

COMMERCIAL JEWELLERY TECHNIQUES: INNOVATING SELECTED CONTEMPORARY MANUFACTURING TECHNIQUES

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ABSTRACT

This study is an investigation into specialised techniques which can aid the establishment of a unique South African jewellery design style in order to enhance commercial and contemporary jewellery. The initial impetus for this investigation was informed by conclusions drawn and recommendations proffered by various previous studies which indicated that the lack of uniqueness of South African jewellery concepts as well as the replication of Western or Eurocentric trends in local jewellery have resulted in South African jewellery being an unmarketable brand abroad. The study showcases the development of diverse techniques which has increasingly become obsolete in the modern South African epoch of commercial jewellery. This study argues that the primary inclination of jewellery designers and especially from European immigrant origin to simply employ traditional African crafts, patterns and artefacts as inspiration for formulating a South African style of jewellery, has in the past traversed the portrayal of African culture as primitive. As a remedial approach this study delineates on the possibilities of designers employing and developing an auto-ethnographic design style whilst also incorporating specialist techniques in the pursuit of self-expression in jewellery design. This study argues that such an approach will lead to a more unique and representative jewellery design style and which will be a more appropriate or authentic representation of South Africa's diversity. Considering that South Africa is a major producer of precious metals and precious stones whilst only producing roughly 2% of the world's jewellery, the South African government has in recent years invested heavily in the jewellery industry with a view on its advancement and growth. Subsequently, this investigation additionally delineates on views of jewellery specialists on the state of jewellery design and manufacture in South Africa in order to formulate recommendations for the South African jewellery industry to propagate a progressively more mature industry.

DECLARATION BY CANDIDATE

I, the undersigned, hereby declare that the work contained in this dissertation is my own independent work and that this dissertation, or parts thereof, has not previously been submitted by myself or anyone else to any other institution in order to obtain a degree. I furthermore understand what plagiarism entails and am aware of the University's policy in this regard. As such, where external sources were utilised (whether a printed source, the Internet or any other source), due acknowledgement was given by means of a comprehensive list of references in line with departmental requirements.

Eric Leslie Holmes

Date

LANGUAGE PRACTITIONER CERTIFICATE

I, Johan Frederick Barnard, hereby declare that I have been appointed by Eric Leslie Holmes (“the Candidate”) to attend to the linguistic aspects of the research report (excluding appendices) that is hereby submitted. To the best of my knowledge, all suggestions and recommendations made by me in this regard have been attended to by the above-mentioned candidate.

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LIST OF ABBREVIATIONS

ADJO	–	Association of Designers and Jewellers Organisation
ANC	–	African National Congress
BEE	–	Black Economic Empowerment
CAD	–	Computer-aided design
CCT	–	College of Cape Town
CPUT	–	Cape Peninsula University of Technology
CSIR	–	Scientific and Industrial Research
CUT	–	Central University of Technology, Free State
DTI	–	Department of Trade and Industry
DUT	–	Durban University of Technology
FF Plus	–	Freedom Front Plus
GDP	–	Graduate Development Programme
IFP	–	Inkatha Freedom Party
JCSA	–	Jewellery Council of South Africa
JMASA	–	Jewellery Manufacturers' Association of South Africa
MQA	–	Mining Qualification Authority
SEDA	–	Small Enterprise Development Agency
SU		Stellenbosch University
TUT		Tshwane University of Technology
UJ		University of Johannesburg

LIST OF ADDENDA

Addendum A: Interview transcription: Johan Slabbert

Addendum B: Interview transcription: Thomas Labi Kapo

Addendum C: Interview transcription: Liz Loubser

Addendum D: Informed Consent forms

Addendum E: Practical Journal

CHAPTER 1

INTRODUCTION

1.1 Background to and Aims of the Study

South Africa is a major supplier of gold, diamonds and platinum to the world market. Nonetheless it manufactures roughly only 2% of the jewellery in the world. Numerous efforts from the South African government to support the growth of the jewellery industry have not yielded the desired outcome. Consequently, the jewellery industry in the country is facing enormous challenges, challenges which can be overcome by enriching training to support the initiatives of government and fulfil the needs of the industry (Da Silva, 2007:292). In his article, Ruffini (2010:30) indicates that for the most part of the 20th century until 2006, South Africa was the world's largest gold producer, but by 2009 South Africa had slipped to fourth place behind China, the United States of America and Australia. According to a study by Um Jwali Market Research conducted in 2012 on behalf of the Small Enterprise Development Agency SEDA (Um Jwali Market Research:2012), South Africa is one of the largest producers of gold, diamonds and coal as well as other base metals and the largest producer of platinum. Even though South Africa is no longer the largest producer of gold in the world, South Africa still holds the largest natural unmined reserves of gold, platinum group metals, chrome and manganese. South Africa also has the second largest reserves of zirconium, vanadium and titanium. The country exports the majority of these raw products, only to import finished products – for instance jewellery – from countries such as Italy, India and China. As South Africa is such a large producer of precious metals, there is a need for a larger and more competitive jewellery industry in South Africa to support the beneficiation of these precious commodities. Over the past 30 years, the South African government has initiated various projects and ventures to grow the jewellery industry in South Africa, to provide alternative jobs in view of the ailing gold mining industry and to aid in the beneficiation of raw materials used in jewellery manufacturing.

When reflecting on the design of commercial jewellery¹ in South Africa, it can be observed that

¹ The term commercial jewellery as used in this study by the researcher refers to mainstream jewellery ranges which is in mass manufactured and sold in retail shops. This type of jewellery is in general manufactured using metals such as silver, gold or platinum with the main feature of the jewellery being faceted stones in an attempt to imitate the splendour of diamond jewellery. Commercial jewellery is usually devoid of deep expressive concepts and unusual or exotic techniques such as mokume gane, granulation, keum boo or enamelling. In some cases, such mass manufactured commercial jewellery is of poor quality measured according to high standards of qualified goldsmiths.

numerous techniques have developed over centuries in the art of jewellery making, but these seem to be increasingly unexploited. According to Da Silva (2007:294), the replication of European jewellery trends by most jewellers in South Africa and the advancement in certain technologies have left the industry without any individuality and as a result a South African identity in jewellery design has not been formally established. The consequences are that South African jewellery is unmarketable and exporting capabilities of the industry are extremely weak compared to countries such as Italy, which is not a significant gold, platinum or diamond supplier, but a major exporter of manufactured jewellery. Da Silva (2007:294) further cautions, that without more new and uniquely styled jewellery on a large scale, South Africa will find it increasingly more difficult to compete on the world jewellery stage as a major exporter of jewellery. She goes on to claim that “[m]uch of the jewellery that is produced in South Africa is replicated from Italian and other European designs, and therefore lacks uniqueness. Jewellers have long been encouraged to develop a design style that is identifiable as South African. Without new designs it is too difficult to compete with existing producers or target niche markets.” This notion is further supported by Short and Radebe in a book which focuses on the whole gold value chain and jewellery industry in South Africa. On the design concepts of South African jewellery, Short and Radebe state the following: “With respect to the mass-produced product lines (chain as well as cast product), international jewellery trends drive the product ranges.” They furthermore state that “[i]t is common for South African consumers to buy locally fabricated jewellery that is indistinguishable (in design) from product sold in Western markets elsewhere. In both design and character, the South African mass market is similar to that of the United Kingdom. This is particularly true of mass-produced chain bangles, bracelets and earrings” (Short & Radebe, 2006:82, 83).

Furthermore, in a study conducted by McCallum he reiterates that superficial, degrading African-themed jewellery has been invented and nurtured over the centuries by Western civilisation. It is aimed at ill-informed tourists who have a biased view of the African psyche and culture. McCallum (2007:43-44) notes that besides these attempts, before 1998 South African graduates in jewellery design and manufacturing were not equipped to deal with or design original African- or South African-themed jewellery. This notion and the fact that South Africa exports most of the raw products used to make jewellery, only to import finished jewellery, led McCallum and John Bond, founder and chief executive officer of Laser Optronics Technologies, to form a consortium that included Laser Optronics Technologies, the Council for Scientific and Industrial Research (CSIR) and the University of Johannesburg (UJ). The consortium was awarded R8.25 million to research and develop technology for designing and manufacturing high-end jewellery. This enabled the

University of Johannesburg's Jewellery Department to explore ways to support the consortium, and they consequently shifted the focus to ways of creating innovative jewellery designs that represent a South African identity (McCallum, 2007:iii-iv). McCallum (2007:44) furthermore states that in training jewellers prior to 1998, the emphasis was only on craft and hand skills and the techniques involved in manufacturing Eurocentric-modelled jewellery.

Reflecting on the findings of and observations by McCallum (2007), Da Silva (2007), Short and Radebe (2006) and Um Jwali Market Research (2012), it can be concluded that there is a need to investigate techniques which can act as an enabling vehicle for South African jewellery designers and manufacturers to express themselves as well as the diverse cultures of South Africa and to elevate their designs and concepts. A path for jewellers and graduates should be formulated to cultivate a new culture of invention and conceptualisation to give them the ability to move away from simply replicating Eurocentric jewellery and to discover and establish new and original designs. Therefore, there is a need at a tertiary level of education to teach the theory and history of a variety of techniques which can aid upcoming jewellers to create more individual designs and concepts, as well as to develop a South African style which will be recognisable globally. The research question in this study explores the idea of extending the scope for graduates and providing jewellers with a broader knowledge of jewellery manufacturing processes to promote a unique and marketable brand. As such the main intent of this research is to investigate rare jewellery manufacturing techniques, and to include examples as well as a concise history of their origins. The use of underutilised techniques such as enamelling, for instance, can unlock and expand the design concepts of jewellery designers and enable designers to portray ethnic, cultural and more individual design considerations with a larger design toolkit. The use of underutilised surfacing techniques and the combination of these techniques with South African-themed subject matter can result in jewellery which will be more individual and distinguishable from contemporary world trends. This conjunctively can make South African jewellery more marketable worldwide as a recognisable South African style or brand as opposed to the current replication of jewellery designing trends fashionable elsewhere around the world and, in particular, European or Western trends in jewellery design.

1.2 Problem Statement

When commencing employment at private jewellers, postgraduate students are expected to be able to replicate established jewellery processes and these processes are aimed at replicating current world trends in jewellery design. The aforementioned graduates are typically not

encouraged to bring about concepts which are rooted in African or South African design concepts². This phenomenon has historically been the vehicle and foundation on which curricula have been developed at jewellery schools and universities in order to provide students with a blueprint for duplicating these trends. For instance, many hours are allocated by trainers to teach learners specific established stone setting procedures, but rarely encourage learners to develop or design their own stone settings themselves as certain procedures in the setting of stones are seen in the jewellery industry as established principles. This has left a huge gap in the conceptualisation of original ideas and the establishment of a unique style which in time can become identifiable and marketed as unique and South African. As McCallum (2007:43) accurately observes:

“Design is a complex process that combines skills and concepts to produce a product. Jewelry design departments train the majority of designers and before 1998, were not equipped to deal with content in jewelry that conveys meaning through design. Jewelry design students largely focused on skills that taught them how to set stones into jewelry such as rings, pendants and earrings. Emphasis was placed on settings, welding, polishing, processes that emphasize manufacture rather than design. The jewelry design institutions were initially created to supply a labour force of bench workers for the jewelry industry. Importance was attached to the craft of handmade jewelry. Such an approach allowed for little individualized expression and rarely went beyond the superficial notion of an African identity.”

Universities have over the past two decades transformed their curricula and the extent of design and the technical skills involved in jewellery manufacturing, but in the field the jewellery produced and imported by traditional jewellery manufacturers and especially retailers tends to appear similar without any individual flare. This type of commercial jewellery is usually devoid of original concepts and unique techniques which were developed over centuries. The reason for this occurrence might well be the buying behaviour of the public. According to Short and Radebe (2006:95) there are principally three events which dominate the jewellery retail sales calendar in South Africa. These events are Saint Valentine’s Day in February, Mother’s Day in May and Christmas in December. Short and Radebe (2006:95) indicate that in the four days prior to

² According to McCallum (2007:141), African or South African design concepts is difficult to define as it is a loaded term which refers to identity. The researcher will use the term in this thesis to refer to jewellery which can in some way represent the tapestry of cultures part of the South African delineation of peoples either as one group or as separate groups. When speaking about African Design, the researcher refers to design which is inspired by traditional African art.

Christmas, the stores record sales in excess of the monthly averages for the entire year. If the buying behaviour of consumers is as predictable as it is in the jewellery industry, it can be considered that these consumers are not aiming to buy narrative personalised jewellery and which could explain why retail stores cater for consumers aiming to buy jewellery which has cliché type of themes following worldwide trends. Thus it will be central to the study to determine which techniques can be employed to help and inspire jewellers to become more creative and original in their approach to jewellery manufacturing, as well as to determine how some deeper narrative subject matter can be introduced into jewellery design.

At present there are at least seven active jewellery manufacturing training programmes in South Africa, most notably those of the Tshwane University of Technology (TUT), the University of Johannesburg (UJ), Stellenbosch University (SU), the Cape Peninsula University of Technology (CPUT), the College of Cape Town (CCT), the Central University of Technology, Free State (CUT) and the Durban University of Technology (DUT) (Van Staden, 2010:126).

1.3 Main Research Aim and Co-objectives of the Study

As a Reflecting on the views of Da Silva (2007:294), Short & Radebe, (2006:82, 83) and McCallum (2007:43-44), a South African jewellery design style are primarily extensions of Western or Eurocentric design. The main aim of this study is to explore rare underutilised jewellery manufacturing techniques which can be introduced to South African jewellery designers, training institutions and manufacturers in the industry to assist them in discovering and exploring more unique designing concepts. Three co-objectives to support and help realise the main aim are formulated as follows:

- The first co-objective is to:

Provide an overview of jewellery designs currently being manufactured in South Africa.

- The second co-objective is to:

Manufacture a body of work which will consist of experimental artefacts of jewellery and examples using an assortment of jewellery manufacturing techniques. Designs for the body of work will be guided by the research. Due to their scarceness in mainstream mass manufactured commercial jewellery the following techniques will be further explored in this study:

- Enamelling

- Niello
- Mokume gane
- The third co-objective is to:

Reflect on the techniques used in the body of work. These techniques will be scrutinised in order to determine if they have the potential to be used to rejuvenate and invigorate the design concepts of jewellery designers in South Africa.

1.4 Significance of Contribution

South Africa is acclaimed all over the world for its richness in culture as well as its rich and abundant mineral resources. As a consequence, it is almost impossible to understand why South Africa has such a small stake in the global jewellery manufacturing industry. There must be countless concomitant or co-existing reasons why the jewellery industry in South Africa has never reached its rightful potential of being one of the largest jewellery exporters in the world. Surely one of the cumulating or contributing factors which has in the past inhibited the jewellery industry is that of education. This research can assist in the pedagogy of a jewellery design and manufacturing learning curriculum, which will contribute towards providing competent graduates and assist in fulfilling the need of the jewellery industry in South Africa to become more competitive worldwide, and to market more original and invigorating designs. This research aims to explore the concept of South African-themed jewellery designs and narrative jewellery which will enable jewellery designers to contribute towards the establishment of a South African jewellery style. In time the elevation of South African jewellery design concepts will cultivate and enhance the jewellery industry's contribution to beneficiation of these precious raw materials used in jewellery manufacturing which in the past have been exploited and exported without benefitting South African art or the jewellery industry. As stated previously, due to the jewellery industry in South Africa following world trends, South African jewellery has become unmarketable as a specific South African brand or style abroad. Thus the focus or approach of South African jewellers towards jewellery design needs to be shifted. A remedial and fresh approach by means of assessing South African culture may be provided by this study open to the scrutiny of the South African jewellery industry which can contribute to a unique way of promoting African cultural patterns, materials and identity to the global community through jewellery.

1.5 Chapter Overview

1.5.1 Chapter 1

The first chapter provides the rationale for the study. Chapter 1 unpacks the background to the study and which highlights the issues faced by the jewellery industry in South Africa today. Furthermore, this chapter defines the problem statement and facilitates a description of the main objectives and finally illuminates the significance of this study to the jewellery industry, and concludes by providing a chapter overview which highlights the intension and focus of each chapter.

1.5.2 Chapter 2

The second chapter of this study comprises of three aspects. Chapter 2 firstly provides a review of the literature which has contributed to the formation and scope of the study. Secondly this chapter provides a comprehensive framework of the methodology employed, and thirdly a description is tendered of all the ethical considerations implemented throughout the scope of this study.

1.5.3 Chapter 3

The third chapter of this study is committed to a concise discussion on the history of jewellery techniques followed by a comprehensive discussion on the selected techniques that are used in the creation of the body of work. In addition, this chapter also provides a comprehensive discussion on contemporary jewellery ³in relation to South African jewellery by providing a description on the development of contemporary jewellery. Furthermore, this chapter sets out to explain the differences which exist between contemporary jewellery and mainstream commercial jewellery. Lastly this chapter discusses how these techniques can enhance South African commercial jewellery by also incorporating concepts which is evident in contemporary jewellery.

1.5.4 Chapter 4

The fourth chapter of this study firstly provides a brief background on the South African jewellery

³ The term contemporary jewellery as used by the researcher in this study, refers to jewellery which is not mass manufactured. This type of jewellery may also be manufactured using an array of unconventional materials and often combines techniques which is not necessarily related to jewellery. The concepts of contemporary jewellery is much more involved than the designs of commercial jewellery and can be seen as similar to concepts used in contemporary fine art, ceramics, fashion etc. This type of jewellery can thus be described as an art form in opposition to commercial jewellery which uses more prescribed methods, materials and stylistic features.

industry and then moves on to discuss the work of an immigrant jeweller in order to demonstrate the influence of Eurocentric interpretations of Africa in South African jewellery. Lastly this chapter is committed to the fieldwork which is essential to this study. In this chapter the interviews with respected jewellers and specialists in the field are analysed and interpreted in order to aid the researcher to make recommendations to the jewellery industry.

1.5.5 Chapter 5

The fifth chapter essentially delineates on South African culture with the purpose of identifying qualities which possess intrinsic worth which can possibly be used to facilitate the emergence of a South African jewellery style, as well as how South African cultural elements can be incorporated into contemporary narrative commercial jewellery. Therefore, this chapter provides a cultural background to and description of the various groups that form part of the South African classification in order to identify the differences and similarities of the various groups in terms of norms, religion, and belief systems.

1.5.6 Chapter 6

The sixth chapter concludes by reflecting on the body of work and delineates on themes utilised by the researcher in order to attempt to design and manufacture an auto-ethnographic⁴ body of work which reflects on his own culture. This chapter additionally discusses practice-led experiments conducted in order to investigate the procedures and possibilities of self-expression using the selected techniques.

1.5.7 Chapter 7

This final section of this study aim to highlight the most notable conclusions drawn according to the phases of the research design and additionally provide a final reflection on the study. The last section shortly aims to formulate an approach which the jewellery industry can take to invigorate the designing capabilities of jewellery designers in South Africa. This section additionally highlights the researcher's thoughts on further study related to the jewellery industry as well as other or related art disciplines in general.

⁴ Auto-ethnography is a research approach whereby the learner analyses his/her personal experience in the pursue of understanding cultural experience. An Auto-ethnographic approach considers research as a political, socially-just and socially-conscious act by incorporating elements of *autobiography* as well as *ethnography* to develop an Auto-ethnography. (Ellis, Adams, Bochner, 2010:1). In the cace of this study, this approach will be followed with relation to identifying themes or inspiration in the design of jewellery.

CHAPTER 2

LITERATURE REVIEW AND RESEARCH METHODOLOGY

2.1 Literature Review

The inspiration for this study revolves around the inability of the jewellery industry of South Africa to grow to its full potential and to assume its due place among the world's largest jewellery production countries. One central dilemma which has manifested from focusing on the reasons for the defunct position the South African jewellery industry finds itself in, is fundamentally embedded in the absence of a South African style in jewellery, which in turn makes South African jewellery unmarketable as an autonomous and recognisable brand.

The most prominent study that contributed to the formation of the research title was conducted by Da Silva.⁵ In her study, Da Silva (2007) illustrates and explains in depth how the jewellery industry in South Africa has developed, reached its peak and has ultimately imploded and stagnated. Da Silva consulted an array of archival material, including the State Archive depots in Pretoria. Most of this archived material comprised documentation on correspondence with the jewellery industry and between various government departments. To corroborate the documentary evidence, Da Silva also conducted oral consultations with some of the surviving jewellers.

Da Silva's position in the Department of Trade and Industry (DTI) provided her access to internal correspondence on the restructuring of the jewellery industry. Though most of her findings are related to government policies which inhibited the jewellery industry from realising its full potential, the political situation in South Africa and also tensions between eminent bodies influencing the jewellery industry, she has also concluded that there is a pressing need in the industry to elevate its designing capabilities and to emancipate jewellery designing in South Africa from replicating European jewellery designing trends, thus providing more scope for local industry to be more competitive worldwide. The study conducted by Da Silva accurately highlights the most treacherous inhibitions placed on the jewellery industry by the South African government. Her study also provides invaluable knowledge on the state of the jewellery industry in South Africa

⁵ Maria Da Silva was working at the Department of Trade and Industry (DTI) while studying towards her PhD. She is currently working at the Chamber of Mines as Senior Policy Analyst in the Communications Department. She works on a number of issues from publications to taking minutes and assisting with new members joining the Chamber.

and provides recommendations to the jewellery industry on how it might remedy the situation. Da Silva also reiterates that the design of jewellery in South Africa should be more original and that jewellers should make jewellery uniquely South African, but unfortunately the scope of Da Silva's study does not include recommendations on how such a style or uniqueness may be accomplished.

In contrast in his study, McCallum (2007) focuses on empowering black South Africans in the jewellery industry, and emancipating them from historically degrading Eurocentric presumptions about black South Africans and what South African jewellery should be. In his study he reiterates the notion that for South African jewellery to become globally competitive, a South African identity in jewellery design should be established, and that this design should become more individualised and illustrate the unique and diverse South African culture. McCallum's furthermore addresses the problems associated with transformation of the jewellery industry similar to other industries in South Africa which before 1994 were dominated by predominantly white Afrikaner men, whilst totally ignoring the fact, as illustrated by Da Silva, that the jewellery industry as a whole, regardless of colour, was subdued by the government since the discovery of gold in South Africa.

As this study will also highlight, the most prominent jewellers who have laid the foundation of the South African jewellery industry – though dominated by whites – have always been immigrants and not white Afrikaans South Africans who have dominated most of the South African economy. McCallum, in contrast to Da Silva, does provide a point of departure on how a South African identity in jewellery may be approached, but positions his viewpoint on South African identity from the stance that all black South Africans are a homogenous group where the reality, especially when trying to formulate a South African style, is that the term “South African” is relatively new and incorporates a multitude of different peoples, ethnic groups or “nations” all with their own traditions, beliefs, and belief systems.

Both the studies of McCallum and Da Silva conclude that one of the major contributing factors towards the inability of the South African jewellery industry to fulfil its potential is partly due to the lack of uniqueness of jewellery design in South Africa. In both instances the current researcher agrees that a unique South African identity should be established, but the research will not aim to investigate the formation of such an identity in jewellery, as it is believed that this will be cultivated in time through the cumulated efforts of collaboration between all South African universities, training institutions, the Jewellery Council of South Africa (JCSA) and private jewellery designers and manufacturers alike. Rather, this research will examine how selected techniques can support

and aid the vision of creating a South African style and original, individual jewellery pieces, providing a larger palette for jewellery designers and allowing them to express and conceptualise their ideas through various techniques.

Agreeing with the observations made by McCallum, the current researcher also finds South African identity to be too vague and impractical to enforce a recipe for designing according to a South African style. The term “South African” in its current sense is relatively new and very broad. To be South African, in general, means belonging to a variety of enormously different groups and races each with an array of languages and religions making up their diverse cultures. It is therefore concluded that it would be more beneficial to the jewellery industry to focus on principles of elevating and cultivating individualistic designing skills and capabilities, which will in turn have the same beneficial effect on enabling and aiding the jewellery industry to become more productive and competitive worldwide, and in time provide jewellery designers with the tools to cultivate a South African style without forcing the issue.

The study by Da Silva highlights various historically deep rooted problems ranging from restricting government policies, the reluctance of the jewellery industry to transform, the ill-advised support of the JCSA for the jewellery retail industry and its reluctance to support or give prominence or market or promote unique individualised jewellery. This study will not aim to resolve any differences in views by any individuals, universities, other training institutions, or the JCSA on how to best train an individual to become a jewellery designer or manufacturer. This study will only investigate a selection of rare jewellery manufacturing techniques and make recommendations on how these techniques can possibly aid in the establishment of a unique South African style or to assist graduates and established jewellery designers in enhancing their designing capabilities and how these techniques can be incorporated in commercial jewellery.

In this study a South African design style is referenced which, if properly established or outlined, can act as an instrument to market a pure South African brand of jewellery. It is therefore of value to investigate what a brand actually is and how a brand can endorse specific cultures. For this purpose, an article was consulted which featured in the *Journal of Marketing Management* by O’Reilly (2005). This article provided the current researcher with valuable insight into branding and especially into the dynamics of cultural branding. Alongside the article by O’Reilly, a study by Mandujano (2013) was also consulted. This study provided valuable insight into branding a specific country.

An additional issue in the South African jewellery and mining industries which directed the

justification for this study is the need for South Africa to benefit from its natural resources. To be able to delineate on this issue, articles were consulted in trade journals such as the *Engineering & Mining Journal*. In this journal an article by Ruffini (2010) provides adequate information on the state of especially gold mining in South Africa. Additionally, a case study by Marais (2013), was consulted. This study provided valuable insight into the effects of the declining gold industry in South Africa. In this area it was attempted to establish a jewellery hub which has had mixed successes. This case study is important to note as other mining establishments in South Africa and abroad face similar decline and economic troubles if alternative industries are not established in time. Furthermore, opinions and viewpoints held by the current researcher on beneficiation and the need to inflate the jewellery industry were informed by an article which was an interview by Commey (2014) with Labbi Kapo, an acclaimed and well-known jeweller. In this interview Kapo (2014) reiterates the need for beneficiation and furthermore provides an account on the hurdles black jewellers are encountering in South Africa.

For the purpose of this study, it is empirical to provide an epigrammatic description of various jewellery techniques which have developed over the centuries. These techniques will be placed in a historic, chronological order to inform the reader of the background in which these techniques were developed. This description of various techniques will be followed by an extensive investigation of three selected techniques which will be used to create the body of work. It is vital to place these techniques into a historical context and draw upon the background against which these techniques were discovered or developed. In this study it is imperative to also provide a background account on how mainstream commercial jewellery has become objects of function where the function is purely decorative and an object to demonstrate wealth or status. The rationale for this background is to demonstrate a fundamental flaw in commercial jewellery which has contributed to the lack of uniqueness of South African jewellery which in turn makes South African jewellery unmarketable and unrecognisable as South African. According to Da Silva (2007: 214) the lack of uniqueness of South African Jewellery stems back to World War II when a jewellers competence was only measured on craftsmanship while unique design concepts was not a priority. Da Silva (2007: 214) further states that this occurrence persisted even after 1961 when design competitions was introduced. She attributes this to the fact that the design competitions were not initiated by the manufacturers themselves but was driven by other stakeholders. The magnitude of the problem became apparent as a competition which was initiated by the chamber of mines in 1970 revealed manufacturers preoccupation with craftsmanship opposes to design.

To be able to delineate on the development of the various techniques, a variety of complementary sources by the following authors and related to the jewellery industry in South Africa and Africa were used, i.e. the Readers Digest Association (1973), Guadalupi (1998), Prins (2009), Evans (1953), Garrard (1989), Markowitz and Doxey (2014) and Schadt (1996). Of all these sources, one of the more relevant to this study is the work by Schadt. This book provides a clear and comprehensive chronological account of the development of jewellery techniques and hollowware with photographs of some of the most amazing treasures that have been created by man over the last 5000 years. As an introduction to each period, the researcher first provides an historical background on the culture, religion, and art styles prominent during the specific period. This introduction is followed by a description on the hollowware and jewellery of the time and then, most importantly and relevant to this study, a background and description of the techniques involved and the development thereof are provided as well as the development and evolution of the design styles. Furthermore, the researcher consulted an article which appeared in the magazine *Ornament* by Markowitz and Doxey (2014). This article is well researched with photographs of the jewellery and sculptures and additionally provides valuable information on the technical ability of jewellers in Ancient Nubia. As one of the selected techniques is enamelling, this article is of value to this study as it reveals examples of the earliest enamelling techniques in jewellery.

In order to define the techniques and more importantly the selected techniques and how they have evolved and furthermore to provide a contemporary account on each technique, a book by Brepohl (2001) was consulted as his work provides an in-depth and descriptive account on the execution of the selected techniques. Before studying at the College of Applied Arts in Leipzig in 1953, Brepohl received training in his father's workshop. After obtaining his master's level, he also obtained additional degrees in mechanical engineering and industrial design. Brepohl taught at the College of Applied Arts for many years. One of Brepohl's most important accomplishments was to translate a famous 12th century manuscript by Theophilus Presbyter. As the manuscript is written in Latin, Brepohl had to first learn the language. As a result of this, he published a book in 1987 which also served as his dissertation for which he received the degree of Doctor of Philosophy. Brepohl has also written five other books, including *Artistic Enamelling* and *Cutting and Setting Precious Stones*. Brepohl's book provides detailed descriptions on jewellery techniques and also provides a systematic scientific account on the theory behind the techniques. Brepohl's elevated and sound knowledge of metallurgy and the science behind the successful execution of complicated techniques will provide this investigation the necessary information

needed to delineate further on how these techniques will aid South African graduates in enabling them to find common ground in designing uniquely designed South African jewellery. Brepohl does not only provide a recipe on how best to execute these techniques, he also provides an in-depth scientific background on the rationale of the steps involved in the processes.

Furthermore, to appropriate additional information on the selected techniques, books by the renowned jeweller Untracht were consulted. Untracht was a master goldsmith who was born in New York City in 1922. Though he was originally trained as a photographer, Untracht became a specialist on the jewellery of India and Nepal and was also honoured with the Lifetime American Achievement Award on behalf of the American Art Council. Untracht's 1967 book was considered a standard training textbook for jewellers and provides a background on the origin of metal, the physical properties of metals and includes a chapter on the classification of metals, but predominantly this book delineates on the processes and techniques involved in craft metal fabrication (https://en.wikipedia.org/wiki/Oppe_Untracht). His 1982 book is similar, but focuses more in depth on jewellery techniques specifically. Both of these books were consulted in order to get as much possible information on the techniques selected for this study. As one of the selected techniques is enamelling, Untracht's 1967 book on enamelling was furthermore also consulted; this book provides examples of the procedures of the various types of enamelling and represents the work of over forty well-known enamelling artists. Additionally, a book by Ball (2006) was also consulted. In this book Ball outlines all the various enamelling techniques with considerable focus on the technicalities and properties of the enamel, the preparation of the metal and enamel as well as design consideration which is obviously influenced by the properties and process of enamelling.

In providing a background on the South African jewellery industry in relation to design, the researcher consulted the works of van Staden. Van Staden has written a number of informative articles on South African goldsmiths and his work concentrates on the jewellers or goldsmiths of the 1950s. The articles he authored and which were published in the journal *S.A. Tydskrif vir Kultuurgeskiedenis* in 2011, 2013, 2014 and 2015 provide supportive knowledge on the work of immigrant jewellers who have left a huge footprint on the style of South African jewellery. Van Staden noted a range of influential jewellers including Egon Guenther, George Xanthides, Eone de Wet, Mauro Pagliari, Max Segal, Joe Calafato, Jack Friedman, Kurt Jobst, Else Wongtschowski and Birger Haglund to name only a few. For the purpose of this study the current researcher will delineate on the work of Joe Calafato as Calafato intrinsically aimed to instil African subject matter, forms and patterns into his jewellery. Drawing on the work of Calafato will

furthermore demonstrate the inability of immigrant or European jewellers of interpreting a pure African or South African style.

For the purpose of this study, especially towards the incorporation of the selected jewellery techniques towards the creation of a unique style, it is cardinal to provide an in-depth understanding of what contemporary jewellery is and how it is currently being interpreted in South Africa and abroad. According to Sirifesmas (2005:16):

“Contemporary jewellery can be considered in terms of the skills, materials and ideas that the creator used. However, the most important distinction between traditional and contemporary jewellery is the new meaning to be given to the jewellery that may correspond to abstraction and modernization. This reflects the desire to provide the different meaning, style, material, in addition, as well as the place and proper space where contemporary jewellery can be accommodated on the body.”

In an attempt to clarify the array of diverse perspectives on the concept of contemporary jewellery, a range of sources were consulted, e.g. an article by Metcalf (2014) and which is a review on the book by Skinner (2014). Metcalf’s article is relevant to this study as not only does he provides insightful observations regarding the book, but he also supplies alternative perspectives on what contemporary jewellery entails.

Yet another valuable contribution to the current researcher’s appreciation of contemporary jewellery and how it can be incorporated into an African aesthetic style is a 2013 master’s dissertation by Burger submitted at Stellenbosch University. In her dissertation, Burger offers a wide-ranging description of dialogic jewellery and which is comparatively similar to the definition of narrative jewellery presented in this study. Narrative jewellery is conceptual jewellery which conveys a message, makes a statement or simply just has the ability to communicate to the viewer. This type of jewellery stands in contrast to mainstream commercial jewellery which does not convey anything besides class or having a decorative function. Contemporary and narrative jewellery, as opposed to mainstream commercial jewellery, can therefore be classified as unique as contemporary jewellery assigns a voice to jewellery where traditionally the function of mainstream jewellery can easily be described as simply decorative, for instance a ring which is worn on the finger. The main intent of the ring is to decorate the hand; furthermore, the ring might project status depending on the value of the materials used. The purpose of the ring, in conjunction with the previous points, can also be to carry a message that one is married, depending of course on which finger and hand it is worn. But all of these meanings of a

commercial wedding band cannot be put forward as a unique piece of jewellery as the design of the ring does not carry meaning in and of itself. Although it can be argued that a ring that is worn on the ring finger of the left hand symbolises that a person is married, this tradition cannot be put forward as narrative jewellery or contemporary jewellery as the design of the ring becomes totally irrelevant and therefore the ring, as promoted by mainstream commercial jewellery, lacks uniqueness and consequently it is not marketable as, for example, a pure and original South African brand. Commercial jewellery has become unimaginative vessels whose function is to be decorative and act as status symbols as a means of reflecting wealth as is the case with most jewellery available in retail stores around South Africa. It is therefore imperative to this study to investigate what contemporary jewellery encapsulates and investigate how contemporary jewellery concepts can possibly be incorporated into commercial mainstream jewellery.

The study by Farber (2010) has brought much insight into the term “South African” as a unifying identity. Although her study focuses on the challenges and accomplishments of the fashion industry in South Africa, it is nonetheless relevant to this study as the jewellery industry faces similar challenges and both industries have been under the same past and present constraints. In the opening statement to her study, she reiterates that although it can be assumed that South African garments are noteworthy, they are nevertheless still underexplored (Farber, 2010:128). This statement is similarly very much applicable to South African concepts which in the jewellery industry are also underexplored. Farber (2010:128) reiterates that it seems that South African fashion design is beginning to contribute to the reorganisation of sociocultural and economic life in South Africa. Reflecting on the utterances of Farber, it would seem that the fashion industry in South Africa are doing well with transforming fashion in South Africa, thus it might be rewarding to highlight how another discipline of industry has overcome some of the challenges facing the jewellery industry as well.

Together with the study of Farber, another crucial study is an article by Loughran (2009) which appeared in the journal *Fashion Theory*. This study is critical of the idea of Africa constantly borrowing stylistic ideas from Europe and focuses on an opposite idea of instances where African forms have inspired fashion and jewellery in Europe. This notion will be interesting to explore, especially to investigate how Europeans have in the past interpreted African inspiration in their jewellery and fashion, as well as the reasons why Europeans themselves have taken the initiative to use African forms as inspiration. Can it be assumed that the reason might lie in the absence of such jewellery or fashion resulting from an African or South African obsession of reproducing jewellery and fashion according to Western trends? The study by Loughran might also add

credibility to McCallum's notion that interpretations of Africa by Europeans have historically been demeaning.

An article on the jewellery of Beverly Price, written by Simon (2010), provides this study with valuable insight into contemporary jewellery specifically in South Africa. Price draws inspiration from her own experience of South Africa's turbulent past (as she grew up during the time of apartheid), South African cultures, as well as South African icons such as Nelson Mandela in her attempt to create African-inspired contemporary hybrid jewellery. A thesis by Knisley (2013) also provides this study with valuable and fascinating information on studio jewellery or contemporary jewellery as opposed to commercial jewellery. Knisley elaborates on the emergence of studio jewellery with a secondary focus on the European approach to contemporary jewellery design. These two studies are important to highlight the view of contemporary jewellery as interpreted in the West and how contemporary jewellery, in relation to the rest of the world, is interpreted by South African jewellers. It is important for the purpose of this study to articulate on contemporary jewellery and then further delineate on how this practice can be incorporated into commercial South African jewellery.

The investigation into contemporary jewellery will additionally include an analysis of the use of the selected techniques by contemporary jewellers. This analysis will include background information of the jeweller and a short timeline of how the jeweller was first introduced to the jewellery trade. The analysis will also delineate on the jewellers' inspiration which has led to the production of their work. This analysis will include the artist jewellers Mariko Sumioka and Barbara Seidenath for enamelling, Phillip Fike and Gigi Mariani for their work in niello and lastly the work of George Sawyer and Craig Stuart will we considered, both of whom specialises in mokume gane. The work of two additional contemporary artists, namely Harold O'Connor and Dorothy Hogg, was also considered and, although not included in the analysis, additional works by other jewellers considered and who's work also constitutes contemporary jewellery include works by Philip Sajet, Julie Cohn, Kliff Slemmons, Rachel Carren, Patrik Kusek, Eric Silva, Pat Pruitt, Daniel DiCaprio and Lola Brooks. The artists or jewellers' works included in the analysis constitute contemporary works which illustrate particular techniques and concepts relevant to this study. This analysis will later on be used in order to draw a triangulated analogy between the current author's body of work, mainstream commercial jewellery and contemporary jewellery manufacturers. With a view on reflecting on mainstream commercial jewellery, brochures from some of the most prominent jewellery retail stores in South Africa will also be gathered.

In order to delineate on the contemporary use of enamelling, an insightful article by Simon (2002:18-25), which appeared in the magazine *Metalsmith*, provides a description of the contemporary enamelling work of Barbara Seidenath. The article highlights Seidenath's background and from which she draws much of her inspiration for her work, and highlights the people who have contributed to her development as a jeweller. A further article that provided insight into the contemporary use of enamelling is that of Julius (2015:40-43) which featured in *Craft Arts International*. This article elaborates on the contemporary enamelling work by Mariko Sumbioka. The work of Sumbioka, as opposed to the work produced by Seidenath, is more involved and can be seen as an inspiring example of how to incorporate culture and tradition into jewellery. Sumbioka uses the Japanese culture as main inspiration and successfully depicts the Japanese sense and tradition of living in harmony with nature in her work.

The use of niello and mokume gane by contemporary jewellers is rare due to the complexity of these techniques; subsequently there is a huge shortfall in formal investigations and studies on these two techniques. Thus some of the sources used for the investigation of jewellers using these techniques are somewhat limited and will compel the researcher to resort to the use of unpublished articles on websites delineating on the work of particular jewellers.

