 12 shows objects which were formed when Ferreira submerged steel into a saltwater solution in a glass container. The salt solution causes the steel to rust, and the steel changes the colour of the salt and the solution. This process permanently transforms the original state of the steel and the glass container. The three components act upon one another and affect one another simultaneously (Ferreira, 2016:79-80). There is a reaction because of the favourable environment, but also a reaction on the environment. Alchemy was a product of cultural influences, but it also had a significant influence on that culture, as mentioned in Chapter 1. Art is a product of the elements that bring about its creation, but it also plays an active role in influencing the environment in which it operates. Along with this, contemporary jewellery can

30. New Materialism is a contemporary perspective in the arts, humanities and social sciences that has a theoretical and practical ‘turn to matter’. It highlights the materiality of the world and everything – social and natural – within it (Fox & Alldred, 2019:1).

comment on and critique societies' habits and traditions. Ferreira re-evaluated the place of salt as a material within a contemporary jewellery practice and in so doing questioned the place of salt in society.

Referencing Piper and Schön, as well as Heidegger, Ferreira discusses her work process using ideas of play, the unconscious, and flow. Critically reviewing her creative practice, she believes her decisions are derived from her repertoire of knowledge. Further, she links her work to alchemy in terms of her process; because like the alchemist, through continued experimentation, she learns from each attempt (Ferreira, 2016:72).

Similarities between alchemy and Ferreira's practice involve the physical transformation of matter, along with a shared spiritualism. She uses the same materials and instruments as some of the traditional alchemists, and there is a correspondence with the mystical and practical experimental processes (Ferreira, 2016: 60). Ferreira states: "Constantly working and spending time with a material or specific technique can expand and develop your understanding of that material or technique" (Ferreira, 2016:52). She believes that her practice consists of physically changing matter and that this is guided by the theory of the transformation of matter (Ferreira, 2016:84).



Figure 10. (left) Franz Christoph Janneck, 18th century: *The Uroscopy*. Oil on copper. Chemical Heritage Foundation Collections, Fisher Collection, Philadelphia Museum of Art (Ferreira, 2016:64).

Figure 11. (right) Catherine Ferreira, 2014–2015: *Work in Process I*. Salt, thread, steel, copper and glass (Ferreira, 2016:61).

Catherine Ferreira echoes what Marais (2008:108) says when discussing how implicit knowledge is acquired through her practice and the ritualistic nature of jewellery manufacturing. She states:

“The knowledge I have of steel and copper comes from physical contact with it and physically working with it. However, I am not always aware of the knowledge I gain; therefore, I call it tacit knowledge”(Ferreira, 2016:31).

This tacit knowledge could be related to the idea of gnosis, an inherent knowledge of the processes and materials that an artist work in. The works of Ruudt Peters, Inge Marais and Catherine Ferreira all speak of a freedom of choice of materials. There is liberty in the choice of production techniques and which technologies to incorporate. Concepts are favoured over materials and techniques. The methodology of all these artists could be seen as practice-based research and therefore contemporary jewellery serves as a way to investigate a subject like alchemy.

The research I did regarding these artists gave me the freedom to work in any material I deemed suitable. It justified my technological choices and it gave me the confidence to continue my visual interpretation of the subject of alchemy.



Figure 12. Catherine Ferreira, 2014–2015: *Three actants (salt, water and steel)*. Coarse non-iodised pink salt, steel and glass (Ferreira, 2016 , 80).

2.4 Conclusion

Jewellery plays a role in constructing identity for the individual, the group or society, however this visual information is interpreted by others from their own perspective. Contemporary jewellery could be considered as a postmodern movement in which makers express and explore their ideas through any medium that they find appropriate.

The works of Ruudt Peter, Inge Marais and Catherine Ferreira, as discussed in this chapter, reference alchemy as inspiration and motivation. It follows that contemporary jewellery can be used to research and explore complex terms such as alchemy and the ideas that stem from it, such as the improvement of matter. These artists employ contemporary jewellery to explore and visually communicate the ideas of alchemy.

A correlation has been found between the practice of alchemy and contemporary jewellery as both produced research that has practical and theoretical outcomes. Processes in alchemy, such as transformation, can contextually be related to ideas, techniques and materials within contemporary jewellery.

Chapter 3

3.1 Introduction

In this chapter I investigate how contemporary jewellery could be utilised to explore and visually communicate the ideas of alchemy. To accomplish this, I discuss the practical part of this research for which I produced pieces of contemporary jewellery and sculpture through which I interpreted the philosophies of alchemy.

This practical exploration engages in physical performance through the manual manipulation of the materials that I work with. It also involves intellectual creativity through researching production techniques and combining them in unique ways, along with researching and interpreting ideas of alchemy. From a posthumanist perspective, I discuss how materials influence my creative process, depending on their physical properties and accessibility, concluding that there is an interdependence between myself and the materials. I investigate how the interpreted meaning can change according to the materials from which an object is made. I examine the role that intuition plays in my artistic production of objects and I also look at the transformation that took place within my practice over the course of this investigation. I connected the alchemical ideas of time to my process and associated my visual inspiration with alchemy and transformation. The utilisation of three-dimensional printing formed an integral part of my practice in the exploration of shapes.

3.2 Reflections on my practice

Baber et al. is of the opinion that “Jewellery making is an area of human activity in which cognitive creativity and physical performance meet” (Baber et al., 2019:283). They say that the creative act is inseparable from the physical act; they are interwoven and influence each other. The person working with the material not only responds to the state in which the material is found, but also to the possible future states into which it could be transformed. Creativity is a repetitive cyclical response to circumstantial clues in a process where a problem leads to a solution that then leads to a problem. It involves a repertoire of responses and abilities to interpret and to respond to clues and limitations of the material. This then leads to the tools fading from the conscious awareness and the objective becomes the creation of a specific effect or finish (Baber et al., 2019:298). The interactions between myself, my materials, my tools, and the contextual setting within which I am working, all blend and influence each other in the creation of a piece of jewellery. This can be linked to the philosophy of posthumanism, in that it speaks of an interdependency between human, technology and material.

Tin, in the article, *Making and the sense it makes*, explores the physical process of making, stating: “It consists of an intentional forming process whose outcome is articulated meaning. This process involves my body and is performed as a bodily practice” (Tin, 2013:1). Jewellery requires muscle memory for actions that can be described as ritualistic and repetitive. My understanding of Tin’s statement is that making, as well as research, and the transfer of knowledge, happens in the physical space. It is a translation of a conceptual idea into an object. Through my practice, I allow others to view how I translate ideas into objects. The artistic creation of objects is a practice that engages both the physical body (the hand) and the head, and as such, can be related to the field of alchemy in that both is concerned with both practical application and theoretical research.

Principe writes that alchemists were concerned with research consisting of both theory and practice since the very early days of alchemy as a field of study. Zosimos, an alchemist who was active in Egypt around 300 AD, wrote about alchemy; he was clearly orientated towards a central goal – that of the transmutation of metal. He was also engaged in the practical problems of reaching his goal and in his search for solving these problems, he formulated and applied clear theoretical principles that underscored his writing. Principe believes that this proves that theoretical principles guided the alchemist’s practical work, while observations of practice were, in turn, used to support or alter their theories. (Principe, 2013: 17-19). This process of thinking about and through practice, allows for a gnosis on the part of the researcher, an inner understanding.

3.2.1 Materials

Materials had a direct influence on my creative process, that was sometimes further determined by time, place, season, and my repertoire of previous experiences. In this practical investigation, the primary material I worked with was porcelain clay. Clay is an organic substance, that, after being vitrified through heat, is transformed into what is called ceramics. As a material, it is very versatile; it can be moulded by hand, shaped on the potter’s wheel, or slip cast into a mould. After being manipulated into a shape, it needs to dry completely. At this point, however, if allowed to absorb water, it could still return to its original amorphous shape. This dry, unbaked clay is called greenware. The firing of this item in a kiln at a very high temperature changes its structure and chemical composition, transforming it into a fragile, but fixed shape, now named a bisque piece. Bisque pieces can be enhanced with glazes or oxides, after which there is a final high firing that vitrifies the material and strengthens it into a final stronger shape. After the final firing, it is called a ceramic object. It is now fixed in time and could survive for millennia. The oldest known ceramic object has survived from around 25 000 BC.

I also relied on the use of computer aided design and three dimensionally³¹ printed polylactides (PLA). The availability of certain materials made it possible for those materials to be part of Catherine Ferreira's creative exploration. Her crochet experiments were available, and she had access to salt, copper, iron and silver. Like Ferreira, my practical work changes from time to time, corresponding to the availability of materials and my circumstances. This can be compared to the way in which Principe interprets early alchemical ideas when he writes "Such studies – be they alchemical or modern scientific – do not occur in a cultural vacuum, nor are practitioners somehow insulated from the conceptions, interest and ways of thinking of their particular time and place" (Principe, 2013:22).

In what could be seen as posthuman thought, Bolt, in her article, *Materializing Pedagogies*, believes that materials should not be seen as passive objects to be used by the artist, but rather that they bring their own intelligence to the process (Bolt, 2006:1). Piper writes in the article *Inside Making* that Heidegger believed that we can only come to know the world theoretically after gaining an understanding of physically handling it (Piper, 2006:3). Piper believes that a material like clay can have a variety of responses to the maker's attentions and tools in the space where the artist connects physically with the materials (Piper; 2013:4). Materials have physical mechanical properties, such as strength, elasticity, plasticity, hardness and brittleness. These properties will dictate what can and cannot be done with a specific material. Clay has a high level of plasticity that allows it to be shaped and moulded by hand. Once fired, it loses this property, and acquires hardness, and brittleness and so it is turned into a fixed shape. Coming to terms with these properties and the creative possibilities and limitations of materials, only happens when I physically engage with these substances. Only after this engagement with the material, does internalised knowledge or gnosis of the material occur. I see clay as a natural product and PLA as a synthetic industrial material. These materials contrast each other as natural and manmade materials.

Piper believes that the key elements that are brought together during the making process are the interaction of the maker and the materials in an interpersonal space, along with the tangible and potential qualities of the materials being used. The physical collaboration between the materials and the maker, makes it possible for the shift from an abstract (or internal) idea into a tactile or real object. There is also a special tactile connection between the inner self, the hand, and the materials (Piper, 2013:1).). In what can be seen as posthumanist thought, authors such as Bolt (2006:4) and Piper (2013:4) suggest an alternative to mastery over materials and encourage a

31. Three-dimensional printing refers to the creation of a three-dimensional object on a specialised printer from a software file on a computer. Depending on the printer, a variety of materials can be used to print with, including printing in clay, platinum titanium, resin, wax and cement, to name but a few. The materials available to me were the plastic-like products called PLA, PETZ and ABS. I printed three dimensional objects on an entry-level printer called Creality Ender 3 v2 after I rendered these shapes in a software program widely used in the jewellery industry called Rhinoceros 6.

close working with the materials to recognise their voice. This resonates with Malafouris's ideas that the process of making things by hand, shapes the process of human cognition (Malafouris, 2013:154). It is a way of making the internal, external (Malafouris, 2013:27). The presentation of artefacts is a nonverbal way of communicating potential meanings and multiple possibilities.