In developing and expanding on my familiarity on the contemporary use of niello, the researcher consulted an article by Yager (1998:16-25) which appeared in the magazine *Metalsmith* and provides an account of the work of Phillip Fike. The article was written after the passing of Fike and is a testament to Fike's love and passion for jewellery and especially his fascination with the art of niello. The article by Yager provides an in-depth account on the jewellery career of Fike and highlights his accomplishments, influence and contribution towards the jewellery industry in the United States of America. Exploring the work of Fike provides this study a first-hand account on the impediments, limitations and possibilities of niello as a medium of expression in contemporary jewellery. An additional jeweller which specialises in niello jewellery is Gigi Mariani. In order to expand on the work of Mariani, the researcher consulted a video interview by Beautiful People Live Art with Mariani. The video is available on YouTube at <https://youtu.be/wSkr4Db7OjE>. In this interview, Mariani passionately talks about his fascination with niello and describes his intention as an artist. Mariani creates very personal jewellery objects and expresses himself and his feelings by incorporating niello into his jewellery. In this interview, Mariani unveils his conceptual process of designing and elaborates on the manufacturing of his niello work.

With a view on reflecting on artists using mokume gane, an article by Stuart (2014:118) which appeared in the *Craft Arts International* was examined. This article, however, only provided limited information on the work of Stuart. The researcher therefore additionally consulted two videos available on YouTube as well as Stuart's public website. In these two videos, Stuart elaborates on his work and what inspires him as well as his designing and manufacturing process. Stuart talks passionately about his love for nature and how this inspiration manifests in his work. The researcher furthermore consulted the website *Craft and Design*, available from www.craftmaker.co.uk/craigstuart/. Here Stuart elaborates on and clarifies his process of manufacturing the mokume he uses in his jewellery.

A jeweller who also uses mokume gane in creating jewellery is George Sawyer. An article by Dinoto (2012:26-27) which appeared in the *Metalsmith* elaborates on the work and accomplishments of Sawyer as a commercial jeweller. Sawyer's work is aimed at the retail jewellery sector.

A further article by Dinoto (2014a:50-57), which also appeared in *Metalsmith* provided insight into the work of Harold O'Connor. The work of O'Connor can constitute as narrative jewellery which includes granulation and reticulation. Both of these jewellery manufacturing techniques are not used frequently in mainstream commercial jewellery. O'Connor's work is busy, even cluttered, and in some sense reflects an earthy and almost ethnic feel. Furthermore, an article by Goring (2015:19-22) which featured in *Craft Arts International* and focuses on the work of Dorothy Hogg was consulted in order to demonstrate how subtleness in the use of inspiration can still communicate meaning through a jewellery piece. The work of Hogg stands in complete opposition to the work of O'Connor as the work of Hogg is simple yet mesmerising and demonstrates how subtle inspiration can be incorporated into jewellery and how these subtle hints can add a voice to a jewellery piece. Hogg additionally uses a variety of surfacing techniques such as enamelling and soft texturing, but keeps the pieces uncluttered and simple.

The researcher elaborated on the work of these three artist jewellers as their work is firstly contemporary and furthermore the works can all be put forward as narrative jewellery. In this study the researcher will place the work of these three artists in opposition to each other and delineate on the different approaches and highlight the similarities in order to provide a reference point on which to draw upon when setting out to design my own jewellery pieces. It is also of value to understand the methods these artist jewellers use to add meaning to their jewellery.

In this study, especially when outlining commercial jewellery, it is essential to additionally note the

technological developments in the industry. Computer-aided design (CAD) and 3-D printing are making tremendous inroads into most industries and the jewellery industry is no exception. The rapid development and use of 3-D printing will in future become the rule rather the exception in the jewellery industry and subsequently inform the look of design. It is therefore of value to this study to note the developments in 3-D prototyping and printing. To provide a sufficient representation of these developments, an article by Hoffman (2015:91) which featured in *PC Magazine*, was consulted. This article is informative and provides sufficient information on the current manufacturing abilities of 3-D printing and includes a forecast of future developments in this technology. It is important to note that this study will not endeavour to provide an analysis of 3-D printing. The purpose of mentioning it here is merely to inform the reader of such developments and furthermore to take note of these developments as it could influence the design of my body of work and which may influence the outcome of this study.

Drawing on South African culture as inspiration for design, commands the provision of an account on South African culture. One of the most striking contributions towards this subject is the book by Magubane (1998). Magubane is a photographer who has published a host of books delineating on the people of South Africa. Magubane started his photographic career in 1954 when he started to work for the magazine *Drum*. Some of his early work was exhibited in London and Germany. From 1966 he covered political events while working for the *Rand Daily Mail* and received a scholarship from the Ford Foundation to study documentary film-making in the United States. Magubane also worked for *Time* in New York during the 1980s and 1990s and was later on moved to the Johannesburg office. During the years of apartheid, Magubane was detained and spent 586 days in solitary confinement, after which a five-year banning order was imposed upon him by the apartheid government. Magubane remained committed to unveiling the harsh conditions and political injustices of apartheid and in 1997 he received the Lifetime Achievement Award from the Mother Jones Foundation and Leica Cameras. Magubane furthermore received an acclaimed letter from President Nelson Mandela, South Africa's renowned former head of state. This letter states:

“For his bravery and courage during the dark days of Apartheid, Peter became a beacon of hope not only to thousands of other journalists all over the world, but also to millions of our people across the country. His commitment to photojournalism helped pave the way to transformation in South Africa, and such efforts are, needless to say, worthy of international recognition.”

Magubane's book has provided this study indispensable insight into the traditional lives, customs and religions of the black population of South Africa. The book is a photo documentary of the various groups in South Africa with a well-researched account on the customs and historical origins of the largest black ethnic groups and tribes of South Africa. It is important to note that the history of black South Africans which was never documented before the arrival of Europeans has always been written by Europeans whose discourse had to rely on verbal legends and tales which over time must have been distorted. Therefore, Magubane's book is absolutely relevant when delineating on the culture of the black population in South Africa as it is a well-researched written account by a black South African.

In contrast to the availability of written historical accounts on Black South Africa, the white or European segment of the population is well documented. Most of the information on the Afrikaners was derived from the history book by various contributors and edited by Muller (1969). This book pays little attention to the consciousness and struggle of black South Africans, and provides a chronological account of from the first Portuguese explorers around the Cape, through the arrival of the Dutch, the French Huguenots, the British through to the Great Trek, the establishment of the Boer Republics, the Second Anglo-Boer War (also referred to as the South African War), the Unification of South Africa, and the implementation of the policy of apartheid. Even though some may view this book as a one-sided account of the history of South Africa, the use thereof was nonetheless necessary to ascertain and accurately represent the Afrikaans population's customs and religion and understand their own view of history which has shaped their belief system of today.

Serving as counterbalance to the book by Muller (1969), the book by Giliomee⁶ (2004) was consulted. In this book, Giliomee's narration of Afrikaner history is not necessarily an attempt to pardon Afrikaners for their oppressive history, but rather an attempt to place the Afrikaners' stance into perspective as to better understand their position as a people who have also been undermined and subdued by their British conquerors and being a minority in South Africa.

⁶ Hermann Buhr Giliomee was born in 1938 in a small town called Sterkstroom and attended school in Porterville. He studied history at the University of Stellenbosch near Cape Town where he would also later lecture. He subsequently became a lecturer at the University of Cape Town and was President of the South African Institute of Race Relations from 1995 to 1997. Giliomee has written a range of political and historical publications and in 2008 received the coveted Helgaard Steyn Prize for Literature for *Die Afrikaners. Nuwe geskiedenis van Suid-Afrika* and *New History of South Africa* were published in 2007, co-written with the historian Bernard Mbenga.

To form a representation of the hegemony of British South Africans or the English as they are commonly referred to in South Africa, an article by Lambert (2009) in the *Journal of Imperial & Commonwealth History* was consulted. This article was part of a larger project on writing a biography on the origin of British South Africans. The article deals with the arrival of the British and how they became dominant in South Africa and after the Afrikaner Nationalist takeover of South Africa in 1948 the British dominance started to decline. The article also deals with the British division among themselves which ultimately affected the British feeling of nationhood and halted the establishment of a Southern African English nation as opposed to the case of the Afrikaners.

The Indians of South Africa have since their arrival in South Africa been treated with antipathy and was seen as a great threat by the British in Natal and the Afrikaners in the Boer Republics. South African historians have also treated the history of Indians in South Africa as a history of foreigners. To unfold the history of the Indians and their struggle to be recognised as South Africans in their own right, the researcher once again consulted the book by Muller (1969) which will show to what extent the apartheid government went to in order to put laws in place to subdue the Indian population in South Africa.

The representation of the Coloured community in South Africa is accurately represented in Freedberg's (1987) study. In this study, Freedberg unfolds the concurrence of the Coloured identity crisis and the historical predicament of the Coloureds in South Africa, being a mixed race who on the one hand identifies with white or Western norms yet rejects their supposed cultural superiority while on the other hand identifying with black or African ideals and the Black Consciousness Movement but at the same time rejecting black or African traditions and norms.

Moving on to the methodology of this research, a collection of sources was consulted. This will be a qualitative research process where practice-led research will be employed to guide the study. To provide a definition for practice-led research, the researcher consulted a variety of sources including an article by Marshall (2010) which appeared in the *Teaching Artist Journal*. This article by Marshall has provided insight into research methodology which is suitable and acceptable for research from an artistic perspective. Studio-based research is primarily a research design suitable for artistic research where the data, which frequently consists of works of art, can prove difficult to interpret or draw conclusions from by using traditional methodologies. Furthermore, an article by Nimkulrat (2007) was consulted which appeared in the *Journal of Research Practice*. In this article Nimkulrat provides a precise step-by-step account of practice-led research, and additionally provides information on how to document the process. Finally, the researcher used a

guide on practice-led research by Candy (2006). In this guide, Candy describes the history and process of practice-led research and furthermore provides an exposé on the outline of a thesis with answers on the most frequent questions concerning the writing of a thesis.

In the design and manufacturing phase, Feyerabend's concept of epistemological anarchy will be employed. This theory is not necessarily a process to be followed step by step, but on the contrary is a methodology which is against the use of prescribed methods. This concept argues that following prescribed methods may actually inhibit the discovery process which is supposed to lead to new knowledge. Although it is customary to follow a prescribed designing process when designing jewellery, where firstly one has to research the theme, get inspiration, explore the inspiration and then start designing. After designing a number of pieces and exploring a few concepts, some design development must be carried out before the pieces can be presented as final. During the design development phase, in my view, many of the decisions an artist takes during this process of creation is unknowingly reliant on Feyerabend's theory. In providing this study a concrete definition of this method, the researcher made use of a study by Sarma (2015:179). In this study Sarma explores misconceptions related to qualitative research as in some circles qualitative research is dismissed as not having enough rigour to qualify as scientific research. Sarma argues that most of these comments and viewpoints are the result of a lack of understanding the fundamental differences between quantitative and qualitative research as well as the haphazard implementation of qualitative research methods by some researchers. Additionally, an article by Tsou (2015) was consulted. This article clarifies any misgivings one might have about Feyerabend's theory on epistemological anarchy.

In designing the questions intended for the interviews, the researcher assimilated a phenomenological qualitative research approach. The intention of this approach is to encourage a narrative account on the lived experience from the participants grappling with interpreting a South African style when designing commercial jewellery without reverting to extracting inspiration from Western interpretations of what an African style or aesthetic should be. Furthermore, the researcher wants the participants to provide an account of their incorporation of techniques which is not widely integrated into commercial mainstream jewellery and, lastly, the researcher wants the participants to provide an account of their abilities in self-expression when designing. Therefore, the researcher appropriated a phenomenological approach where predominantly the questions are structured to provide the participant the opportunity to provide narrative open-ended responses. In providing this study with an accurate definition on what phenomenology is, the

researcher consulted a study by van Manen (2007). Phenomenology, according to Van Manen (2007:12), refers to “[a] project of sober reflection on the lived experience of human existence—sober, in the sense that reflecting on experience must be thoughtful, and as much as possible, free from theoretical, prejudicial and suppositional intoxications.” As such Van Manen provides a holistic account of the various facets or interpretations of phenomenology. Furthermore, the data collected from the respondents will be interpreted and validated using the triangulation theory or process. Formulating an understanding on triangulation, an article by Bryman (2003) which appeared in the *Encyclopedia of Social Science Research Methods* was consulted. This article provides a concise and detailed explanation on triangulation and concludes by clarifying some critique directed at triangulation.

Lastly, this will be an outcomes-based study which will focus on the history and diversity of techniques. It will research how these techniques may be used visually to interpret a specific theme or tell a story through jewellery or to give meaning to a jewellery piece. This is in contrast to the replication of world trends, specifically commercial Eurocentric design which has dominated trends in the South African jewellery industry.

2.2 Methodology and Research Design

■ Phase 1

Phase 1 of the research will be aimed at providing an overview of the jewellery industry in South Africa as well as the jewellery designs currently being manufactured in South Africa.

As mentioned in the literature review, to be able to obtain reliable knowledge and to encourage a narrative account on the lived experience from the participants, a phenomenological qualitative research method will be followed by conducting interviews with open-ended questions for the respondents. These will be aimed at two domains in the jewellery industry:

- Specialists in the field of jewellery manufacturing
- Jewellery lecturers or trainers

Interviews aimed at specialists in the industry should supply sufficient background accounts of the views of the specialists on jewellery currently manufactured in South Africa.

Van Manen (2007:12) defines phenomenology as follows:

“Phenomenology is a project of sober reflection on the lived experience of human existence-sober, in the sense that reflecting on the experience must be thoughtful, and as much as possible, free from theoretical, prejudicial and suppositional intoxications. But, phenomenology is also a project that is driven by fascination: being swept up in a spell of wonder, a fascination with meaning. The reward phenomenology offers are the moments of seeing-meaning or ‘in-seeing’ into ‘the heart of things’ as Rilke so felicitously put it. Not unlike the poet, the phenomenologist directs the gaze toward the regions where meaning originates, wells up, percolates through the porous membranes of past sedimentations – and then infuses us, permeates us, infects us, touches us, stirs us, exercises a formative affect.”

In his study, Sarma (2015:180) quotes Denzin and Lincoln by stating that qualitative research is a mix of three interconnected concepts, namely ontology, epistemology, and methodology. Sarma further delineates that ontology refers to the qualitative researcher approaching the world with a set of ideas and then examining the question in a certain way which is the methodology by focusing on a set of questions which in turn is the epistemology.

In the preliminary stage interviews with specialists in jewellery manufacturing or lecturers and trainers in jewellery design and manufacturing will be conducted, allowing the researcher the opportunity to reflect on and interrogate the lived experience of the stakeholders and allow the researcher to make a thick description of the data to be interpreted and validated. For instance, the interviews can be compared with each other allowing the researcher to pinpoint the similarities and anomalies in the answers of the participants. This will allow the researcher the opportunity to validate the general situation or status quo of jewellery designing in South Africa.

To add rigour and credibility, and to identify the shared experience of the subjects of the study, the data collected will be interpreted and validated using the triangulation strategy. A reliable determination can then be formed by the conformity of interpretations between the specialists and jewellery lecturers and trainers. This will be determined by analysing and identifying the patterns that may emerge in the textural and structural description and responses by the participants.

Bryman (2011:1142) defines triangulation as follows:

“Triangulation refers to the use of more than one approach to the investigation of a research question in order to enhance confidence in the ensuing findings. Since much social research is founded on the use of a single research method and as such may

suffer from limitations associated with the method or from the specific application of it, triangulation offers the prospect of enhanced confidence. Triangulation is one of the several rationales for multi-method research. The term derives from surveying, where it refers to the use of a series of triangles to map out an area.”

■ **Phase 2**

The second phase of this research entails using the knowledge gained from the data collected from the stakeholders in the industry to identify relevant techniques which can aid jewellery designers. The researcher will subsequently manufacture a body of work which will consist of experimental jewellery artefacts and examples using an assortment of jewellery manufacturing techniques. These can then be scrutinised in order to determine if they have the potential to be used on a large scale to rejuvenate and invigorate the designing concepts of jewellery designers in South Africa.

To master the techniques and manufacture the body of work, a variety of sources will be investigated, including reflecting on my own past experience and examining primary sources such as jewellery manufacturing manuscripts and books. Firstly, the process of manufacturing each technique will be researched, and an example of each technique will be manufactured. This will be done and redone until each process has been mastered to satisfaction. Throughout this stage the processes will be documented and reflected on in a journal. Thereafter a range of contemporary jewellery designs will be designed by the researcher. These designs will be guided by the observations and findings made with the manufacturing of the examples of each technique. The most relevant designs will subsequently be selected and manufactured by the researcher. This last stage will also be documented.

Predominantly a practice-led research methodology of creating, observing, describing, reflecting and then analysing the techniques will be pursued. The practice-led process will be documented by making frequent inscriptions in a journal. The journal will consist of four columns, as illustrated below.

Facts and actions	Immediate reactions	Preliminary reflections	Reflections

Candy (2006:1) describes practice-led research as follows:

“Practice-led research is concerned with the nature of practice and leads to new knowledge that has operational significance for that practice. In a [...] thesis, the results of practice-led research may be fully described in text form without the inclusion of a creative work. The primary focus of the research is to advance knowledge about practice, or to advance knowledge within practice. Such research includes practice as an integral part of its method and often falls within the general area of action research.”

The practice-led process of designing, manufacturing and documenting of the artefacts will fundamentally be based on the epistemological anarchism concept introduced and defined by Paul Feyerabend. Sarma – with reference to Feyerabend – defines epistemological anarchy as follows: “[S]trict scientific method does not help scientific process rather it is actually some amount of *ad hoc* postulates breaking the rule ensure scientific progress. In a sense this [sic] *ad hoc* postulates defy the typical rationalistic model of theory building” (Sarma, 2015:179-180). This theory or methodology formulated by Feyerabend will complement the designing and manufacturing of the artefacts especially with this study as the study aims to move away from strict step-by-step instructions for making jewellery. Feyerabend (1975:14-15) states the following:

“There are circumstances when it is advisable to introduce, elaborate, and defend *ad hoc* hypotheses, or hypotheses which contradict well-established and generally accepted experimental results, or hypotheses whose content is smaller than the content of the existing and empirically adequate alternative, or self-inconsistent hypotheses, and so on. There are even circumstances – and they occur rather frequently – when argument loses its forward-looking aspect and becomes a hindrance to progress.”

This anarchist epistemological *ad hoc* or “anything goes” principle which rebels against set rules in methodologies used in science will encourage the discovery process and the emergence of new knowledge. In my view, this method (or anti-method) of discovery is ideal for the design and production of jewellery. When designing jewellery, one needs to know the application of techniques when designing in order to design according to what is possible to manufacture, but

these methods do not need to restrict but only guide the designer on how to apply these techniques in the design. This is also true when it comes to the manufacturing of a specific design. When the intention of the design is to be contemporary and new, then when the outcome of the piece is not a perfect reflection of the intended design for whatever reason, it does not mean that what has been manufactured is a failure. By breaking the rules, or deviating from specific blueprints for producing a specific method, one may well produce something entirely new and totally original. The most important intent of this research fundamentally gravitates around the experimentation of techniques, and the possibility of discovery. If this experimentation is limited or obstructed by set rules, the possibility for discovery will be unattainable. Consequently, this study would become a tedious “how to” instruction manual on how best to apply already known knowledge of techniques which have been perfected decades earlier.

■ Phase 3

The third phase of this research will be to provide a narrative reflection of my experience of the first two phases. The researcher will reflect on the body of work and subjectively provide a thick description of recommendations for the jewellery industry to invigorate designing concepts for the benefit of the whole jewellery industry. These recommendations will not be prescriptive, but rather informative.

PHASE	METHOD	SAMPLE (purposive sampling)	OBJECTIVE
1	Phenomenological qualitative research - Open-ended interviews	- Specialists in the field of jewellery manufacturing	- Provide an overview of jewellery designs currently being manufactured in South Africa
2	Practice-led research - Inscriptions into a Journal	- Jewellery artefacts	- Identify relevant techniques which can aid jewellery designers - Manufacture a body of work
3	Narrative reflection - Written component	- Body of work - Findings	- Reflect on the body of work - Provide recommendations for the jewellery industry to invigorate designing concepts

2.3 Interviews

In an article by Griffiee which appeared in the *Journal of Developmental Education* in 2005, Griffiee provides a comprehensive explanation on methods of conducting interviews. According to Griffiee (2005): “Interviewing is a popular way of gathering qualitative research data because it is perceived as ‘talking,’ and talking is natural. Interviews do not presuppose any statistical knowledge, and persons to interview, called respondents, might be close at hand and willing”. Concluding this article, Griffiee explains that interviewing respondents is a qualitative method by which data may be captured, and further describes interviewing as less formal than quantitative methodology, therefore the questions should be carefully designed and the data systematically analysed and validated (Griffiee, 2005:36-37).

The first two questions for the interviews are formulated to provide background information on the jeweller and also to establish his/her qualifications and how they came to be in the jewellery industry. It is important to note that the interviews will be directed towards respondents who have been in the jewellery industry for a considerable period and exhibit first-class knowledge of the jewellery industry in South Africa. As such the questions for the interviews are reasonably more involved and open in order for the respondents to provide a clear and in-depth account on the questions. The following questions for the interviews are formulated to provide the researcher with additional information in the writing of the chapter on the South African jewellery industry as well as to provide information with reference to designing and manufacturing jewellery in South Africa. The questions will vary from exploring the South African jewellery industry to providing opinions on contemporary and commercial jewellery as well as to provide an account of the respondents’ own personal jewellery inspiration and subject matter. This will assist the researcher in providing recommendations to the jewellery industry as well as selecting techniques which could be relevant in aiding designers when designing towards a South African style.

2.4 Ethical Considerations

2.4.1 General

The gathering of and reporting on all information in this research will observe ethical regulations and also comply with ethical research practices. All interviews and questionnaires will comply with the principles of informed consent.

2.4.2 Safety

This research will entail the manufacture of metal artefacts or jewellery pieces which may involve the usage of chemicals or acids. All substances which may be harmful to the environment will be disposed of responsibly according to health and safety regulations.

Precautions and actions to be taken by the researcher when using hazardous substances will include the following:

When using chemicals like acids, correct mixing methods will be used to ensure safety.

Appropriate protective clothing and goggles will be worn to protect against spills.

All chemicals will be marked accurately with a label after mixing.

All acids will be properly neutralised and safely disposed of after use.

All chemicals will be used in a properly ventilated area.

All working areas will be clear of any fire hazards when working with flames.

2.4.3 Participants' Privacy

All the participants will be consulted and the aim of this research will be explained to them prior to the interviews and the completion of the questionnaires. To participate, they will first be requested to sign a consent form.

2.5 Conclusion

This chapter expanded on three aspects, namely:

- (a) a review of the literature which has contributed to the formation and scope of the study,
- (b) a comprehensive framework of the methodology, and
- (c) a description of the ethical considerations implemented throughout the scope of this study.

The literature review of this study has provided a rationale on why specific sources was used and also outlined how the information will be further appropriated throughout the study. The literature review delineated on the sources used in formulating the methodology used in the study. The description of the methodology used in the study included the methodology of the manufacturing of a body of work, the ethical considerations and furthermore expanded on the methodology used

for the formulation of the interview questions. Lastly this chapter clarified all the ethical considerations which will be adhered to throughout the scope of the study. The following chapter of this study will take an in-depth look at the development of jewellery techniques throughout history. The focus will subsequently shift towards the background of the selected techniques and provide a glance at how these techniques are used in contemporary jewellery. The chapter will conclude by providing an in-depth description on what contemporary jewellery entails.

CHAPTER 3

DEVELOPMENT AND PROGRESSION OF JEWELLERY TECHNIQUES

3.1 Introduction

The intention of this chapter is to provide a sequential background on the development of jewellery techniques from some of the earliest known artefacts excavated in Egypt up to the modern age where jewellery manufacturing has become commercialised and machine-made. This chapter will not aim to provide a historical reflection on the development of civilisation or the history of art, but the main intent is to provide an overview of the development of jewellery manufacturing techniques and technological innovations that directed the advancement of jewellery from functional jewellery to contemporary narrative jewellery. Providing a historical background on jewellery manufacturing is vital as to inform the immensity and diversity of techniques which encapsulate jewellery manufacturing. Furthermore, this chapter includes a descriptive narrative on contemporary jewellery as seen through the eyes of various jewellers whereby the work, background and inspiration of two contemporary jewellers will be discussed. It is crucial for the purpose of this study and especially for the creation of an auto-ethnographic body of work by the researcher to reflect on and comprehend the concepts and subject matter of distinguished contemporary jewellers. This chapter additionally discusses the selected techniques and unpacks the contemporary use of these techniques by discussing two contemporary artist jewellers for each of the three selected techniques who employ these techniques in their jewellery. It must also be noted that with the discussion of the development of the techniques since ancient times, a great number of events and developments will be omitted. As such this chapter aims to highlight only the historical developments of related and selected jewellery techniques and furthermore aims to demonstrate how these techniques are presently employed in contemporary jewellery.

3.2 Development of Jewellery

In her thesis, Knisley (2013:3) accurately and relevantly quotes Fuller as stating that “‘there can be no evasion of tradition’ (Tousley, 9); it is impossible to innovate progressively unless there is first an acknowledgement of the past.” With this observation in mind, this chapter will include a historical account of the eras in which specific jewellery techniques were developed.

In her book, Evans (1953:39) poetically describes jewellery as follows:

“Jewellery is one of the oldest of the decorative arts, it answers to the deep human

love of intrinsically beautiful materials, to the deep human wish for bodily beautification, and to the superstitious need for reinforcing human powers by things that seem to a savage more lasting and more mysterious than man [...] Jewels, indeed, though they may seem alien to an age of austere functionalism, still play a living part in our civilization. To understand that part we must understand their history.”

Evans (1953) accurately states that jewellery has always been an important part of cultural expression since the beginning of formal human civilisation. Jewellery is timeless as humans have always had the distinctive desire to adorn themselves and humans have been making jewellery for at least the past 7000 years. Through these ages various styles of art have come and gone and jewellery has mostly mimicked these styles. According to Prince (2009), jewellery in prehistoric times was predominantly made from natural objects such as the mollusc shell, stone beads, animal bone and feathers. While some of this jewellery was most probably only used for decorative purposes, some prehistoric jewellery pieces were nonetheless found in burial caves. This suggests that jewellery were also worn for the perceived magical properties of the artefacts (Prince, 2009:190) and may be evidence that the deceased was highly revered or even a belief that the jewellery would afford the deceased some benefit in the afterlife.

According to The Readers Digest Association (1973:36), in a book *The Last Two Million Years*, around 8000 years ago inhabitants from early farming villages in Western Asia became increasingly skilled in making pottery and clay objects. These craftsmen were constantly in search of better materials while the technology for firing these objects also improved. In their search for new materials they stumbled on lumps of gold and copper and as human curiosity would have it, they also placed these lumps of gold and copper into the pottery kilns to see how these substances would behave. To their surprise and to humanity’s benefit, they discovered that these substances became liquid when heated and then became solid again when it cooled down while taking on the shape it rested on while in liquid form. Although these craftsmen could not possibly have known the enormous implication this discovery would have on humanity, it is the single most important discovery made by man that would launch humans from the Stone Age into a new age of discovery and ingenuity.

It is important for the purpose of this study to note the sheer span of the importance of bodily adornment by means of jewellery and to what extent this human instinct has evolved from earlier human instincts of beatifying one’s body to more complex agendas such as portraying identity

through objects symbolising wealth and status through to jewellery and as objects expressing individuality. According to Kingsley (1999), jewellery and goldsmith techniques developed from very early on even as the tools were restricted and mostly made from wood, bone and metal. As gold was easily hammered to very thin plates, many of the ancient gold jewellery consisted of thin gold sheets. Cast jewellery was only the norm in Western Europe. As the story of jewellery spans over 7000 years, the stern production of gold and silver jewellery with coloured stones began only from the Bronze Age onwards, thus the predominance of jewellery adornment spans over 5000 years of human history (Kingsley, 1999:7).

In ancient times jewellery was mostly owned by the elite rulers and used to project their holiness or superiority over their subjects. Only later on jewellery became more widely utilised as objects to portray beliefs or fulfil a religious function and still later it became objects which acted as vessels for housing as many precious stones as possible for showcasing wealth.

The earliest notable developments in jewellery manufacturing techniques were accomplished by the Egyptians, the Nubians⁷ and also the Mesopotamians. In Egypt (3000-30 BCE) jewellery was one of the most significant human possessions. Even as gold was in abundance, it was mostly reserved for the rulers or pharaohs and other elite as gold was believed to be noble as it is widely known that the Egyptians believed gold to be the sweat of the gods. Various hieroglyphs in tombs which were excavated in the Valley of the Kings, confirms this assumption.

The Egyptians were familiar with all gold processing techniques, smelting and refining of gold. They were also able to use solder that consisted of inorganic copper compounds such as pulverised malachite (natural carbonate). This material essentially has a lower melting point than gold, making it suitable as a solder. The Egyptians were also familiar with the process of granulation, cloisonné⁸ inlaying and gold leaf. The Nubian artisans furthermore had mastered faience⁹ technology and developed the skills to glaze quartz. The most notable objects made from

⁷ During the early years of the Nubian empire, a huge amount of jewellery was imported from Egypt up to the Classic Kerma Period (1700-1500 BCE) when the Nubian Kingdom was well established in northern Sudan (Markowitz & Doxey, 2014:33).

⁸ Cloisonné is the French word for “compartments” (Brepohl, 2001:373).

⁹ Faience refers to a white pottery glaze with the addition of an oxide of tin which is suitable to paint elaborate patterns and motives on. In Ancient Egypt and Nubia, however, it refers to powdered quartz which is fired at extremely high temperatures to produce a sintered glass-like compound with the ability to be casted into moulds. Therefore, Egyptian or Nubian faience is not actually a reference to a white ceramic glaze as the word is used at present, but rather an object made entirely of the fired quartz. The colour of the faience is also not white as in ceramic faience, but blue-green depending on the composition and firing conditions. The reference to Egyptian

this substance were translucent beads used for necklaces, bracelets and in decorating textiles (Markowitz & Doxey, 2014:32-33). Granulation is a technique whereby small spheres are fused onto the surface of a metal without using solder. Firstly, a copper compound is applied to the base and then an organic compound is added to it. This organic compound also acts as a flux as well as a glue to temporarily hold the minute granules in place. When the piece has dried completely, it is then slowly heated until the piece reaches the desired temperature which is different from and varies when using different metals. As the piece reaches the desired temperature, the copper compound reacts with the glue and flux, which then in turn forms an alloy with a low melting point exactly where the granule touches the metal base. The resulting granule is clear from any solder blobs, displaying pattern of clean perfectly spherical granules (Brepohl, 2001:319-320). This technique is also known as eutectic fusion. The most prominent innovations in granulation were made by the Etruscans.¹⁰ The intricate powdered granulation which the Etruscans used for lines and surface decoration have up to today not been imitated or perfected. Some of the granules were as small as only a fraction of a millimetre. They used three methods for obtaining such intricate perfect granulation, one of which was to pour molten gold onto a smooth stone lying in water. Another method was to pour molten gold into charcoal dust, and lastly gold dust was melted and rotated in charcoal dust. The resulting granules were perfect spheres and extremely small. These small spheres were bonded to the surface of the base metal using rudiments such as powdered copper carbonate mixed with bonding agents such as fish glue. The piece was slowly heated up to about 880°C. At this temperature the bonding agent evaporated, leaving the copper which is alloyed with the gold resulting in a permanent bond (Schadt, 1996:21-23).

Kingsley (1999:8) rightly observes: “Outstanding achievements came from the Etruscans, who brought filigree and granulation techniques to a peak of perfection rarely equalled since, and from the Hellenistic court jewellery, who mastered the art of modelling human figures for earrings, necklaces and bracelets, bright with red garnets and enamel.” Filigree is a pattern or surface decorating technique in which thin wires are rolled flat and then shaped in scroll-like shapes and

blue is also a direct reference to faience objects found and manufactured in ancient Egypt and Nubia. Available from: https://en.wikipedia.org/w/index.php?title=Egyptian_faience&oldid=697367492

¹⁰ A wealthy tribe known as the Etruscans emerged in the region of Italy. Although they spoke a different language from the rest of the region, they had a common language with independent city-states. Around 3000 BCE the area known today as Italy was dotted with small settlements with a primitive Bronze Age culture. This started to change when civilised colonists from mainly Greece started to colonise the area. This led to the establishment of cities which later on became city-states (*The Reader's Digest Association*, 1970:406).

subsequently soldered together to form a delicate wire pattern. The front or top of the wires is then beaded by using a miligrain, but traditionally minute granules were soldered on top of the wires by using eutectic fusion. The word “filigree” is derived from Italian, and the term literally means beaded wire from “filo” which means wire, and “grana” which means grain. Filigree and granulation have since ancient times been used in correlation. Two types of filigree exist, namely open work filigree which has the appearance of pierced lattice, and filigree which is soldered onto the base plate. In time filigree started to develop separately and its use in conjunction with granulation became less important and ultimately omitted altogether. Filigree wire can be made with all silver and gold alloys, but traditionally filigree is made by fine silver as it is easy to shape and does not oxidise as which is the case with sterling silver (Brepohl 2001:231).

Wire-making, however, was only mastered after the discovery of iron, enabling the drawing of wire through drawplates with draw thongs (Schadt, 1996:12). The jewellery artefacts discovered in Mesopotamia consisted of excellent examples of Repoussé and Chasing in silver and gold. Some of the jewellery artefacts excavated also contained cloisonné inlay and semi-precious stone beads such as lapis lazuli and Carnelian (Schadt, 1996:15-17). Repoussé is a technique where one uses a block of wood, a block of lead or a bowl of pitch,¹¹ all of which are elastic in composition and will give way when struck with a punch or hammer. A thin plate of metal is placed on top of the pitch bowl and by using different shapes of punches, a motive, pattern or specific shape is hammered into the metal in reverse. The plate is then turned over to then chase or hammer details onto the front using punches (Brepohl, 2001:391-392).

The development of jewellery manufacturing techniques progressed considerably during the Greek¹² and Roman Empires,¹³ most notably the techniques of enamelling, soldering, casting, gilding and gem carving. The Greeks improved the quality of soldering and used a tin and lead alloy with a melting point of only 180 to 240°C. Additionally they also further developed casting

¹¹ Pitch or Jeweller’s Pitch is a substance used to anchor the metal plate or jewellery piece in Repoussé and Chasing. The substance must be able to harden when cold, but also be able to be flexible enough to allow for the metal to dent into the pitch when hammered with punches. Pitch usually consists of resins, brick dust or dry plaster and a lubricant, usually linseed oil, beeswax or tallow (Brepohl, 2001:394).

¹² The Greek Empire superseded the Minoan, Achaeans and the Etruscans. From the 7th Century BCE, Greek culture is considered the cradle of Western culture and art.

¹³ During the First Century CE, the Roman Empire was established under Caesar Augustus. This was the beginning of a Golden Age of art and also resulted in the blending of the Roman and Greek cultures.

techniques and perfected the “Cire Perdue” – or lost-wax – casting process. This is still the most widely used metal casting process in jewellery manufacturing and sculpture. The process involves carving the object from wax, then enclosing it in clay slip or investment.¹⁴ The clay or investment is then baked for several hours to harden. While baking, the wax subsequently melts away leaving a cavity for casting the metal into. Thereafter the hardened clay or ceramic is hammered off while the investment will be submerged in cold water while it is still hot. The resulting thermal blast from submerging the hot investment into cold water will pulverise the investment leaving an exact copy of the originally carved wax object as a metal jewellery object (Schadt, 1996:25-33).

In Rome the art of gem carving enjoyed particular prominence. Although gem carving was known in the Mediterranean since from around 1700 BCE, it was during the time of the Roman Empire that this craft was perfected by the Romans. They used diamond and corundum¹⁵ dust or specs for abrasion, by tipping drill bits first into oil, fat or ram’s blood in order for the dust to adhere to the drill bits. Then they used a string bow to rotate the drill bit to achieve the needed rotation to be able to carve into the hard stones. Later a rotational thread wheel replaced the string bow and today drills are driven by electric motors. The Romans also developed a technique for colouring gemstones like agate¹⁶ by using a concentrated sugar solution or honey which could be soaked up by the relatively porous agate. The stones were then carbonised with a solution of sulphuric acid and then systematically heated in order to intensify the colour (Schadt, 1996: 37).

The Romans also developed the technique of fire gilding to form a thin layer of gold on the surface of metal objects. In this process gold dust was added to heated mercury. The mixture of the two substances subsequently created a paste-like amalgamation of gold and mercury. The paste-like amalgam was painted or rubbed onto the surface of the metal to be gilded. Hereafter the metal object was heated in order for the mercury to evaporate leaving a fine gold layer that stuck to the surface of the object (Schadt, 1996:38).

¹⁴ Investment refers to gypsum used also in plaster of Paris. It is used in jewellery and in the dental industry for the lost-wax casting process (Brepohl, 2001:141).

¹⁵ Corundum is the group of stones which is second last or number 9 on Moh’s scale of hardness and includes rubies and sapphires. Moh’s scale of hardness is a scale from one to ten where number one (talc) is the softest stone and number ten (diamond) is the hardest. Each higher number is able to scratch all numbers below except a diamond which can’t be scratched by any other known material (Prins, 2009:96).

¹⁶ Agate is a porous semi-precious stone of the Chalcedony family of minerals. Agate, when cut in half, consists of concentric bands in conjunction with quartz which makes the stone ideal for carving cameos (Prince, 2009:100).

Today the art of fire gilding has been replaced by the more refined process of electroplating. Electroplating can be done on a range of metals; an assortment of colours can also be achieved and it can also be used in mass production. The process of fire gilding, however, yields a remarkably different outcome than its more modern and sophisticated electroplating equivalent. The unique and clearly visible intense saturated layer of gold which is deposited onto the metal is rarely seen in contemporary jewellery. This method of gilding or plating metal is due to the use of mercury which is absorbed through the skin and poses a health risk unless it is performed in a well-ventilated area (Brepohl, 2001:364-365).

Some of the most important innovations were that of electroplating and electroforming. In electroplating a thin layer of metal is deposited onto the surface of another type of metal by placing the metal object in a liquid solution of dissolved silver or gold and cyanide. The object to be plated is then immersed into this solution while an electric current flows through it, resulting in the deposition of thin silver or gold film onto the surface of the object. The current flows from the anode which is a thin silver or gold plate to the cathode which is the piece that is being plated. Similar to the electroplating process is that of electroforming. The major difference between electroplating and electroforming is that the piece that will be electroformed does not have to be metal. It can be any object carved out of wax, resin or even natural objects which is coated with an electroconducting agent such as graphite. The piece is then immersed into the electrolyte solution for a much longer period. The resulting deposited metal is much thicker and is an exact copy of the original piece before the metal was deposited. As the addition of metal cannot be accurately controlled, the resulting surface is not always uniform and thus a process of first making a hollow mould by covering an object with wax, plastic or plaster. The mould is then removed and metal is subsequently deposited onto the inside of the hollow mould whereby the outside will be a perfect copy of the surface of the inside of the mould (Brepohl, 2001:435).

A technique developed during the Biedermeier period (1815-1848) and which is still used today to create commercial jewellery is that of stamping. Stamping is a process where a design is engraved onto soft steel. The steel is hardened by tempering and then pressed on top of another soft steel block in order to create the female die. The female die is also tempered and hardened. These two dies are attached to the stamping press and layers of thin sheet gold or silver is then stamped to create elaborate thin designs. Some of these embossed designs are so thin that it must be stabilised by soldering it onto a thicker back plate and filled with resin. During the 19th century it also became possible to colour gold by alloying it with silver or copper. Various colours could then be achieved by dipping the piece in an array of chemical substances and the result is

known as a patina (Schadt, 1996:155-167).