3.2.2 Intuition

Blakeslee writes in *Right brain: A new understanding of the unconscious mind and its creative power*: "Intuition is a catch-all word for thinking processes we cannot explain," and "intuitive judgements are not arrived at step by step, but in an instant". Also "they cannot be verbally explained" (Blakeslee, 1980:25). In my studio, I design and create pieces and objects intuitively through practical processes and material application. The solution to a particular design challenge often appears during the manufacturing process. Blakeslee further believes that most creative breakthroughs are the result of an intuitive leap that "must be carefully analysed in logical terms by looking at the result" (Blakeslee, 1980:39) and creativity in art can function with very little help from left brain³² activities (Blakeslee, 1980: 27). In Beth Legg's³³ research project, she asked participants to produce an item of jewellery from objects and materials they collected from their immediate environment. Feedback was given by completing a questionnaire, and fifteen out of sixteen contemporary jewellery artists mention intuition as an important component when describing their creative process (Legg, 2012:69). I believe that this intuitive, often unexplainable process, is what Catherine Ferreira refers to when she relates her practice to alchemy in terms of mystical and magical aspects.

"This historical overview of alchemy and metallurgy created a different perspective to understand my practice. The alchemist and metallurgist use their magic, 'inner heat' and "magico-religious power" to activate the magic in the instruments in order to transform and transmute their materials into something even more mystical. I argue that this 'inner heat' flows within me (the vital materialist art jeweller) through to the process (enchanted, unconscious, intuitive and material thinking) and materials (actants) to the final artwork. Thus, this intrinsic 'inner heat' creates an internal connection between me, my process, my materials, instruments and final artworks" (Ferreira, 2016:59).

This idea of intuition could be related to the idea of gnosis or an internalised understanding. It refers to a decision that is made without knowing how one has arrived at that conclusion.

32. Blakeslee (1980) discusses the different functions of the two hemispheres of the brain. The left side of our brain expresses thoughts in words, but the right side has a separate train of thought that is nonverbal. This forms part of our personality and abilities (Blakeslee, 1980:4). The right brain looks at the entire situation through a single action, while the left brain handles complexities by following small logical steps (Blakeslee, 1980:21). The right brain is believed to be where creative thought and actions originate from.

33. Beth Legg's research centred around the question, "How do contemporary jewellery makers transfer the sensory experience of place into a tangible object?" Within this, she says: "Material has a fundamental role as an expressive tool in jewellery, as a practice that is not defined by its medium (unlike glass, textile or ceramics)"

3.2.3 Transformation

The transformation that material undergoes during the processes of my practical work can be related to the transformation that alchemists hoped to achieve in their laboratories.

I perceived several changes in my creative process and practical work over the course of this study and investigation, and I link this evolution to the alchemical idea of transformation. My material investigation started with the interpretation of my ideas into three-dimensional clay forms made by hand. I began my experimentation in stoneware clay³⁴ and later I worked in porcelain³⁵ clay. I transformed the mechanical properties of the clay from elastic to rigid, through allowing the wet clay to dry. The outcome of producing shapes by hand, for me, resulted in organic, uneven, and asymmetrical forms. Figure 13 shows an example of some of my initial pieces.



Figure 13. Ronel Jordaan, 2020: *Erdeware*. Stoneware, Silver, 40 x 40 x 40mm. Photo: Henk Kruger

34. Stoneware is a type of clay that is usually less refined than porcelain.

35. Porcelain is a finer clay that contains kaolin; it is appreciated for its durability, whiteness and strength. Because of these qualities I believe that it is better suited for creating jewellery like pieces.

My conceptual and visual inspiration directed me towards creating more symmetrical shapes to communicate my ideas. In pursuit of this, I produced plaster moulds for the slip casting³⁶ of porcelain as seen in figure 14.

The process of slip casting can be seen as transformational as I changed the state of matter of the clay from liquid to solid through drying. Initially the master copies³⁷ were made by hand. I utilised a variety of technologies available to me, both from my jewellery practice and from ceramic studio methods; however, I struggled to make the shapes symmetrical, using this medium that was relatively new to me. As can be seen in Figure 15, I could repeatedly produce the same shape, which allowed me to create a range of forms with which to experiment.

In some instances, during my creative process, I realised that I could stop fighting the natural properties of the material and embrace the imperfection of the shapes and outcomes. I would intentionally and intuitively distort the shapes further, after removing them from the mould (see figure 16).



Figure 14. Ronel Jordaan, 2021: Slip cast moulds. Plaster of Paris 100 x 50 mm. Photo: Henk Kruger

36. Slip casting is a technique in ceramics where a mould is produced in Plaster of Paris. Liquid porcelain clay is poured into the mould and the layer that is in contact with the mould dries slightly. The inside remains liquid; this is poured out of the mould. The positive shape is then allowed to dry further and taken out of the mould when the clay is dry enough.

37. This refers to the model or form that is utilised in the creation of the mould.



Figure 15. Ronel Jordaan, 2020: Slip cast porcelain pieces, Wood, 50 x 20 x 20mm. Photo: Henk Kruger



Figure 16. Ronel Jordaan, 2021: Slip cast porcelain, Wood, 50 x 40 x 20mm. Photo: Henk Kruger

I then employed computer aided design (CAD) and three-dimensional printing technologies, to assist me in creating the master copy for the slip casting moulds. The intention was that these shapes would enable me to produce perfectly symmetrical moulds. In addition to the original function of the printed shapes as master copies, I have found that the shapes can be utilised within my practice, in the material that they were printed in. The combination of ceramics and printed PLA can be seen in figure 18, 19, 22 and 33 to 36. The material underwent a transformation of shape as the raw material was printed. Through the process of slip casting, I transformed a three dimensional mould into a ceramic object.

I furthermore related my creative process to the alchemical ideas of time because the process of producing a ceramic object is lengthy and time-consuming³⁸ and cannot be rushed. As mentioned in Chapter 1, Mircea Eliade believes that the alchemist strives to do the work of nature; aspiring to interfere with time, by manipulating substances. Time plays an intertwined roll in my practice, similar to the work of Catherine Ferreira and Inge Marais. I need to cooperate with the natural timeline of my materials, often allowing pieces to dry or cure. The drying and curing of materials will only happen at the rate in which the surrounding environment allows it to do so and this is influenced by factors such as the seasons or the moisture in the air.

Ceramic items also need to be granted the time to cool down slowly inside the kiln after a firing, and this cannot be rushed³⁹. In contrast to this, some of my processes interfere with nature, by accomplishing that which is unattainable or would have taken nature a long time to achieve. The firing of clay or glazes in an electrical kiln is an example of this. Clay could theoretically vitrify in nature in a natural disaster where extreme heat is involved, but this would be a very rare occurrence. Within my contemporary setting, however, it is a synthetic process, where electricity is used to heat the clay in a controlled environment.

Three-dimensional printing in resin or plastic materials is another example of a process that would be impossible to reproduce in nature. Even though some of the materials used in three-dimensional printing are made from renewable organic substances like corn starch⁴⁰, these ingredients need to be put through several industrial processes to transform them into the desired material that has the capacity to be printed.

38. After shaping the clay, the item is allowed to dry. Once dry to the touch, if the shape of the created piece permits it, I smooth the surface of the clay with water and a sponge. After the bisque firing, I start experimenting with the forms, arranging them in different combinations, intending to arrive at a solution that I find aesthetically pleasing. I visualise how these items could potentially be combined in jewellery pieces and then produce quick sketches that serve as a visual reminder of these decisions and possibilities. I typically finish the piece after the final firing by sanding it with fine sandpaper. If needed, I manipulate the piece with specialised equipment.

39. A sudden change in temperature could cause cracking of glazes or chipping of objects

40. PLA could be produced from renewable resources such as corn, cassava, sugarcane or sugar beet pulp. These are called bioplastics.

My creative process inadvertently includes inactive moments, while I wait for the clay to dry or my objects to be fired in a kiln. These pauses allow for the possibility to reflect on the outcomes at different stages. I find myself slightly distanced from my creation. This allows me to re-evaluate the object more objectively, allowing for a combination of intuitive and reason-based influences on the artefacts I produce.

I chose to explore the surfaces of the porcelain pieces I created through glazing. Glazing relies on a reaction of chemical substances when heat is applied in the kiln to create certain colours. This speaks of the process of alchemy. Principe writes that the end of the seventeenth century saw a reinterpretation of alchemy by separating alchemy from chemistry, and as such, separating it from modern science (Principe 2013: 118). Principe believes that this was done to elevate the status of chemistry and chemists (Principe, 2013:88), however he sees alchemy as a crucial part of the history of modern science and specifically that of chemistry (Principe, 2013:118). Glazing is the utilisation of a chemical process in the production of the artefacts.

I mixed the glazes by hand, using oxides of elements such as cobalt, iron, tin, copper and zinc, in combination with a commercially available clear glaze to bring about a colour change to the surface of the clay. The mixed glaze that is applied to the surface of the clay, for the most part, is one colour on application, and transforms into a completely different colour once fired. Cobalt Oxide, for example, is dark grey when applied, but dark blue once fired. This speaks of the transformation that happens in the kiln during firing. The mixing of glazes is a repetitive action of weighing and mixing while meticulously documenting⁴¹ the process. Only by physically mixing and firing a piece, does one get to know what the colour of the glaze will be once fired. This is caused by the different compositions of the mined chemicals that are used in glazes. Glazes interact uniquely with each other and differently on every type of clay. Figure 17 shows test plates that I created in order to determine the colour of a specific glaze.

I relate this process of glazing to alchemy in that it changes the surface and the appearance of the porcelain and stoneware from one colour to another, like the silver that alchemists coloured to look like gold. This change of colour could also signify change in the meaning that each individual ascribes to an object. As mentioned in chapter 2, viewers interpret what they see from their own perspective (Den Besten 2012:104). This means that if you attach a specific meaning to the warm white colour of porcelain, you will attach a different meaning to an item that is dark grey or blue because of your personal frame of reference. Figure 18 shows one of the pieces in which I utilised glazing, contrasting the colour of the porcelain with that of the glaze.

41. Record keeping is done to try and recreate a specific colour, but these glazes often yield unexpected results as the elements interact with one another. Firing the same glaze in different kilns or in different positions in the same kiln could bring about different results. This sometimes leads to unreproducible, once-off reactions.



Figure 17. Ronel Jordaan, 2020: *Test Plates*. Glazed porcelain test plates, 20 x 20 x 20mm. Photo: Henk Kruger



Figure 18. Ronel Jordaan, 2021: *Bymekaar*. Neckpiece. Slip cast porcelain, Printed PLA, Sterling silver. Leather 50 x 20 x 20mm. Photo: Henk Kruger

3.2.4 Inspiration

For visual inspiration, I started referencing the objects in my workshop, and found the jewellery crucible⁴² inspirational and relevant. It represents the creative and technical rituals of the jeweller's occupation. The crucible is used for the melting of non-ferrous metals and in most jewellery practices, it is often in the crucible where the process of creating something new starts. I can argue that my traditional jewellery processes have inspired and informed my creative art and design practice through this interesting vessel. Abbri writes that the crucible could be seen as the main tool of Chinese Alchemy from a symbolic, ritual, and technical point of view (Abbri, 2019, 40). This reinforced my choice in exploring the crucible as a suitable reference for visual inspiration.

During my research, I reinterpreted the jewellery crucible, from its role as a technical tool, into a range of creative ceramic objects and jewellery pieces. Combining these with glazes, my crucibles become a visible reminder and a symbol of the fundamental changes and transformation of materials that I facilitate in my studio practice. Figure 19 shows a sculptural piece, one of the interpretations of a crucible that I researched in my practical process. In seeing the crucible as a symbol, I relate my work to that of Ruudt Peters, as he works with symbolic references. The title of Ruudt Peters' solo exhibition, *Ouroboros*, indicates a symbol used in alchemical text that relates to rebirth. He also made use of ladders in the exhibition, that could be seen as the alchemical symbol for reaching for the divine⁴³. In both cases, the material object represents an abstract idea.