Round about 1700 an Italian named Vincenzo Peruzzi developed the brilliant cut which is up to today still the most widely used cut for diamonds and which displays the brilliance of a diamond perfectly. Diamonds became increasingly more expensive and imitation diamonds were later developed. Cheaper substances such as strass – also known as rhinestones or paste – were subsequently developed. Strass is made from lead glass and with the addition of alumina and thallium the brilliance is increased up to the point where it almost resembles a diamond (Schadt, 1996: 133-141).

The Industrial Revolution,¹⁷ which began in England, significantly affected the style and quality of jewellery. In England inexpensively acquired steel was used to manufacture jewellery which were sold for great profits. The invention of the cupel furnace as well as the discovery that the addition of phosphorus made iron more fluid immensely improved the casting of iron. This enabled the casting of iron to be more intricate and suitable for more delicate jewellery (Schadt, 1996:150-151).

Later on, as a result of the Arts and Crafts movement which revolted against the machine-made look of art and jewellery due to industrialisation and commercialisation, movements such as Art Nouveau and Art Deco came to the fore where jewellery became more expressive and artistic. This pattern continued with the birth of the New Jewellery movement which led to studio jewellery as it is known in some countries and in South Africa as contemporary jewellery.

From 1895 to 1910 the Art Nouveau period yielded glorious jewellery. At this time Europe was in a state of awakening as radical change were brought on by the emergence of the machine age which led to the mass manufacturing of goods without any aesthetic appeal or unique craftsmanship. The previous century's revival of historic styles was also rejected and a new and unique design style was sought. Thus came to be the Art Nouveau movement with the word *nouveau* meaning “new” in French (Schadt, 1996:169-177). Art Nouveau was essentially inspired by the symbolist movement from the 1880s. The subject matter of this movement included combining religious mysticism with eroticism. Some of the most prominent themes in Art Nouveau were that of the femme fatale and also imagery from mythology in the form of dragons, serpents,

¹⁷ The Industrial Revolution was the transition to new manufacturing processes in the period from round about 1760 to sometime between 1820 and 1840 (https://en.wikipedia.org/wiki/Industrial_Revolution).

dragonflies, and peacocks (Kingsley, 1999:18-19).

In contrast to Art Nouveau after World War I, the Art Deco movement came into being as a reflection of the Industrial Age and constructivism which spread from Russia after the death of Lenin and many artists immigrated to France. The Art Deco style is characterised by geometric, clear and precise shapes with a technical overtone. In Art Deco jewellery, jewellers used bold colours such as red, green, blue, and black. These colours were usually precious and semi-precious stones set next to white pave set diamonds which created a high degree of contrast.

After the discovery of the tomb of Tutankhamen¹⁸ (or the boy king as he is commonly referred to) in 1922, Art Deco jewellery were also injected with motives and influences from Egyptian jewellery and motives. With the discovery of new ores of platinum in South Africa, the use of platinum surged in Art Deco jewellery with especially diamonds being set into platinum. By 1914, 34% of the platinum mined was used in the production of jewellery, but rapidly increased to 70% by 1922. By 1928 – as a consequence of the growing popularity of platinum for Art Deco jewellery – no less than a quarter of this percentage was used exclusively for the setting of diamonds. The Art Deco age also saw the introduction of industrial man-made metals such as chrome, nickel and aluminium as well as many man-made materials such as Bakelite and Galalith. One of the most popular stone cuts during this period was the Baguette cut, which was developed as a direct result of the trend towards geometric forms (Schadt, 1996:179-187).

After the Second World War up to the 1960s there was a boom in jewellery as a new consumerist culture took shape. During the War, jewellery was highly taxed as it was a luxury item and as these restrictions were lifted, new possibilities in jewellery design were unlocked. Many art forms that were banned and seen as degenerate art before and during the War could now be freely explored by artists and jewellers also took the plunge and explored these new ideas. Although jewellery was still a status symbol, for the first time it became an extension of art and an expression of the artist or jeweller. For the first time jewellery was recognised by the fine arts as art in its own right, whereby the jewellery in itself became art and even the function of jewellery changed to that of an art piece. Fine artist jewellers became interested in jewellery as the materials used in art became diversified. Artists used rocks, plastic, metal, Perspex and anything which could add value to the concept of the art piece. Therefore, jewellery was from the 1980s

¹⁸ Lauded as one of the most celebrated and elaborate discoveries of the 20th century, Tutankhamen's undisturbed tomb was discovered in 1922 and the opulent jewels found buried with him provided archaeologists a huge insight into the life of the pharaohs, the daily lives of Egyptians, their religion and naturally the jewellery making skills and techniques involved.

and even up to today heavily influenced by art movements such as neoplasticism, surrealism, cubism, neo-constructivism, and Pop Art to name but a few. Unusual extreme expressions in metal or jewellery are created using an array of different techniques and materials such as acrylic resin, reticulation, electroforming and anodising, while all the old techniques also play an important role in contemporary artistic jewellery (Schadt, 1996:189-223).

The styles of jewellery design have throughout history reflected the styles and themes prominent in art through the ages as well as religion, superstition, social organisation, economics, trade, and warfare. Jewellery design is mostly directed by and reflects the political and religious beliefs of the time and as time went on new techniques were introduced which also influenced the type of materials used in jewellery as well as the styles.

The techniques involved in jewellery manufacturing evolved and advanced as human know how, innovation and technology developed. Many of the techniques discovered and developed over the centuries have constantly resurged over different periods, but the quality and methods advanced as human ability and technology advanced. Although most of the discussed techniques are not widely used in commercial jewellery, they are still used by artists and private jewellers today in the form of contemporary jewellery. It is unfortunate that many of the African jewellery can only be interpreted through a modern perspective as no written account on the meaning and concepts exists from the time when these pieces were manufactured. To interpret these works accurately, one has to rely on verbal accounts passed on from generation to generation which over time could have been distorted or exaggerated.

Throughout history jewellery has always been the embodiment of beauty and has up to today portrayed wealth and class. This pattern in jewellery of the portrayal of wealth and class has as before the establishment of Art Nouveau once again taken hold in commercial jewellery where jewellery has become a vessel to showcase expensive stones such as diamonds. The experience of walking into a jewellery shop in Johannesburg is roughly the same as walking into a jewellery shop in New York. There are given recipes to follow when manufacturing jewellery to be commercially viable and which dictates the type of jewellery being designed around the world. Therefore, to be able to disentangle South African commercial jewellery from world trends, a middle ground must be reached between commercial jewellery and contemporary jewellery, or a connotation towards more expressive narrative commercial jewellery must be established. A new paradigm for Afrocentric jewellery must be developed by South Africans as which was the case with the birth of the Art Nouveau movement.

Reflecting on this chapter, there is a myriad of techniques which can be incorporated into South African jewellery. As the next chapter will show, South Africa is so abundantly rich in religion, mythology, stories, historical happenings and accomplishments, that it is almost impossible to grasp the reasons why the depiction of this cultural richness has not yet revealed itself in the art and discipline of jewellery design and manufacturing in South Africa.

3.3 Selected Jewellery Techniques

As the next chapter will show and reflecting on the diversity of and politics in South Africa, one of the major narratives through our history is the question of colour. In this study, colour is one of the major considerations of choosing techniques to aid in the creation of a uniquely South African style. When reflecting on the predominantly black cultures of South Africa, colour also plays a central role in differentiating cultures. By, for instance, using specific colours the way they were used by the Art Nouveau movement to set a mood of mystery and to depict myths and stories, one of the techniques to be explored in this study will be enamelling. The mode in which Art Nouveau depicted and recounted European myths and symbolism in their culture can easily be applied to the South African context. Another consideration in choosing the specific techniques is that these techniques appears to be underutilized in current commercial jewellery.

Figure 1 below illustrates the most basic procedure of enamelling. The enamel is firstly ground into a fine powder and cleaned with water. It is then mixed with a water based adhesive and placed inside compartments in the silver. The enamel is then heated in a kiln until all the powdered enamel has melted into glass. The glass enamel is then filed until smooth followed by a final firing in the kiln in order to restore the enamel surface to a high gloss finish (Cruise, 2001:54).

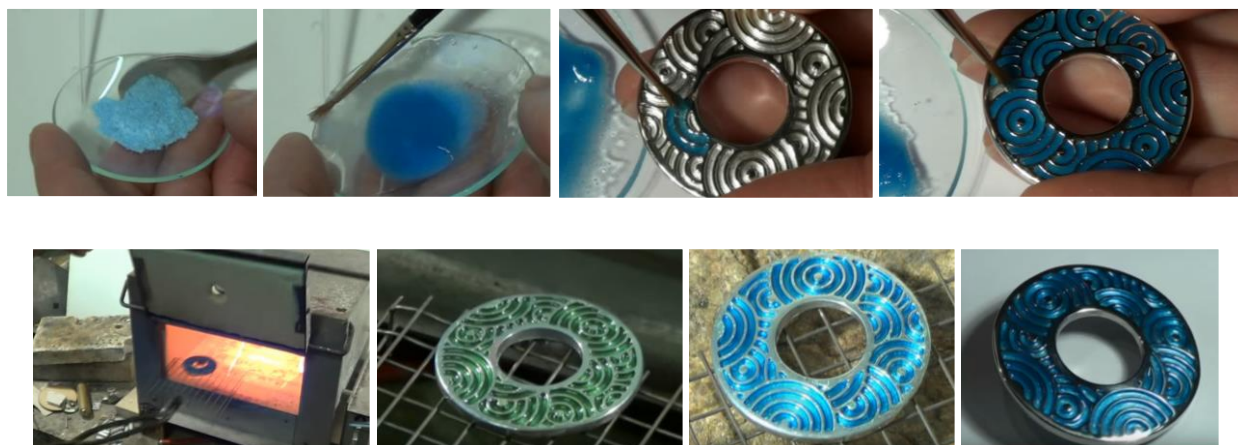


Figure 1: Enamelling procedure (2014). Silver, enamel
(Anon 13:1)

The second technique this study will look into is niello. The word “niello” is derived from the Latin word *nigellus* (black) and is still used in most Western languages (Untracht, 1982:382). Niello is a surface finishing technique involving the fusion of copper, silver, lead and excessive quantities of sulphur. Niello adds a beautiful dark lustre to jewellery which can create huge possibilities when patterns need to stand out as a focal point of a jewellery piece. It is used to fill in cavities created by engravings or piercings in the metal. A variety of shades of dark lustre are possible through variations in the quantities of the ingredients. Figure 2 below illustrates the procedure of creating niello and applying it to metal. Silver copper and lead is firstly melted in the crucible. While all the metals have melted sulphur is added in excess while stirring the concoction with a graphite rod. When this mixture is properly mixed it is then casted into an ingot and left to cool down Untracht (1967:186-188). The niello can now be melted into any engraved or pierced pattern and then filed flush to reveal the dark lustrous pattern of the niello.





Figure 2: Niello Procedure (2013) Silver, Niello (Anon 14:1)

A technique which is almost similar to eutectic soldering is the art of mokume gane, which means wood grain (mokume) metal (gane). It is a Japanese technique which has been used in Japan for the last 300 years to make jewellery and swords, sword mountings and sword guards. The technique involves fusing an assortment of precious non-ferrous metal plates together to form a single plate. This is done by using sheets of silver, gold, copper and brass, while other combinations of different metals are also possible and will create different effects. The sheets are cleaned and placed on top of one another. The sheets are then clamped together to apply pressure and placed in an adequately heated furnace until all the different metal layers are fused together into one piece of metal. Thereafter the metal is rolled through a rolling mill to reduce the thickness of the fused layers of metal; dents are hammered into the metal with punches and protruding areas made by the punches are filed off to reveal a pattern similar to wood grain (Untracht, 1982:372-382). Mokume gane is quite difficult to master, but the effort is rewarded by a unique and beautiful piece of metal that will certainly enhance any jewellery range. Figure 3 below illustrates the procedure of creating a mokume gane billet. In this example alternating plates of silver and copper is cleaned and stacked together. The stacked plates clamped in a vice and heated until the metal sweats on the sides just below melting point. At this temperature the metal fuses together and is ready for further working. The fused billet can be filed, rolled, hammered and twisted in order to produce distinctive patterns which usually resembles wood grain. Once the desired pattern is attained, the mokume plate is utilised similarly to traditional precious metal plates in the manufacturing process towards creating unique jewellery artefacts.

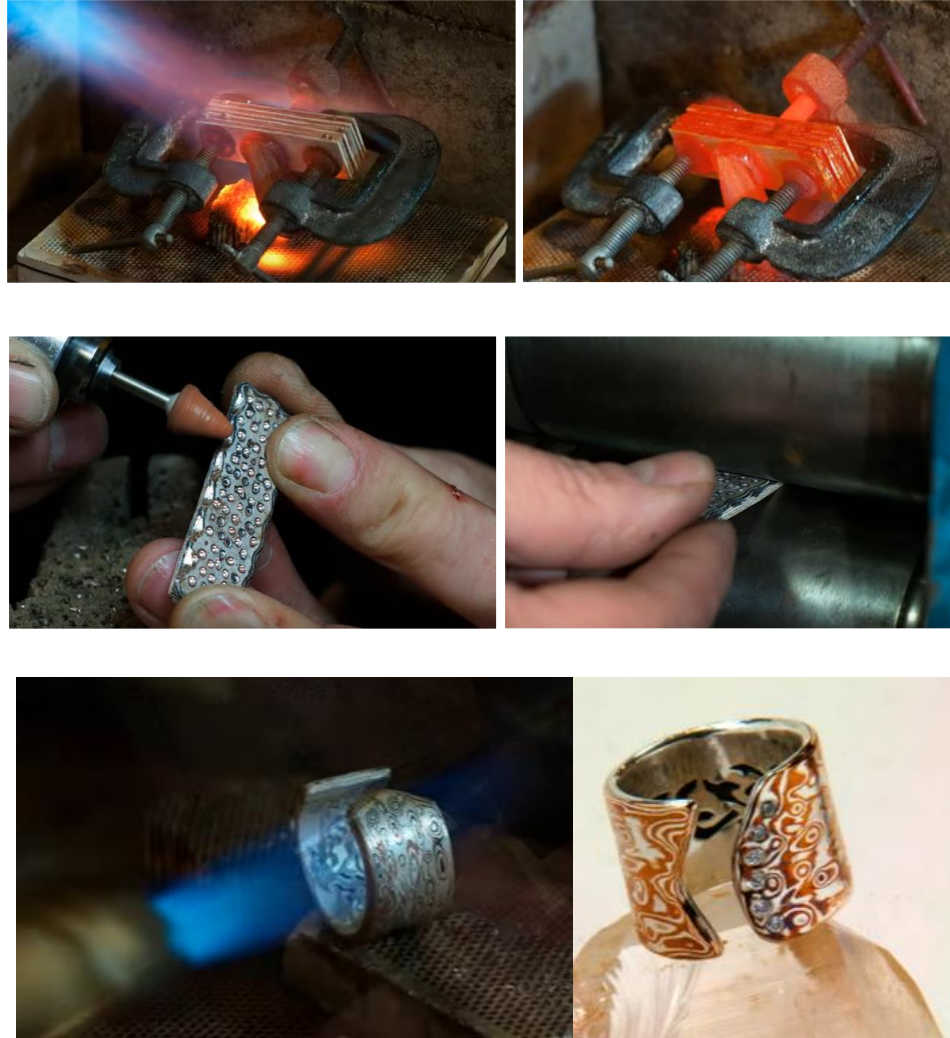


Figure 3: Mokume gane procedure (2015) Silver, copper, Mokume (Anon 15:1)

3.3.1 Enamelling

The enamelling technique used in jewellery has been known for centuries and has its origins in ancient societies and most notably in the Ancient Middle East during the 10th and 11th centuries CE. This technique was perfected by the Chinese at the end of the 12th and mid-13th centuries. The technique spread and was improved and perfected in the workshops of the acclaimed Russian court jeweller Carl Peter Fabergé (Tsareva & Spiridonov, 2012:308-309).

The basic technique of enamelling involves melting an assortment of colours of powdered glass onto precious metals or into cavities made in precious metals by piercing the metal with a jeweller's saw or by creating enclosures with wires on the metal surface. There are a variety of different enamelling methods, most notably that of plique-à-jour enamelling and cloisonné

enamelling (Cruise, 2001:54).

Enamel is fused glass and has been used to add colour to jewellery for over two thousand years. Today it is a simple and inexpensive process where powdered glass is fused onto the metal by placing it in a furnace. Over the centuries a whole range of interesting variations of enamelling techniques was developed. These techniques include the already mentioned cloisonné enamelling and also *champlevé*, sunken enamel, *plique-à-jour* enamel, *basse-taille* enamel, enamelling *En Ronde Bosse* or 3-D enamelling, Limoges enamel and enamel painting. The main body of the enamel is made up of frit and the rest is oxides and on occasion also opacifiers. The frit is a combination of quartz, feldspar, boric acid, soda, potash and lead oxide. The different colours of the glass enamel are achieved by the addition of different metal oxides, while other ingredients can also be added to create special effects such as opalescence (Brepohl, 2001:372-374).

The popularity of enamelling in jewellery resurged throughout the ages and specifically during the time of the Byzantine Empire, the Middle Ages, and the Baroque period and most significantly during the Art Nouveau period. The Byzantine Empire lasted up to about the period around 1000 CE. Christianity was made the official state religion in 380 CE and as a result Christian and biblical motives became popular and the use of cloisonné enamelling played a central role to depict elaborate Christian-themed pictorial artefacts in gold. Gold was used as a background with thin wires to define the outline and inside contours of the Christian-themed motives. The spaces created by the thin wires were then filled with enamel (Schadt, 1996:45-47).

The period from 400 CE onwards until the 15th century was known as the Middle Ages where most of the jewellery of the respective periods can be classified as similar in subject matter and techniques used. These periods include the Romanesque period (second half of the 12th century), the Late Romanesque period (first half of the 13th century), the Gothic period (14th century), and the Late Gothic period (15th century). While the subject matter was strictly religious and centred on the depiction of Jesus Christ, later on the significance of man and the depiction of human figures in jewellery became more prominent. The techniques employed included *champlevé* enamel, *basse-taille* enamel, embossing and impressing, cameo,¹⁹ and filigree. During the Gothic

¹⁹ A cameo is usually a reference to a carved gem which features a raised relief image. The background colour is usually darker. This effect is achieved by using semi-precious layered stones such as coloured agate where the layers are of contrasting colours. The lighter layers are carved away until the darker layer is reached leaving a stylised portrait or motive on top of the darker layer which in turn will then be further carved to add details. The stone carving is then set into a brooch or locket (Anon 10:1).

period, the word *Juel* from *Jue* and which is old French for game play were first used in Middle English, indicating that jewels henceforth were an expression of the joy of life. During the Late Gothic period, En Ronde Bosse enamel was first used enabling goldsmiths to enamel figures in the round for the first time using the technique of gold or silver En Ronde Bosse enamel (Schadt, 1996:56-101).

Throughout the first half of the 16th century during the Renaissance, the focus of themes in jewellery shifted from religious themes to the artistic concepts of the Renaissance as well as the importance of jewellery during this period. During this period the process of etching on metal was developed as an art and the use of etching on jewellery also became prominent and these etched pieces were often filled with blue enamel (Schadt, 1996:103-108). Etching is a process where an acid proof resist – in the form of paint, wax or even photographic resists – is applied onto the surface of the metal. After the required pattern or picture is scraped off, the metal is then submerged into an acid which will in turn dissolve or eat into the exposed metal areas. Once the required depth of this acid bite is reached, the piece is withdrawn and cleaned, revealing a pattern of raised and lowered sections. This process can be used to mimic more specialised techniques such as engraving and is also used as preliminary steps for processes such as niello and enamelling (Brepohl, 2001:402-404).

The process of enamelling was further developed during the Baroque period as enamel painting was invented in 1632 and enamelled paintings could be painted on top of a light background with an arrangement of different colours and then subsequently fired all at once (Schadt, 1996:125-132).

Enamelling in jewellery reached its peak during the Art Nouveau period. This new style could be characterised by the stylisation of naturalistic forms, and often was also reminiscent or influenced by Japanese art. As a result of the naturalistic nature of Art Nouveau, the most important and prominent technique in Art Nouveau jewellery was that of enamel, or more specifically that of plique-à-jour enamelling. Plique-à-jour enamelling was similar to cloisonné enamelling, but the backing was removed after firing. The resulting effect was a resemblance of extremely delicate stained glass windows (Schadt, 1996: 169-177).

3.3.1.1 Cloisonné

At present, in jewellery terms, when referring to cloisonné, it usually refers to an enamelling technique where thin flattened wires are bent into shapes in order to create a pattern or picture.

These wires are then set in place by either flux or by first firing a clear layer of enamel. The wires are then placed on top of the clear enamel and then, by firing the piece again and as the clear enamel melts, the wires will subsequently sink into the melted enamel being fixed into place permanently. The wires will now have created perfect little compartments or cloisonné which can be filled up with various colours of enamel (Brepohl, 2001:373).

3.3.1.2 Champlévé

Champlévé enamelling involves creating a depression into thick metal plate by using various processes such as engraving, chiselling, etching or filing. These depressions are then filled up with enamel. The enamel is fired in a furnace producing a pattern filled with glass which adds colour and contrast to the surface of a jewellery piece (Brepohl, 2001:373).

3.3.1.3 Sunken Enamel

Sunken enamel, a process also known as false champlévé, is a combination of cloisonné and champlévé enamelling where a depression or recess is formed onto thin plate and furthermore thin wires are placed onto the metal framing the sunken recesses. These wire demarcated areas are subsequently filled with enamel and fired (Brepohl, 2001:373).

3.3.1.4 Plique-à-jour Enamel

Plique-à-jour enamel is probably one of the most intricate enamel processes due to the fact that there is no backing for the enamel. A compartment or cloisonné is cut into a metal sheet or assembled by thin wires. These compartments are then subsequently filled up with enamel and fired. After firing it is necessary to fill the cavities again as the enamel contracts upon melting and subsequently leaves empty spaces in the compartments. After this process has been repeated until the whole compartment is filled up to the brim, then the enamel is filed off until flush with the metal and then fired for the last time to restore the shine to the surface of the enamel. In cases where the compartments are too large to hold the wet enamel in place, then the piece will be placed onto either sheets of mica or thin foil to keep the enamel in place. These sheets are afterwards removed, revealing a stained glass window effect (Brepohl, 2001:373).

3.3.1.5 Basse-taille Enamel

This process is very similar to champlévé enamel, but the depressions are firstly prepared to different depths and then filled with transparent enamel. As the different depths can be seen through the transparent enamel, it creates different patterns as the shades of the enamel appear

differently depending on the depth. It is similar to the way one sees water on a lake and where the water appears darker at deeper depths (Brepohl, 2001:374).

3.3.1.6 Enamelling En Ronde Bosse (3-D Enamelling)

En Ronde Bosse enamelling refers to enamelling that is applied to three-dimensional objects such as small sculptures (Brepohl, 2001:374).

3.3.1.7 Limoges Enamel

This technique is named after the city where it was developed and perfected during the 15th and 16th centuries. The process involves covering a whole surface with black enamel; white enamel is then painted over the black layer and depending on the thickness of the white enamel, it would display different shades of grey, black and white patterns. Another variant of Limoges enamel is known as grisaille enamel which involves firstly applying a black layer of enamel and then covering the whole area with white enamel; the white enamel is then drawn into with brushes to reveal the black underlay (Brepohl, 2001:374).

3.3.1.8 Enamel Painting

Enamel painting involves painting a miniature painting with metal oxides on top of an opaque white base layer of enamel. The piece is then fired in the kiln and then a transparent layer of enamel known as the fondant is added to cover and protect the delicate painting underneath (Brepohl, 2001:374).

3.3.1.9 Contemporary Use of Enamelling

Enamelling is used extensively by contemporary jewellery manufacturers. One such artist or jeweller is Mariko Sumioka. Sumioka was born in Aichi, Japan, in 1981 and relocated to Brazil with her parents when she was two years old. In Brazil she became fascinated by the jewellery which was worn by the children in preschool. Her parents soon moved back to Japan where her grandmother told her that one of her relatives was indeed a jeweller. This made Sumioka imagine herself one day to become a jeweller. Later she decided to study economics and soon was invited to participate in an exchange programme in Santa Barbara in the United States of America for six months. On arrival Sumioka could not speak English, but through resilience she soon learned the language and became comfortable with the culture. Sumioka wanted to pursue a master's degree in economics, but were bored with it and settled to work in risk management for an international company specialising in nuclear minerals. She then started to attend weekly classes in jewellery

manufacturing which she found to be difficult as she worked slowly. She soon left her job and decided to further her studies in jewellery in Scotland. During holidays she returned home to Japan where she noticed the differences between Scotland and Japan. This inspired her to examine these differences in her dissertation by undertaking a visual and theoretical study of Japanese culture (Julius, 2015:40-43).

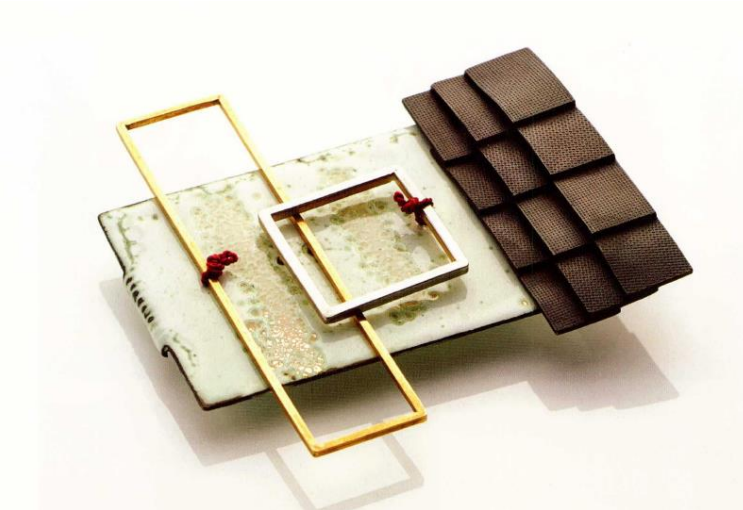


Figure 4: Mariko Sumioka, "Yane & Mado Brooch" (2014). Enamel on copper, oxidized copper, silver, gold-plated copper, and silk, 6.5 x 6.3 x 1.3 cm (Julius, 2015:40)

Sumioka's studies guide the foundation of her contemporary jewellery works. She is almost emotionally inspired by the Japanese concept of wabi-sabi, which is a Japanese concept of living in harmony with nature. According to Sumioka, the Japanese respect, understand and accept nature as one of their members. She is also inspired by Japanese architecture and draws on its materials, colour contrasts, linear forms, geometric shapes and structural spaces. She furthermore studied the precepts of Zen Buddhism and draws on the essence of the Japanese love for nature which has built her understanding of people's attitude behind their culture. Most of her work is geometrical boxes which brings these elements together harmoniously while acting as a symbol of or testament to the Japanese culture. The box shapes also symbolises the jewellery box for Sumioka where small precious and personal objects can be kept (Julius, 2015:40-43).

In Figure 4 one can clearly see Sumioka's reference to Japanese culture with the oxidised brown squares which symbolise the roofs of buildings complemented by the whitish green enamel. This brooch is furthermore a clear representation of the meticulous precision with which Sumioka aims

to establish an amalgamation between nature and man-made objects or a representation of the Japanese belief in wabi-sabi or living in harmony with nature. The reserved inclusion of the pigeon blood red string is a direct symbolic reference to the Japanese conviction towards the colour red which symbolises protection. This brooch by Sumioka displays elements of hybridism in contemporary jewellery with the inclusion of non-traditional materials used in jewellery as will be explained in the next section of this chapter with specific reference to Metcalf (2014:16-17).

Initially Sumioka did not intend to use enamelling in her work until she was introduced to this technique by master UK enamellist Elisabeth Turrel. Since then her work frequently features enamel. Sumioka's use of colour in her work is extremely symbolic as she uses colour not only as decoration but intentionally to complement and symbolise Japanese culture. For instance, she uses red to symbolise festivals and celebrations while the colour also acts similarly to a talisman intended to protect from harm. Sumioka furthermore uses bright green patinas to depict surfaces such as copper roofs which have been patinated by washes of rain which is quite frequent in Japan. She additionally uses white enamelled beads as a representation of the energy she finds in nature which also portrays life in contrast to the geometric forms she uses to depict architecture and man-made objects or structures (Julius, 2015:40-43).

A further enamelling artist jeweller who creates contemporary jewellery is Barbara Seidenath. According to an article by Simon (2010), Seidenath is a German jeweller born and raised in the area in Germany known as Bavaria in the town of Jablonec nad Nisou. This area is famed for its tradition of glass-making and by the second half of the 18th century the area was also known for its production of costume jewellery. As Germany is also home to some influential art movements, Seidenath was particularly influenced by the movement known as "Der Blaue Reiter" which translates as "The Blue Rider" as she saw these elements of history that surrounded her as part of her German heritage. Probably one of her most important motivations and reference to become a jeweller was growing up in the same town as the renowned jeweller Hermann Jünger (Simon, 2010:19).

As a girl, Seidenath frequently roamed in the forests of Bavaria and her studio is still filled with botanical objects and visual reminders of nature. This subject matter also regularly features in her jewellery. She was from an early age also friends with Anette Jünger who was the daughter of Hermann Jünger and which sparked her curiosity in jewellery making. Seidenath states that it was this influence and the region's preoccupation with nature as well as the supporting educational system which contributed to Seidenath's success and development as an artist. Seidenath

enrolled for a three-year course in jewellery in a school in NeuGablonz which also specialised in glass-making. In this school she learned a level of mastery which is synonymous with German craftsmanship where accuracy up to a tenth of a millimetre is a necessity. After state school she visited the United States with her parents and thereafter regularly went to America and also spent several years in New York during the 1980s. She was especially inspired by the American jeweller Margaret de Patta. Back in Germany she also worked for the renowned jeweller Ulrike Bahrs and later on also worked with Hermann Jünger. Some of her other associates included various jewellers considered the cream of the influential German jewellers (Simon, 2010:20).

In 1990 Seidenath received an MFA from the Academy of Fine Arts in Munich and soon after returned to the United States to join her husband Lois Mueller, who is also a metalsmith, to teach at the Rhode Island School of Design. In the early 1990s while still in graduate school, Seidenath acquired a workshop and started to participate in exhibitions in Europe. Her enamelling work is characterised by colour, especially complementary colours such as apple green and scarlet red, dimensionality and vitality. Another characteristic of Seidenath's work is enamelled folded metal which was motivated by Justine Wein, a fellow student. As enamel does not flow over solder, this method of folding metal without solder was an alternative for Seidenath to keep the integrity and quality of the enamel. Although Seidenath's subject matter is mostly rooted in nature, she also explores the sexual foundation of all life forms by using the same elements observed in nature – such as colour, movement and form – to attract attention. Her forms are organic yet abstract and by using bold colours she consciously references ambiguous erotic symbols (Simon, 2010:23).

Another of Seidenath's brilliant use of coloured enamel is a range of winter-themed brooches titled "Midnight sun" which was inspired by the abstract patterns of a winter landscape as she saw it from an aircraft during a flight to Miami. As Figure 5 illustrates, this range is a perfect and beautiful example of how relevant use of coloured enamels can evoke feelings and tell a story. According to Simon (2010), Seidenath explains her intent as follows: "In winter nature and fertility are dormant, the range of colours is muted and reduced, surroundings change. Raindrops turn into a white backdrop like a canvas and conceal familiar things with an obscuring cover." Simon (2010:24-25) describes the pieces as follows:

"Much information is imparted in these tiny compositions. There is a glimpse of snow with a few scattered diamonds framed by geometric bezels with jagged edges, as if large chunks of ice have broken off. The surfaces are mostly white, the fine silver showing through, broken by a few straight lines. Over time, the lines become more

dominant and the underbelly of inhospitable black water is revealed. *Winterstorm* and *Nest* are like charcoal drawings of a maelstrom just barely contained by the most minimal of frames. In the strong frameless black and white drawings, enamel comes closest to its painterly counterpart, again without the distraction of colour. All the associations with glass, fragility, even the slang term ‘ice’ for diamonds, spring to mind. The intimate size draws the eye right in, as the fine layers of glass have trapped lines like silt in ice.”

Seidenath’s brilliant use of enamel is a testament towards how a simple silver box brooch can be transformed to become contemporary narrative jewellery by the addition of underutilised techniques such as enamel.

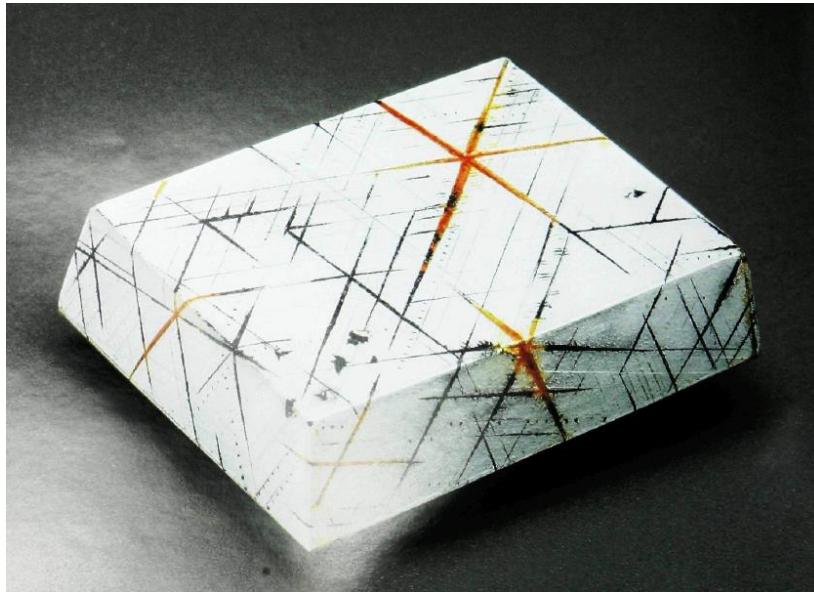


Figure 5: Barbara Seidenath, “Crystalline II” brooch (2001). Enamel, sterling silver.
Photograph: Marty Doyle (Simon, 2010:22)

The enamelled work of these two artists is a testament of how colour in the form of enamelling can give meaning to jewellery. The work of Sumioka does not only embody an expression of her personal emotions, but it also sketches a tale of the Japanese culture, their outlook on life and approach towards nature. This depth of expression and meaning which she has instilled in her work would not have been possible without the use of coloured enamels, which is also evident in the work of Seidenath. Seidenath’s work is a good example of how, through the use of colour, a jeweller can bring forth jewellery which can facilitate an artist’s specific and precise intent as well as how the use of an ancient technique such as enamelling can be incorporated in contemporary jewellery.

3.3.2 Niello

Niello's deep black contrasting effect was used since the Middle Ages by filling depressions or lines made by engraving, etching, stamping, rolling or layering. It has a striking graphic visual effect which was perfect for depictions on three-dimensional shapes. Niello is considered a lost process due to the complexity of mastering it. Firstly, the creating of the substance is complicated and poses health risks and furthermore the application thereof is complicated and needs to be carried out with care and delicacy. The abandonment of this speciality technique can also be attributed to the difficult art of engraving which has become too difficult a process for most contemporary jewellers to master (Brepohl, 2001:369). This substance can be applied to gold, silver, copper, bronze, brass, and even steel. It was commonly used by the ancient Egyptians, Greeks, Romans and Persians and currently it is still used especially in Thailand and in the Far East (Untracht, 1967:186).

The process of niello was also widely used by Germanic tribes during the Migration periods²⁰ in Europe. In 1939, a royal boat was discovered in a burial mound at Sutton Hoo. The jewellery artefacts found there were sensational and gave valuable insight into the techniques employed at the time. One of the many examples of jewellery found at Sutton Hoo was a belt buckle covered in ribbon-like ornamentation which was inlaid with niello to emphasise the inner layers' contours. Niello is a process where silver, copper, lead and sulphur are melted together. The resulting substance has a low melting point and was melted into engraved, pierced and carved work. Niello is a dark, almost black, lustrous substance and the technique resulted into high contrast of the depictions in jewellery artefacts (Schadt, 1996:49-53).

Niello as decoration for armour in the 15th century is surprisingly directly responsible for the development of the intaglio printing procedure. Initially niello was used to decorate engravings on armour. After the armourers had engraved or etched their specific patterns or designs onto the metal plates which are set to become the armour, they filled the depressions with ink and subsequently printed onto paper to see what the plates would look like after the niello is inserted. This technique of printing with etched or engraved plate soon caught the attention of graphic

²⁰ The 7th to 8th centuries in Europe were known as the Migration periods during which Germanic tribes expelled by the Huns in 375 CE moved into territory of neighbouring tribes and subsequently these tribes were also displaced, upsetting the Roman authority. A hostile period between the Roman Empire and the Germanic tribes followed and with the migration of Germanic tribes into the Roman territories, Christianity also spread amongst the Germanic tribes (Schadt, 1996:49).

artists who realised the potential of this technique and they subsequently appropriated the process (Untracht, 1967:186).

In melting the ingredients together for making the niello, the metal with the highest melting point is first melted and then the metal with a lower melting point is added and finally the metal with the lowest melting point. These metals while melted are then stirred with a graphite rod to ensure that the metals completely amalgamate. Thereafter with the metal still in a melted state, sulphur is added which then colours the amalgam black. Applying the niello is comparable to that of enamel where the whole piece must first be finished and cleaned; thereafter grounded powdered niello is filled into the depressions which is created by filing, etching, sawing or wire compartments. The piece is then placed into the furnace to melt and fuse the niello onto the surface after which the niello is filed flush with the surface revealing the contrasting pattern. Too thick a layer of niello added to the metal surface can easily produce pits or bubbles. It is therefore important to keep the layers thin enough in order to prevent this unwelcome occurrence (Untracht, 1967:188).

3.3.2.1 Contemporary Use of Niello

One noteworthy artist jeweller specialising in niello jewellery was Phillip Fike. Fike, who was one of the founding members of the Society of North American Metalsmiths, was born on 15 July 1927 in Baraboo, Wisconsin, and before his death suffered from pulmonary fibrosis and died at the age of 70 in 1997. Fike was not only a metalsmith, but also an artist, researcher, scholar, communicator and educator for 50 years. Fike has received numerous awards in exhibitions by America House, the Museum of Contemporary Crafts, the Wichita Art Association, the Detroit Institute of Arts and also exhibited at the Renwick Gallery, the Walker Art Centre, the Minnesota Museum of American Art and some of his work featured in *Objects USA*, *Copper 2*, *Good as Gold*, *Ferrous Finery*, *Goldsmith*, *Jewellery USA* and *Platinum Jewellery Design*. His work has also been exhibited at the American Craft Museum, the National Ornamental Metal Museum, the Museum of Art in Toronto and the Victoria and Albert Museum in London. His last exhibition was in the American Masters of Hollowware at the Georgia Museum of Art (Yager, 1998:16-25).

While Fike was in Madison West High School he learned how to cast a ring in silver, how to raise a bowl in pewter and how to engrave metal. He also became aware of Scandinavian modern silversmithing. After school he served in the navy and afterwards he went to study applied art at the University of Wisconsin in Madison where he graduated with a Master of Science degree in 1951. During his studies he was introduced to the art of niello and he credits this to Henry Wilson's book (1942 [2nd ed.]). His first experimentation with niello caused the evacuation of the whole art

department due to the fumes produced when melting all the metals together with the addition of sulphur in the production of niello. After Fike concluded his studies, he started to work at the Liberty Powder Defence Corporation where he supervised the machine milling of rocket ammunition. While working there, Fike set up a jewellery workshop in his bathroom where he worked on a portfolio after hours in the hope that the portfolio will land him a teaching position at a university or college. His efforts paid off as in 1953 he was hired at Wayne University to replace the retiring English silversmith Arthur Nevil Kirk. Fike went on to teach at the Wayne University for 45 years (Yager, 1998:16-25).