Figure 20 shows one of the initial pieces I produced for this research. In this piece I transformed the idea of the traditional crucible and its holder into a pendant. Normally, once complete, the jewellery object occupies a relatively fixed shape, but in this piece, the ceramic part can be removed and replaced with a similarly shaped form. This is a literal translation of facilitating change in an object, like the way that alchemist aimed to facilitate the change in matter. Figure 21 shows a brooch that has a similar design aesthetic to the piece in figure 20.

Figure 22 shows a necklace with one of the slip cast porcelain pieces as the central part of the work. Porcelain is a fragile material that breaks when it falls. In this case, I repaired the broken crucible with visible black glue. This serves as a visual reminder of the fragility of the material, and I see it as a token that meaning is fragile. An object could be interpreted to have meaning by a specific person at a specific time, but that same object might have a different meaning for another person.

42. By using a combination of oxygen and LPG gas torch, non-ferrous metals like gold, silver, copper and brass, can be melted in a crucible and poured into a steel shape (ingot) where they solidify into a bar. Through various processes, the metal bar is shaped into different forms to create jewellery.

43. Explored in section 2.3.1.



Figure 19. Ronel Jordaan, 2021: Sculpture. Slip Cast Porcelain, Printed PLA. 200 x 40 x 20 mm. Photo: Henk Kruger



Figure 20. Ronel Jordaan, 2020: *Smeltkroes*. Neckpiece. Porcelain, sterling silver, leather plastic. 50 x 50 x 20mm. Photo: Henk Kruger



Figure 21. Ronel Jordaan, 2020: Brooch. Slipcast porcelain, Sterling silver, Steel 30 x 30 x 20mm. Photo: Henk Kruger



Figure 22. Ronel Jordaan, 2021: *Because When*. Neckpiece. Slip cast porcelain, sterling silver, printed PLA, nylon, glue 65 x 65 x 20mm. Photo: Henk Kruger

Figure 23 is an image that shows different views of a silver and porcelain ring that is a continuation and extension of the crucible pieces in figure 20 to 22. In this piece, the porcelain object can also be removed and replaced. The porcelain shape in this ring is a more conceptual interpretation of a crucible, and although inspired by the crucible holder and the previous pieces, it also speaks to my theoretical research regarding changes in the meaning of jewellery objects.

Figures 24 to 27 display the progressive exploration of different ring ideas that constitute a range. The initial crucible shape evolved and opened new possibilities through the creative design processes that I explored. .

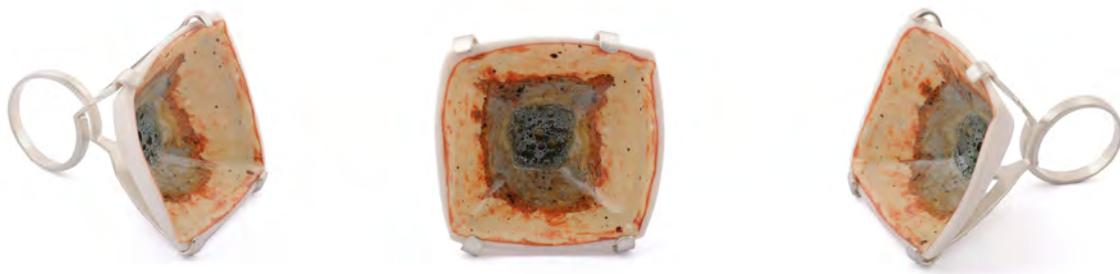


Figure 23. Ronel Jordaan 2021: *Ring in Konteks II*. Ring. Slip cast porcelain, silver 45 x 45 x 45mm
Photo: Henk Kruger



Figure 24. Ronel Jordaan, 2021: *Ring in Konteks I*. Ring. Slip cast porcelain, silver 45 x 45 x 45mm.
Photo: Henk Kruger



Figure 25. Ronel Jordaan, 2021: *Ring in Konteks III*. Ring. Slip cast porcelain, glaze, oxidized silver 45 x 45 x 45mm. Photo: Henk Kruger



Figure 26. Ronel Jordaan, 2021: *Ring in Konteks IV*. Ring. Slip cast porcelain, glaze, oxidized silver 45 x 45 x 45mm. Photo: Henk Kruger



Figure 27. Ronel Jordaan, 2021: *Ring in Konteks V. Ring*. Slip cast porcelain, glaze, oxidized silver 45 x 45 x 45mm. Photo: Henk Kruger

3.2.5 Three-dimensional printing

Figure 28 shows one of my first three dimensionally printed crucible design experiments. Like the ideas of improvement in alchemy, I was in pursuit of perfecting the symmetry of my chosen design shapes, that I initially formed by hand. At first, I found the three-dimensionally printed objects quite lifeless. It seemed like my creation had culminated in a perfectly symmetrical product that did not have a soul.

Piper states:

“It could be said that the life of a work is embedded in its making, and that the transitional space between maker and made, containing the corpus of sentient decisions made, imbues its legacy not only in the work, but also within the soul of the maker, and ultimately an interested viewer” (Piper, 2013:5).

The activity of creating a piece of art is the transition of the maker’s idea or concept into a physical reality. The finished object contains all the decisions that were made during this process, leaving traces of these decisions in the work itself and in the soul of the artist. This is evident in the created artefact; therefore, it can be appreciated by the viewer. It is this sequence of choices or the evidence of process, I believe, that is absent when one looks at an unaltered three-dimensionally printed object.



Figure 28. Ronel Jordaan, 2021: White PLA Crucible Printed PLA. 65 x 65 x 25mm. Photo: Henk Kruger

I associate three-dimensional printing with alchemy by returning to the idea of time. Eliade writes in *The Forge and the Crucible* that the “alchemist dream was to accelerate the tempo of things” (Eliade; 1978: 174). The realisation of this dream could be said to be seen in the creation of synthetic products, and he believes that these synthetic products demonstrate for the first time the possibility of eliminating time (Eliade, 1978: 173)⁴⁴. This technology will continue ‘making’ while I proceed with my day. I do not need to spend time to create the model or piece after rendering the idea in the CAD program. Using CAD in my process, I explored how a design idea or concept can be virtually realised and brought into the physical space. I printed the models first to evaluate the shape of the pieces and then proceeded to manufacture the item in ceramics. Clay is a physical material, and as such, relies on the senses. One can see and feel clay by handling it when producing forms. When utilising CAD programs, one needs to envision what the object will look like once printed. The interpretation of scale is an interesting challenge during this process, as the computer screen is a specific size, and the zoom function is used to aid in the designing of objects. Figure 29 shows images created in the program that I render. Three-dimensional printing can also be seen in terms of Malafouris⁴⁵ Material Engagement Theory. Technology and human society have coevolved and working with 3D printed materials testify to the technological or intellectual development in the field of jewellery design and production

44. I discuss this in section 1.2

45. I discuss this in section 1.2

I explored the application of imitation gold leaf on some of the printed plastic pieces (see figure 30). Through using imitation gold, I tried to question the perceived value of the material, by changing the meaning of the pieces in order to make them look like metal. Would the viewer consider them to have a different value, or maybe that they are more valuable?



Figure 29. Ronel Jordaan, 2021: Three-dimensional rendering of object to be printed.



Figure 30. Ronel Jordaan, 2021: *Verteenwoordig I*. Neckpiece. PLA, imitation gold leaf, steel. 60 x 40 x 40mm. Photo: Henk Kruger.

In figure 31, I produced a similar piece to the one seen in figure 30. This is a ceramic neckpiece that investigates the way in which material would alter the meaning, feeling and visual appearance of a piece. With this piece, I investigated the ideas of Scrivener, as discussed in Chapter 1.3.1. I experimented with the ideas of expressing “multiple potential meanings” (Scrivener, 2002:7) and tried to “present different ways of seeing”.

Figure 32 shows a neckpiece that is part of the range seen in figure 29 to 31. In this piece I reached a solution whereby the clasp is incorporated into the forms themselves. The shapes contain magnets that allow the parts to be attached to one another, but in this specific solution they do not always need to be connected. This is a design solution that appeared in the production of the other pieces. Only by holding the printed shapes in my hand could I have reached this conclusion. The design solution was presented in the practical creative process.



Figure 31. Ronel Jordaan, 2021: *Verteenwoordig II*. Neckpiece. slip cast porcelain, steel 60 x 35 x 35mm. Photo: Henk Kruger



Figure 32. Ronel Jordaan, 2021: *Verteenwoordig III*. Neckpiece. PLA, imitation gold leaf steel. 60 x 40 x 40mm. Photo: Henk Kruger

Inspired by Peters' piece, *Prima Materia*⁴⁶ I went on to create the neckpiece seen in Figure 33. I created geometric shapes from clay by slip casting three dimensionally printed shapes. In utilising the technology of three dimensional printing, I could produce shapes that I was not able to create through hand production nor would one be able to find these shapes in nature. Therefore the components cannot be mistaken as natural objects. As such, I relate this piece to that of Ruudt Peters. Furthermore, I relate this to the fact that Eliade believed that the alchemist strived to accelerate the natural tempo of nature and that synthetic materials can be seen as the accomplishment of this idea. I used black nylon cord to tie two pieces together, leaving the ends of the cords as is. I then used the cord to tie them all into a neckpiece. I created the final neckpiece through a quick and intuitive informal design solution.



Figure 33. Ronel Jordaan, 2021: Neckpiece. Slipcast porcelain, printed PLA, nylon thread 200 x 200x 50mm. Photo: Henk Kruger

46. His piece is shown in Figure 4.

The work that is portrayed in figure 34, is a sculptural piece. The Afrikaans name, *Triptiek van Gedagtes*, translates to the English, *Trilogy of Ideas*. It is the culmination of several ideas that I encountered and grappled with during my creative investigation.

Standing in sharp contrast to the visual outcome of the creative process that I followed in my initial stoneware experiments, I see this change in the appearance of my pieces as the transformation that occurred within my process over the course of this practical investigation. I aimed to portray the idea of the fragility of my chosen material, porcelain, and relate that to the fragility of meaning. I intentionally made the porcelain walls of the ceramic part of the piece very thin and therefore exceptionally delicate. The meaning of *Triptiek van Gedagtes* is meant to be equally delicate, as each viewer will potentially have a different frame of reference when looking at the shape and colour of these objects. My initial reaction to the plastic-like printed material, was that one could not see the series of decisions that was taken during the process of making. I challenged my own perceptions and transformed these views in this piece. This sculptural piece was created with much less involvement from my hands. I printed the vessel's shape and made a slip cast mould without any other manipulation. The outside surface still reflects the texture of the printed material, but the inside I smoothed and glazed, as this is where I wanted the change that I facilitated to be most evident. The shape itself is a further conceptual extension of the idea of a crucible.

The bottom stands are a printed repetition of the top forms, but they are made to enhance the look of fragility in the piece by suspending the ceramic part on thin plastic base-shapes. The plastic and porcelain materials are opposites to me, but simultaneously integrated. Instead they are the more natural clay and manmade printed pieces. The piece reflects the combination of intuitive and reason-based decisions that are made during the creative process.



Figure 34. Ronel Jordaan, 2021: *Triptiek van Gedagtes*. Sculpture. Slip cast porcelain and PLA 100 x 65 x 65mm. Photo: Henk Kruger

In figure 35 I extended myself in order to work on a bigger scale. I followed similar processes to those utilised in creating the sculptural pieces in figure 34. Pushing the interpretation of the crucible further, I wanted this work to be seen as an object in its own right and unlike jewellery, it did not need to be attached to the body.

I continued the exploration of this form in figure 36. Slightly smaller, and combined with a different shaped printed PLA, I explored the change in visual appearances that occurs when one part of the sculpture changes. Through repetition, I inherently came to know the process of producing these ceramic shapes; I relate this integrated, felt knowing to that of gnosis.