Fike developed an obsession with the fibula during a sabbatical in Florence and Rome. This jewellery item which function it was to hold garments together intrigued Fike so much that after his studies he vowed to devote the rest of his goldsmith life to making them. He constantly kept on researching and recreated this device with various metals and materials such as silver, brass, bronze, stainless steel, iron, niello, and ebony, until he unravelled the secret of how to wind the inverted spring coil as seen in “Flower Fibula with inverted spring coil mechanism” (Figure 6 below). In these fibulae as well as in some of his neck pendants and ear ornaments, Fike, like many other contemporary jewellers of that time, explored the notion of kinetics and created intricate wire constructions where the use of thin wire was taken to the extreme. One of his ear ornaments titled “The Orbiters” were so precisely balanced that once they were turned they continued to turn for more than two minutes. During the 1960s Fike devised a bi-metal casting process and created a range of interlocking rings in 14ct white, yellow, red, and 24ct gold. These rings, depending on the personality of the wearer, ranged from geometric to organic patterns with crisp edges. These rings, which interlocked together like puzzles, demonstrated Fike’s ability to solve problems related to combining extreme technical pieces whilst not distracting from the aesthetic appeal of the objects. Fike, working in iron and precious metals, also enjoyed making wood carvings and had a brief affair with glassmaking as he was introduced to glass blowing techniques in 1962 and again in 1969 to 1970 where on an exchange with the University of California, Berkeley, he received meticulous training in this technique, but soon after returned to metalworking. Although Fike was interested in a range of materials and techniques, he always returned to his first interest which was niello. Fike on his own accord brought niello out of the archives and through workshops he renewed and revived this long forgotten metal decorating technique (Yager, 1998:16-25).



Figure 6: Phillip Fike, "Flower Fibula with inverted spring coil mechanism" (1980). Mild steel, sterling, gold.
Photograph: Jerry Anthony (Yager, 1998:20)

The fibula depicted in Figure 6, although it can be seen as a reproduction of an earlier historic object which has become obsolete in the modern world, shows how with the addition of underutilised techniques such as niello, this forgotten functional jewellery piece is brought out of hibernation to become relevant in the modern world again. One characteristic of contemporary jewellery is the uniqueness of the object and the simplicity of design. As the fibula has been replaced by buttons to hold garments together, the reintroduction of this functional jewellery piece in a contemporary form revitalises the idea of its function and provides modern-day people with a more unique and eloquent alternative to the button.

In addition to the work of Phillip Fike, the researcher also looked at the work of Gigi Mariani. In a video interview with Mariani by Beautiful People Live Art, Mariani states that his goldsmith career started as a hobby and as an apprentice in 1983. In 1985 he opened his own studio in Modena. Mariani has an intimate love for painting very deep, dark, tormenting and emotional paintings which he then uses as inspiration for his jewellery. This approach results in extremely dark, geometric and difficult to wear jewellery of which he himself admits to. Mariani was always interested in classical jewellery techniques such as niello and granulation which one does not regularly see in mainstream jewellery. He mastered the technique of niello together with Craziano Visentin and Maria Rosa Franzin and also employs granulation and mokume gane in his work and which he learned from Giovanni Corvaja. Mariani's design process unfolds by firstly becoming inspired by things such as walls, sidewalks, cracks and random things he sees around him. He is furthermore inspired by emotions which he transfers into contemporary jewellery in a simple,

informal and spontaneous way. He makes sketches and builds carton mock-ups of the pieces before manufacturing and through this process he even becomes more inspired (Anon 6:1) (also compare Anon 7:1).



Figure 7: Gigi Mariani, "Cracksring". Silver and 18ct yellow gold with niello patina (Anon 6:1)

Mariani states that his goal is to move from the concept of simple jewellery to a larger concept of sculpture and an art piece. Even though he mostly uses precious metals such as silver and gold in his jewellery, he is intrigued by the idea of hiding the preciousness of these metals by concealing it with harsh rough and textured dark niello. Mariani aims to create jewellery which looks as if it is a recycled industrial archaeological object without any value. Mariani states that niello aids his artistic freedom and affords a certain force to the jewellery. What makes these objects strong and unique is the final texture which is a result of the niello. He furthermore states that the randomness makes everything look more natural (Anon 6:1).

In Figure 7 one can see the dark rough niello texture which Mariani uses to depict his melancholic paintings. The rough texture of the dark niello is unlike the traditional use of niello where it is usually inlaid into channels of engraved patterns and then filed until the edges of the engraved metal are exposed. Thereafter it is highly polished which results in a lustring black contrasting

motive. This ring clearly shows that employing underutilised techniques such as niello in a unique way can bring forth new and original styles which, when used correctly, can change a plain ring into a vessel which communicates thoughts or emotions. This ring also underlines Mariani's notion of hiding the preciousness of the underlying gold and silver which bursts through the cracks created by Mariani's informed use of the niello.

3.3.3 Mokume Gane

Included in the Northwest Blacksmith Association's financial report for 1983 is an interesting addendum which provides a detailed description of the process of mokume gane. According to this explanation which is by an anonymous author, mokume gane is about 300 years old and developed in the Skilta prefecture by Denai Shaomi. Mokume is originally an adaptation of the welding of ferrous metal swords in Japan. The mokume was used as decoration of the tsuba or sword guard (NWBA, 1983:1-4). In her thesis, Tapleshay (1993) indicates that use of metals was more expressive to the Japanese than their western counterparts. They treated or used metal as a medium or material of colour which extended the combinations of the metal as a medium of expression. The Japanese developed various techniques to combine metals. These techniques included mokume gane, Nunome Zogan, Hira Zogan, and Gomoku Zogan (Tapleshay, 1993:8).

For many years it was thought that mokume was a soldering process until Hiroko Pijanowski shared the process with American craftsmen after he observed Japanese craftsmen in Japan making mokume gane. Pijanowski revealed the process to be layers of contrasting stacked metal layers which is fused together in a reduction furnace where there is as little oxygen as possible. If these plates are soldered together, then the mokume becomes brittle resulting in peeling, air entrapment and solder corrosion. In contrast to a soldering process, the process of diffusion results in a laminate which can be forged, raised and even twisted without peeling and cracking. The diffusion of the laminate plates will only take place evenly and successfully when the plates have been thoroughly cleaned and degreased and is totally flat. It is necessary to also introduce pressure to the plates in order to minimise the contact of oxygen between the surfaces of the plates. It is also recommended to use metal alloys which are without tin or lead or any other metals with low melting points. Subsequently metals such as bronze and brass are unsuitable (NWBA, 1983:1-4).

According to the description of the process by Untracht (1967), the plates must be cleaned and then a solution of borax must be painted onto the plates and then sprinkled with hard solder filings. The borax solution must then be allowed to dry before the plates are stacked together. The plates

are then heated with a torch while applying pressure until a thin gleaming line of solder can be seen between all the plates (Untracht, 1967:182-184). This method of fusing the plates together seems to be an alternative to the traditional Japanese version which uses no solder to bond the metals and can be considered to be a mock-up version which would result in a substandard laminate that would easily crack when rolling, forging, bending or doming the metal laminate.

After the metal plates have been entirely fused, the laminate is deliberately distorted by punching, doming, filing and hammering and then rolling the metal in order to reduce the thickness. After the thickness has been reduced, the plate can then be cut in half and the two parts can then be fused on top of one another again in order to produce a laminate with very fine detail. The idea is to expose various levels of the metal which on repeating the above procedure will result in a wood grain pattern to emerge with alternating contrasting metals. The effect can also be emphasised by submerging the finished piece in acid which will dissolve alternating layers of metals at different frequencies as these metals possess diverse qualities which makes their resistance to acid divergent (Untracht, 1967:182).

3.3.3.1 Contemporary Use of Mokume Gane

The use of mokume gane in contemporary jewellery is limited and is mostly used in the art of knife-making. There is, however, a surge in the use of this technique in commercial jewellery, although it is only used as a material of interest with no conceptual thought behind the designing. One such jeweller is the Minneapolis-based jeweller George Sawyer. Sawyer's first brush with metalwork was during the 1960s when he worked for Kar-Kraft which specialised in building high-end racing cars. In his spare time, he attended jewellery classes and quickly realised his passion for jewellery. By the 1970s, Sawyer made custom jewellery and started to experiment with mokume gane as he was always interested in this Japanese art. According to Sawyer, he was the first American jeweller to figure out this mysterious and difficult process. In 1985 he attended the JAC show in New York and got one of the retailers interested to place orders for his line. Currently Sawyer's mokume gane signature range of jewellery sells in nearly 80 retail stores in the United States and abroad, and he owes this success to the retail market embracing his signature line. Sawyer describes mokume gane as the most labour-intensive jewellery technique and uses it to create seamless gold rings, pendants, necklaces and brooches, but his main line is that of bridal jewellery for men and women. He therefore uses laminates of light metals such as platinum, silver, grey gold and palladium as generally bridal jewellery favours white metals. According to Sawyer, his new design innovations incorporate elements of the Koi which is a multi-

coloured Japanese equivalent of the carp fish and he furthermore also incorporates wabi-sabi. Sawyer reiterates that the four most important objectives for young jewellers are originality, creativity, craftsmanship, and marketability (Dinoto, 2012: 26-27).



Figure 8: George Sawyer, “Ring Set” (2012). Mirror image, pattern matched Mokume set. 500pd and sterling silver, platinum mounts, diamond. Photograph: Allen Brown (Dinoto, 2012:27)

In Figure 8 one can clearly see how Sawyer uses the mokume technique to manufacture predominantly commercial jewellery ranges. To be able to create such perfect jewellery from mokume, one must have mastered the technique of mokume in order to adhere to the standards required for commercial jewellery. This picture clearly displays Sawyer’s degree of quality craftsmanship in mastering the difficult process of mokume gane. The style of the rings is, however, fairly conventional and commercial which is similar to general jewellery one would be able to buy in retail shops which is unequivocally void of any meaning as displayed in most contemporary jewellery. These rings can, however, to some extent be presented as more unique than mainstream commercial jewellery as it is constructed with the rare technique of mokume which immediately creates a more interesting exotic look as opposed to it being made from plain gold, silver or platinum.

One of the artist jewellers who do use mokume gane conceptually in contemporary jewellery is Craig Stuart and who is based in the historic village of Dunkeld in Highland Perthshire in the heart of Scotland. Stuart is a self-taught jeweller who at a more mature age attended the Duncan of

Jordanstone College of Art where he graduated with a degree in jewellery and metalwork in 1998. Ever since then Stuart has specialised in the art of mokume gane and is one of only a few jewellers in the United Kingdom and Europe who uses mokume gane in contemporary jewellery. He opened his workshop in 2001 and while Stuart's work has been exhibited throughout the United Kingdom as well as Craft Scotland at SOFA Chicago 2012, his work is sold exclusively through his workshop in Scotland (Anon 1:1).

Stuart mostly uses 18ct white and yellow gold, platinum, 22ct gold as well as silver in his high contrast mokume laminates, while many of his pieces also feature the addition of diamonds and coloured gemstones. According to Stuart, he firstly cuts flat sheets which is stacked together and then fused without using solder. To fuse the plates together, he uses an open forge where he holds the pieces at a precise temperature that he judges by looking at the billet. The billet is then hammered at exactly the right moment to be able to create the bond between the metals (Anon 3, 2016:1).



Figure 9: Craig Stuart, "Halo Discus Brooch 2" (2011). Mokume gane, 18ct white gold, silver, 22ct gold, diamond details, diam. 5cm
(*Craft Arts International* No. 90, 2014:118)

In Figure 9 one can clearly see the intention of Stuart and his ability to manipulate the mostly random-like patterns of mokume to adhere to his intent of creating a radiating pattern around a centre golden circle. The design is not conventional and lends itself towards conceptual commercial jewellery by the addition of mokume as well as the inclusion of an etched inside silver

circle and the addition of diamonds which have been placed in an *ad hoc* manner.

Stuart's work is greatly affected by his relationship with nature and is greatly inspired by his surroundings, discarded machinery, and the boundaries which exist between nature and man-made objects. He is especially intrigued by nature which has the ability to claim back from humanity as, for instance, when a tree will grow around something man-made that has been discarded. Stuart states that he is intrigued by how the wood grain of trees is affected by growing around man-made objects as much of his work also emphasises the feeling of growth. In the process of making mokume gane it is difficult to predict the outcome of the finished patterns. But this poses a challenge for Stuart as he gets satisfaction from trying to predict the outcome of the finished pattern and then seeing the finished result. The patterns of his finished pieces are therefore deliberate, i.e. in contrast to most mokume artists' work. Stuart treats each piece of jewellery as a work of art and being able to control the pattern of mokume gane speaks of years of painstaking experience in this difficult art form (Anon 2:1).

3.4 Contemporary Jewellery

Skinner (2014), in "Contemporary Jewellery in Perspective", provides an explanation on what contemporary jewellery encompasses and presents essays from role-players in the art over the last 30 years. According to Skinner (as quoted by Metcalf [2014:16-17]), a new classification in jewellery called "contemporary jewellery" has to be established. Metcalf reiterates that in identifying this new classification in jewellery, contemporary jewellery will mean that in time we would have to start talking about "post-contemporary and then post-post" as that which is referred to as contemporary today will in time become old and outlived to the next generation. Metcalf therefore suggests that we rather refer to "studio jewellery" (Metcalf, 2014:16-17).

Skinner (as quoted by Metcalf [2014:16-17]) proposes that contemporary jewellery should be critical and that the most fertile territory for the present-day practitioner is in the realm of the hybrid. With "hybrid" he simply means that jewellery should be constructed using techniques and materials from different fields, for example textiles or pottery or any other type of material which can be incorporated into jewellery. The notion of being critical in art stems from the 1970s and early 1980s when quasi-Marxist critics like Hal Foster and Benjamin Buchloh started to mobilise and motivate artists to create art works which could contribute to the radicalisation of all citizens and ultimately aid in the creation of a social revolution (Metcalf, 2014:16-17). This idea of contemporary jewellery being critical transpires to some extent in the work of Gigi Mariani as he comments on the traditional notion of jewellery which must be made of precious materials and

showcase wealth. Mariani intentionally hides the precious metals with dark textured niello which creates the feeling of a discarded archaeological object.

Metcalf, however, acknowledges the place of critical jewellery as well as hybrid jewellery but notes that capitalism is not pure evil and socialism cannot solve every social malady. He states that the idea that an artist or jeweller should be or feel obliged to take a critical stance to all things is totally inappropriate, and that there are enough other subjects which can be explored which has always been a part of the subject matter of jewellery. These include, for instance, celebration, decoration, comfy domesticity, beauty, self-expression or just simple human kindness. Though these are not all critical, they belong within the jewellery realm of expression, as do critical jewellery (Metcalf, 2014:16-17). The idea of using celebration as a theme in jewellery can be distinguished in the work of Mariko Sumioka as her work is a clear celebration of the Japanese culture as she incorporates objects, colours and shapes symbolising the beliefs of the Japanese in her work. The idea of self-expression is evident in the work of all the artist jewellers which were discussed with each drawing inspiration from their surroundings, emotions and culture while recurring references are made by these artists towards their upbringing.

Skinner further motivates jewellers to look outside the field of jewellery for inspiration and information to use as subject matter and materials. Hybridisation can be seen as amalgamating two or more totally different and non-related fields and combining them as prevalent in contemporary jewellery. Metcalf perceives this as a reasonable and logical outcome of the standard art school post-conceptual, post-studio scheme, which is highly fashionable now as most artists under 30 mashes up work from unrelated fields. Metcalf reiterates that although there are possibilities in these amalgamations, that these possibilities can also be achieved by searching for subject matter already within the field. There are more than enough and equally relevant issues and ideas to explore within the field of jewellery itself, such as the body and its genders, jewellery as protection, jewellery as semiotic code, jewellery as shaper of identity, and jewellery in its multitudes of social interactions (Metcalf, 2014:16-17).

According to Knisley (2013:3-5), studio jewellery was born out of and was an extension of the New Jewellery movement which had its roots in Amsterdam, Munich, and London. This movement found its way to America in the 1980s when there was a great deal of emphasis on abstraction, and experimentation around form, value, self-expression and the relationship between the object and the body. Studio jewellery was partly born out of debates surrounding and the challenging of the wearability stipulation which is one of the attributes of commercial jewellery. For jewellery to

be commercially viable, the piece must be comfortable, wearable and conform to the contours and shape of the wearer. Studio jewellery challenges these conditions and argues that it is first of all important for the viewer to see the piece as an object before considering the wearability of the object. Because if the object is first seen for and viewed in light of its function or wearability, then the function becomes the first and main concern. Studio jewellery is not concerned about the piece being comfortable, but more with self-expression and as long as it can attach to the body, then it is wearable (Knisley, 2013:3-5).

The next part of this section will focus on the work of Harold O'Connor and Dorothy Hogg who are contemporary jewellers specialising in diverse techniques.

3.4.1 Harold O'Connor

The work of Harold O'Connor is brilliantly reflected upon by Dinoto (2014:50-57) which appeared in *Metalsmith* magazine. O'Connor is an American-born jeweller who later on studied goldsmithing at a craft school in Denmark and subsequently Finland and later on moved on to study classical metalsmithing in Germany under Klaus Ulrich and Reinhold Reiling in the city of Pforzheim. Pforzheim is nicknamed "Goldstadt" ("Golden City") and is famous in jewellery circles for being a hotspot of jewellery manufacturing. O'Connor credits this time as laying the foundation for his career.

O'Connor is considered as a master of the skill of granulation and reticulation²¹ and also frequently incorporates embossed metal plates into his jewellery, which results in complex textured surfaces. The embossed plates are prepared by rolling precious metal through a metal roller with the addition of handmade Japanese paper. O'Connor furthermore also recurrently integrates non-precious materials such as bone, amber and wood into his work but always in conjunction with precious metals such as gold or silver²² which provides structure to the pieces and furthermore aids in the embellishment of the pieces. Although O'Connor was trained according to European traditional goldsmithing norms, his work is quite divergent to classical jewellery. He incorporates the already mentioned traditional techniques into his work and in his own contemporary style creates unique pieces which are abstract, narrative, primitive and sometimes even humorous. He

²¹ Reticulation is a texturing technique which involves using a torch with a localised flame which melts the surface of the metal resulting in a rough texture (Schadt, 1996:204).

²² Although silver is not considered as a precious metal by some in the industry anymore, it has similar working qualities to gold and other precious metals and is still widely used in the production of jewellery.

draws most of his inspiration from his environment, nature, ancient cultures and found objects whilst he is also influenced by the work of contemporary sculptors such as David Smith, Isamy Nogushi, Anthony Caro and Eduardo Chillida. O'Connor's work is intended to be wearable, one-of-a-kind pieces to such an extent that he rarely makes earrings as he is disinclined to make the same piece twice in a row. He places specific intent on creating three-dimensional objects which evoke the same spatial authority as the space which the body occupies.



Figure 10: Harold O'Connor "Wind from the east" (2009). 18ct and 24ct Gold, silver diameter 3" Photograph: Harold O'Connor (Dinoto, 2014: 52)

Taking a glimpse at the work of O'Connor, one realises that most of his work is infused with subject matter from some stage or event throughout his peripatetic life as O'Connor has travelled extensively in pursuit of making his mark on the world through his passion for jewellery. After his studies in Europe and throughout his career he has travelled to various destinations. He was the first resident metalsmith at the acclaimed Penland School of Crafts in North Carolina, after which he moved to Crested Butte in Colorado where he set up a studio. His passion for teaching soon emerged and he decided to further his studies at the University of New Mexico where he earned a Bachelor of University Studies degree in 1971. O'Connor, however, aimed higher as he wanted to teach at college level and went on to earn a Master of Fine Arts degree from the Instituto Allende in San Miguel de Allende in Mexico. Next he moved to Calgary in Alberta, Canada, where he taught for two years at the Alberta College of Art and Design. He returned to Crested Butte and in 1978 moved to Denver and then Taos, New Mexico, in 1986 where he worked for eight years describing it as his "sacred place". Taos, however, was distracting to him and in 1993 he

moved to Salida in order to take advantage of the tranquillity and isolation (Dinoto, 2014: 50-57).

The focus of the next section is on the contemporary jewellery of Dorothy Hogg.

3.4.2 Dorothy Hogg

According to an article by Goring (2015:19-22) which appeared in the magazine *Craft Arts International*, Hogg grew up in Troon, a small seaside town in Ayrshire on the west coast of Scotland where her father and grandfather both had jewellery workshops and worked as jewellers. Hogg subsequently grew up being exposed to jewellery from a very young age as she seemingly preferred to rather help her father and grandfather in the jewellery workshops than to be in school which she deemed to be grim and uninspiring. She had always been fascinated with intricate and detailed work which she was throughout her childhood repeatedly exposed to – if not the jewellery of her father and grandfather, then the detailed embroidery and knitting which was done by the women at home. It is therefore not surprising that Hogg would one day become an accomplished jeweller (Goring, 2015:19-22).

Hogg attended Marr College, a secondary school in Troon, South Ayrshire, where she flourished in art and afterwards pursued her artistic career by enrolling at the Glasgow School of Art in 1963 where she studied general art for two years. This laid a foundation in art and students were allowed to choose a specialisation for another two years. Hogg subsequently chose jewellery as her area of specialisation. In her last year in 1967 she won the Diamonds International for a platinum ring she manufactured, while in the same year she sat for a week-long entrance examination and was subsequently accepted into the Royal College of Art in London which was the only college in the United Kingdom at that time where a postgraduate degree in art could be obtained. She studied at the Royal College of Art until 1970 and was presented with a prize, namely a silver medal for work of special distinction and she was also invited to participate in three exhibitions. At around this time Hogg reacted against precious jewellery which is perceived as a status symbol and her work was driven by impulses, while also aiming to create well designed jewellery for the masses (Goring, 2015:19-22).

Hogg was appointed Head of Department and Professor at Edinburgh College of Art in 1985 and served in this position for 22 years (Anon 11:1), after which she accepted a residency at the Victoria and Albert Museum in London. During her residency she received security clearance and was able to view all the jewellery in the metalwork section. She was especially intrigued by mourning jewellery. This is jewellery that was made to remember someone by and often contained

hair, portraits and pearls from loved ones who have passed away. She was so haunted with these works and the idea of emotion trapped behind a transparent screen that she made it the theme for her residency (Goring, 2015:19-22).



Figure 11: Dorothy Hogg, “Artery Series Brooch” (2009). 925 Silver, red beads, 14 x 6 cm

Photograph: Stacey Bentley (2014) (Goring, 2015:21)

The work of Dorothy Hogg evokes subtle emotion which she instils by creating clean and uncluttered pieces with subtle flashes of primary dark blue and red colours. In her article, Goring (2015:19-22) refers to an interview by Philippa Swann with Hogg which appeared in *Crafts* magazine in 2000. In this interview Hogg summarises her intent and inspiration poetically by stating: “Transient skies of every tone of grey with dark islands and headlands juxtaposed against a silvery changing sea. My eye is so attuned to these subtle and monochromatic tones that this has resulted in a tendency in my work to be restrained and understated.” Hogg furthermore describes her work to be constructivist in form as the shapes develop piece by piece three-dimensionally while it is being constructed. As her husband and son are both musicians, Hogg has taken it upon herself to add some musically inclined sound to some of her pieces through movement (Goring, 2015:19-22).

Hogg prefers to work in silver and adds subtle flashes of red or blue with enamel, felt or stones such as lapis lazuli. Although her pieces are clean, uncluttered with subdued colour, they are filled with emotion and intent.

In comparing the work of Dorothy Hogg and Harold O'Connor, distinct similarities can be put forward as characteristics of contemporary jewellery. Because these artist jewellers place specific emphasis on elements such as colour or technique in order to initialise a concept, it can in turn be deemed as narrative contemporary jewellery. In comparison to the colour in the work of O'Connor, the work of Hogg is subdued with specific regard to colour, yet the work of both still overflows with meaning and emotion. This is in total contrast to commercial jewellery which does not include expressions of the individual or the artist. Commercial jewellery can in many cases, however, be themed for specific undertakings such as Christmas or Saint Valentine's Day or be in the form of crosses or hearts and so forth. These examples are usually mass-produced with as little as possible diverse techniques in order to make the production thereof simple and cheap. This jewellery is then put forward as trendy or branded jewellery which sells rapidly and in large quantities to a public not always adequately informed regarding quality jewellery.

3.4.3 Conclusion

This chapter has highlighted some of the most noteworthy developments of jewellery techniques throughout history and moved on to describe the selected techniques of which a body of work will be manufactured by the researcher. Furthermore, this chapter has provided two examples on how each of the selected techniques is used by jewellers in contemporary jewellery. Lastly this chapter provided a precise description of what contemporary jewellery encapsulates with examples of two artist jewellers specialising in contemporary jewellery.

In concluding this chapter, it must be noted that jewellery has certainly come a long way from the early civilisations up to the contemporary and commercial jewellery of today. People have the instinctive desire to be unique and individual, thus they will always find ways of resisting humanity's own instinctive desires to become wealthy through standardising everything in an attempt to push up production. This is unfortunately the result of industrialisation which has had an adverse effect on the quality of jewellery worldwide and this trend has historically also left its mark on jewellery manufacturing in South Africa as our jewellery has become unmarketable as South African jewellery in its own right. One solution to this problem could be to simply incorporate African motives into commercial jewellery. Although by drawing inspiration from former African art and attempting to facilitate the emergence of an African aesthetic style in jewellery or in any other

art for that matter, it may prevent the natural emergence or development of a true South African or African aesthetic style as it will constantly draw attention away from the moment we are currently living in. We will therefore stagnate towards a fabricated African style which has in the past been presented as “primitive” African art. Art as it is seen through a Western perspective – where it is accepted and presented as a separate entity or classification, as is also the case with science, biology, religion or even abstract concepts such as astrology or theosophy for instance – has evolved and is renewed constantly as it is according to Western concept expected to evolve and progress. But African artefacts which the West deems as art in the Western frame of mind is appreciated for its aesthetic value in the West, but was never intended to be a separate entity or as art which was made to be appreciated for its aesthetic value which needs to evolve and progress. These artefacts were made in Africa by Africans to fulfil a purpose in their everyday lives to act as complementary functional objects in relation to their customs and rituals. Dr Roslyn Adele Walker – an expert on African art and an art historian and art director at the Smithsonian Institute’s National Museum of African Art – is quoted by Boateng (2010) in a periodical published as a cover story in the *New African* magazine in 2010. According to Boateng (2010), Walker reiterates the notion that historical African art should not be interpreted through the Western view of art by arguing that traditional African art served a purpose (and still does in some cultures) as an agent of religion, social stability, and social control. Thus, generally, “African works of art were not meant to be viewed in a museum. Rather, they were placed in shrines and on personal or communal altars, carried in public processions and worn as regalia or in a masquerade” (Boateng, 2010:24). The viewpoint of Walker is underlined by the perspective provided by Burger (2013) as she explains that in traditional African objects the subject-object relation has always been very strong. She explains that objects were traditionally produced in order to fulfil a function: utensils, bowls, snuff containers and so forth. She points out that many of these traditional functional objects have been commoditised by the West and have subsequently lost much of their original purpose or meaning. She therefore argues that dialogue and conversations on changing subject-object relationships allow for rethinking the “thingness” of African material culture (Burger, 2013:5).

Reflecting on the work of artist jewellers utilising the selected techniques, it is clear that these artists do not design jewellery according to specified recipes evident in commercial jewellery. These artist jewellers act upon self-discovery and self-exploration and reflect on events or customs which have contributed to who they are within the epoch of their own culture. Barbra Seidenath explains how a winter landscape seen through the window of an aircraft has inspired

her to create a range of enamelled jewellery which emotionally depicts the icy white, melancholic landscape. Mariko Sumioka has created an enchanting and emotionally inspirational range of jewellery by drawing on the Japanese concept of wabi-sabi, which is a Japanese concept of living in harmony with nature whilst also using enamel to depict the Japanese rural landscape. Gigi Mariani draws on his paintings as a form of self-expression in creating his rough yet simplified contemporary jewellery range with the inclusion of niello which reveals his main intent of concealing the value of the precious materials. All of these works are a testament to the value of self-expression and the benefit of utilising techniques such as enamelling, mokume gane and niello can have in the pursuit of creating unique and original jewellery.

As the next chapter will show, we as South Africans cannot attempt to force a style to develop by constantly drawing on historical African art or artefacts as inspiration just because we live in Africa and the West regards historical African objects as African art. Any such style that would emerge would be a synthetic approach to African art or a biased interpretation regarding African art as the influences of colonisation and the modern world have shaped our culture towards a different epoch than it was during the time authentic African artefacts were produced. We should rather create jewellery or art by following our own approach and interpreting our own insight, culture, beliefs, myths and customs in our own sphere of existence today. By constantly drawing on and interpreting African art with the intention of creating an African or South African style will halt the natural emergence of a true South African style reflecting who we are today. We have to consider that the greatest challenge for South African jewellers is to amalgamate elements of expression in contemporary jewellery with commercial jewellery by drawing inspiration from ideas, religion, norms and customs which determine who we are today. The next chapter of this study will provide a brief background on the formation of the South African jewellery industry and furthermore focus on the opinions of role-players or specialists with regard to the hurdles facing this industry. The researcher will aim to determine how these role-players perceive South African contemporary and commercial jewellery design in order to substantiate the inspiration for a body of work by the researcher. The researcher will furthermore aim to draw conclusions from the responses of the jewellery specialists and aim to provide recommendations to the jewellery industry.

CHAPTER 4

A SOUTH AFRICAN IDENTITY IN JEWELLERY

4.1 Introduction

This chapter provides a brief background to the formation of the South African jewellery industry as to comprehend the scope of influence which has contributed to the predicaments it currently faces. In order to demonstrate the influence of Eurocentric interpretations of Africa, this chapter delineates on the work of Giuseppe Leonardo (Joe) Calafato (1912-1991) who was an immigrant jeweller, and indicates how preconceived Eurocentric interpretations of Africa affected his attempts to create African-inspired jewellery. This chapter additionally incorporates opinions from respected jewellers and specialists in the field of jewellery. The opinions of the jewellery specialists will be incorporated into this chapter by means of a narrative account on the lived experiences of the participants in relation to the South African jewellery industry. Furthermore, an account of each participant's incorporation of techniques which is not widely integrated into commercial mainstream jewellery will be provided. This chapter will also delineate on the participants' opinions surrounding self-expression when designing South African jewellery. In order to obtain sufficient data and primary knowledge on the South African jewellery industry, the researcher have selected three specialists who have been working in the field of jewellery manufacturing for several years. These three individuals, although connected to training in the jewellery industry, all have diverse backgrounds and links to the industry itself. The respondents are Johan Slabbert, Thomas Labi Kapo and Liz Loubser respectively.

4.2 Interview Respondents

With a view on selecting relevant respondents who can arguably be deemed as specialists in jewellery manufacturing in South Africa, a number of factors had to be taken into consideration. Firstly, the researcher identified individuals who were or still are involved in jewellery manufacturing training in South Africa. Secondly, the intention was to identify individuals who are involved in the Jewellery Council of South Africa or involved in the Graduate Development Programme of the Mining Qualification Authority. It was also important that the individuals have been in the jewellery industry for a number of years and specifically before 1994 as to provide sufficient information on how the industry has transformed since that period. For the purpose of this study it was also important to get the opinion of a specialist in contemporary as well as commercial jewellery in order to be able to triangulate the responses from the three diverse

individuals. The three respondents who adhere to these criteria are, as indicated above, were Johan Slabbert, Thomas Labi Kapo and Liz Loubser. The full transcribed interview with each of the respondents conducted in 2016 are attached hereto as Addendum A (Johan Slabbert), Addendum B (Thomas Labi Kapo) and Addendum C (Liz Loubser) respectively. Please note that in referring to specific content in the respective interviews, the editorial abbreviations “JS/A” (Johan Slabbert/Addendum A), “TLK/B” (Thomas Labi Kapo/Addendum B) and “LL/C” (Liz Loubser/Addendum C) will be used followed by a page number which corresponds to the page number in the relevant addendum.

4.2.1 Johan Slabbert (1968)

Johan Slabbert is a jewellery lecturer who has been directly involved in jewellery manufacturing training for a number of years at the Motheo FET College in Bloemfontein. He was also involved in compiling the syllabus of the Mining Qualification Authority’s Graduate Development Programme in the form of unit standards. This involvement makes him a relevant jeweller or specialist for the purpose of this study. Slabbert was born in South Africa and grew up in Port Elizabeth in the Eastern Cape Province. He has been a lecturer in Jewellery Design and Manufacturing for the past 10 years at the Motheo FET College in Bloemfontein and started making jewellery when he was 27 years old after a short career in personnel management. When he realised that jewellery was his passion, he subsequently quit his job and enrolled for a jewellery course at the Motheo FET College where he later on became a lecturer as well (JS/A:151).

Slabbert describes his design style as movable jewellery, similar to kinetic jewellery. He enjoys experimenting with a variety of materials and often includes found objects into his jewellery. Slabbert states that he regularly incorporates materials like leather, vegetable ivory, desert roses, cuttlefish casting, and even mechanical objects from engines. Design is an important and necessary step in his endeavour of making jewellery and he states that he does not just make jewellery for the sake of making jewellery. Slabbert explains that there has to be a reason why someone makes something and the jewellery has to be created in order to bring across meaning. When designing jewellery, Slabbert always works from inspiration and selects specific inspiration which will reflect something that has dwelled in his mind for a long time, or something in his environment, his background or even just something close to him. Slabbert points out that no two people are the same and to be able to create unique and authentic jewellery, one must develop one’s own style and tap into one’s own uniqueness. When designing, he tends to steer away from the stereotypical. Slabbert, who grew up next to the ocean, states that the sea has always been

a big inspiration to him. The constant and perpetual motion of the ocean and the way that the waves move provides some inspiration to him as he designs some of his kinetically inspired jewellery. As he no longer lives close to the coast, he always keeps his eyes open for found objects like, for example, bones or skeletons which he finds in the veld close to where he lives, namely on a farm outside Bloemfontein, and which he can use as objects in his jewellery or as inspiration when designing (JS/A:160).

4.2.2 Thomas Labi Kapo (1958)

Although not a South African, Thomas Labi Kapo is a relevant participant in this study as he is an executive member of the Association of Designers and Jewellers Organisation (ADJO) and the Jewellery Manufacturers Association of South Africa (JMASA). Kapo is also a member of the Jewellery Council of South Africa (JCSA) and a registered training provider and subject matter expert. In addition to the above, Kapo is also an accreditation auditor in jewellery operations and a registered assessor and moderator for the Mining Qualifications Authority (MQA). This involvement places him in direct reach of jewellery graduates. Kapo has also for a number of years been involved in facilitation of extra classes in platinum fabrication at the University of Johannesburg as well as part-time facilitation of workshops on jewellery manufacturing at the Central University of Technology, Free State. Kapo also has expert knowledge on the magnitude of the jewellery industry in the rest of Africa as well as Europe and especially the United Kingdom. Kapo's in-depth knowledge on jewellery manufacturing and his association with various entities in the jewellery industry makes him a specialist in the field of jewellery and a relevant respondent for the purpose of this study.

Thomas Labi Kapo was born in Nigeria on 13 May 1958, and his parents left Nigeria to study in Europe when he was about nine to ten months old. They then travelled in Geneva, where they studied, while he was in nursery school. After his parents completed their studies, they moved to London, where Kapo grew up and spent most of his life. Kapo originally opted for a career in engineering, but after the company he worked for became redundant, he was subsequently left without a job. Whilst visiting one of his friends who worked at a jeweller, Kapo saw an expensive watch which he couldn't afford. His friend organised that he could pay off the watch in turns. When he went to pay the last instalment on the watch, his friend was no longer working at the jeweller and the jeweller asked him if he could help out for a couple of weeks until they find a replacement for his friend. Kapo, considering his engineering background, agreed and that was the start of his goldsmith career about 40 years ago. Although Kapo ended up the jewellery industry by sheer

coincidence, he does acknowledge that his background in engineering as well as his exposure to metal work at school in London gave him an advantage in jewellery manufacturing (TLK/B:163-164).

Kapo's designing style in jewellery can be described as quality jewellery. Being trained in Europe by highly qualified jewellers has left a huge imprint on the style of his jewellery. Kapo explains that he endeavours to make jewellery in the same way that he was taught. One of the elements he consistently includes in his jewellery is to elevate the jewellery with intricate galleries whereby the metal does not simply lie flat on the skin, but is elevated. This presents a look which translates into more sophisticated jewellery which has a purpose. Kapo furthermore explains that the back of the jewellery is also carefully decorated by, for instance, azure cutting and piercings in order to make the jewellery attractive to look at from the front and the back. The most important aspect of Kapo's jewellery and which sets it apart is his utmost attention to detail and high quality which is rarely seen in the work of even some of the most accomplished jewellers in South Africa (TLK/B:170).

Although Kapo is a specialist when it comes to manufacturing, when using specific techniques or processes like, for example, enamelling, he explains that in his training in the United Kingdom and Europe, even though they do get exposure to such processes, the procedure is a bit different than here in South Africa. Kapo namely points out that in Europe and in the United Kingdom there are specialists in every possible field in jewellery. In South Africa most jewellers are "general practitioners" and when such techniques are to be included in a jewellery piece, it is performed by the jewellers themselves. In contradiction to this practice in South Africa, in Europe and the United Kingdom one would manufacture the piece of jewellery and prepare it for the next stage. Jewellery with specialist techniques such as enamelling, setting, engraving or suchlike techniques, are then sent to a specialist in that specific field. Kapo explains that this practice elevates the quality of high-end jewellery tremendously as the execution of such techniques would not be as good if executed by only one person than when done by outside specialists (TLK/B:170).

4.2.3 Liz Loubser (1959)

Liz Loubser is a specialist in South African contemporary jewellery and has additionally been involved in facilitation of private jewellery training. Loubser was also involved in training at the former University of Durban-Westville (the University of KwaZulu-Natal was formed on 1 January 2004 after the merger between the University of Natal and the University of Durban-Westville) and was additionally one of the first jewellery lecturers at the Technikon Witwatersrand which,

after merging with the Rand Afrikaans University and the Soweto and East Rand campuses of Vista University on 1 January 2005, formed the University of Johannesburg. Although she is a specialist in South African contemporary jewellery, her business regularly hosts contemporary jewellery exhibitions and additionally creates commercial ranges as well as ranges aimed at the South African tourist industry. Being a contemporary and commercial jeweller as well as her involvement in jewellery manufacturing training make her a relevant respondent for the purpose of this study. Liz Loubser is a jeweller specialising in custom-made commercial as well as contemporary jewellery. Loubser commenced her studies in art in 1977 at Stellenbosch University in the Western Cape Province, South Africa. In her first year she was exposed to a variety of art disciplines such as ceramics, fine art sculpture and also jewellery manufacturing. Loubser realised her passion and decided to specialise in jewellery manufacturing. After concluding her studies, she moved on to facilitate jewellery manufacturing classes and later took some time off to focus on her family life. Loubser then worked at the University of Durban-Westville and thereafter relocated to Johannesburg and became one of the first lecturers in Jewellery at the Technikon Witwatersrand. While facilitating freelance classes in jewellery manufacturing, Loubser decided to launch her own business (LL/C:172-173).