In a response to my training as a goldsmith I returned to working in metal only, but I now interpreted the material in a more sculptural way, as can be seen in figure 37. For these pieces, using the CAD program, I scaled down the shapes from figures 34 to 36, to enable me to produce a set of rings. I printed the shapes in resin and through a lost wax casting technique⁴⁷, changed the shapes into metal. The process itself speaks of the creation of one shape in the place of another. It could be said that a material change occurs when the resin is burned out in the kiln to be replaced with metal. It is the change of one material into another. This speaks to the alchemical idea of the transformation of matter.



Figure 35. Ronel Jordaan, 2021 Sculpture. Slip cast porcelain, printed PLA 450 x 270 x 270mm. Photo: Henk Kruger

47. Lost wax casting involves the production of a wax or resin model, that is then encapsulated in investment (a plaster of Paris like substance), This is placed in a kiln and the wax is burned out. The resulting cavity is filled with molten metal that solidifies once cooled down in order to produce a piece.



Figure 36. Ronel Jordaan, 2021: Sculpture. Slip cast porcelain, printed PLA 450 x 230 x 230mm. Photo: Henk Kruger



Figure 37. Ronel Jordaan, 2021: Rings. Sterling silver 25 x 15 x 15mm. Photo: Henk Kruger

3.3 Conclusion

I design and create jewellery and sculptural objects, to give expression to my ideas regarding alchemical philosophies. For this investigation, I primarily made use of clay and three dimensionally printed PLA pieces as materials. I facilitated a transformation in these materials, from one shape to another, from one colour to another, from one state of matter to another and changed one physical property into another, through processes such as slip casting, glazing, and the firing of objects in a kiln. Through this I am influenced by the abilities and properties of the materials and as such we are in an interdependent relationship. The transformation that I bring about could be interpreted as the alchemical goal of transforming one substance into another.

Intuitive decisions and actions are a culmination of my experience, time, the place and the constraints of that specific situation. I am inspired by and interpreted the crucible as a range of jewellery that I linked to alchemical ideas. The utilisation of three-dimensional printing could conceptually be related to the alchemical idea of the successful manipulation of nature and time through the creation of a synthetic product.

I believe that the successful exhibition of the jewellery pieces created during this research, in a gallery space, shows that jewellery could be employed to explore and visually communicate the ideas of alchemy. Images of the work on display at GUS, Stellenbosch as the solo exhibition called gnosis, can be seen in figures 47 to 55.

Conclusion

that investigates the way in which material would alter the meaning, feeling and visual appearance of a piece. With this piece, I investigated the ideas of Scrivener, as discussed in Chapter 1.3.1. I experimented with the ideas of expressing “multiple potential meanings” (Scrivener, 2002:7) and tried to “present different ways of seeing”.

When handling the ceramic items that I produce, there needs to be a certain sensitivity towards the pieces, because they are formed from a fragile, breakable material. Handling the plastic-like materials that I printed, I do not have to consider that the objects will break when falling. To me, this changes the meaning and content of the object. Even though I can make the plastic look similar to other materials, it does not generate the same reverence that I feel when I handle the porcelain objects.

This is my personal practical application and exploration of the idea of the changeable meaning of objects from a postmodern perspective. The change in materials changes the way I perceive the object. In the field of alchemy, the transmutation of matter into gold is a central concern that remained constant from ancient to early modern times. In endeavouring to reach this goal, research was done through practical and theoretical applications. Alchemy can be interpreted in several ways, such as a pre chemistry, a philosophy of nature or an interpretation of analytical psychology. This depends on the perspective from which it is viewed, be it positivistic, postmodern or anthropological. From a postmodern point of view, I found that alchemy is a term that could be said to have many subjective interpretations.

Practice-based research in the arts is concerned with the creation of artefacts as a major part of the study, that is submitted along with a written thesis. The meaning and interpretation of an art object is dependent on the context within which it is viewed, such as an exhibition. This led me to deduce that practice-based arts inquiry can be utilised to reflect and interpret the concepts, ideas and processes of alchemy through the creation and display of artefacts.

Contemporary jewellery is a movement in which makers express their ideas and a medium they use to explore a great variety of things, including, but not limited to, culture, fashion, customs, rituals, and our relationship with objects. Processes in alchemy can contextually be related to ideas, techniques and materials within contemporary jewellery. Two examples of this are the idea that transformation can be seen in the changes a material undergoes during the creation of an artefact, for instance from slip cast clay to ceramic object, and the change in surface colour when applying glazes. The alchemical idea of creating a new material from existing ones can be seen in the work of Ruudt Peters, while challenging ideas around the value of a material. Contemporary jewellery as a practice works from a practice-based research methodology.

Ruudt Peters, Inge Marais and Catherine Ferreira are contemporary jewellery artists that reference alchemy as inspiration and motivation for their work. Their research consists of both practice and theory and as such the study of their works, led to the conclusion that contemporary jewellery can be used to research and explore complex terms such as alchemy.

This motivated the creation of a body of contemporary jewellery pieces to explore and visually communicate the ideas of alchemy. These artefacts are an expression of my understanding of alchemy, the materials I work with, and the time and the place in which I find myself. I see them as an extension of myself and a way to visually communicate certain ideas around alchemy.

Contemporary jewellery is a gnosis that I experience through the physical involvement with my materials, intellectual engagement with alchemy and contemporary jewellery as research subjects. It is in the making that the gnosis lies, the felt intrinsic and intuitive knowing that comes from this engagement.

This, I believe, proves that the practice of creating contemporary jewellery could be utilised to explore terms such as alchemy that could have many subjective and changeable interpretations.