Loubser describes her own personal jewellery creations as being influenced by who she is and where she lives. Having been raised in South Africa, she explains that included in her designs, there is a strong connotation and reference to Africa. She describes this influence as an unintentional, natural and automatic outflow of who she is. Loubser is passionate about Africa and elucidates that although she is constantly influenced and exposed to European jewellery in books and magazines, when designing, she naturally tends to inculcate African textures, patterns and images into her work. Although Loubser constructs commercial jewellery on demand, she also manufactures original contemporary jewellery. In her contemporary jewellery she regularly and proficiently utilises a variety of specialist techniques which confirms her versatility, expertise and affiliation to contemporary jewellery or studio jewellery. One of the techniques she specialises in is the Korean art of Keum Boo. Loubser explains this technique as fusing thin sheets of fine gold which have been cut into patterns onto pickled silver. She explains that the silver is firstly pickled until it is clean and white or until a thin layer of fine silver covers the whole surface of the plate. The thin gold sheets are then cut into shapes according to the design and then placed onto the fine silver plates. The jewellery piece is subsequently heated until the gold sheet fuses onto the fine silver plates. Additional techniques used by Loubser include amongst others using the fly press and mokume gane. Loubser agrees that most of these specialised techniques are rarely

used in commercial jewellery as they are time-consuming and it is also difficult to predict the outcome (LL/C:179-188).

4.3 South African jewellery: Background

The bulk of South African jewellery is produced in the provinces of Gauteng and the Western Cape where most manufacturing industries are concentrated. Considering that South Africa is one of the largest producers of gold, platinum and diamonds, compared to countries such as Italy, India and China, South Africa has a hugely underdeveloped jewellery industry (Da Silva, 2007:128-129). Historically the use of gold for adornment in Southern Africa can be traced back to about 1000 years ago. Golden artefacts have been found in Mapungubwe, Bosutswe, and Thulamela. These items show that highly developed cultures existed long before European settlers arrived at the Cape of Good Hope. These cultures unfortunately declined and besides the ruins of their dwellings, no permanent traces of their civilisation or expertise in working with gold survived by the time Europeans settled in Southern Africa (Miller et al., 2001:297).

With the settlement of European culture in Southern Africa, their jewellery making skills were imported – although at first it did not develop into a huge production venture. Only after the Second Anglo-Boer War, which was a result of the unprecedented discovery of diamonds and gold in the Orange Free State and the Transvaal, as well as after the First World War, the Great Depression and the Second World War, a notable jewellery manufacturing sector was established. This development lasted from about the 1950s to about the 1970s and was complemented by the many skilled immigrants who came to South Africa as a result of the Second World War (Van Staden, 2013:140). After the Second World War, the South African Mint, which was established in 1923, contracted their activities as many of the jewellers left the Mint to pursue private practices. This was possible for them as the Mint was affected by government policy to not compete on the open market. This led to a huge upsurge in the jewellery manufacturing sector in South Africa as many skilled artisans assembled lucrative jewellery manufacturing businesses on the open market (Van Staden, 2013:144).

Reflecting on the South African jewellery industry, it is important to note that it is probably one of a very few industries in the country where the trendsetting jewellers were dominated by European immigrants. Jewellery making and the goldsmith trait have always been a remarkably rare trait and many of the prominent and influential jewellers in South Africa have predominantly been immigrants from first generation born individuals from especially European countries such as Germany, Italy, and the eastern European countries as well as Russia. These individuals were

by no means part of the first Dutch settlers who in time transubstantiated to become the Afrikaners, neither the British settlers of the 1820s. It is therefore understandable that South African jewellery has, but by no means purposefully had, a European flair with African themes being interpreted half-heartedly and inaccurately.

One such immigrant jeweller who particularly constructed jewellery in an African design style was Guiseppe Leonardo (Joe) Calafato (Van Staden, 2010:127). Calafato was a jeweller from Sicilian parents and was born in the former Lourenço Marques in Mozambique in 1912. After the death of his father in 1920, his mother moved the family to Johannesburg. Calafato was always interested in art and was accepted as an apprentice goldsmith in 1934 under Jack Friedman. Friedman, an immigrant from Latvia, opened a jewellery workshop in Johannesburg in 1933. He subsequently became a well-known and accomplished jeweller in the Witwatersrand area (Van Staden, 2010:128).

After completion of his apprenticeship, Calafato started to work at the South African Mint in the jewellery section from 1938 to 1945. During his lunch breaks and after hours, Calafato started to undertake private commissions. After he left the South African Mint, Calafato formed a partnership with Bob Campbell who also worked at the Mint as a sinker. Together they opened a jewellery workshop in Pretoria which they named Metal Art Creations and later on shortened it to Metal Arts. The workshop grew as more and more jewellers, especially from the South African Mint, joined their venture and they soon had to move to a larger workshop. By 1951 the workshop grew to about 200 workers. For Calafato and Campbell this became too large and they subsequently left and started a new and smaller workshop. The business of Calafato and Campbell was negatively affected as the competitiveness of the jewellery industry grew considerably when in 1966 import controls and tariff duties were lifted by the government on all imported jewellery. Subsequently Calafato and Campbell dismantled their partnership to start separate workshops (Van Staden, 2010:130-132).

Calafato opened a workshop in Pretoria and registered it as Joe Calafato (Pty) Ltd. The business was sold in 1984 and the new owners moved the business to the former Boputhatswana homeland of Ga-Rankuwa. The business was moved to be able to benefit from government incentives. The Nationalist apartheid government at the time offered incentives to individuals who started businesses in the former homelands or Bantustans as it was known at that time (Van Staden, 2010:133).

According to Van Staden (2010), the techniques Calafato specialised in included the press

method and die casting. His creations included bracelets, rings, bangles, brooches, pendants, necklaces, earrings and he also specialised in Saint Christopher pendants. Calafato worked mainly in silver and copper but sometimes gold and platinum were also used while he also became a connoisseur in cloisonné enamel. His inspiration was multifaceted while he also adopted to the fashion trends of the time. Calafato drew inspiration from American and European jewellery magazines, his travels abroad, and was also influenced by European apprentices and the taste of the general public, while later on he started to focus on the tourist market which became progressively important. Some of his work also had traces of the Art Deco style which also drew some of its inspiration from African motives and especially Egyptian art. Even though Calafato's early work was hugely influenced and inspired by European jewellery, his work reflects a timeline of a fading European influence in jewellery in South Africa and a direction to more African-themed jewellery. There is a clear shift in focus from original scroll abstraction to more organic and realistic expressions of plant, animal and human forms ending almost entirely in the depiction of African landscapes, African animals, and African village life. As such his work matured into extensively embracing images of the African continent (Van Staden, 2010:134-149).



Figure 12: Joe Calafato, "African Iconography" Brooches and Bracelets. Photograph: Hellmut Wilhelm (2009) (Van Staden, 2010:147)

In Figure 12 above, although one can assume Calafato's intentions were noble, one can clearly see how his representation of Africans or African art leans towards a Eurocentric notion of what African art or jewellery should or are presumed to be. Calafato recurrently represented Africans as primitive from a European perspective. Thus in essence these works cannot be put forward as authentic African jewellery as it is firstly manufactured by a European immigrant with limited knowledge of African customs and, secondly, these pieces are designed to take advantage of Westerners' curiosity towards the exotic and unknown. These pieces are a literal representation intended to showcase the primitive lives of Africans. To be able to avoid the same unintentional mistake made by Calafato, we need to identify and properly interpret current traits, beliefs, customs and religions of South African cultures.

This perceived interpretation of Africa persisted up to the end of apartheid in 1994 and the newly elected democratic government intended to transform the industry through uplifting skills through training and attracting young South Africans into the industry who should eventually replace and transform the legacy left behind by immigrant jewellers who dominated the market for the latter part of the 20th century. The issue of transformation in the jewellery industry was presented to the respondents through an interview in order to test their personal views on a number of issues surrounding the South African jewellery industry, including training and mastering of skills, transformation of the industry, the quality of manufacturing in South Africa as well as their views on a South African jewellery style.

4.4 Training and Quality in South African Jewellery

Being confronted with the issue of training and uplifting the quality of jewellery manufacturing, Slabbert, Kapo and Loubser postulate that the basis for becoming an accomplished jeweller is to master to most basic and fundamental techniques in jewellery manufacturing. Slabbert explains that even with new developments in the jewellery industry such as computer-aided design (CAD), a student should have a high degree of knowledge of basic jewellery manufacturing techniques. Slabbert points out that in order to be able to successfully design on CAD, one needs to understand the specifications of hand-made jewellery (JS/A:154-155). Kapo also underlines the notion of becoming fluent in the basic techniques and further explains that he was exposed to high-end jewellery manufacturing and where they were trained in more of the older, traditional techniques in jewellery manufacturing. Kapo explains that mastering the older techniques has given him an advantage when attempting to manufacture modern variations of high-end jewellery

(TLK/B:166-167). Loubser agrees with Kapo and Slabbert and states that the fundamentals of becoming an accomplished jeweller are basic, good technical skills and a heightened awareness of proportion, whether one specialises in contemporary jewellery or commercial jewellery. She does, however, mention that mastering these skills is a lifelong process. According to Loubser, it is quality craftsmanship that distinguishes excellent fine jewellers from incompetent jewellers (LL/C:177-178).

On elucidation of the quality of manufacturing skills in South Africa, Slabbert accurately explains that with the investment from government and the MQA into the Learnership Programme and the Graduate Development Programme, there was a number of questionable trainers and jewellery training schools that sprung up which intended to exploit the situation. These trainers have for a long time only focused on financial increments and the quality of the training was the last priority and accordingly substandard. Slabbert furthermore points out that although through the government's noble intentions of luring an abundance of young people into the industry, quite a number of the individuals who enter the industry are not necessarily appropriate candidates for the industry's needs. Slabbert explains that a good jeweller is not necessarily someone with artistic inclination or an aptitude for art, but an individual with the right temperament and patience which can complement his or her talent. He therefore proposes a system able to identify the right type of individuals who not only have talent, but also the right temperament.

Slabbert furthermore explains that another aspect which can enhance the quality of South African jewellery is to identify suitable trainers in the industry. He explains that qualifications or skills do not necessarily qualify or result in a good trainer (JS/A:156-158). Kapo underpins the viewpoint of Slabbert and states that it is essential to have the best and most qualified lecturers and teachers. He furthermore affirms that in the jewellery industry this is no easy task as not all qualified jewellers in South Africa have had the type of high-end exposure necessary to be a good trainer (TLK/B:168). Loubser also agrees with the observations made by Kapo and Slabbert and states that good technical training is essential to elevate the standards of South African jewellery. Loubser explains that most of the academic trainers are not in the trade itself and are not master goldsmiths. She therefore suggests that trainers should get more exposure to commercial jewellery in order to be able to train students effectively (LL/C:177-178).

Reflecting on the viewpoints of the respondents, it is clear and without question a given that technical excellence is fundamentally the most important aspect of becoming an accomplished jeweller. A solid foundation of technical skills and expertise should be laid within the first three

years of jewellery practice. It is therefore imperative to pinpoint the most efficient process of training learners in order to proficiently uplift their quality of manufacturing in order to elevate the quality of South African jewellery in general. According to all the respondents, it is also imperative that trainers and facilitators should have expert knowledge and skills, and also a desire and ability to hand down their skills. Kapo explains that as the skills of the trainers improve, so does the skills of the students (TLK/B:168). Slabbert also points out an important and often overlooked issue: he explains that although the government has made enormous strides in attracting young people to the jewellery industry, it is not always the appropriate kind of populace. Jewellery can be seen as a discipline or an art form. Therefore, as indicated above, it is not adequate to simply search out people that have artistic talent, but people who also have the right temperament (JS/A:157-158).

Although the Graduate Development Programme has elevated the quality of jewellery, the focus of this programme is on pre-formulated briefs which has its foundation in and is defined by European and Western commercial trends in jewellery design. This approach, although noble and very effective in elevating the quality and hand skills of the graduates, is still not a solution to the issue highlighted by Da Silva (2007) and McCallum (2007) whereby a South African identity of jewellery should be established in order to make South African jewellery more marketable as a brand and which in turn will support the beneficiation of South African raw materials. As highlighted in Chapter 1, McCallum (2007:43) states that prior to 1998 emphasis was placed on processes that emphasise manufacture rather than design, whereby the Graduate Development Programme is once more reverting back to the same practice as described by McCallum (2007) prior to 1998, which will allow little space for individualised expression. Although university curricula, as McCallum (2007) rightly indicates, have transformed to focus more on design and concept development and teaching underutilised techniques such as enamelling, a process of furthering this knowledge or skills should be incorporated into programmes such as the Graduate Development Programme in order for the designing capabilities of the graduates to develop. The possibility of reverting back to producing bench workers with only the ability to reproduce or appropriate Western or Eurocentric jewellery must be avoided, otherwise efforts to establish a more design-orientated curriculum in jewellery design made by South African universities would become obsolete. Loubser furthermore states that there is a divide between commercial jewellery and contemporary jewellery (LL/C:173-174). This divide is eminent in many discussions between the various factions in the jewellery industry and should not be ignored or taken as insignificant. University curricula which are geared to enable students to create more expressive conceptual jewellery are often criticised by more commercially orientated jewellers, yet the very practice of

appropriating European jewellery designs in the industry and continuing to steer students in that direction is one of the significant causes why South African jewellery is unmarketable as a brand and cannot grow to an eminent position compared to other jewellery manufacturing countries.

Although addressing concerns surrounding the transformation of the jewellery industry in South Africa is beyond the scope of this study, it is of importance to highlight these issues in order to provide a foundation for future research into the matter. The issue of transformation was therefore discussed with the respondents in order for them to present their personal views. Being confronted with the question of transformation in the jewellery industry since the dismantling of apartheid in South Africa, the respondents offered varied standpoints. According to Slabbert, although he points out that the jewellery industry in South Africa has been declining, there has been mixed outcomes. Slabbert's opinion is validated by comments made by the Minister of Trade and Industry in 2014 when he unveiled the Gold Loan Scheme to support local jewellers to supply export markets and the local retail sector. During this unveiling, Davies (2014) indicated that with only 1000 jewellery manufacturers left in South Africa, the production is down from 7500kg in 2004 to only 3500kg in 2014. Davies has also indicated that jewellery imports have skyrocketed from R280 million in 2004 to over R1 billion in 2014 (Anon 4, 2014:1). But generally Slabbert feels that the industry has transformed sufficiently as there is a whole new generation of young jewellers who are black. He further states that when he started studying there was not a lot of black goldsmiths in the industry. Slabbert credits this emergence of new and young black goldsmiths to the efforts and support by the government and the Mining Qualification Authority's support which has also contributed to the establishment of qualified goldsmiths. Slabbert does, however, reiterate that legislation²³ surrounding the jewellery industry – especially with regards to precious metal regulation – still has a negative effect on the industry and which makes it increasingly difficult for young jewellers to get a foothold in the market. According to Slabbert, graduates do not seem to be taking the plunge into starting their own businesses and is of the opinion that it might be as a result of monopolies held by financially strong and established competitors. Slabbert explains that during the early days of the jewellery industry there were many well-qualified jewellers who entered into the jewellery industry in South Africa who have since monopolised the market. Due to the current economic climate and the cost of setting up jewellery workshops – as

²³ According to the Department of Minerals and Energy (2005:24-39), in a third edition handbook on the precious metal trade in South Africa and which was compiled by Ashok Damarupurshad and published in 2005, there are strict regulations on trading and owning unwrought gold in South Africa. The restrictions on owning unwrought gold were set in place as South Africa is a significant producer of gold and unrestricted possession of gold would lead to smuggling (Anon 5:24-47).

well as a lack of experience and maturity of jewellery graduates – the pioneer jewellers are still in a position which enables them to dominate the market (JS/A:151-153).

Kapo, on the other hand, being from Great Britain, approached the subject from an entirely different angle. Kapo states that the support which the South African government provides students is unheard of in the rest of the world. Kapo further points out that South Africa has an advantage with regards to the infrastructure which is already in place. One example is that the accessibility of tools in South Africa can be easily compared with First World countries like Britain where most specialised tools needed to manufacture high-quality jewellery is readily available and easily accessible. Kapo explains that the situation in the rest of Africa is less advanced, and places South Africa in an advantaged situation to position itself as the jewellery manufacturing hub of the African continent. Kapo further delineated on the efforts of government to attract young people to the jewellery industry through the Mining Qualification Authorities' Learnership Programme as well as the Graduate Development Programme or GDPs. Kapo reiterates that it was only a coincidence that he got to be in the jewellery industry as he was never exposed to the industry while growing up and it was never a choice he ever considered as a career option as he was never exposed to jewellery manufacturing. Similarly, most young people in South Africa who did not grow up in a family where the mother, father or even grandfather is a jeweller would never even consider selecting jewellery manufacturing as a career option. Therefore, the efforts to introduce jewellery manufacturing to young people as a career option can be seen as a significant and meaningful endeavour on the part of the South African government (TLK/B:165-166).

Loubser, in contradiction to the views of Slabbert and Kapo, pronounces that the jewellery industry has not undergone momentous changes with respect to the racial demography of jewellers as a result of the dawn of a democratic South Africa. She points out that during the previous dispensation, apprentices for goldsmiths could enter the jewellery industry regardless of race. She explains that prior to 1994, whilst lecturing at the University of Durban-Westville, although it was a university specifically for black and Coloured students, these students have always been allowed to enter into the jewellery industry. Loubser furthermore views the jewellery industry in South Africa as in fact consisting of two separate entities, namely the commercial side of the industry and the contemporary side. She views the commercial side as an important component for all jewellers, especially contemporary jewellers, and further states that jewellers would not be able to survive without catering for the commercial market as well. Loubser, being a contemporary jeweller herself, acknowledges that the commercial leg of her business is paramount to keeping her business viable and states that the commercial jewellery sales exceeds sales for her

contemporary ranges. She does, however, remark that the contemporary jewellers are very passionate and although the South African contemporary jewellery market is still relatively small, it is a very strong market. Loubser further indicates that there is a divide between the contemporary jewellers and commercial jewellery manufacturers (LL/C:173-174).

The opinions of the respondents confirm the views of Da Silva (2007:292) that the South African government has supported and encouraged various programmes to remedy the challenges facing the jewellery industry in South Africa. Although at the time of her study governmental efforts had not yet bared fruit, as Kapo described, recent undertakings such as the Learnership Programme as well as the Graduate Development Programme have significantly enriched and elevated the work quality of jewellery graduates as well as attracted a considerable number of young people to the jewellery industry. Thus the South African jewellery industry has shown remarkable improvement in attracting young emerging jewellers (TLK/B:165-166). Reflecting on the viewpoints of the respondents, it would seem as though the transformation with regards to the racial profile in the South African jewellery industry has been satisfactory and all races are equally represented, while the current hurdles facing the jewellery industry burdens all races equally.

4.5 Contemporary Jewellery versus Commercial Jewellery in South Africa

Jewellery probably counts among the most versatile and diverse of man-made articles. Over the centuries jewellery has furthermore dramatically changed and evolved and diversified into a multitude of different meanings and functions. The debate surrounding what jewellery truly is, is therefore a much needed and relevant debate – especially in South Africa where there exists a considerable intent on expanding the industry. The debate surrounding if jewellery should be seen as a trade, a discipline, an art form or just a craft is important and should be explored as it can inform role-players in the industry on the way forward. The subject is also relevant when trying to establish where the different facets of the industry are situated and how these facets can be amalgamated or used to grow the industry as well as aid in the establishment of a South African jewellery style. The jewellery industry is therefore most notably but not limited to commercial jewellery, contemporary jewellery and tourist jewellery.

Slabbert explains that for him jewellery is an art form but admits that it can also be seen as both an art form and a discipline as there are many who consider it as just a discipline (JS/A:160). Kapo views it similarly and he explains that although it can be seen as an art, there are certain principles that you have to adhere to. Kapo points out that one cannot claim that jewellery is an art without acknowledging the importance which geometry plays in jewellery. Kapo explains that

in jewellery manufacturing there are specific measurements that one has to take into consideration when manufacturing specific things, and once one knows and mastered these specific principles or measurements, one can use it and incorporate it into one's own expressions (TLK/B:169). Loubser, on the other hand, rejects the notion that it is an art. She explains that for a long time she chose to see jewellery as an art, but acknowledges that throughout the years her opinion has matured and she now sees it as a craft. As previously stated, Loubser does, however, draw a definite divide between commercial and contemporary jewellery and further acknowledges the importance of both. Loubser accurately explains that contemporary jewellery is jewellery where the concept is extremely important. The concept that a jewellery piece should carry the same weight as the technique employed further explains that contemporary jewellery is and should be analytical, investigative or exploratory jewellery and more intellectual (LL/C:173-175).

According to Slabbert, there is definitely a place for contemporary jewellery in South Africa. He indicates that one of the reasons that contemporary jewellery is still in its developmental stages in South Africa may be that the general public associates jewellery with the type of commercial jewellery which they have been introduced to by commercial jewellers (JS/A:160). This opinion by Slabbert is underpinned by the observations of Short and Radebe (2006) which were referred to in the introduction of this study. In their study they state that the three principal events which dominate the jewellery retail sales calendar in South Africa are Saint Valentine's Day in February, Mother's Day in May and Christmas in December which in the four days prior to Christmas the stores record sales in excess of the monthly averages for the whole year (Short & Radebe, 2006:95). This occurrence, which is also mirrored by international jewellery consumers, has a huge influence on the types of jewellery and design style of jewellery. It is also important to note that the annual large-scale marketing of such jewellery largely intimidates and influences the buying patterns of consumers. In an article published in the *Journal of Marketing Management* in 2005, O'Reilly suggests that marketing is in itself a particular kind of cultural brand, namely an ideological myopia which operates in the service of capital (O'Reilly, 2005:573).

This phenomenon is relevant when looking to the craftier tourist jewellery in South Africa where the buying patterns and design styles have always been orchestrated by marketing the fabricated misconceptions of Western conceptions or Europeans on what African art should be in the pursuit of making money. These hypotheses are again substantiated by Farber (2010:142) and McCallum (2009:76) and further underpinned by Slabbert and Loubser who are in agreement that tourist jewellery has always been exceptionally clichéd and without substance. Slabbert suggests that in order to elevate the quality of tourist jewellery, it should somehow become more individually

inspired (JS/A:160). Loubser on the other hand explains that even though as South Africans we look at tourist jewellery in a belittling way, it may be as a result of being used to it as we have grown up with it and it has not changed over the years. She further points out that tourists visiting South Africa are extremely fond of this type of jewellery and therefore the tourist jewellery market is doing exceptionally well (LL/C:181).

Moving to commercial jewellery, Kapo explains that commercial jewellery is lighter in weight and that certain specifications that one would expect from high-end jewellery are compromised, although he further points out that this is necessary concessions in order to make jewellery more affordable to the wider public, thus giving everybody a chance to own jewellery (TLK/B:170). Loubser underlines the observations of Da Silva (2007:294) and states that commercial jewellery in South Africa is exactly similar to jewellery which is made in the rest of the world (LL/C:181). This observation is also in line with the juxtaposition of Short and Radebe (2006) who state the following: “With respect to the mass-produced product lines (chain as well as cast product), international jewellery trends drive the product ranges.” They furthermore state: “It is common for South African consumers to buy locally fabricated jewellery that is indistinguishable (in design) from product sold in Western markets elsewhere. In both design and character, the South African mass market is similar to that of the United Kingdom. This is particularly true of mass-produced chain bangles, bracelets and earrings” (Short & Radebe, 2006:82, 83).

Slabbert on the other hand explains that the look of commercial jewellery is recently and notably also influenced and directed by advances in technology such as computer-aided design. He explains that the introduction of CAD processes in the jewellery market has made certain types of jewellery much more prominent as it is easily designed and manufactured using technology. These types of processes have also made the production of jewellery much less expensive. Slabbert states that mass manufacturing and the intention of keeping costs low have resulted in the quality of commercial jewellery in some cases being below expectation (JS/A:161). According to an article by Hoffman (2015) in *PC Magazine*, three-dimensional printing – while only in its infancy – is exploding into numerous industries with a variety of uses. This observation brings Slabbert’s view into perspective. Hoffman (2015) namely states that although it is almost impossible to predict into which industries 3-D printing will further branch into, it is certainly going to revolutionise manufacturing and become a household phenomenon. He further explains that besides the jewellery industry, 3-D printing has already revolutionised the automotive and aviation industries. It is further used in architecture, archaeology, and palaeontology. Some companies are now even printing food, electronics, prosthetics, hearing aids, artificial teeth and bone and

some have even been able to replicate organs. Hoffman also explains that though most current printers print objects using only one material, future printers will be able to print with an array of materials (Hoffman, 2015:91-100). It can therefore be accepted that, as Slabbert has stated, that CAD processes have radically influenced the jewellery industry and anticipated that such technologies will in future become indispensable to the jewellery industry.

The assumptions forwarded by interviewees Loubser and Slabbert (2016), Short and Radebe (2006) as well as the description of the possibilities of 3-D printing by Hoffman (2015) are underpinned by Da Silva (2007:294) where she states that the replication of European jewellery trends by most jewellers in South Africa and the advancement in certain technologies have left the industry without any individuality. As such a South African identity in jewellery design has not been formally established.

Reflecting on the viewpoints of the respondents it would seem that the jewellery industry is currently manufacturing according to the needs of consumers and tourists. It would further seem that the concepts or designs of the manufactured jewellery are a direct result of and are subsequently directed by the clients and world trends. It can consequently be concluded that there is a pressing need and almost a necessity for South African jewellers to go back to the drawing board and find more personal and localised inspiration by means of retrospection in designing ranges. With intensive marketing of individualised conceptual ranges of commercial or tourist jewellery, the consumer's interests or desires would mature and which may redirect the design concepts of commercial jewellery in South Africa in general.

4.6 Contrived Interpretations of an African or South African Style

My interpretation of Calafato's work does not stand in total isolation as the same type of analogy is demonstrated by Farber of certain fashion brands in South Africa. According to Farber (2010) in an article which appeared in *Critical Arts: A South-North Journal of Cultural & Media Studies* in 2010, the hybridisation as well as the reinterpreting of African-themed fashion – in conjunction with the effective marketing of "African" fashion garments – have helped the fashion industry to start contributing to the sociocultural and economic life in South Africa.

The scope of this study does not necessitate a loaded discussion surrounding the issues which have dominated the discourses on the fashion industry in South Africa and abroad. The researcher nonetheless wishes to highlight one analogy observed between the interpretations of an African aesthetic style of the fashion industry in relation to the jewellery industry in South Africa.

This analogy is relevant to this study as to demonstrate that the challenges faced by the jewellery industry in relation to the interpretation of a South African identity are not in total isolation and are echoed by other industries and specifically in the fashion industry.

In her article Farber (2010) highlights Eurocentric fashion discourses which were inherited from colonialism and apartheid and further on elaborates on how the fashion industry has emancipated itself from Eurocentric traditions through re-evaluating identities and embracing hybridity in the form of fusing Eurocentric elements with African cultural elements such as patterns, politics, history and traditions. This successful attempt by the fashion industry is illustrated by Farber through presenting the work of three successful fashion labels that have each assimilated elements of an Afro-aesthetic in their own unique way. In each of the instances Farber reiterates that their work is not strictly ethnic and highlights those elements which are Eurocentric and those which are African. One of the labels specifically combines African-inspired garments which are manufactured by way of European traditional tailoring. These garments are closely fitted to the body, thus contrasting traditional African garments which are mostly loosely fitted in order to give the impression that the women wearing them are larger than they really are. Larger, more voluptuous women, according to African tradition, are viewed as strong and well looked after by their husbands, while petite, lean women are perceived to be malnourished and informally associated with diseases such as tuberculosis. The garments are presented as unified African identity fashion garments as the inspiration and references are combinations of South African, Central African and West African traditional and cultural euphemisms all amalgamated and presented as one culture or a unified traditional African identity. According to Farber, these combinations of various African cultures are loosely appropriated, combined and presented as generalised yet glamorous impressions of a conventional imagined Africanness. In styling these Eurocentric garments, the designers have used stereotypical patterns, colours, jewellery and even in the modelling of these garments used stereotypical face painting which is prevalent in certain African cultures in order to present an idealised African style or what an African idealised style should be. In quoting Farber (2010:142): “These particular ‘takes’ on tradition might be seen to hark back to a romanticised, idealised, generalised, colonial and even eroticised image of Africa, as a ‘mythical’ continent; a place of ‘primitive’ beauty” (Farber, 2010:142).

This conception of a stereotypical unified African style in fashion is echoed by attempts by the jewellery industry to also interpret a fabled and imagined unified African style which is aimed at the tourist market such as the work of Calafato. This type of marketing and design styles takes advantage of ill-informed tourists and especially Western tourists who have a preconceived image

of what being African means with their only conception of such a style as one which has been fabricated through colonial discourses on the exoticness of primitive African art. This point of departure is also grounded by the remarks of McCallum (2009) who states the following: “Since 1994 a plethora of commercial jewellery uses iconography that includes a generalized imitation of masks and Zulu shields. Such iconography denies the regional, ethnic, national, and gender considerations of jewellery design, and the fact that cultural differences exist from region to region in South Africa” (McCallum, 2009:76).

The views of Farber (2010) and McCallum (2009) are substantiated by the opinions of the respondents interviewed. According to Slabbert, at the moment the incorporation of traditional African cultural themes and stereotypical African designs aimed at the tourist industry has become clichéd and with exception to jewellery aimed at the tourist market, there are not a lot that differentiate South African jewellery from world trends. Slabbert suggests that there are numerous local materials such as tiger’s eye, indigenous woods and vegetable ivory that can be used in order to differentiate South African jewellery from trends followed elsewhere around the world (JS/A:155).

Kapo, on the other hand, explains that most jewellery concepts around the world revolve around plants or nature in the form of motives or shapes resembling organic substances. Kapo declares that in each country there is a variety of different plants and insects which is found exclusively in certain countries which should be used as inspiration in order to design original pieces of jewellery. Kapo also affirms that cultural affiliation will also determine or affect the way in which such pieces will be worn around the world. Kapo explains that he encourages his students to look at their own environments to be able to establish their own style while complementing other styles around the world (TLK/B:167).

The observations by Kapo and Slabbert have resonance in the views of Loubser as she points out that there is very little that differentiates the concepts of South African jewellery from the rest of the world. Loubser further acknowledges that there is some differentiation in the South African craft jewellery such as the beading industry and the weaving tradition that set us apart from the rest of the world. Unfortunately, these types of industries have never been recognised in South Africa as a viable option for using those techniques in mainstream jewellery. Loubser points out that it would be extremely beneficial if such traditional crafts can somehow be incorporated into mainstream jewellery design concepts, but, through various efforts by herself, she concedes that

incorporating such techniques in mainstream jewellery provides challenges and poses a number of difficulties (LL/C:176).

Considering the opinions of Farber (2010) as well as the respondents and also taking into account the viewpoints of the various artist jewellers discussed in Chapter 3 of this study, with particular reference to commercial jewellery, one would have to conclude that the design concepts of South African jewellers have to be rigorously transformed. Identifying a unifying South African golden thread which can be incorporated into contemporary jewellery and commercial jewellery would result in the successful promotion of South African jewellery to the rest of the world which will elevate the beneficiation of South Africa's raw materials and ultimately grow the jewellery industry. Such a thread is not necessarily limited to the aesthetic traits of design and could also include lecturers and trainers approach to teaching and learning of design and manufacturing as all the respondents agree that training is a contributing factor in the success of emerging jewellery designers. Loubser determinedly states that the largest hurdle in promoting South African jewellery is that South African jewellery is unoriginal and similar to jewellery overseas. She explains that it will be impossible for South African jewellery to tap into overseas markets if the jewellery is to a large degree similar whilst also more expensive. Loubser articulates that although it is not easy, South African jewellery should get its own individuality or language (LL/C:176). Such a language through jewellery is thoroughly investigated by Burger (2013) in what she calls dialogic jewellery in her dissertation. According to Burger (2013:104), the significance and meaning of African material culture are established through numerous dialogues that occur between the work, the producer, the different viewers and the context in which the work is presented.

4.7 Conclusion

This chapter has provided a background to the South African jewellery industry and highlighted the causes for South African jewellery having become unmarketable abroad due to the lack of a distinct South African style which can be branded as South African jewellery. Furthermore, this chapter considered the opinions regarding the state of South African jewellery from jewellery specialists. This chapter, additionally, glimpsed at jewellery manufactured by the immigrant jeweller Joe Calafato in order to demonstrate the interpretation of a historical Eurocentric interpretation of African identity. As a reflection, this chapter has informed and substantiated my conclusion that to fabricate jewellery by using historical African artefacts as inspiration will result in a spurious and non-authentic South African style as historical African artefacts were never intended to be used as in the Western sense of being art or appreciated for their aesthetic beauty.

These objects are today mass produced to take advantage of tourists' appetite for owning exotic African art, but these artefacts put forth as inspiration for the mass productions were historically used in rituals and everyday customs.

Such interpretations should be avoided as they contribute to foreigners' view of Africa as being primitive and underdeveloped. To conclude, a true South African style can only be nurtured through authentic expressions and concepts by individuals within their respective cultures. A true South African style should convey the diversity of all ethnic groups or nationalities, tribes and subcultures which it represents and cannot just convey or depict one superficial construct of the West of who and what South Africans are or should be. In retrospect to this chapter, the best remedial approach the jewellery industry in South Africa can take is to encourage contemporary, authentic, well-researched and auto-ethnographical narrative design concepts by jewellery designers executed through the addition of diverse and well executed techniques which in time could nurture a true, diverse South African style.

This view is echoed by Loubser as she lobbies for a unique language in South African jewellery design as well as McCallum (2009) as he concludes his study on a South African identity in jewellery: "What needs to be considered by policy makers and government is that designers need to be given the freedom to create jewellery that not only has a unique South African identity but that also incorporates a specificity of a certain ethnicity or interest group." McCallum furthermore states: "The content and themes of identity in jewellery design potentially lie within the narratives and experiences of the daily lives of South Africans more so than the myths constructed by the West" (McCallum, 2009:143-145). Establishing such a language through jewellery in South Africa is more complex than aiming to establish such a language in less diverse countries as the next section of this chapter will demonstrate by presenting the diversity of the term "South African". Chapter 5 will also delineate on South African culture in order to identify worthwhile traits which can enhance the depth of concepts in contemporary commercial South African jewellery.

CHAPTER 5

SOUTH AFRICAN CULTURE

5.1 Introduction

This chapter will deliberate on South African cultures which are considered part of the South African classification in order to highlight the diversity of this classification and which will reveal the difficulty of formulating a pure South African style of jewellery. The essence is to provide a suitable ethnographic background to the various groupings that form part of the classification “South African”. The ethnography provided in this chapter can be reflected on to aid the researcher in formulating an auto-ethnography in design concepts and themes which in turn can aid the establishment of a South African design style and provide a fresh discourse for jewellery designers. This chapter will therefore unpack a background to cultures included in the classification “South African” and reflect on the diversity which exists in South Africa in terms of culture, language and religion.

It is essential to note that for the purpose of this study, this chapter will not consider indigenous beaded jewellery as part of the goldsmith jewellery trade in relation to the objectives of this study, but rather a constituent contributing to tribal beaded jewellery as an integral and important part of black South African identity. Although this chapter will highlight the significance of beaded jewellery specifically in Zulu identity, the primary purpose of the study is to explore techniques used in precious metal jewellery. This chapter will subsequently focus on the goldsmith trait and South African culture and include the influence of beaded African jewellery as it has a unique significance in South African cultures.

Due to the complexity of South African cultures and the large number of cultures that form part of the South African classification, to avoid a prolonged discussion on South African history, this chapter will be limited to highlight only three diverse cultures which should be adequate in order to reveal the immense diversity in South African cultures. The first will be the Zulu followed by the Afrikaners and lastly the Indians. The rationale for choosing these specific three cultures is firstly that the Zulu, which is the largest of all ethnic groups in South Africa, is also the largest and most influential group of all the black cultures in South Africa. The second group will be the Afrikaners which make up the largest part of the white populace in South Africa and one of the cultures whose presence has left the most significant imprint on the history and politics of South Africa. The third and final ethnic group under discussion will be the Indians. Although the Indians are one

of the smaller minorities in South Africa, their presence in South Africa underlines the degree of diversity of South Africa. It must be noted that although this study will only delineate on the above-mentioned three groups, other groups that form part of the classification “South African” will be mentioned in passing in order to provide a scope of the diversity of this classification. Whilst there will not be a formal delineation of all groups, the background, customs, religion and culture of all the groups were also part of the investigation as set forth in the literature review.

5.2 South African Diversity

Besides referring to people from the geographical area of the southern part of Africa and the citizens of the Republic of South Africa, the term “South African” is not a homogenous term as all people classified as part of this nomenclature consists of a kaleidoscope of differences in terms of race, culture, religion and language. The most obvious difference is that of race. The two most prominent races in South Africa are black (African) and white (European) as classified and accepted in South Africa. Another group known as the Coloureds, or as they refer to themselves in Afrikaans as “Kleurlinge”, generally consists of a mixed race, brought about by early mixing of indigenous African Khoisan and European settlers, as well as Griquas, Malays, Namas and Basters²⁴. During the early days of the Cape Colony which was established from 1652 onwards, there was frequent intermixing between the European settlers and the indigenous Khoisan as well as between the settlers and the imported slaves. There was also intermixing between the imported slaves and the indigenous Khoisan and so forth. This intermixing eventually brought about a new group of people who was neither black nor white. This group of people culturally assimilated more with the white European culture than the Black indigenous population and took on European languages and religion (Freedberg, 1987:9). Furthermore, the term “South African” includes Indians who immigrated to South Africa from the Indian subcontinent to work on the sugar plantations in the British-controlled area of Natal.

The largest racial group by far is the black population, consisting of various groups, namely the Zulu, Xhosa, Sotho, Tswana, Tsepedi, Xisonga, siSwati, Venda, Ndebele and the San. With exception of the San, all the black African groups moved southwards from the equator into Southern Africa and all have similar cultural norms and religious beliefs. It is vital to note that in the current dispensation Indians and Coloureds are also classified as black contrary to the former

²⁴ The Basters are an ethnic group in central Namibia. They are decedents of early European settlers and the indigenous population of the Cape Colony. The Basters announced their intention to leave the Cape Colony in 1868 and moved north and settled in Rehoboth in central Namibia. An estimated 20 000 – 40 000 Basters still remain in Namibia.

apartheid regime where they were classified as Indians and Coloureds, while the white population is the only racial group which is currently classified differently from blacks in South Africa. The smallest black population is the San who were the first inhabitants of Southern Africa. The San had no permanent settlements as they moved around according to their needs. The San are descendants of the Khoekhoe people and Iron Age farmers who moved southwards into South Africa around 2000 years ago. Due to the impact of colonialism, slavery and in some cases extermination, the numbers of the San have diminished and so their culture. The San, or Bushmen, of today are widespread throughout the Northern Cape, Namibia, and Botswana (Magubane, 1998:156).