Figures of my practical work



Figure 38. Ronel Jordaan, 2021: Neckpiece. Slip cast porcelain, printed PLA, leather, resin, nylon thread 300 x 200 x 50mm. Photo: Henk Kruger



Figure 39. Ronel Jordaan, 2021: Brooch. Slip cast porcelain, sterling silver. 100 x 35 x 35mm. Photo: Henk Kruger



Figure 40. Ronel Jordaan, 2021: Brooch. Slip cast porcelain, sterling silver. 100 x 35 x 35mm. Photo: Henk Kruger



Figure 41. Ronel Jordaan, 2021: Neckpiece. Slip cast porcelain, sterling silver, nylon thread, leather 200 x 200 x 50 mm. Photo: Henk Kruger



Figure 42. Ronel Jordaan, 2021: Sculpture. Ceramic slip cast, Wood 270 x 270 x 50 mm. Photo: Henk Kruger



Figure 43. Ronel Jordaan, 2021: Earring. slip cast porcelain, sterling silver 25 x 15 x 15mm.
Photo: Henk Kruger



Figure 44. Ronel Jordaan, 2021: Brooch. Slip cast porcelain, sterling silver 35 x 35 x 20mm.
Photo: Henk Kruger



Figure 45. Ronel Jordaan, 2021: Neckpiece. Slip cast porcelain, sterling silver, Silk thread 250 x 200 x 50 mm. Photo: Henk Kruger



Figure 46. Ronel Jordaan, 2021 Ring. Slip cast porcelain, sterling silver 45 x 30 15mm. Photo: Henk Kruger



Figure 47. Ronel Jordaan, 2020: Ring. Handformed porcelain, sterling silver 45 x 30 15mm.
Photo: Henk Kruger



Figure 48. Ronel Jordaan, 2021 Exhibition space at GUS Photo: Ronel Jordaan



Figure 49. Ronel Jordaan, 2021: Exhibition space at GUS. Photo: Ronel Jordaan

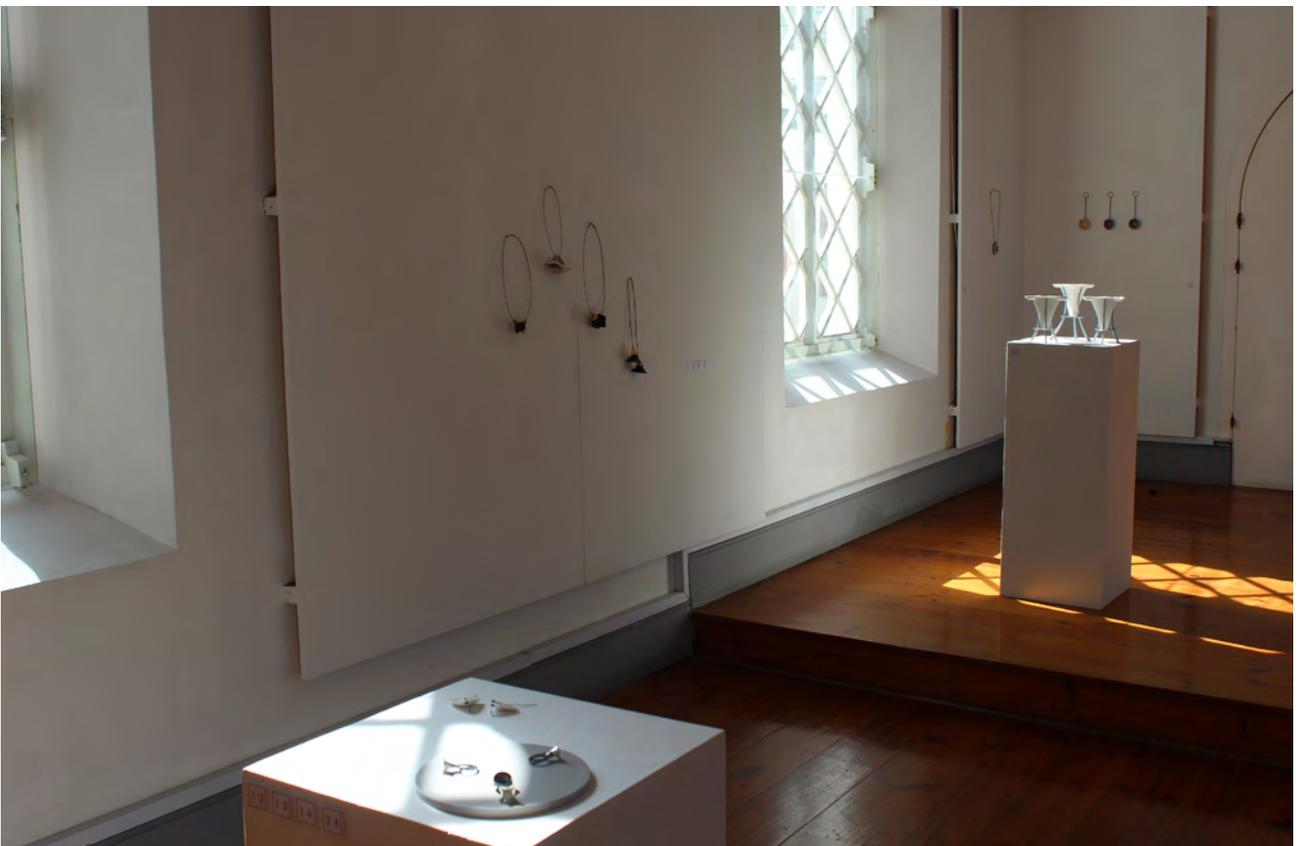


Figure 50. Ronel Jordaan, 2021: Exhibition space at GUS. Photo: Ronel Jordaan



Figure 51. Ronel Jordaan, 2021: Exhibition space at GUS. Photo: Ronel Jordaan



Figure 52. Ronel Jordaan, 2021: Exhibition space at GUS. Photo: Ronel Jordaan



Figure 53. Ronel Jordaan, 2021: Exhibition space at GUS. Photo: Ronel Jordaan

g n o s i s

by

R o n e l J o r d a a n



M A V A E x h i b i t i o n

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Figure 54. Ronel Jordaan, 2021: Exhibition invite Image: Ronel Jordaan

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