The white population are divided into several groups where the largest group is the Afrikaners followed by the English, and furthermore also includes small minorities consisting of Dutch, German, Greek, Portuguese, Italians and Jews. The first British settlers arrived in South Africa 150 years after the Dutch colonised the Cape of Good Hope in 1652 when Britain bought the Cape from the Dutch. A second wave of English settlers came to South Africa in the middle of the 1800s but they settled in Natal which was also colonised by the British. These immigrants, however, came from Northern English counties such as Yorkshire and Lancashire and were of a higher class and social standing than their predecessors and were allowed to visit England and renew their contracts. These settlers were subsequently able to retain their accents and until today there is still a distinctive difference between the accents of Natal and the Cape. The discovery of diamonds and gold accounted for huge numbers of additional English immigrants to come to South Africa. In the last quarter of the 1800s more than 400 000 immigrants, mainly from Britain, came to South Africa in search of fortune and a better life (Svartvik & Leech, 2006:112-115). Based on statistics in a study by Heere, Walker, Gibson, Thapa, Geldenhuys, and Coetzee (2014:33), the ethnic groups in South Africa are divided into the following order:

South African ethnic groups	
Ethnic group	% of pop
Zulu	23.82%
Xhosa	17.64%
Northern Sotho	9.39%
Tswana	8.2%
Sotho	7.93
Afrikaner	6.7%
English	4.5%
Tsonga	4.44%
Swazi	2.66%
Indian	2.22%
Ndebele	1.59%

Khoisan	-
Other	0.48

Before further delineating on the various cultures of South Africa, it is also crucial to realise and acknowledge that extreme divisions exist between factions in all groups of South Africans and especially between black and white. The foundation for these divisions is a natural outflow of South Africa's segregated past which was the discourse throughout its history as well as cultural and religious differences which are still prevalent today. These divisions drew to a peak during the Mfecane (a period of widespread chaos and warfare among indigenous ethnic communities in southern Africa during the period between 1815 and about 1840), the Great Trek, the Second Anglo-Boer War, apartheid as well as the first democratic elections and sadly these divisions are yet again resurfacing with renewed racial tension, service delivery protests, inequality, strikes and unemployment threatening to thrust South Africa into renewed unrest²⁵. This chapter will nonetheless henceforth focus on only three dominant cultures in order to avoid a prolonged discussion of South African history.

5.2.1 The Zulu

The Zulu are the single largest ethnic group in South Africa and originated in an area close to the White Umfolozi river in what is known today as KwaZulu-Natal around 1550. The Zulus consisted of a small chiefdom of about 1500 people until Shaka succeeded his father as the new Zulu chief. Shaka was determined to build a large Zulu empire, and started incorporating neighbouring tribes into his former small army. The small Zulu chiefdom soon grew to a large nation. Shaka was assassinated by his half-brothers Dingane and Mhlangana in 1828. The two brothers competed to succeed Shaka and Dingane eventually gained the upper hand and took control over the Zulu empire. Lacking the military genius of his predecessor, the Zulu empire began to recede. During this time the Voortrekkers also started to move into the area and started to negotiate territories where they could reside and establish republics. Dingane saw these new arrivals as a threat to his throne and ordered the murder of one such Voortrekker leader called Piet Retief and his entourage whilst negotiations were seemingly at an end with a positive outcome for the Voortrekkers. After their murders, Dingane also sent his army to kill the women and children and the men guarding the camps at Bloukrans. The Voortrekkers swore an oath to God to take

²⁵ Violent protests have during the first few years since the struggle against apartheid have ended subsided, but in recent years there have been a number of violent incidents such as the Marikana massacre as well as the #FeesMustFall protests at universities. Sporadic violent service delivery protests have become an almost daily occurrence in South Africa.

revenge on the Zulu and on 16 December 1838 the Zulus were humiliated as they attacked the Voortrekkers on the banks of the Nkome River. Over 3000 Zulus perished while the Voortrekkers only sustained minor injuries. The Nkome River was subsequently renamed Blood River. This event was a watershed moment in the history of South Africa and 16 December has ever since been celebrated by the Afrikaner as a Sabbath day (Magubane, 1998:34-36).

The British were determined to enlarge the British Empire in Africa and intended to take over from the Cape to Cairo. The Zulus presented a major threat to this ideal and war between the British and the Zulu was inevitable. The British suffered their biggest defeat in colonial history at Isandlwana. The war lasted from 21 January to 4 July 1879 when the military headquarters of Cetshwayo, the Zulu king at the time, were destroyed by the British. The British took control of Zululand and incorporated the area into Natal under British rule (Magubane, 1998:37).

Traditionally the Zulus live in extended homesteads known as umuzi where the headman lives with his wives and children, his younger brothers and their wives and children and occasionally married sons as well. Each umuzi is self-reliant and has its own fields to grow crops and for their cattle to graze. The layouts of the umuzi are the same throughout Zulu society and are dependent on the status of the wives where the head wife will occupy the chief dwelling directly opposite the main entrance. The head wife's son will succeed his father to become the next chief. The umuzi is circular in form and the chief umuzi is usually built on a slope facing east in order to overlook the rest of the umuzi (Magubane, 1998:38). In the Zulu nation, depending on age and sex, each individual has his or her place and function in the umuzi (Magubane, 1998:44-47).

Childbirth for the Zulu has always up to today been a concern for women alone. The older women who are past childbearing age act as midwives. When a baby is born, it is first washed with special medicine and then the mother (who is seen as being impure) and child are isolated until the umbilical cord falls off. The mother is then purified and sprinkled with "intelezi"²⁶ before she can resume her normal life. Before the husband is allowed to see the child for the first time, the hut is first cleaned, fresh cow dung is spread on the floor and a fire is lit in the centre.

The Zulu, similarly to the Xhosa, put their faith into their ancestors to guide and help them along during their lives. But the Zulu also believe in a supernatural being known as uNkulunkulu who sprang from reeds and created all animals and the mountains as well as the sun and the moon. They also believe that humans have a body and a soul which are known as umzimba and idlozi

²⁶ "Intelezi" is a type of herbal remedy used in Zulu cleansing ceremonies.

respectively. The heart (or feelings) is known as the *inhliziyo* and the brain, mind or understanding is *ingqondo*. They also believe humans to have a shadow personality or *isithunzi* which after death becomes an ancestral spirit.

The Zulu offer sacrifices to communicate or act as bridges to the ancestral spirits. Two types of sacrifices are used, namely the thanksgiving or *ukubonga*, and the scolding sacrifice or *ukuthetha*. The first is carried out when something good has taken place and the latter when someone in the *umuzi* has died unexpectedly (Magubane, 1998:62).

5.2.1.1 Zulu Beadwork and Identity

According to McCallum (2007:20-22), the discovery of small gold beads, gold wire and a potsherd discovered by Sydney Miller proves that beaded gold jewellery was part of the African culture that lived in South Africa since the 14th century until the arrival of Europeans and colonialists. It was this discovery that brought to light the excavations of Mapungupwe in the 1930s. But since the arrival of Europeans in South Africa, glass beads from Europe became renowned and valuable to South African cultures and they even traded gold to acquire these beads which they were not able to manufacture themselves. According to McCallum, glass beads were not as prominent in pre-colonial African jewellery, but when glass beads were introduced by Europeans, it changed the face of African jewellery. The use of glass beads became so prominent that it changed the appearance of black South African jewellery even up to today. Beadwork subsequently became and is of specific cultural importance to black South Africans (McCallum, 2007:21-22). These glass beads have become paramount to most of the African tribal culture in South Africa to such an extent that it has contributed to the metamorphosis of African pre-colonial cultures to new cultures that are far apart from the cultures that flourished before Europeans settled on the African continent. The gold beads and shards discovered by Sydney Miller and the treasures of Mapungupwe which were hidden by the apartheid government act as a beacon of achievement for Africans, but these items cannot be put forth as contributory towards the establishment and prominence of beading in South Africa today. If one considers South African tribal or cultural jewellery, it is almost exclusively saturated by coloured beads which most certainly bare roots in the trading of glass beads by early European settlers. According to McCallum, there are three cultural moments that need to be acknowledged that led to an understanding of jewellery design in South Africa today. These are the arrival of colonialists and missionaries in the 18th century, the discovery of gold and diamonds in the 19th century and the third is the consolidation of a stratified industry through the enforcement of apartheid (McCallum, 2007:22).

According to Boram-Hays (2005), beadwork is one of the most significant aspects of Zulu identity. Due to the volatile history of the Zulu nation the past 200 years, the expression of the identity of the Zulu as a group as well as on an individual basis through beadwork is important and complex. Throughout history the Zulu nation has constantly shifted from being unified to certain clans breaking away followed by unification again. This transpired in the Zulu nation consisting of a multitude of variations in identity. Boram-Hays (2005) notes that beadwork in particular has become a means for the Zulu nation to exhibit and reflect their diverse identities. Identity for the Zulu has been an important aspect of their culture since the reign of king Shaka (1817-1828). Shaka unified a number of clans to become the Zulu nation. As each clan was incorporated, the young men were required to join the military and some young women were required to do service to the military and the royal court. This custom instilled a sense of nationhood and unity amongst the Zulu people. This custom of unity fluctuated throughout history as the loyalty of clans towards any reigning king also fluctuated (Boram-Hays, 2005: 38-93).

During the earlier years of the kingdom, trading was strictly controlled by the king which gave him carte blanche on the supplies of various articles including glass beads which were imported by Europeans. Beadwork was during that time subsequently strictly used by the upper class to distinguish them from the other classes. Beads subsequently became a symbol of social status and political connections. In 1840 under King Mpande unity was restored to the Zulu nation followed by a period of unity, peace and prosperity. During this time, although the king still controlled the availability of beads, he loosened restrictions which prohibited European traders from entering Zululand and which resulted in beads being more freely available. It is, however, believed that the importance of beads for the Zulu identity came into being only after the Zulu defeat at the hands of the British in 1879 and following the annexation of the Zulu kingdom. As a result, many Zulu clans lost faith in the king and regional identities became increasingly important and variations in colour and style of beadwork started to act as signifiers to others of their political allegiance, social hierarchy, cultural and socio-economic status, as well as religious beliefs and identities of the wearers. Up to today, the colour, design motives, style and type of ornament is used by the Zulu to remind the king of the importance of the various clans and local identities and their functions within the Zulu society. It also demonstrates to the king the independent nature of each region and their will to break away and shutter the union if they felt the king as incompetent or unjust. Beadwork is still used by the Zulu to communicate a variety of customary traditions including courting, marriage, location, gender, age, social status, political affiliations and religious orientation (Boram-Hays, 2005:38-93).

5.2.1.2 Zulu Self-determination Ideals

According to an article by Blauer and Laure (1995), published in the magazine *World & I* in 1995, KwaZulu was a Zulu homeland created by the apartheid government in order to create an enclave for the Zulu nation which in time was meant to become an autonomous Zulu state. According to Piper (2002), in his article which appeared in the journal *Nations & Nationalism* in 2002, the apartheid government established the Zululand Territorial Authority in 1970 which was replaced by the KwaZulu Legislative Assembly in 1972. Both of these authoritative bodies were dominated by traditional leaders and led by Mangosothu Buthelezi (Piper, 2002:78). The apartheid government, however, demarcated the area intended as scattered patches of underdeveloped rural areas separated by the more developed white areas. These areas were in some cases hundreds of kilometres apart. In 1973 the apartheid government pressed the appointed leader, Chief Mangosuthu Buthelezi, to accept limited autonomy and independence for KwaZulu, in opposition with the Xhosas in Transkei and Ciskei and the Tswanas in Bophuthatswana, Buthelezi resisted vigorously and lived off the money provided by the apartheid government to govern and administrate KwaZulu (Blauer & Laure, 1995:184).

According to Piper (2001), Buthelezi aimed at using the homelands created under apartheid as a vehicle to gather populist support for revolt against the oppressive apartheid system, but his attempts proved to be futile due to the lack of interest by his counterparts in other homelands and the lack of flexibility by the apartheid government. Buthelezi decided to follow a new strategy to gather populist support and formed Inkatha whose membership was only open to Zulus in 1975 drawing on a similar proto-Zulu organisation of the 1920s. At this time – with most of the political parties rallying support against the oppressive apartheid system being banned by the government – there were limited organisations that offered militant resistance against apartheid. Inkatha therefore embraced the traditional colours of the ANC in order to gather support from disenfranchised ANC members at home and abroad. Inkatha was, however, different from other resistance movements in the sense that it accepted the apartheid status quo of the homelands being indirectly ruled by traditional leaders and directly ruled by the government. Inkatha therefore stood for autonomy of the Zulu but also wanted to fulfil a role as liberator of Africans. This situation later resulted in a power struggle between Inkatha and the ANC as Inkatha presented themselves as the true liberators of black South Africa in an attempt to rally support for their ideals of autonomy. What followed during the latter part of the 1980s were violent clashes between the ANC and Inkatha which escalated towards the run of the first democratic elections in 1994. At the

peak of the clashes it became so intense that a full-blown civil war seemed inevitable (Piper, 2001:79-80).

According to Blauer and Laure (1995), on the eve of the first democratic election in South Africa, on the back of Buthelezi, the Inkatha Freedom Party (IFP) rejected the idea of a multicultural and multiracial South Africa and announced that they will not participate in the elections. According to Piper (2001), the Zulu king Goodwill Zwelithini announced to 100 000 Zulus at a rally in Durban that he lay claim to the right to self-determination and repeated his demands to the then president of South Africa, F.W. de Klerk, on 17 January 1994 (Piper, 2001:84). This notion acted as a catalyst for the IFP of Buthelezi and they proclaimed their intentions for KwaZulu to convert into an independent state which would be governed separately from the rest of South Africa. Inkatha even briefly co-operated with right-wing Afrikaner organisations which rallied for an independent Afrikaner state. Inkatha unleashed a reign of terror over black communities who did not support this effort and subsequently thousands of violent deaths occurred. Buthelezi made another dramatic U-turn one week before the elections and announced that Inkatha will again participate in the elections in order to become legitimate participants in the government of the New South Africa (Blauer & Laure, 1995:184).

The ideal of the Zulu to live according to tradition and under the authority of the King and traditional leaders in the form of a separate state or kingdom, although subdued by the ANC's notion of a multicultural rainbow nation and that Zuluness does not necessarily mean Zulu Nationalism or self-governance, undoubtedly forms part of the psyche of the Zulu and forms part of the modern Zulu identity. These ideals will certainly form part of the Zulu's identity in the future and will for certain be an important segment of Zulu identity which will be drawn upon in formulating the future ideals of the Zulu.

5.2.2 Afrikaner Identity

In an article written before the capitulation of the Afrikaner and the National Party, Cillé (1977) asks the following question: "Who and what are the Afrikaners?" He hastily answers: "They find it a most absorbing question. Their learned men and artists show an intense preoccupation with 'identity'. And there exists among Afrikaners, as among white South Africans in general, a sincere conviction that, on this score as on others, they are being woefully misunderstood and misrepresented abroad. Their conception of what they are and what they are up to is completely different from their image in the world" (Cillie, 1977:94).

In contrast to the indigenous African cultures, the South Africans from European descent have an entirely different culture and belief system. The settlement of whites or Europeans in Southern Africa was undoubtedly the single most momentous occurrence in the narration of South African history and would alter the landscape and direction of the region indefinitely.

The Afrikaners are the descendants of the Dutch and French Huguenots, who settled in South Africa from 1652 when the Dutch East India Company founded a settlement at the Cape of Good Hope at the southern tip of Africa. The Afrikaners or Cape Dutch were first under Dutch rule and later on under British rule when the British settled in the Cape of Good Hope and subsequently annexed and incorporated it into the British Empire. The Afrikaners are a Calvinist nation of western European origin and developed a binding sense of nationhood before the English settled in the Cape. This spirit of unity was in part due to the French Huguenots who relocated and settled in the Cape to escape religious persecution and furthermore the harsh treatment of the Dutch East India Company of the “Burghers”²⁷ also cultivated a spirit of unity and independence. But the more significant and well-known history of the Afrikaners which formed the foundation of Afrikaner identity started with the Great Trek²⁸ of the 1830s when thousands of Afrikaners left the Cape of Good Hope and moved into the interior of Southern Africa to establish various independent Boer Republics. Of these various small Republics, the most significant was that of the Transvaal and the Orange Free State. Gold and diamonds were soon discovered within the borders of these two republics and Britain sought to exert its dominance over the whole of South Africa. Britain and the Afrikaners or Boer Republics were soon at war. Of what became another slab in the foundation of Afrikaner identity, the Second Anglo-Boer War which is today referred to by some as the South African War, lasted from 1899 to 1902 and the Afrikaners or Boers were crushed by the British Empire. During the War, the Afrikaners were the first nation to experience concentration camps where at least 27 000²⁹ Afrikaner women and children perished. After the War nearly a third of

²⁷ The word “burghers”, directly translated to “the citizens”, refers to the majority of Dutch permanent settlers at the Cape who would later on become the Afrikaners.

²⁸ Between the mid 1820s and mid-1830s after abolishing all the institutions of which the “Burghers” became accustomed to, the British eradicated all statutory discrimination and slavery placing the Afrikaners equal to the slaves and the indigenous population. The Afrikaners was marginalised due to lack of representation, while security on the frontier became a great source of concern for the Afrikaner. Subsequently the Great Trek was organised and the Afrikaner moved inland in large numbers. The Afrikaners were dispersed throughout what is known today as South Africa with the exception of the south-eastern coast.

²⁹ It must be noted that during this war, though not as widely publicised and ambitiously recorded, roughly the same amount of black people died fighting on both sides of the spectrum and a considerable number also perished in the concentration camps.

Afrikaners were destitute and which gave rise to the so called “poor white” problem (Giliomee, 2003:xiv-xv). The Anglo-Boer War and especially the concentration camps had a detrimental effect on the psyche of the Afrikaner which up to today influences Afrikaner identity and which likewise affects their approach and relations towards their English counterparts.

5.2.2.1 The Afrikaners and Apartheid

After the War, the British established the Union of South Africa in 1910 and amalgamated the Cape Colony, Natal, the Orange Free State and the Transvaal into one union. During the 1920s the Afrikaner Nationalists won power for a short period. The Afrikaans language became one of only four languages to be standardised in the 20th century and was developed to be used in all spheres of life. Segregation of the races in South Africa was already well established by the 1920s, but in 1948 formal segregation policies were put into place by the Nationalist government and referred to as the system of apartheid which in Afrikaans means “separateness” or “the state of being apart”. This led to four decades of Afrikaner domination in South Africa where the indigenous population subsequently suffered severe discrimination and also dehumanisation. The apartheid regime aimed at separating whites and blacks completely and created the “Bantustans” or homelands. These homelands were demarcated areas for different cultures depending on where they traditionally lived. The apartheid government intended to eventually make these areas entirely independent states from white South Africa (Giliomee, 2003:xiii-xvii).

According to Cillié (1977), in his article which appeared in the *Saturday Evening Post* in March 1977, the ideal Afrikaner vision during the 1950s and 1960s was that eventually the homelands with their economic potential should be extended, consolidated and developed into self-governing states. But these enclaves unfortunately stagnated to become rural slums and the able-bodied migrated to the fast-growing industries in white towns (Cillié, 1977:94). The homeland policy was probably the most critical policy of the apartheid government. The main intent for the establishment of self-sufficient homelands for blacks was to put an end to blacks streaming into white South Africa (Muller, 1969:486). The objective was that by creating black homelands, the steady stream of blacks into the white areas of South Africa would stop and even be reversed. To accomplish this, the apartheid government needed to invest heavily into these enclaves in order to create sufficient jobs in the homelands. Dr. H.F. Verwoerd, who became Prime Minister in 1958, conceded that the black homelands would eventually lead to a number of independent black states in South Africa. There was opposition to this policy as it would have divided South Africa into fragmented states, but Verwoerd defended the policy by saying that he preferred a small

white South Africa to a large black South Africa where whites would be absorbed into an integrated state dominated by blacks (Muller, 1969:486-489). After eight years as Prime Minister, Verwoerd was stabbed in the back with a dagger by Dimitrio Tsafendas who was a parliamentary messenger. The dagger penetrated Verwoerd's heart and he died almost instantly. Tsafendas was declared insane in the trial that followed and was detained at the State President's pleasure (Muller, 1969:511).

In 1962 the United Nations urged its members to break all diplomatic ties with South Africa and countless sanctions were placed upon South Africa in order to pressurise the country to abolish apartheid (McGill, 2009:1). The urgency of ending apartheid finally started to dawn on Afrikaners with continued sanctions and violent protests in South Africa and abroad. The 1976 Soweto Uprising³⁰ followed by waves of protests throughout the 1980s as organised by the African National Congress (ANC) and various other anti-apartheid organisations placed the apartheid government under tremendous pressure. According to Giliomee (2008), these riots resulted in the then state president P.W. Botha to declare a state of emergency on 20 July 1985 which was in effect in 254 magisterial districts. In response the then ANC leader Oliver Tambo called for the people to make South Africa ungovernable (Giliomee 2008:1). P.W. Botha, who suffered a series of strokes in 1988, was pushed out of his position in what can be described as a hostile takeover by his own cabinet and was succeeded by F.W. de Klerk in 1989. In a speech in parliament in February 1990, F.W. de Klerk announced the release of Nelson Mandela and which paved the way for democratic elections which were held on 27 April 1994 (Villette, 2016:1).

5.2.2.2 Post-apartheid Afrikaners

The Afrikaners firmly believe that God gave rise to the Afrikaner nation. In his book Moodie (1975) quotes Dr D.F. Malan as saying:

“Our history is the greatest masterpiece of the centuries. We hold this nationhood as our due for it was given to us by the Architect of the universe. His aim was the formation of a new nation among the nations of the world ... The last hundred years have witnessed a miracle behind which must lie a divine plan. Indeed, the history of

³⁰The 1976 Soweto Uprising is considered a watershed moment in the struggle against apartheid. On 16 June 1976 a peaceful protest by black youths against Afrikaans as language of instruction in schools soon turned into a tragically violent revolt as the South African police implemented live ammunition in order to subdue the protest. At least twenty-three people were killed in the incident which is today a national holiday known as Youth Day (Baines, 2006:18).

the Afrikaner reveals a will and a determination which makes one feel that Afrikanerdom is not the work of men but the creation of God” (Moodie, 1975:1).

The Afrikaner feelings of superiority is echoed by this statement by Malan, but this view which was taken to heart by most Afrikaners was shattered a few decades later by the emergence of the democratic, multicultural regime.

After the unbanning of the African National Congress and the formal abolishment of the apartheid system, the “one person, one vote” system (universal suffrage) was adopted/implemented in 1994 and subsequently the ANC received an overwhelming majority and Nelson Mandela became the first black and democratically elected president of South Africa. After the abolishment of apartheid, this era of Afrikaner history and racist labelling by Afrikaners have stuck to their identity and persona in post-apartheid South Africa to such an extent that they have become victims of similar racial discrimination in the New South Africa which they endorsed upon blacks during apartheid. Black Economic Empowerment (BEE) and affirmative action are both policies which have been implemented by the ANC government in order to redress the inequalities which resulted from apartheid. Unfortunately, these policies, though noble, are directed at all whites regardless if they benefitted from apartheid or not and with no indication when this internationally accepted discrimination will come to an end. Furthermore, Afrikaners on farms are constantly victims of persecution through farm attacks. These attacks, which have left thousands murdered since 1994, have taken such prominence in Afrikaner politics that there are numerous pro-Afrikaner political splinter groups and individuals rallying for an independent Afrikaner state. According to Jenni Evans (2015:1), one such political party, namely the Freedom Front Plus (FF Plus), has announced that they want to refer farm murders and “human genocide in South Africa” to the United Nations Secretary General for investigation through the United Nations forum on minorities. According to the FF Plus there have been around 11 514 murders on farms since 1990 (Evans, 2015:1). This persecution and marginalisation of Afrikaners coupled with the loss of political influence undoubtedly will weigh heavy on the Afrikaner psyche and identity in future.

In his book, Hermann Giliomee (2003) quoted Jan Smuts (a former South African State President) as saying: “What young nation can boast a more romantic history, of more far-reaching human interest? Colour, incident, tragedy and comedy, defeat and victory, joy and sorrow ... our early history is full of the most gripping human interest. If only we had the pen of Greeks, what a literary contribution should we make to our future treasures! There is gold not only in our earth, but still more in our history” (Giliomee, 2003:xiii). This notion by Smuts is a testament to the Afrikaners’

acknowledgement of their dramatised history as a shaper of their identity.

In attempting to provide an answer to the question posed by P.J. Cillé in 1977: “Who and what are the Afrikaners?” Reflecting on the events which have shaped the identity of the Afrikaner, their modest beginnings at the Cape of Good Hope, the Great Trek, the establishment of the Boer Republics, the Anglo-Boer War, the Unification of South Africa, the establishment of the Republic of South Africa, the rise and fall of apartheid, the rise of a democratic South Africa and post-apartheid South Africa, whether their intensions through all these events were pure or not, whether one can sympathise with their causes or not, one thing that remains at the core of the Afrikaners is that through all of these dramatic historical epochs the desire or ideal to be independent have run through their history in the form of a golden thread that has been the catalyst which have shaped all decisions they have taken throughout their history.

5.2.3 Indian

5.2.3.1 Indentured Indians

Babu Naidoo was the first Indian to arrive in Durban, Natal, in 1855. Initially public opinion was opposed to the importation of Indians. Nonetheless, the sugar cane industry in Natal preferred Indian workers as opposed to black workers who they alleged were not dependable and only wanted to work occasionally. In 1895 the Natal government agreed to import Indian workers from Mauritius and these workers started to arrive in 1860. Even though the initial workers were considered to be of poor quality and funds from public works were used to cover the costs for their importation, the project was still deemed a success as labour problems subsided.

The costs for the importation of the Indians, including women, initially fell to the government. Subsequently they were indentured towards the companies they worked for. These Indian workers were to work for three years while they were paid 10 shillings in the first, 11 in the second and then 12 shillings in the third year. They were, however, provided with free lodging and rations on a fixed scale. After the three years, the Indians could choose to work for another two years or buy their freedom for £2.10 for each year. After five years they were free to work and live as they pleased and after 10 years of residence in Natal they received a free passage back to India or Crown land. The arrival of the Indians was a concern for whites in Natal who had to contend with the “black problem” while suddenly also having to contend with a new so-called “Indian problem” (Muller, 1969: 219-220).

By the 1880s more Indians came to Natal on their own expense and established themselves

mainly as traders. These Indians as well as the Indians who already served their periods of indenture and had not returned to India were known as free Indians. The so-called problem that the Indians posed was as small land owners, traders and labourers; their presence prevented Natal from absorbing more white settlers as the Indians were becoming exceedingly competitive. Pressure on the government grew and in 1894 the Natal government repealed its annual contribution towards Indian immigration. Despite these measures the immigration of free Indians continued in large numbers. The antagonism from whites grew to such an extent that in 1897 the whites attempted to prevent some few hundred Indians from landing in Durban. Consequently, the Natal government put laws in place which would limit the immigration of free Indians. The Indians were expected to provide proof of or take a test of competency in a European language before they could immigrate to Natal and which also restricted Indian traders. The sugar magnets, however, continued to import Indian workers up to 1911, while free Indians continued to immigrate up to 1913. As a result of this steady stream of Indian immigration accompanied by a high birth rate, the Indians in Natal came to outnumber the 73 000 whites (Muller, 1969:229).

5.2.3.2 Restricted Indians

After the Anglo-Boer War (1899-1902) there was an influx of Indians into the Transvaal. Relations between Indians and whites were low as before the War the Republican Volksraad (literally "People's Council") denied Asians any civil and political rights. Even though these laws were leniently applied, it was also forbidden for Indians to own fixed property and they were confined to live in separate locations. After the War, Indian hopes were shattered as they hoped that these laws were to be repealed, but, on the contrary, the British administration under Lords Milner and Selborne implemented these laws even stricter than their Republican Volksraad forerunners. In 1906 the Indian rights defender M.K. Gandhi succeeded in temporarily halting a new ordinance of registration of Indians to be passed by the Transvaal Legislative Council. Soon thereafter the Transvaal Parliament introduced a fingerprint-based registration process to control the influx of Indians into the Transvaal. The Indians in the Transvaal were inspired by Gandhi's doctrine of Satya-graha (the force of non-violence) and started a campaign of passive resistance. Although Gandhi and Smuts reached a temporary agreement in 1908, many Indians were incarcerated.

In 1911 a bill which was aimed at curbing the influx of Indians into South Africa was published, but it was soon withdrawn as the Viceroy of India objected to it as the bill would have led to excessive discrimination against Indians and the Free State objected, as it did not discriminate enough against Indians. A new immigration bill was passed in 1913 which did not name Indians

specifically, but nevertheless put an end to the influx of Indians. Gandhi, who was the leader of the South African Indians, demanded the repeal of all South African laws which discriminated towards Indians. In a five-point demand Gandhi requested the repeal of the law which imposed a £3 tax on Indians, the repeal of the law which prohibited Indians from entering the Free State, the recognition of marriages according to Indian custom, reform of the land, the repeal of liquor and immigration laws which discriminated against Indians, and permission for Indians who had been born in the Cape to return there. Gandhi's passive resistance movement consisting of about 2000 Indians crossed the Transvaal border from Natal at Volksrust in 1913 in an attempt to be arrested. As he had hoped, they were arrested under the law prohibiting Indians from entering the Transvaal. A commission into the grievances of the Indians were established and Smuts agreed to meet Gandhi personally. The Indian Relief Act was passed in 1914, which abolished the £3 tax on Indians in Natal, Indian marriages were recognised and the entry of Indian wives were facilitated. Gandhi was satisfied with this new arrangement, but he informed Smuts that further questions related to the discrimination of Indians in South Africa would be addressed at a later opportunity. With the First World War looming, Gandhi soon afterwards left for India (Muller, 1969:398).

In 1943 the Trading and Occupation of Land Restriction Act (the so-called "Pegging Act") was passed in the Transvaal and Natal and in terms of which Indians were forbidden to purchase land in the Transvaal and Natal for three years. This Act had a detrimental effect on relations between India and South Africa and India threatened to take similar measures against South Africans in India. In order to put Indians at ease, Smuts arranged a meeting with the South African Indian congress and reached an agreement with them that a board of control consisting of three whites and two Indians would replace the Pegging Act. This new board of control would henceforth not prohibit the purchase of land by Indians in white areas, but only prohibit and control the penetration of Indians into white areas. The board of control collapsed and the Asiatic Land Tenure and Indian Representation Act was passed in 1946. The first part of this bill was similar to the Pegging Act while the latter part was an attempt to keep Indians content and give them representation in the Natal Provincial Council, the House of Assembly and the Senate. The Indians were, however, not amused by the Act which they called the "Ghetto Act" and launched a passive resistance campaign against it. Several hundreds of Indians put up tents in white areas and as they were arrested, they were simply replaced by more Indians. The Indian government subsequently broke all relations with South Africa and even recalled their representative in South Africa and they also placed the treatment of the Indians in South Africa onto the agenda of the

National Assembly of the United Nations Organization (Muller, 1969:459).

5.2.3.3 South African Indian English

According to Wiebesiek et al. (2011) in their study which appeared in the journal *World Englishes* in 2011, the Indians who came to South Africa during the late 19th and early 20th century spoke diverse languages. Of the 152 000 migrants who came from the north and south of India, the migrants from the south spoke Dravidian languages which were mainly Tamil, Telugu and Dakhini while the migrants from the north spoke Bhojpuri and Awadhi coupled with various Hindi dialects. Other languages included Gujarati, Marathi, and Konkani. This linguistic diversity resulted in the South African Indians having no formal lingua franca as none of these languages were numerically or socially dominant and none of these languages could be used to communicate with white plantation owners of the black labourers. English was therefore taught in Indian schools in order to overcome the communication challenges faced by the Indians. The schooling system in the late 19th and early 20th century for Indians was poor and the English teachers were mostly non-native English speakers resulting in the Indians speaking a poor form of English. The quality of Indian schooling from the 1950s onwards improved dramatically and the number of Indian children in schools also increased consistently. This resulted in English being spoken by more Indians at home and according to the 2001 census 93.8% of South African Indians speak English as their first language. Subsequently the South African Indian population is the second largest group of English mother tongue speakers in South Africa (Wiebesiek et al. 2011:253-255). This phenomenon has contributed to the cultivation of the Indian identity of today and will surely in future become a unifying trait of the South African Indian population.

5.3 Conclusion

South Africa's obsession with race throughout its history has created a fragmented and segregated population which – even with the eradication of formal segregation and the end of apartheid – considerably influences many facets of South African culture, values, religion, politics, sport and spheres of social interaction. If the term “South African” did not have a reference to the specific location of the southern tip of Africa, then it would have probably been the vaguest classification of a nation in the world and yet there is an abundance of cultural groups that form part of this classification.

This chapter has demonstrated the enormous diversities which exist in the South African classification as a unified nation, making it impractical to formulate a recipe to follow in order to

design South African jewellery, except when following the clichéd Big 5 or geometric patterns which is a Western construction aimed at the tourist market or in the case of Calafato's work, depicting primitive African domestic scenes taking advantage of the Western affection of the exotic and otherness of Africans. To conclude, in order to use South African culture as inspiration for jewellery designs, it would be more rational to look towards individual expression or create a type of auto-ethnographic design style. Such a style could inculcate the diversity which is evident in South African history, norms, and customs as well as politics which form part of each of the South African cultures as well as events, recollections and even celebrations that have a direct effect on the persona and attributes of individuals. Subsequently there is enormous possibility of utilising and exploring these attributes as themes in jewellery design in the quest to create original concepts which can be further developed into trendy commercial ranges.

A personal reflection on this chapter is that much of our achievement in South Africa and the positive traits of each group have been subdued through the politics of greed and a hunger for power and domination. South Africans are preoccupied with race, the mistakes of rival cultures as well as abhorrence of one another, which have resulted in a nation which has become blind to the richness of their own culture and heritage. As opposed to trying to submit to representations of political constructs such as a unified "Rainbow Nation" or Western constructs such as a unified African identity drawing on the exotic otherness of pre-colonial paradigms, we must rather acknowledge our differences and give each other the space to redefine ourselves in the new epoch of the South Africa we have inherited. Such a new approach towards contemporary and commercial jewellery design might be realised by providing space for reflecting upon our own cultures through creating auto-ethnographic jewellery. Such a style would more accurately represent who we are individually in the epoch of your own culture without intending to interpret the uncharted waters of other cultures the customs and traditions of which are unknown or unfamiliar to us. The next chapter of this study will reflect on experiments using the selected jewellery techniques and also delineate on the rationale for the inspiration used in designing an auto-ethnographic body of work which was informed by the outcomes of this study.

CHAPTER 6

BODY OF WORK

6.1 Introduction

The final chapter to this study demonstrates the possibilities of the selected techniques and aims to exhibit the connotations my work has to contemporary jewellery whilst it also – through the experiments and artefacts manufactured using the selected techniques – endeavours to explain how these techniques may possibly enhance and be incorporated into South African commercial jewellery. This chapter will furthermore focus on various experiments using the selected techniques and then delineate on how these experiments have influenced and informed the design and manufacture of the presented body of work. The experiments showcase the integration of Paul Feyerabend's concept of epistemological anarchy using the three selected techniques in order to formulate original procedures or incorporation of these techniques. As stated in Chapter 2, this concept argues that following prescribed methods may actually inhibit the discovery process which is supposed to lead to new knowledge. This chapter will also demonstrate how the researcher has formulated his own approach to auto-ethnographic jewellery by incorporating personal interpretations of his own culture, beliefs and influences in the epoch of his own culture. This chapter will also exhibit the researcher's reluctance to using stereotypical and contrived African interpretations which is persistently used by jewellers in an attempt to fabricate African tourist jewellery.

6.2 Design Inspirations

Considering the discussion presented on contemporary jewellery in Chapter 3 and the subject matter which jewellers can explore, Skinner (according to Metcalf [2014]) motivates jewellers to look outside the field of jewellery for inspiration and information to use as subject matter and materials. Hybridisation can be seen as amalgamating two or more totally different and non-related fields and combining them as prevalent in contemporary jewellery. Metcalf perceives this as a reasonable and logical outcome of the standard art school post-conceptual, post-studio scheme, which is highly fashionable now as most artists under 30 mashes up work from unrelated fields. In opposition to the views of Skinner, Metcalf (2014) believes that there are enough other subjects which can be explored and which have always been a part of the subject matter of jewellery. These include, for instance, celebration, decoration, comfy domesticity, beauty, self-expression or just simple human kindness. Though these are not all critical, they belong within

the jewellery realm of expression, as do critical jewellery (Metcalf, 2014:16-17). Keeping in mind the views of Skinner (2014) and Metcalf (2014) – including the work and views of the contemporary artists discussed in this study as well as the opinions of the interviewees Slabbert (2016), Kapo (2016) and Loubser (2016) – it is concluded that the subject matter which can be used for especially contemporary jewellery as well as South African jewellery should come from within each jeweller. Jewellers and especially contemporary jewellers' personal expressions should enjoy *carte blanche* when choosing subject matter and searching for inspiration. To all intents and purposes it is quite impossible to impose a specific or fixed recipe for a South African jewellery design style as South Africa has numerous divergent cultures and unlimited subcultures each with their own views and outlook on life and what is important to one is irrelevant to the next. The researcher therefore did rigorous introspection in order to identify subjects or passions which is important in the context of his own culture in an attempt to interpret an auto-ethnographic design style. The researcher therefore intended to identify what he believe and what made him who he is today. The researcher focussed on some of his most precious memories and aspirations as well as his views concerning the future and what is beautiful to him without trying to impose what makes him African or how he can appropriate something African in his work. Keeping in mind that the final pieces should also conform to commercial jewellery it

6.3 Technique Experiments

Before attempting to manufacture final wearable pieces using the selected techniques, the researcher performed a variety of experiments using the selected techniques in order to observe and explore the possibilities for personal expression these techniques may yield. Although there are countless textbook examples of how these techniques are appropriated into jewellery, it is imperative to observe how these techniques behave under different circumstances and also to determine how one can express one's own design aspirations by using these techniques. The researcher therefore used Paul Feyerabend's theory of epistemological anarchy to experiment with the techniques by applying the techniques in various different and *ad hoc* or unconventional ways. Feyerabend (1975:14-15) states the following:

“There are circumstances when it is advisable to introduce, elaborate, and defend *ad hoc* hypotheses, or hypotheses which contradict well-established and generally accepted experimental results, or hypotheses whose content is smaller than the content of the existing and empirically adequate alternative, or self-inconsistent hypotheses, and so on. There are even circumstances – and they occur rather

frequently – when argument loses its forward-looking aspect and becomes a hindrance to progress”.

This methodology or anti-methodology has aided the process tremendously as the researcher was not bound by specific recipes already formulated. In jewellery design, as with most other design disciplines, there is a specific designing formula which has to be followed in order to create original designs. Although the researcher did follow a design procedure, he was not bound to stick to the procedure as the pieces changed and developed as a direct result of the *ad hoc* experiments which was informed by Feyerabend’s epistemological anarchy theory. The practice-led process of documenting the experiments as stated in the methodology section of this study was done by making step-by-step inscriptions into a journal which consisted of four columns – as illustrated below – with an extra column which included photographs illustrating the processes.

Facts and actions	Immediate reactions	Preliminary reflections	Reflections

Referring to the Journal (Addendum E), the researcher first experimented with an arrangement of provision pieces. Some of the first pieces were to determine how niello behaves when melting it into burred or engraved lines or patterns. The lines were mostly thin, allowing the researcher to see how much detail can be achieved using the niello. As described by Untracht (1967:186-188) in making the niello, the researcher firstly melted one-part copper, and then added another equal amount of silver to be melted into the already melted copper. While these were still melted, two parts lead was added and stirred into the concoction vigorously with a graphite rod until all the lead had mixed with the silver and copper alloy. While this concoction was still melted, flowers of sulphur was added while stirring until the whole concoction turned visibly black. The melted concoction was then casted into an ingot and left to cool down. After the billet had cooled down, the niello billet was broken into smaller pieces with a hammer and then applied onto the jewellery piece.



Figure 13: Eric Holmes, Provision piece 1 (2016). Silver, niello

Figure 13 clearly shows deep pits and cavities with additional large holes contrasting the original engraved pattern. These pits developed due to intentional overheating until the metal was red hot in order to see how the niello could be aggravated. Although the intention of the original contrasting pattern is eclipsed by the imperfections of the holes, cavities and pits, the final outcome satisfies my personal aesthetic preferences as the holes provide a random, unusual, unexpected and original feast for the eye. The final result of using this technique of intentional aggravation of the niello is somewhat unexpected or unpredictable, therefore a jeweller using this type of process must do it with the intention of an unpredictable result. This technique will fare well in more artistic expressive creations such as the creations of Gigi Mariani. As discussed in Chapter 3, Mariani creates more expressive artistic contemporary jewellery pieces which are inspired by emotions as well as his paintings which he spontaneously transfers into contemporary jewellery. Mariani uses dark textured niello to conceal the preciousness of some of the metals he uses in his sculptural industrial-inspired jewellery. When working with niello, one is faced with a certain degree of uncontrollability of the final outcome. Mariani uses this uncontrollability to create informal jewellery which gives him artistic freedom (Anon 6:1). Depending on the concept, this technique can be utilised in commercial jewellery if a certain degree of control can be exerted over the process. But due to the difficulty of controlling the niello, it is much more suitable for contemporary conceptual jewellery; subsequently further experiments were conducted to refine the application of the niello in order to obtain a more predictable outcome which may be used in commercial jewellery.



Figure 14: Eric Holmes, Provision piece 3 (2016). Silver, niello

Figure 14 shows how the researcher played with roll printing and niello to see how the niello fares on roll printed plate. The possibilities of this technique are fascinating as there are countless natural and man-made fibres and patterns that can be roll printed onto precious metal plate. Some of the materials include feathers, leaves, lace, plastics and even laser cut patterns on thick paper. In this case a dried leaf was used which was printed by applying the leaf on top of an annealed fine silver plate and then sandwiching the plate and the leaf between two copper plates. The sandwiched plates are then roll pressed through the roller whereby the leaf prints a pattern onto the softer fine silver plate. The niello was then carefully applied to the plate by applying heat from the bottom of the plate. When the niello melted, it was carefully scraped over the plate with a solder pick in order to make sure the niello was evenly distributed. With low heat the niello roughly reacts like solder and flows towards the hottest region of the plate. Although some of the fine detail of the leaf was lost during buffing, the results are striking, resembling a silhouetted tree landscape as some of the fine detail remains. Depending on the type of pattern printed, this technique would certainly add uniqueness to any jewellery piece.



Figure 15: Eric Holmes, Provision pieces 6,9 &10 (2016). Silver, niello and enamel

Figure 15 shows additional experiments with niello. The researcher was interested to observe how the niello would react when combined with enamel. There were certainly some interesting observations. Granulations and wire was applied to the left plate to determine if the niello can be used as a solder to attach pieces like granules. Although one of the wires became detached, all the granules were sufficiently and permanently fixed to the plate. Further experiments were conducted using this technique in the plate on the right to see if cloisonné compartments can be simultaneously filled with niello and enamel. The result was not as expected as firstly the niello could not be contained in the cloisonné compartments and flowed underneath, spreading over the whole plate. The enamel, having a much higher melting point as the niello when melted, flowed on top of the niello and contracted in upon itself and therefore did not spread over the plate as it usually does in cloisonné enamelling.

The centre plate of Figure 15 shows further experiments with this effect of the enamel flowing on top of the niello. Although this time the researcher intended to see if a texture can be created with the niello. Subsequently rough pieces of copper filings were mixed with the niello and applied it on one side of the plate. On the bottom right corner, the researcher applied blue and white opaque enamel and on the left side clean niello. When heating the plate up to the point where the niello and enamel were melted, the niello flowed underneath the enamel whilst the enamel flowed on top of the niello and contracted upon itself as expected. The textured part of the niello came out as expected but also acted as a hindrance for the enamel and the enamel did not flow over to the textured side of the plate. Although this plate exhibits very abstract forms and textures, the overall effect is somewhat interesting and cautiously interpreted by the researcher as aesthetically pleasing. By using this effect in commercial jewellery, one may exclude the use of enamel as the outcome is too unpredictable, but using niello as a contrasting bonding material like a solder to

adhere patterns of granules or wires can create interesting contrast in jewellery. With repetition this effect can be refined and used in commercial jewellery.



Figure 16: Eric Holmes, Concave Pendant (2016). Silver, niello

Figure 16 shows further experiments with the effect of using niello as an adherence agent. The intention was to create a concave pendant with random protruding fine silver wires on top of a black contrasting and textured surface. The concave shape was filled with niello which was mixed with rough copper filings with the intention of creating a rough texture as in the central plate in Figure 15. The wires were inserted and the whole piece was slowly heated in the kiln. After the piece was extracted from the kiln, even though the wires were permanently stuck to the pendant's concave surface, due to the addition of copper filings, the niello did not flow evenly and created pits and holes. Subsequently the niello came out dull in contrast to its usual dark and shiny lustre. The inspiration for this piece is burned savannah grasslands. During wintertime, especially in the central regions of South Africa, the grass or savannah are regularly burned down by malicious individuals walking past the open grasslands. The look of the pendant with the silver wires protruding from the dark niello has direct connotations to the burned savannah grasses frequently seen in the central parts of South Africa. From an artistic point of view and as a personal reflection, it is also to illustrate not only the positive in our society, but to also showcase the negative in an attempt to silently protest certain lamentable occurrences.



Figure 17: Eric Holmes, Concave ring (2016). Silver, niello

Figure 17 shows a further attempt at using niello as an adhering agent (compare Figure 16), but with a different approach as the niello in Figure 16 was dull due to the inclusion of copper filings in an attempt to create a textured niello surface. With this ring, the researcher firstly coated the dome with the niello until it covered the domed plate smoothly. The whole ring was finished while the addition of the small silver squares was left until the end. The cubes were set in place and the niello was heated from the bottom and from the top until the researcher could observe a flash of black niello around the small cubes. At that moment the researcher concluded that the cubes have fused onto the niello surface. The final result was pleasing as the niello took a high polish and exhibited a textured, dark shining lustre as intended. The design of this ring is a subtle and abstract depiction of informal settlements in South Africa with again, as in Figure 16, the reference to the burning of savannah in and around South African cities especially during winter months which is represented by the textured niello. The small cubes represent the square shacks which millions of poverty-stricken South Africans are subjected to live in. These informal settlements have sprung up around all major cities and towns in South Africa due to the inequalities that resulted from the apartheid regime and furthermore due to the rapid industrialisation of South Africa with the advent of the discovery of gold on the Witwatersrand as millions of impoverished Africans from South Africa and also from other parts of Africa flocked to these goldfields.



Figure 18: Eric Holmes, Stereotype pendant (2016). Niello, silver

Figure 18 and Figure 19 portray two very different negative South African stereotypes. Figure 18 depicts an image from an old cartoon strip which was appropriated to showcase the negative stereotyping of mature white Afrikaans women. In the picture it shows a typical Afrikaans woman on the telephone complaining and telling the recipient that he or she is pathetic. This is an attempt to showcase the negative stereotype that Afrikaans people and particularly women are usually privileged and regularly complain about bad service. This stereotype has become a prominent and generalised stance of some individuals in South Africa since the dawn of the democratic South Africa by which the previously privileged whites or Afrikaners have become accustomed to good service during the years of apartheid.



Figure 19: Eric Holmes, Protest pictogram ring (2016). Niello, silver

Figure 19 showcases a ring which comments on the violent protests prevalent in South Africa. The researcher decided to firstly create a pictogram ring in order to see how the niello fares in very thinly engraved grooves onto a round object such as a ring. Since the 1980s, South Africa has been plagued by protests in order to bring about democratic change in the country. At a stage these protests became extremely violent and many people were “necklaced”.³¹ According to Bridger in an article which was published in the journal *Gender and History*, she points out how Winnie Mandela – a South African struggle icon and the former wife of Nelson Mandela – endorsed “necklacing” and also points out how she publically stated that: “We have no guns, we have only stones, boxes of matches and petrol ... Together, hand in hand, with our boxes of matches and our necklaces we shall liberate this country” (Bridger, 2015:453). Although the country was eventually liberated with the dismantlement of the apartheid regime, violent protests are regular and recurring phenomena in South Africa which has almost become part of South African culture. This ring, although somewhat comical in design, depicts the negative stereotype in a bid to draw attention to the negative connotations surrounding such violent protests and is also an attempt to voice my own personal critical stance towards this which has become the rule rather the exception in South African culture. Using such inspiration is relevant when considering the approach of Skinner (2014) to contemporary jewellery as he proposes that contemporary jewellery should be critical (Metcalf 2014:16-17). Although the attempt to appropriate critique in jewellery is not aimed at discrediting other races, but only to comically showcase the negative stereotypes, the researcher definitely thinks that there is a definite place and function for more critical jewellery in South Africa. South Africans of all races are a product of an unusually unstable political background and are therefore exceptionally critical of one another as well as of the past and present government. It can therefore be considered natural that this critique would spill over to the arts and also into jewellery representations.

³¹ “Necklacing” is a form of execution that was sometimes used against suspected informers in South African townships. A tyre is placed around the victim’s neck, filled with petrol and set alight (Bridger, 2015:435).

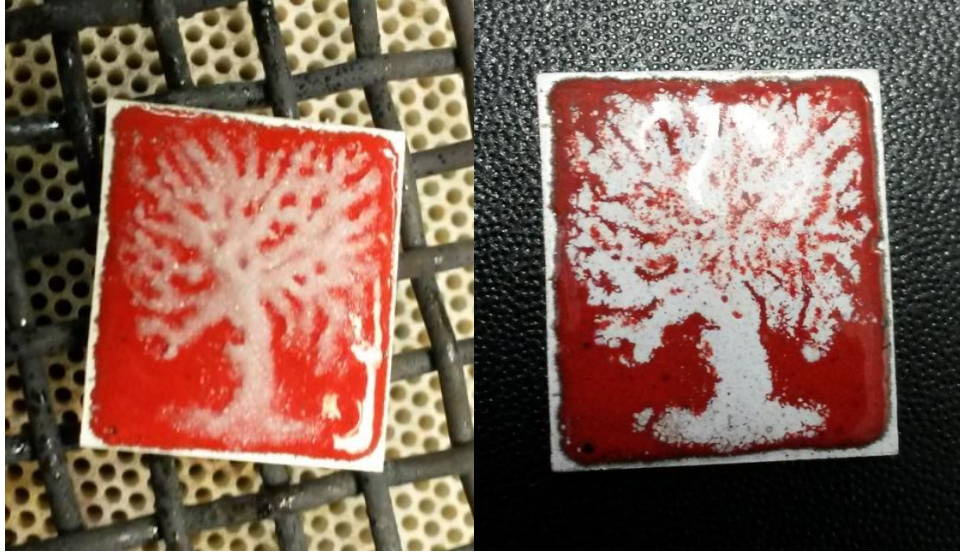


Figure 20: Eric Holmes, Provision piece 12 (2016). Enamel, silver

Considering the technique prescriptions of enamelling by Cruise (2001:54) and Brepohl (2001:372-374) discussed in Chapter 3, experiments with the various enamelling techniques were conducted. The provision pieces are not functional jewellery pieces, although, similar to the means by which Sumioka utilises elements of the Japanese culture in her jewellery, my aim was to focus on subject matter that is dear to me. Julius (2015) explains how Sumioka incorporated the concept of wabi-sabi (i.e. living in harmony with nature) into her jewellery whilst also incorporating the materials, linear forms, geometric shapes and structural spaces which are evident and a testament to Japanese culture (Julius, 2015:40-43). A white tree silhouetted by a red background, Figure 20 shows experiments by the researcher by creating an intricate image using contrasting opaque enamel. The intention was to create an image which was inspired by the eucalyptus tree. This inspiration was used as a testament of the Afrikaner involvement and struggle in Africa, although the eucalyptus tree has never been in any way representative of Afrikaner culture, the tree, which is not indigenous to South Africa, is a direct result of European expansion into Africa. The eucalyptus, originally from Australia, has adapted exceptionally well, especially in the interior of South Africa. The researcher has therefore decided to use it as a metaphor for showcasing the resilience and adaptation of Afrikaners in Southern Africa as described in Giliomee's (2003) book which places the struggles of this culture in retrospect. Creating the details of the tree was challenging as the plates are only roughly 20 x 20 mm, and after firing the plate a considerable amount of detail was lost as the white enamel spread out during the melting stage. Although the plate is striking with especially the contrasting colours

used, the intention was to have very fine detail. The researcher subsequently deliberated on a method that would result in more detail.

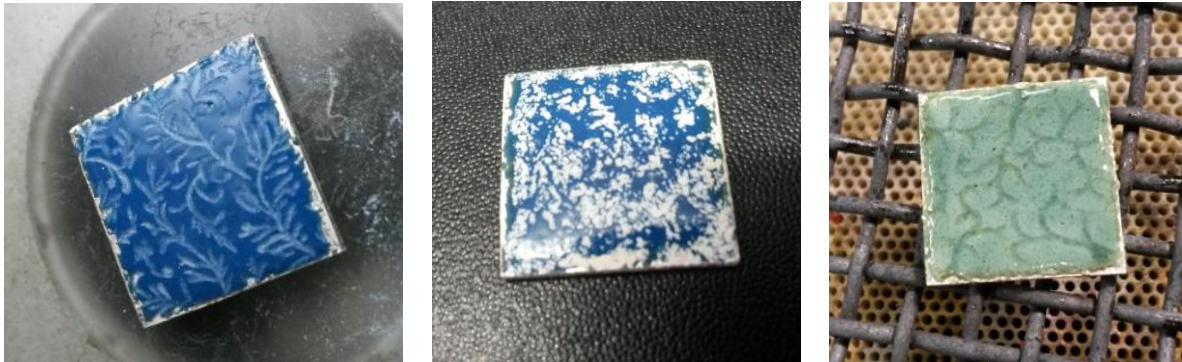


Figure 21: Eric Holmes, Provision piece 14 & 16 (2016). Enamel, silver

In Figure 21 one can see further engagement with the enamel in an attempt to get more detailed patterns. On the left plate (provision piece 14) a diamond burr was used to phrase out a detailed flowery pattern onto dark blue opaque enamel. The crevices were covered with white opaque enamel while expecting the crevices to halt the spreading out of the white enamel. The result after firing was disappointing as there was none of the fine detail left after firing. It was concluded that this was due to the fact that the opaque blue and opaque white enamel has the same melting point, thus the technique would work better if the top layer is done with transparent enamel which has a considerable lower melting point. In Figure 21 on the right one can see the darker patterns which were phrased out using a diamond burr and then subsequently covered with a layer of transparent green enamel. With this experiment it was noted that areas where the pattern was drilled deeper, the transparent enamel appeared darker as in *basse-taille* enamel explained by Brepohl. According to Brepohl (2001), this process is similar to *champlevé* enamel, but the depressions are firstly prepared to different depths and then filled with transparent enamel. As the different depths can be seen through the transparent enamel, it creates different patterns as the shades of the enamel are seen differently depending on the depth. It is similar to the way we see water on a lake where the water appears lighter or darker depending on the depth (Brepohl 2001:374).

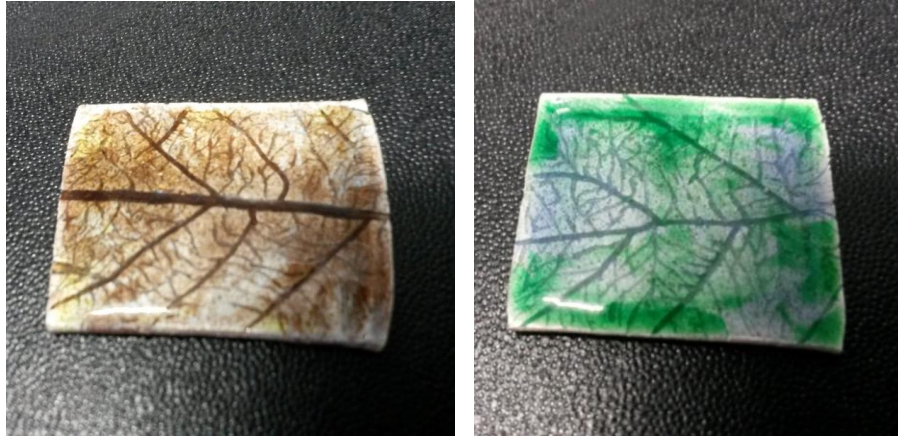


Figure 22: Eric Holmes, Provision piece 17 & 18 (2016). Enamel, silver

Figure 22 shows an attempt to further experiment with this process and decided to again do a roll printed leaf on fine silver. This would also provide the opportunity to compare the enamelled roll printed leaf to the roll printed leaf filled with niello. The plate for this experiment was prepared in exactly the same way as with the roll printed leaf filled with niello with the exception that the crevices were in some areas phrased deeper using a 0.1mm lens burr in order to display darker patterns. The result is striking as the deeper grooves darken the transparent enamel resulting in a well-contrasted, detailed and crisp design. The positive results of this technique motivated the researcher to attempt more intricate patterns or pictures like portraits. Subsequently the researcher decided to use portraits of South African icons as subject matter.



Figure 23: Eric Holmes, Provision piece 20 & 21 (2016). Enamel, silver

Figure 23 shows how the researcher used the countenance of two of South Africa's most well-known icons as subject matter for this experiment. The portraits of Nelson Mandela and Paul Kruger³² were phrased out onto 20 x 20mm plates under a microscope using a 0.1mm ball burr and a 0.1mm lens burr. Care was taken to drill the darker areas deeper and leave the lighter areas. Dark purple transparent enamel was used in both cases as the dark purple displays almost black when a thick layer is applied. In both instances one can see a lot of crisp detail, but, as the plates are so small, some of the detail could not be phrased as the 0.1mm burs are too large. Although the final outcome is striking and aesthetically pleasing, the researcher additionally decided to see how a photo etching would compare using this process.



Figure 24: Eric Holmes, Provision piece 25 (2016). Enamel, silver

Figure 24 shows how the researcher experimented with applying transparent enamel to a photo etching of Emily Hobhouse.³³ In order for the acid to dissolve or eat into the correct areas which have to be displayed darker, the image was firstly printed in the negative or inverted and then

³² Paul Kruger was born on 10 October 1825 and died in exile on July 14, 1904, in Switzerland. He was the State President of the Transvaal or the South African Republic during the Anglo-Boer War (or the South African War as it is also referred to). He is considered by many Afrikaners as the builder of the Afrikaner nation (Anon 9, 2012:1).

³³ Emily Hobhouse was an outspoken critic of the British policy with reference to the Anglo-Boer War. Whilst in America, after she heard about the high mortality rate of Boer women and children in the British concentration camps, she travelled to South Africa where she initiated humanitarian missions to help the Boer women and children. Hobhouse's investigations also lead to indignation in England followed by an improvement of the conditions in the camps. She was deported in 1901, but returned to South Africa in 1903 and subsequently spent five years shaping the education of women and children in the Orange Free State. Her remains are imbedded at the foot of the South African National Women's Monument in Bloemfontein, the capital of the now Free State Province of South Africa (Anon 8, 2012:1).

ironed onto the fine silver plate. The effect of the enamel on the photo etching plate is unexpected as when it is viewed from the front, one can almost see no image but as one turns the plate, one can see a great deal of detail. As a result, the photo etching almost has a type of ghostly, macabre feeling. Besides from doing portraits in enamel, any pattern can be etched onto plate and filled with enamel and depending on the depth of the etching, a range of darker and lighter colours can be achieved. Appropriating this technique into commercial jewellery is possible depending on the shape of the piece that needs to be enamelled.



Figure 25: Eric Holmes, Enamelled ring (2016). Enamel, silver



Figure 26: Eric Holmes, Enamelled ring (2016). Enamel, silver, cubic zirconia

Figure 25 shows the incorporation of enamel onto a hollow constructed ring. The shape of the ring was intentionally shaped to resemble an ellipse in order to test the endurance of enamel on

domed surfaces as well as around sharp edges. The design of this ring is intended to resemble the shape of the flowers of the strelitzia³⁴ plant as seen in Figure 25 on the left. The original intent was to insert bright red opaque enamel on the sides and white enamel on the shank with black enamel on the centre marquise-shaped dome, surrounded by pave set cubic zirconia. After numerous attempts, the researcher concluded that opaque enamel does not fare well on rounded curved shapes and especially not around a sharp edge. With various attempts the red enamel kept on chipping off the moment that the fine silver cools down to room temperature. As the piece reaches the melting temperature of the opaque enamel, the metal expands as a result of the heat. When the piece is then taken out of the furnace, the glass or enamel solidifies immediately whilst the metal is still hot and subsequently still expanded. As the metal cools down, it slowly contracts or shrinks to its original size again resulting in placing enormous stress onto the already solidified glass which does not contract as it cools. Finally, the instant when the stresses become too much for the glass, it cracks in order to relieve the stress and subsequently chips off. Some of the stress can be relieved by adding some cloisonné compartments which result in smaller areas and equate to less stress onto the glass. Cloisonné wires was added to relieve the stress; although the stress was less, the red opaque enamel still chipped off. Additionally, the researcher then added some granules in order to see if this might relieve the stress further, which it did but not enough to stop the red opaque enamel from chipping off upon cooling. As can be seen in Figure 26, after much deliberation it was decided to remove the red opaque enamel altogether and use transparent enamel with a much lower melting point. The rationale is that with an enamel with a lower melting point the metal would not expand as much as with the opaque enamel and thus the stresses onto the glass would be much less. This theory worked perfectly and there was no cracking or chipping of the transparent enamel. When using enamel on such challenging curved shapes, it can certainly be recommended to use cloisonné compartments of which beautiful patterns can be made and furthermore to use transparent enamels of which the melting points are lower. Subsequently the researcher decided to experiment further with another ring with cloisonné compartments to see if the compartments would ease the tension when using opaque enamel.

³⁴ The strelitzia is an indigenous South African plant and also features on the South African 50c coin.



Figure 27: Eric Holmes, Cloisonné Enamelled ring (2016). Enamel, silver



Figure 28: Eric Holmes, Cloisonné Enamelled ring (2016). Enamel, silver

Figure 27 shows the creation of another hollow constructed dome ring and added cloisonné compartments to determine if opaque enamel will fare better without chipping off. The design for the ring is an example of imposed individual personal inspiration or subject matter which was inspired from childhood memories. The researcher while growing up, regularly played in a loquat tree (*Eriobotrya japonica*). Every spring while the tree would blossom, there would be hundreds of black and yellow beetles who fed on the blossoms. The researcher used to play with the beetles

by tying their legs with yarn; then the beetles would fly in circles around my head resembling rotating helicopter blades. Reminiscing back to that time, the researcher recalls the smell of the blossoms and the sounds of the beetles' wings and thus decided to design a ring resembling the shape of the beetles with cloisonné resembling the random shapes of the patterns on the beetles and also add the black and butter yellow colours of the patterns which also functions as a reference to the loquat tree's fruit. In Figure 27 on the left one can see how the powdered enamel was smoothly applied as uneven enamel also creates different tensions onto the whole surface. The ring was subsequently fired at roughly 850°C where mixed results were observed. Although there was no cracking or chipping of the enamel, confirming my hypothesis that the cloisonné compartments would ease the tension of the enamel and, the yellow enamel discoloured as can be seen in Figure 27 on the right. As seen in Figure 28 it was decided to remove the inside of the yellow enamel leaving only a thin border of yellow running along the cloisonné wires. When filing the surface for the final firing which would have restored the final gloss onto the enamelled surface, it was decided to keep the textured enamelled surface. As a personal preference the researcher appreciated the textured enamel as it provides an original and unusual effect most people will probably frown upon. It seems that the opaque enamel fares well on smoothly domed surfaces, especially when inserted into cloisonné compartments which lowers the tension placed upon the enamel as the metal expands and contracts due to heating and cooling down. It could be presumed that transparent enamel would fare even better. It might prove beneficial to do some Limoges enamelling in the empty silver spaces or even some pave setting. It was therefore decided to manufacture a similar ring, but using transparent enamel and adding pave set stones.



Figure 29: Eric Holmes, Cloisonné Enamelled ring (2016). Enamel, silver

Figure 29 reveals the substitution of opaque enamel with transparent enamel which according to previous experiments poses much less challenges than the opaque enamel. Using the transparent enamel on this ring proved to be much more effective as there was no cracking or chipping of the enamel. Growing up in South Africa, the researcher was always aware that the South African National bird is the blue crane. This is one of the most majestic and beautiful cranes in the world and also very rare. Due to its rarity, the researcher never witnessed its beauty until when a hike in the eastern Free State. It was a rainy morning while walking down from a hill and as the valley below was reached, the rain started to clear while the sun shone through the clouds. The researcher was struck by amazement as there was a pair of blue cranes foraging between the long green savannah grasses. The researcher remembers the striking blue-grey colour of the birds which was illuminated by the sun and complemented by sparkling wet grass as the sun was reflecting through the water droplets. The researcher could appreciate the beauty of the blue crane and why it is South Africa's national bird. The researcher therefore tried to capture the essence of that memory in this ring by creating a domed ring which resembles the round shape of the blue crane's head with bright blue transparent enamel which fades towards the top to a more greyish blue transparent colour representing the colour of this majestic bird inside an array of cloisonné patterns. The cloisonné compartments were created by featuring a top plate which

is saturated with pave setting which complements the blue of the ring and represents the sparkling water droplets on the grass. Through this ring, the researcher attempted to show how a memory can be used as inspiration to create unique jewellery designs. This ring also shows how enamelling can be used to add meaning to a jewellery piece through colour. Considering that the subject matter in the design of the ring is not literally interpreted, the meaning of this ring would not be clear to someone who does not know the story. Albeit that the overall shape of the ring is a typical domed shape which is quite a familiar shape in jewellery creations, by drawing on one of our iconic birds, this ring can be put forward as an original South African piece.



Figure 30: Eric Holmes, Provision piece 24 (2016). Silver, copper

Figure 30 and Figure 31 displays experiments with mokume gane. This mokume laminate square was created by fusing silver and copper plates without using any solder. The silver and copper plates were firstly stacked together and fused in a furnace. Thereafter it was rolled thinner and additional fusing was conducted using the annealing torch. The stacked plates were heated with the annealing torch until the silver started to sweat on the sides. The plate was then quickly removed from the heat and placed onto a steel block and then hammered which assists the process of fusing the plates. The process of fusing the plates using the annealing torch proved to be especially functional and useful and the result was successful.



Figure 31: Eric Holmes, Mokume rings (2016). Silver, copper

In Figure 31 two domed mokume rings manufactured by the researcher with a channel in the middle can be seen. The researcher aimed to establish if niello and enamel could be incorporated into a mokume piece. Both combinations worked sufficiently although the niello in the ring on the left does have a few pits and cavities. Considering the pattern of the mokume, the cavities on the niello surface does not seem to distract from the ring, but this is a personal observation. In Figure 31 on the ring on the right the researcher firstly inserted red opaque enamel into the channel and as a result of the chipping of the red enamel as previously discussed, the red enamel was removed and replaced by a blue transparent enamel. These rings did not have a specific design as it was initially only created to test if mokume, niello and enamel could be used in collaboration. As the mokume patterns are extremely busy, the aim was to keep the designs simple.



Figure 32: Eric Holmes, Mokume Pendant (2016). Silver, copper cubic zirconia

Figure 32 shows experiments with the mokume plate in order to create a sharp domed shape. The design symbolises a dust storm with the promise of rain. The researcher grew up in a relatively dry area of South Africa where during spring, dust storms are frequently followed by rain which washes the dust away. The colours of the mokume symbolise the dust storms while the pave set stones symbolise the rain. The shape of this pendant was intentionally kept simple as the mokume and the pave set stones are already very busy. The pendant is elevated with a gallery in order to add some sophistication to the piece. The brightness of the pave set stones complements the darker mokume plate which is further enhanced by the crisp sharp corners of the piece. This pendant again shows how to incorporate something from one's immediate surroundings or where one grew up with into a jewellery piece. The subject matter of this pendant is especially allegorical, but considering the clichéd subject matter one sees in tourist jewellery – such as the very popular Big 5 motif – this type of inspiration is unique and original.



Figure 33: Eric Holmes, Enamel pendant (2016). Silver, enamel, cubic zirconia

Figure 33 shows experiments with cloisonné enamelling on a large domed surface by incorporating black opaque enamelling and transparent blue enamel. Using transparent and opaque enamel on one jewellery piece was intended to test how the different enamels perform under stress as there was no counter enamel added to the back of the piece. Usually transparent counter enamel is applied to the back of the piece which neutralises the stresses created by the enamel on the top of the piece. As previously explained, when the piece is removed from the furnace, the enamel solidifies within a few seconds while the metal is expanded as it is still hot. As the metal cools down, it contracts or shrinks while the solidified glass does not shrink. As the metal contracts, it places stress upon the glass and eventually the glass shatters, cracks or chips. These stresses can be reduced or balanced when counter enamel is added to the back of the piece, but can also detract from the beauty of the piece as it is somewhat messy and the metal is incapable of being polished or cleaned underneath the layer of transparent enamel. The design of this pendant is inspired by a more futuristic narrative reflection of my own culture. My own culture is a direct result of European expansion throughout the world and especially in Africa from the 15th century onwards. The researcher has a firm belief that once humanity has developed the technology, it will finally set out to establish space colonies and eventually colonise other planets and in other solar systems. This pendant is a representation of a rare O-type blue star or blue sun as seen from an imagined planet which might in future be colonised by humanity. The researcher believes that subject matter or inspiration for jewellery can be diversified instead of just simply

depicting nature literally for the sake of making something beautiful. This type of inspiration can act as an impetus for human ideals and advancement. The piece is aesthetically very pleasing with the pave setting complementing the enamel very well.



Figure 34: Eric Holmes, Plique-à-jour enamelling Fibula (2016). Silver, enamel

Figure 34 shows experiments with plique-à-jour enamelling. The design of the piece was intentionally created with the intension of pushing the three dimensionality of the piece to its limits in order to test how plique-à-jour enamelling would fare on a more three-dimensional surface instead of on an assemblage of the usual flat wire construction. The wires were rolled particularly thin and further rolled flat in the roller. The wires were then meticulously soldered on in order to create extreme three-dimensional compartments. The enamel was then inserted using a thin wire taking care that the enamel would not flood over the wires. It took quite a few applications of the enamel between firings to fill up all the compartments to their capacity. The final result is striking, resembling beautifully stained glass windows. Through this experiment it became evident that gravity severely affects the enamelling in such extreme three-dimensional shapes. The enamel reacts like honey when it is melted and the higher the temperature, the more fluid the enamel becomes resulting in the enamel flowing out of the compartments. An interesting test would be to experiment with such extreme three-dimensional enamelling in a zero gravity environment.

6.4 Conclusion

This chapter demonstrated how the integration of specialised techniques has aided to conceptualise a body of work through an auto-ethnographical design style by incorporating infrequent themes which is uncommon in jewellery design and especially commercial jewellery. Utilising the concept of epistemological anarchy in experimenting with selected techniques has significantly simplified the practice-led process by allowing the researcher the freedom to experiment without being inhibited by traditional prescribed methods and processes. To conclude, the incorporation of specialised techniques can significantly enhance the aesthetic appeal of commercial jewellery and allow the artist or jeweller room for self-expression. Incorporating specialised techniques such as niello, mokume gane and enamelling – but by no means having to limit oneself to these – will ultimately elevate the possibilities of conceptualisation of uniquely styled contemporary jewellery as well as commercial ranges of jewellery. Amalgamating specialised techniques with auto-ethnographic subject matter or inspiration has the potential to open up new discourses of thinking about contemporary and commercial jewellery design and manufacturing and broadens the possibilities of pushing boundaries. The selected techniques can be commercialised if designers design such ranges by taking into consideration the limitations of the techniques. Once such ranges are successfully presented to the public, it could in turn spark customers interest of such techniques. Renewed interest in new techniques can possibly blur the lines between commercial and contemporary jewellery. For a true South African design style to be formulated, jewellery designers must break free from the habit of reproduction and assimilation to world trends and find original methods for conceptualising contemporary commercial jewellery design. At the moment there exists a grey area between commercial jewellery and contemporary jewellery. Expanding the arsenal of specialised techniques for jewellery graduates can firstly elevate their capacity for self-expression in manufacturing contemporary jewellery whilst it also has the possibility of blurring the lines of division between contemporary and commercial jewellery.

CHAPTER 7

FINAL CONCLUSIONS, SUGGESTIONS AND RECOMMENDATIONS

7.1 Phase 1

Phase 1 of the research was intended at providing an overview of the jewellery industry as well as the jewellery designs currently manufactured in South Africa. This phase addressed the first co-objective of this study which is to provide an overview of jewellery currently designed in South Africa. Therefore, this first phase of this investigation has been engaged in providing a historical background of the South African jewellery industry, and moving on to highlight some of the current predicaments facing the South African jewellery industry. In order to demonstrate the vastness of jewellery techniques and how these techniques have developed, this phase of the study additionally highlighted the historical development of jewellery techniques and design styles up to contemporary jewellery and moved on to provide a discussion on contemporary jewellery and how specific selected techniques are incorporated into contemporary jewellery by selected jewellers who specialise in such techniques. This phase of the study further included a debate on the degenerating effects of a Western artificial or idealised African style which has resulted in South African jewellery being unmarketable as export products.

The first phase of this investigation also gathered opinions regarding the state of the South African jewellery industry as well as South African designing from jewellery specialists, lecturers or trainers through interviews. Lastly an ethnographic background on selected cultures that form part of the classification “South African” was also included in an attempt to underline the diversity of South Africans in order to illustrate that such a classification is too vast and diverse as foundation or basis for a design style.

As highlighted in the literature review one of the most prominent hindrances facing the jewellery industry of South Africa is its lack of competitiveness in the global jewellery industry. One of the causes for this is the lack of uniqueness of South African jewellery designs is its preoccupation with imitating Eurocentric trends in jewellery. This sentiment as highlighted in the literature review and Chapter 4 is shared by Da Silva (2007:294), McCallum (2007:43-44), Short & Radebe, (2006:82, 83). McCallum (2007) provides a rather constricted solution as he suggests a South African design style which incorporates the diverse culture of South Africa. Such a design style as verified in Chapter 5 would be almost impossible to fully formulate as the diverse nature of a unified South African nation would cause such a style to be vague and impractical. This conclusion

has urged the researcher to look at other opinions of establishing a more unique South African jewellery design style.

Referring back to Chapter 4, Loubser (2016) suggests that South African jewellery should grow towards acquiring its own language. (LL/C:176). Burger (2013) addresses a similar type of South African jewellery style in what she calls dialogic jewellery. According to Burger (2013:104), the significance and meaning of African material culture are established through numerous dialogues that occur between the work, the producer, the different viewers and the context in which the work is presented. The views of Burger are relevant and appropriate to this study. The means in which she interpreted African material culture in her own jewellery is however in opposition to the views of Farber (2010:142). According to Farber (2010) the combination or appropriation of African stereotypical patterns can yield an idealised African style which in the past was romanticized by Europeans. Burger creates contemporary Dialogic jewellery by appropriating traditional patterns, textures, colours and styles of African cultures in her jewellery which further prolongs the colonial Eurocentric adoration for the unknown or an eroticised exotic image of African cultures. This type of interpretation although noble at its core does not emancipate jewellery from its colonial past and does not signify modern South African cultures. Interpreting the views of Loubser (2016), Burger (2013) and Farber (2010) the researcher has derived at the conclusion that one path to establish a truly unique South African jewellery style could be to rather find inspiration within ourselves as individuals to what makes us South African in the context of our own culture. The researcher therefore suggests to encourage designers to do intense introspection when designing which will lead to more original auto-ethnographical concepts. Such a design style will certainly not establish a golden thread as mentioned in Chapter 4, but it would provide unlimited inspiration to draw from in instituting a more unique and diversified South African style or styles. The term South African coincides with phantasmagorias of diversity, thus why should a South African jewellery design style aim to signify anything else but diversity.

7.2 Phase 2

During the second phase of this study the researcher expended the knowledge gained from data collected from the stakeholders in the industry to identify underutilised techniques which can aid jewellery designers to elevate their designing capabilities and then manufacture a body of work utilising the selected techniques. The identification and experimentation of selected techniques directly addresses the main aim of this study, which is to experiment with underutilised techniques which can aid South African Jewellery designers to elevate their design concepts. Reflecting on

the knowledge gained from selected stakeholders in the industry, the historical development of techniques highlighted in Chapter 3, as well as the ethnography on South African Culture in Chapter 5, the researcher identified three techniques which can aid South African jewellery designers in designing more unique South African jewellery. These include enamelling, niello and mokume gane. The specific techniques were chosen as it became eminent in Chapter 3, that these techniques especially enamelling and niello were frequently used throughout the development of jewellery. Further reflecting on the viewpoints of stakeholders confirmed that these techniques are not a frequent feature in South African commercial jewellery and thus underutilised. The researcher furthermore took into consideration the complexity and diverse nature of the South African culture, and chose these three techniques as all three showcases huge potential in their ability to allow for freedom of expression.

The discussion of work by jewellers utilising niello directed the researcher to the conclusion that niello prominently showcases huge contrast which can be used in jewellery to exhibit complex engravings of cultural patterns which is abundant in various cultures in South Africa. Niello can also be used to symbolise or communicate abstract expressions due to the possibility of smooth and rough textures of the medium. Niello can also be left unpolished or polished to a high gloss which provides further possibilities of expression for the artist. One such accomplishment can be seen in the work of Mariani as discussed in Chapter 3.

Elaborating on the work of artists utilising enamel in their jewellery underlines the researcher's notion that enamelling does provide a designer a pallet of colours transparent and opaque which can be used to showcase richness of colours of the South African landscape as well as cultures. As Discussed in Chapter 3, the work of Sumioka and Seidenath displays the possibilities of enamel to exhibit complex personalised as well as cultural expressions or concepts in jewellery.

Mokume gane is a versatile technique which can also be utilised in expression of a variety of concepts. The work of Stuart as discussed in Chapter 3 is a testament on how mokume gane can be used symbolically. Stuart uses mokume in conjunction with other techniques in order to symbolise the feeling of growth. Stuart are also inspired by the unpredictability of the mokume patterns as he gets further satisfaction from attempting to predict the outcome.

The researcher manufactured a body of work which consisted of experimental jewellery artefacts and examples using the selected jewellery manufacturing techniques. These techniques were scrutinised through a practice-led process in order to determine if they have the potential to be used on a large scale to rejuvenate and invigorate the designing concepts of jewellery designers

in South Africa.

Lastly, this phase discussed experiments conducted with selected jewellery techniques and also the incorporation of these techniques into a body of work. The experimentations and body of work directly addresses the second co-objective of this study which is to manufacture a body of work consisting of experimental artefacts, jewellery and examples utilising an assortment of jewellery manufacturing techniques. The body of work consists of various experiments conducted with niello, mokume gane, and enamelling. The experiments were formulated to master the techniques and examine how they might possibly be utilised as mediums of artistic expression in contemporary and commercial jewellery.

Reflecting the body of work additionally addresses the third co-objective of this study, which is to scrutinise the techniques in order to determine if they have the potential to be used to rejuvenate and invigorate the design concepts of jewellery designers in South Africa. This was done throughout the manufacturing process by making inscriptions into a journal as well as in Chapter 6 of this study dedicated to the body of work.

Reflecting upon the body of work has emphasised that specialised techniques can adjoin individuality and personalised expression to any jewellery piece. The integration of specialised techniques such as mokume gane, enamelling and niello can also blur the lines of division between commercial jewellery and contemporary jewellery which in itself has the possibility of elevating commercial jewellery concepts resulting in more unique South African jewellery ranges. The incorporation of an auto-ethnographic design themes into such ranges will in turn additionally contribute to the elevation of the uniqueness of the ranges whilst also diversifying the conceptualisation of a unique South African design style which will reflect the diversity that the term "South African" represents. By means of the chapter dedicated to the body of work, the researcher demonstrated how an auto-ethnographical discourse was incorporated by a conceived personal view on designing whilst aiming to design according to a personal understanding of his own Africanism.

As a final reflection of Phase 1 and Phase 2 of this study the researcher has determined, the most practical way to elevate South African design concepts as well as to assist the pedagogy of a jewellery design and manufacturing learning curriculum is not to force a purely African style to develop by contriving inspiration from outside views of what and who we are, but rather to focus on elevating traditional techniques and quality of manufacturing by the introduction of rare techniques such as mokume, niello and enamelling. Designers, lecturers and trainers must be

vigilant and critical when presented with African designs by students or learners. This study has provided an argument in Chapter 4 on why South African jewellers should reject biased interpretations of African art as inspiration and search within themselves and reflect on their own customs, culture and norms as it is today in their quest for self-expression through jewellery. Traditional jewellers should make a mind shift concerning the traditional discourse of commercial jewellery interpretations in South Africa and encourage apprentices or graduates to find original and relevant inspirations for conceptualising unique designs and further encourage the graduates to develop commercial ranges from such original designs. Encouraging introspection will lead to fresh and innovative auto-ethnographical concepts while a diversified South African style within a diversity of cultures and according to diverse cultural viewpoints on the concept of what Africa is and means would naturally develop among designers. This study has accentuated the necessity and importance of individual expression in contrast to forcing a specific style upon individuals, which is the case with commercial and clichéd tourist jewellery. The design of new and original commercial ranges of jewellery should be motivated and supported by lecturers, trainers and commercial jewellery manufacturers. This could be done by initiating auto-ethnographic design approaches in jewellery design curricula at universities as well as through the mass production and marketing of such ranges. Marketing new and original ranges of jewellery will emancipate South African jewellery from Eurocentric reproductions whilst also educate and inform the public on new developments in jewellery and which in time could transform the current buying trends.

7.3 Phase 3

This third phase of this research are structured to provide a narrative reflection of the researcher's experience throughout the first two phases. This phase of the study addresses the remedial approach mentioned by the researcher in the significance of contribution in chapter 1. This phase is a reflection on conclusions derived throughout the study, the body of work, the views of the specialists and consists of a subjective thick description of recommendations for the jewellery industry to invigorate designing concepts for the benefit of the whole jewellery industry as indicated in the research design.

7.3.1 Suggestions of Further Study and Recommendations to the Jewellery Industry

As a reflection on this study – especially considering the focus placed on growing the jewellery industry over the past 22 years – it can be concluded that the challenges facing the jewellery industry is most definitely a cause for concern. If concerns highlighted in this study, such as the

contrived bias interpretation of African art as well as the replication of Eurocentric stylistic commercial jewellery as explained in Chapter 4 continue in South Africa without attempting affirmative reparation of the situation, it could in the long run permanently inhibit the African and South African jewellery industry from growing to its full potential and taking in its rightful place in the global jewellery industry. Addressing these issues can also assist in the emancipation of the South African jewellery industry from its colonial past as well as the inhibitions placed on the industry resulting from apartheid. The methodology used in this study especially referring to the practice-led process and the use of the epistemological anarchy theory of Feyerabend as well the findings of this study can assist in forming a new approach to the pedagogy of a jewellery design and manufacturing learning curriculum which supports the current debate regarding the “decolonisation of the curriculum” in South African universities.

This study has highlighted and recurrently underlined the need for more individualised expressions in especially commercial jewellery. The viewpoints conveyed by the respondents during the interviews conducted for this study have also illustrated the importance of exceptional trainers as well as the importance of attracting the right type of individuals who will conform to all which a career in jewellery expects of them. In Chapter 4, this study has also touched on the effect of legislation surrounding the regulation of precious metals on the jewellery industry. An investigation into legislation surrounding the regulation of precious metals and the possibility of deregulation of precious metals in South Africa will provide clarity on the effect this legislation has on the jewellery industry. This study has also briefly highlighted how buying trends of consumers has drastically influenced the styles of commercial jewellery. An in-depth investigation into buying trends of consumers and the prospect of expanding the scope of meaning and function of jewellery in South Africa could emancipate the jewellery industry from the current selling calendar which revolves mostly around Christmas and Saint Valentine’s Day.

For South African jewellery to be able to significantly benefit from the use of specialised techniques it needs to drive the specialisation thereof. Kapo has indicated that in Europe when high-end jewellery is manufactured with the inclusion of specialised techniques, the jewellery piece is sent to a specialist in that area of work. A similar arrangement in South Africa is not always possible as such techniques are increasingly rare forcing jewellers to execute such techniques themselves.

One of the most positive and significant facts which we tend to overlook is, as Kapo has pointed out, that South Africa is the leader in jewellery manufacturing on the African continent, as

infrastructure is advanced compared to the rest of Africa (TLK/B:166). Therefore, South Africa is in a position to take advantage of this current situation by identifying scarce skills or techniques in order to broaden training in such areas. Techniques such as engraving, enamelling, horology, lapidary, filigree and granulation, casting, and computer-aided design all have the potential to become lucrative industries in their own right apart from the traditional jewellery industry. In South Africa these specialised techniques have always been scarce yet never formally endorsed as industries in their own right through education and training. Scarce industries such as glass blowing, ceramics, porcelain, beading, weaving and textiles can also be employed to aid contemporary jewellery manufacturers in South Africa to enhance self-expression in creating hybridised unique and original jewellery.

As a measure of excellence a large populace of South African veteran jewellers accept only the trade test ³⁵as a measure of capability of graduates and often discredits students with university training. This is understandable as during formal university training there is an elevated focus on design and various specialised techniques resulting in an impairment of the ability of students to manufacture commercial ranges. This predicament was one of the motivations for the establishment of the Graduate Development Programme in order to enhance graduates' abilities to create commercial jewellery and ultimately pass the trade test. As a consequence – and with no disregard aimed at the goldsmith trade test as its significance in measuring a jeweller's ability is very pertinent – there is no benchmark which a jeweller can aspire towards when aiming to become a specialist in rare techniques.

The researcher would recommend further investigation into how scarce techniques can be institutionalised in conjunction or as separate specialisations within the Graduate Development Programme. Such measures could enable the expansion of the goldsmith trade test and diversify this measure by formulating diverse trade tests within the jewellery trade. A diversity of specialisation trade tests within the jewellery industry will ultimately encourage jewellers to start specialising in unique jewellery techniques. If implemented, such training could cultivate new lucrative industries in their own right within the jewellery industry resulting in a more mature South African jewellery industry with more specialised artisans at hand and which will ultimately aid the establishment of a unique South African jewellery design style.

³⁵ The trade test is a registered NQF level 4 qualification administered by the South African Qualifications Authority (SAQA) which prepares and assesses the learners' ability to produce a variety of basic jewellery as well as to plan, manufacture and repair complex jewellery in a limited time (Anon 12:1).

As a final reflection on this study it is imperative to note that jewellery manufacturing, whether it is viewed as art, a craft or a discipline, does – as Slabbert has also rightly pointed out – require highly talented, artistically inclined individuals. Due to South Africa's segregated past which resulted in an unequal education system, many individuals, especially from disadvantaged backgrounds, did not and still do not have exposure to suitable artistic or craft development during primary and secondary school education. This reality places immense strain on all art-related university programs as excessive time is spent to cultivate primary artistic skills before advanced technical training can generate fruitful results. Loubser has also noted that the mastering of jewellery skills is a prolonged and potentially lifelong process. Therefore, aiming to nurture and develop foundation artistic and designing skills at university level does impede institutions from fully developing elevated skills which are imperative in especially industries such as jewellery, industrial design, architecture and graphic design. An extended in-depth investigation into elevated art and design education and training in primary and secondary schools in South Africa should be conducted in order to support the objectives of higher education programmes in art. Such an investigation can be conducted with the support of both and collaboration between the Department of Arts and Culture and the Department of Trade and Industry in order to align the objectives of art education in schools with the objectives of universities, the craft industry, the jewellery industry and various other art disciplines such as the fashion industry and industrial design.

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ADDENDUM A

Interview transcription: Johan Slabbert

Title of interview: Commercial Jewellery Techniques: Innovating Selected Contemporary Manufacturing Techniques

Date of interview: 1 August 2016

Transcription:

1. Eric Holmes: "Please introduce yourself?"

Johan Slabbert: "Ok, I'm Johan Slabbert, I'm a lecturer in Jewellery design and manufacturing at Motheo FET College in Bloemfontein, and I've been lecturing here for almost 10 years."

2. Eric Holmes: "How and when did you get into the jewellery Industry?"

Johan Slabbert: "Um well I was 27, I am 48 now. Funny it was my second career, um I think my first career choice was more by force, and the environment I grew up. Um I was kind of forced into a more money making kind of direction, so only after when I started working that I actually decided that this is what I wanna do. So I actually quit my job, and studied jewellery design and manufacturing and at that time there wasn't actually many tertiary institutions that um had, I know the Technikons didn't have jewellery design. So the only place I could actually do it was at the College at that time. Ja, so that's ja, that was way back I think it was 1995. Ja."

Eric Holmes: "Ok."

3. Eric Holmes: "Can you provide a short diagnosis of the South African Jewellery industry?"

Johan Slabbert: "Uh, the way I see it, well I think, in some sort of way it's a very declining industry, currently the Jewellery industry in South Africa, I think it's getting smaller and smaller somehow, regarding the manufacturers in jewellery. If you look at the Expo's and stuff, the Expo's getting smaller and smaller. In that sense it's, it's, it's South Africa is a declining industry... the jewellery industry."

Eric Holmes: "And it has never actually been very..."

Johan Slabbert: "It hasn't been very large, ja, so, there still I mean there's a lot of students, but there's not a lot of people I think starting up their own businesses anymore, I think that's... in

that respect. You know there's, there are big businesses, and ja these are the guys that sort of, I feel rule the industry."

Eric Holmes: "Do you think it's got anything to do with like for instance all the old jewellers were coming from overseas and now they are going out of the industry, do you think that might have an effect."

Johan Slabbert: "Um ja I think it's, I think the economy plays a big role, and the fact that the, um you're talking about old jewellers, the people that's still sort of on top there are those people that were in the industry right from the beginning, I think a lot of the old jewellers are still the guys on top of the industry at this stage. So the people that came in early in the industry, ja they took the market at that stage. And ja I think it's difficult to I think compete in a certain sense with those companies. Um I think it's ja, there's a lot of small businesses I believe still, if you look at Bloemfontein guys that, that, um making a living, but also again the guys that are the strongest, are the guys that came in at a certain era or a certain time of the South African economy and survived. And where today, it's difficult, um not I think, maybe not just for the economy, because of the economy, but also, um there's a lot, a lot of extra legislation around jewellery, that came in from the government that also makes it more difficult actually, to which is weird, which to establish your own business. Though I know, I mean I think everybody feels like what drives the economy is small business, and if you can promote small businesses, then um you know then more people can be self-employed and have one or two businesses that or be able to employ one or two people in your business then you do the economy a great thing, but ugh I think the way the industry is conducted and regulated, it makes it difficult for small businesses actually, more and more difficult for small businesses in the jewellery industry to be established. It is unfortunate."

Eric Holmes: "It is difficult to start a jewellery business."

Johan Slabbert: "Legislation."

Johan Slabbert: "Legislation makes it more difficult."

4. Eric Holmes: "Considering the enormous transformation with the advent of a democratic South Africa, how did this change affect the Jewellery industry in South Africa?"

Johan Slabbert: "I would say very positive and negative according to legislation. But otherwise very positive, cause, I mean when I started teaching at the college, it was still a very white sort of industry, and even I mean my involvement with the MQA and things like that was a one, part

of my mission also was um I would have loved and still to see more black goldsmiths out there. Cause at the time when I started studying, there weren't many black goldsmiths, hardly ever, you would, something you wouldn't see. The output, um so definitely the game has changed. There's a lot of more black goldsmiths out there, and even the time at the college, people qualify, um I can think of one or two people that actually qualified and went successfully on in the industry that were black in recent years. Also with the support of the MQA and the GDP's So the its actually much, much better, cause the last 5, 6 years their support, that we never had in the trade earlier on, you never had that kind of support, and now today there's a lot of support for people to hone their skill in a sort of control environment, regulated environment, whereby they actually can grow their skills specifically within a period of time. And actually qualify as goldsmiths, so that is very positive to me. So the fact that, there's a lot of structures, good structures in place to actually make sure that there's also quality goldsmiths out there. I think that sort of helped the industry a lot with the new government so that's very positive to me. The only negative thing that I would say is the legislation, which is a general thing all over the country kind of thing. I don't think it is just the jewellery industry, but um ja its over legislated and that can kill a thing, industries. This point, I think it's a bit overly done the legislation, but generally I find, um ja that in education, and in the trade, as I say with the involvement of the MQA and the GDP's and the support they give young people, and it's not well yea, it's not just the black people, they generally give good support. So obviously the mission which I agree 100% to get more black goldsmiths out there. Its fine, It's great. But I don't, I can't, I still feel at this point, and I don't know, why maybe there's some reasons why there's not a lot of, that I can think of strong um you know of these people that actually went on into their own business yet. There's strong,"

Eric Holmes: "They don't go from worker to proper..."

Johan Slabbert: "To do business, proper business, so I think that are still lacking at this stage. I don't know if it's, maybe because as I previously mentioned, um businesses that's been established in previously economical times that were more suitable for business to grow that it's just difficult today to compete with those guys that are really strong in the industry, um the established jewellers of old. And um, um the big names you know in the South African jewellery industry to compete with them, you know with their output and their factories and things like that. Cause ja, this is multi-factual, cause I mean there's also the other thing we compete with is the um, technology, cause technology had a massive influence also on the industry, so that's probably another reason why manufacturers are declining, in a sense because um to make more profitable jewellery is a big thing, so you know to sell your jewellery cheaper, and obviously a bigger turnover, than where if you hand manufacture it's impossible to compete,

with mass produced product that's been you know CAD and CAM produced. So It's understandable, so you can still get good quality jewellery out of CAD and CAM, though it does influence the whole gang completely, so it's difficult for the hand manufacturers. And obviously the future of jewellery is towards that direction, so um, and its, but it's more expensive also the initial output of that. You know to start up a business a decent business in CAD and CAM, you have to, it doesn't help you set out a few million rand and you don't have the clientele, you not going to start mass producing for a small business, sometimes it's not worth it to, to... but it's getting cheaper I think with technology as it is it does get cheaper and more affordable for the general public so... So there still might be a future... there still I believe there still will be a future there for small businesses. And generally If I look at Bloemfontein, also, goldsmiths, there are two plus that has already gone that direction with CAD and CAM so to survive their business and make it successful. Cause I mean you can't afford labour, labour is expensive, and you know the output, you can't compete with a product that's produced in a mass production way.”

5. Eric Holmes: “What skills is the most important to master to become an accomplished jeweller/Goldsmith?”

Johan Slabbert: “You can never shy away from the basis of jewellery Manufacturing I believe, that has been tried and tested. With CAD and Cam, most people acknowledge that that's the future of jewellery, I believe so. But also with that said, you can't be a good computer aided designer without having the basic skills of jewellery manufacturing. I believe the essence of jewellery manufacturing will always be the most important. So even in any study direction, if you want to become a good jewellery designer computer wise, you still gonna have to have a very strong foundation of jewellery manufacturing, and understanding how a ring fits on the finger, the thickness of the claws, and the thickness of the shank and things like that. You have to understand those things and have done it before. At least to have a good idea so ja, and uh to me there is a other aspect than just the creativity aspect, computers tend to limit the creativity to a certain sense or individuality, where um, ja you have to ja still I think you know still fiscally draw your designs down, you know scribble, brainstorm on pen and paper before you fully go onto the computer, cause otherwise your designs become limited in a sense or very much the same, you can see you can almost see how the Cad fashion trends go in a certain direction. You know everybody has stopped doing that kind of line or whatever. I think the negative thing of that, it can quickly sort of limit the creativity of the design in a certain sense, because you tend to be limited to what you are able to do on CAD sometimes because CAD it's difficult to do certain line flows whereby if you would have carved it out of wax you would have had another feel with it completely. Your design would have even change along the way maybe or adapted because the way you are involved in the material. So there's different sides to it. I always feel there is still a market for handmade products, if one goes away. I still believe there's a market

for that, cause, you still see handmade products still got a lot of times a different feel than what CAD can produce at this stage.”

6. Eric Holmes: “What differentiates South African jewellery concepts with the worldwide jewellery industry?”

Johan Slabbert: “Ja, look, um, there, indigenous styles in South Africa you know like tigers eye can differentiate us from other countries, so here and there you have certain things that people explore but unfortunately, I was in Cape town recently and one thing I saw a lot was these curio shops, which is obviously geared for international tourists, and everything that’s stereotypical African designs you know to a South African person that can become very boring, and very sort of agh, another curio shop. And even you look at the jewellery; it becomes very sort of traditional African which becomes a bit cliché. Ja I think, I don’t know if there’s a lot that differentiates us a lot cause the influence is strong from the international side. So ja but you still find ja there a bit of south African regarding when it comes to stones and other raw materials um that people can explore you know even if it comes to like wood and things like that more organic material. Its south African designs it becomes more prevalent you know, obviously we don’t use ivory anymore, there’s alternatives that people starts using. Such as I....”
Ivory....”

Johan Slabbert: “Ivory... Obviously it’s not politically correct to use, but ja... The things that I’ve used before in Jewellery is instead of Ivory, is vegetable ivory, and I don’t see a lot of people using it. Ja, I’ve used it before in jewellery. It’s also indigenous, well as far as I know. With which South Africans work, you find it mostly in Botswana and the Kwa-Zulu Natal coast.”

7. Eric Holmes: “What do you think is the largest hurdle in promoting South African Jewellery abroad?”

Johan Slabbert: “Um the largest hurdle... I don’t know... I can’t really see that there should be any hurdles with um, um... I think the financial areas is a big hurdle, the finance, and then the legislation of this is a big hurdle. And then getting people to start promoting themselves you know and start um ja... Because ugh, ja cause it’s not just about Diamonds I think you know, if you, to me the competitions in jewellery is, I know it’s another question, but jewellery is very much promoted along the line of competitions. And again it’s mostly the big companies; you know South Africa is renowned for its gold and their platinum and things like that. So, so it, I think it’s, it gets quite promoted by the competitions in a certain sense, but the benefits is not

necessarily towards the, the, the general uh Goldsmiths. The, the man in the street or the small business. So I think, um ja it can become a hurdle in a certain sense that its, almost a little bit monopolised I think in a certain sense.”

Eric Holmes: “The reason why I’m asking this question is because South Africa has produced the most gold all over the world, ever, the same with platinum and Diamonds, but yet we have never really um.”

Johan Slabbert: “It’s a fact, yes, that ja, utilized raw, in a certain sense. Ja cause a lot of the jewellery gets imported back. South Africa gold gets, the gold gets exported and the jewellery comes in from overseas, so ja so that’s a big, it’s a huge thing. And um and one of the reasons I believe it is, there’s not a lot compared to overseas. What I’ve heard, what I see, South African manufacturers in a sense. You know so um. So as I say it’s only recent years, and I think the new government with the GDP’s and the MQA involvement that, that, it’s not long ja, um they started promoting or the training of, of I mean Jewellers. So I think that’s, that’s one of the reasons also it’s that I don’t think were that productive in a certain sense. We need to up our production, and ja, I think it’s something it comes with time. Obviously in South Africa, I think it’s, they only started working on it for the last 10 years. More or less, and so, ja I think that’s, ja the, I mean the fact again that ja, I mean it’s the industry is very strong, in certain sectors, you know companies but...”

8. Eric Holmes: “What measures can be put forth to make South African Jewellery more marketable worldwide?”

Johan Slabbert: “I think that, that is one of the reasons, and I think South Africa should let go a bit more of the legislation and um, you know help the small businesses more. Um, what I find about the current government legislation in a general sense is that ja they know that you know they talk the talk, but they don’t walk the talk necessarily. They know that small business is the future of South Africa’s economy, that’s the only thing that probably save South Africa’s economy, is promoting small business. But then they should really in a general sense make it easier for small businesses to be started up and to be, to be helped, and financial support and also to, to help them to create the past for them to promote their work overseas. So first of all ja, so I feel in that sense it’s a big thing for the government to help small businesses themselves.”

9. Eric Holmes: “What steps do you think can be put into place to enhance the quality of South African jewellery?”

Johan Slabbert: “Ja, ugh, there was definitely a period that the quality of South Africa’s jewellery went for a loop. You know there was this, a lot of these fly by night trainers, you know people will try to make money out of training. There was a lot of that happening at a stage. Um you know government were at some stage throwing a lot of money into training, and everyone was out to make money out of training. Not necessarily, to worry about quality, cause, it was a big thing ja. People set up schools and short courses and jewellery doesn’t work like that. And I know a lot of things like that happened in jewellery for a fact, but it never came off, cause, there was a lot of money thrown into education. And people were pocketing the money, instead of having any benefits for the people being trained, or sourcing the right... Well I think people don’t understand about jewellery unfortunately, is that its, its, it’s not a general skill that takes to everybody, um, and it’s something that I find teaching here at the College, people do not understand it, if they haven’t been involved in jewellery themselves. Don’t understand that most kids get introduced just into painting, ceramics even a bit of Graphic design, or um, drawing but they never get introduced to jewellery. So it’s only at a later stage in their live that they maybe get exposed to jewellery. And what I find at the College what helps us a lot is the fact that we have a bridging course. And that’s important cause in that bridging course we do all the different disciplines, and do a bit of jewellery. Just enough jewellery to sush out the talent, to see if this guy has got the hand eye coordination that fine “motorise vaardigheid”, and that general age difference is not necessarily 18, 19 year olds, sometimes 27, people that come and study later on in life, and I find a lot of times, people are pleasantly surprised. The few, that, mostly people has this commercial advertisements and things like that. People would want to come study Graphics, Graphic design mostly, then they would be introduced to jewellery. And say wow, I actually like this, or I got a flair for it. And it’s not everybody that has that flair, so it helps us to sush out with the bridging course to find those people that has never been introduced to jewellery or and actually has that, that makeup to become a goldsmith, or somebody that has the patience to sit at the bench. And yes, basically you have to have to have the patience i believe. If you want to be a CAD designer, you still have to physically work a lot on the jewellery and if you Design and manufacture it computer wise. But um ja, so that person that goes into the jewellery really has a special kind of makeup. And generally in the past with the government not having that understanding of that fact, and they just threw a lot of people in the courses. You know they just gathered people from the street that has a artistic inclination. It’s not necessarily just that, that’s the thing, it’s not just having an artistic inclination. If I can paint or draw, draw, doesn’t mean I will have that temperament to sit at the bench and make jewellery. It really takes a different kind of temperament and skill. And ja if, and I think that gave the jewellery industry a big knock at a stage, where, where people weren’t selected accordingly. And another thing that gave the jewellery industry a big knock, was that really the quality of jewellery in our industry did go down for a little bit long stage. Its only now starting to

pick up, and I also believe that it's the right trainers in jewellery. Cause I mean, I come out of a generation where we didn't have the opportunity to do the trade test and things like that. If you work in a company, they just worry about making money and things like that. So, but um, so it's, what I find it doesn't necessarily mean if you've done your trade test or you're a goldsmith, that you're a quality trainer or even a quality jeweller. People don't realise, understand or accept that. They just want to ride on their qualifications and things like that, but obviously the proof is in the pudding. What you make and what you do, so it's more, it became more at some point about the qualification than the quality of the qualification. And the other thing is what people don't realise if you're a good goldsmith, doesn't necessarily mean that you're a good trainer. So that's also a big role, a big fact. You know so you get good goldsmiths, that is not necessarily good trainers. So you have to find that, strike that balance somewhere. Find somebody that actually is a good trainer too, and that's difficult to find. Ja they threw a lot of people, I know in some education people that is highly qualified, a lot of credentials in the goldsmith industry, but couldn't train at all. You know they don't have the ability to convey the information or even to actually unleash the talent within inside the student. Which is, is, takes a complete different effort from whatever, ja so in a sense ja, something that helped me because I was uh, before I went into the jewellery industry actually I studied something different. And You know and I was in a different industry, completely different. Personnel management, and with that kind of background it helped me a lot with my previous job experience. Um when I went to study jewellery, and I spent 10 years in the industry before I actually started with training, but that far background of mine actually helped me a lot in my teaching the students. Understanding ja, how to motivate students and to get the best out of them in the industry. So I believe with that I had quite a bit of success in the industry."

Eric Holmes: "Thanks that was well done..."

10. Eric Holmes: "What is your signature style when designing jewellery?"

Johan Slabbert: "Um, ja, I like to experiment and I like to... With me design is important, and to what I see, even with the students, I teach them to unleash their own individual style, if you look at my students, they... each one has got really their own style of jewellery design. And when it comes to, so it's important to have your own style. With me i tend to dabble with things that move, a little bit of kinetic jewellery, and I always find there always should be with me a purpose in what you design. I don't just make a thing, it almost become a little bit of a concept with a jewellery piece and a purpose within the jewellery piece. You know it almost brings something across. The things that if I want to make a certain piece so it can even vary from. I normally call it wearable art. In a certain sense, it sounds cliché, but it should be wearable art. It should be something, it should. Ja I have put forward into it when you make something, there

should be a reason why you make that piece. I believe at the end of the day, don't just sit and start making things for the sake of making things, have a reason why you are making that piece. And design accordingly."

Eric Holmes: "So you would never for instance just go and sit at the bench and just start?"

Johan Slabbert: "No I don't feel it, look I make things for clients, and if a client wants a basic split shank ring I'll make it obviously. You make it and you make it the best to your ability a good product out there. But when it comes to designing a thing you know I will not definitely just sit down. Everything that I have made which is unique and different in a certain sense comes from inspiration at the end of the day. Something that dwells in your mind or being inspired by something in your environment or in your background or, you know something close to you. So ja, so at some point I started incorporating different materials. Like, you know if, not in a cliché way, but like leather bangles, or I started to incorporate, a friend of mine from Botswana, he did tours in Botswana. And he one day came with a big bag of vegetable ivory. And these things hanged around me for quite a while before I started you know cutting it up and doing things with it, and start making actually jewellery from it. Um ja even my piece that I made from desert rose also, somebody gave me a box of dessert roses, and I thought of how can I actually make something out of that, and I eventually designed a neckpiece and made, and ja, and other piece that a neighbour that was a mechanic and he was one day, I was standing by him, he was dismantling a Lexus Toyota, a Lexus engine, and inside the engine there was this magic part that sort of fit perfectly together, and moved nicely together and it was just a big huge piece and I asked him if I could have it. And I had it for a while, and I actually then eventually made a small pendant, a movable pendant, um handmade pendant that was inspired by that piece. Ja it was, I called it 6 and 7 cause, it had perfect 7 slots on the outside and perfect 6 slots on the inside that moved. Um into each other you know like gears and ja, I put a quartz stone and aquamarine I put in the middle. Ja so if you have to be inspired and moved by something to actually create something authentic. So what i tell my students at the end of the day, Ja there's, the competitions is always tough and you know there's a lot of people finishing, lot of people, at the end of the day which is going to make you unique is gonna be your design. No two people are the same, so try to develop your own style, your own uniqueness. And you know that will give you a market I believe at the end of the day. So it's something to be promoted overseas, whatever bit your own individual style I believe is more important than anything. At the end of the day, ja obviously you will be influenced by your culture, and your background and it's something authentic which you can fall back on to at the end of the day."

11. Eric Holmes: "Which traditional jewellery techniques do you constantly use in Jewellery Manufacturing?"

Johan Slabbert: "Ja like I try to somehow you know tend to use things out of nature that steers away from the stereotypical. If you can use it ja, you know like leather like vegetable ivory, like cuttle fish casting. The sea has always been a big inspiration for me; I grew up next to the ocean. So things I... maybe like the kinetic jewellery, the movement of the waves, the constant perpetual motion that exists in the coast with the moving of the waves and stuff also. So the sea inspiration is something that comes to the foreground in the kinetic jewellery. And then as I say if I can find, um used agh, found objects almost in a certain sense. You know, keep your eyes open for things, that inspires, especially if you walk along the coast or if you walk in the field. And now I stay on a farm outside Bloemfontein, so if I constantly look for old bones, and things like that, skeletons and things like that. It can be very inspirational jewellery."

12. Eric Holmes: "Do you see jewellery manufacturing as a discipline or art form? Please motivate your answer."

Johan Slabbert: "I personally see it as an art form, but it can be just a discipline in a sense also, so it's definitely both. But I see it as a definite art form. It's not, it's not as recognised I think as an art form in South Africa maybe as in overseas. And in certain sectors as an art in South Africa yes, but I feel it's definitely an art form."

13. Eric Holmes: "How would you describe contemporary jewellery?"

Johan Slabbert: "Um, I think, um there's definitely a place for contemporary jewellery in the sense as an art form. Um Gallery jewellery, conceptual jewellery, so um, so I think it's still in the development stages in South Africa in a sense, cause, I think the general public will still associate um jewellery with just jewellery in a commercial sense. And not as contemporary conceptual art pieces. So there's still a big gap there that needs to be developed in a sense."

14. Eric Holmes: "How would you describe South African tourist jewellery?"

Johan Slabbert: "Ja as I earlier on mentioned, it's very cliché, um with the little bushmen drawings and the masks and things. Um Its not necessarily that those are cliché like mask. I think it's just the way it has been applied is cliché. One can really sort of apply it more creatively, um I've seen some traditional stuff that is actually nice and inspirational in a certain sense, but not deriving from you know clichés icons or you know, in a certain sense. But um ja when it becomes more individually inspired I believe it can still be nice."

15. Eric Holmes: "How would you describe commercial jewellery?"

Johan Slabbert: "Well the general wedding bands and commercial jewellery, um. It went through a lot of changes. Especially with the introduction of technology. You can see how technology actually affected the choices that people make, and the taste of people. Obviously with what suddenly is available with the advent of micro settings, and claw settings and things like that, it became, more available, and affordable through technology. So cluster rings became more popular suddenly, because it's easier to CAD and CAM produce more complicated rings that it is very difficult to handmade with which you can't compete with. So, that sort of affected the, the, the taste of people and what's the demand of people, so that the outset became more in that sort of region. And but ja, general sense, one thing that bothers me about commercial jewellery is the quality of jewellery. There's definitely a lack of quality. Um you get a lot of stones that you have to reset, that falls out, and its more about making money. The more commercial jewellery supplying chains, I mean it's ridiculous how thin the shanks are that they make, and how easily the rings bend. It's not rings that will last you a lifetime definitely, or even a few years. So ja the quality is for fitted and uh, which is a big problem I believe. And also the, cause of um, casting the stones in the wax, it's not always being checked afterwards, and secured and made sure that the stones will not fall out. So a lot of commercial jewellery, you speak to allot of people that complain that their stones are falling out. You still get obviously quality produced with the smaller businesses, but the big commercial businesses the quality of rings produces is not very high. There's definitely a problem there. Obviously it's about saving money and producing more mass producing. And so they skimp on the amount of metal they use in a ring, so the wall of the ring would be .3 .4 mm thick but it would be build up with a wall on the sides like hollowed out, to make it look thicker. But there's no solid structure in the ring, with one bump it will bend and alter the setting of the stones, where it will be weak you know so. So ja there's definitely a problem there."

16. Eric Holmes: "What type of subject matter would you consider when designing a South African jewellery range?"

Johan Slabbert: "Aah, ja, ogh it's a difficult one. Out of my own background of South Africa, the nature is very strong. The coastal areas is very beautiful, so and um it's not just the coastal areas where you can be inspired along the coast, and things that's happening along the beaches but also inland, they also have other things that can inspire you. Ja you can be inspired by the sky and the mountains and things like that, and the free State where, one thing that struck me when I came to the Free state was, it's a big sky country, the clouds, and the openness, and the earthiness almost. And when you are down at the coast, you got the sea, and the shells and the rocks and ja, different kind of, the forests also and certain parts of

Knysna, and those areas, the woods. So there's, I think if you concentrate on those things that draw people to South Africa, the nature, um I would say not necessarily just, culture, cause um ja, you can find. Culture can be very overly commercialised so out of my personal point of view, um I would look at something that's more unites that divides in a certain sense where culture can divide rather than unite, and I don't.... Culture is important, but I would rather focus on unifying things that the people will, ja and that sort of things.”

ADDENDUM B

Interview transcription: Thomas Labi Kapo

Title of interview: Commercial Jewellery Techniques: Innovating Selected Contemporary Manufacturing Techniques

Date of interview: 1 August 2016

Transcription:

1. Eric Holmes: "Please introduce yourself?"

Labi Kapo: "My name is, well everyone knows me as Labi Kapo, my full name is Thomas Labi Kapo, um yea, should I stop there?"

Eric Holmes: "Um yea maybe just give a little bit background on where you come from."

Labi Kapo: "Ok yea, I was born in Nigeria at um as far back as 1958, um my parents left Nigeria when I was about 9 - 10 months old, to study in Europe, they then travelled in Geneva, where they studied and I went to I think it was nursery school, what they call it there. And then from finishing their studies they moved to London, and that's where I grew up. The whole of my life in London."

Eric Holmes: "That's wonderful..."

2. Eric Holmes: "How and when did you get into the jewellery Industry?"

Labi Kapo: "I got in the Jewellery industry, but first of all were gonna go back a few years now because in those days when I was schooled in London we left, in those days you left school at 16 17, you then seek for employment profession. I originally started off in engineering, which was going quite well, and then the company was actually became redundant and I lost employment. Fortunately for me I had a friend of mine which I have known over the years we grew up, Bernard Belonje, he was working in the jewellery shop, and um I just knew him for that and one day I went, I was looking at a particular watch in his shop and I asked him can I buy this watch, and I couldn't afford it, and I asked him could he talk to his boss, his employer if I could pay off this watch in turns and he said yea sure, and he did obviously talk to him, and made arrangements so that could pay off in turns. Obviously he was my security saying he knows me very well over the years. And um I went to make my last payment on this particular watch and he wasn't there, so um basically he had moved on to another employment and so the director of the company, Mr and Mrs Perer Mrs Perer said look can I help them for a couple

of weeks while they find someone else to replace Bernie or Bernard and I said oh well I thought about it and I thought well I was in engineering and I'll just fit it in so I said alright I'll do it for a few weeks it like getting back into engineering. And that's how I got in and then that was I'm gonna say now that was 40 years ago."

Eric Holmes: "So you never actually while you grew up thought I want to be a jeweller?"

Labi Kapo: "No, no."

Eric Holmes: "It was just coincidence?"

Labi Kapo: "Yea, it was coincidence, but fortunately for me, the school I went to was it was in those days in London it was called Eddinton secondary Modern, and it had the latest workshops, uhm engineering it was like literally a mini engineering factory when you went in there, but it had quite a few skills. We had uh a project or subjects you know, you now in my school in those days called workshops, where we entered the workshop for a couple of periods and we would make things from napkins to little square beakers, um we did some resin work, and we did a number of things and then I was quite skilled with my hand skills and I had won a few awards while I was at school for some of my... the crafts I had designed and made."

Eric Holmes: "So you already had some, some metalworking background or exposure."

Labi Kapo: "Yea I had that to. Yea sure, Um I remember we had to make a napkin ring and we had to use a planishing hammer and you were using the planishing hammer right there in the jewellery industry and it was all about making this the actual planish or remarks along the the outskirts of the napkin ring to give it a decoration of the of making it look completely plain."

Eric Holmes: "Ja ok"

Labi Kapo: "In those days, and these were in copper I can tell you."

3. Eric Holmes: "Can you provide a short diagnosis of the South African Jewellery industry?"

Labi Kapo: "Well it's a, short diagnoses, very difficult because here, I entered the jewellery industry, um I think I said it in the past by chance and by accident, by luck, all rolled into one and um but learning and becoming in the jewellery industry, I did notice that it was really a trade that was handed down through families from father to son, or mother to daughter, and it been well I better speak for London Its pretty much how it is, and I understand it's like that in

other parts of the world the jewellery industry is kept within families and it's been, but I entered by chance through Mr and Mr Perer, who were originally were from Africa, actually, they were from Tanzania, and they had left Tanzania to open a business in London and that's how I met up with them back in 1976 and um, the actual entering of the industry. Sorry can you repeat the question?"

Eric Holmes: "Um a short diagnoses of South African Jewellery industry..."

Labi Kapo: "Yea, so coming back to the shortness, it's very difficult, because the trade was entered but what I can say is that I'm aware that the government in this country made arrangement after the past dispensation to bring young people into professions which had never been sort of, been in had the idea of, so what they, I believe what the government in this country did was open up the whole industry, and all aspects of the um industries, industries I've got to say to the young people who have never had that experience in the past. So they had these learner ship programs which um brought a whole lot of new young people into the industry, which never even thought of the idea in the first place like myself. So I think it's a good thing in South Africa what they doing because it gives, it exposes everybody. To..."

Eric Holmes: "You're talking about the current dispensation."

Labi Kapo: "Yea the current dispensation yes, yes, I believe it's a really good thing for young people, so young people if they haven't heard of the jewellery industry, and they do hear about it, they can make arrangements to enter it, which I never heard about it, I didn't know anything about it, and it was just by chance that I had my friend worked in the shop."

Eric Holmes: "I actually also came into it by chance, a similar story, I had to go and pick up a ring for my mother, at a jeweller and then we started talking, and then welt hats it. Well that's interesting."

Labi Kapo: "Ok um considering... this question is related to the previous question..."

4. Eric Holmes: "Considering the enormous transformation with the advent of a democratic South Africa, how did this change affect the Jewellery industry in South Africa?"

Labi Kapo: Well as I said, partly related to the previous question, it has, its made a huge difference because there's a whole lot of young people that has never taught of the industry. And um they can if they hear the right information can get exposure to it and have the ability to

enter it, um and the Government assists you, which is unheard of anywhere in the world I believe, um the government do assist you into entering a profession, it might be a small stipend but it a assistance, and you can obtain a qualification which as I believe again you won't see it in any part of the world right now in this current era."

Eric Holmes: "Do you think that what they are doing is enough to grow the industry?"

Labi Kapo: "I Believe so, look I've travelled around other parts of Africa and I did look at that when I because I did have my experience in Europe in the jewellery industry, When I came here to South Africa I had 28 years of experience in the industry. In other parts of Africa, they have a industry there but it's not quite, what it should be like South Africa has, here in South Africa you've got all the infrastructures in place, I can literally walk into a tool shop here and buy tools like as if I was buying tools in London. In other parts of Africa, it doesn't exist, you might get a few hand tools, but we need as you know perishables. And if you can't buy your saw blades on a regular basis, or your drills and your buff papers, then you're gonna find your industry very hard to work in other parts of Africa. So I believe South Africa is, can be, is the base I think, and could be probably I see South Africa as being the hub of the Jewellery industry for the continent as well as international exposure as well."

Eric Holmes: "Well I don't think we are where we should be, considering that we have so much gold and platinum and diamonds, we should be the leader in the world."

Labi Kapo: "Yes, yes, yes, I know, yea I sit on the executive board of the Jewellery Manufacturing association, and I have seen figures there, I've seen figures of 70 -80% imported jewellery. It sounds crazy... because the gold and the diamonds are all here, its jus um the exposure to people to gain an experience in the industry in order to make South Africa thrive and reduce its own imports, when all your raw materials are here in the first place."

5. Eric Holmes: "What skills is the most important to master to become an accomplished jeweller/Goldsmith?"

Labi Kapo: "Well look um for me I started and I went to a jewellery, um school, a part from where I started in my trade in London where I had my first exposure in a retail shop, I then went on to go to the college which was in those days I believe it's still called the same, Sir John Cass Jewellery school which is in Aldgate east. I um went there for a few years until I found other work. But I did get the exposure of making jewellery what we, I would consider more at the higher end of the industry because of there, they would not just teach you, they were teaching you jewellery but they were also teaching you the older styles of jewellery. So learning the older

styles of manufacture helped you do the modern styles much easier. And so you got this exposure, then we had, I was fortunate, when I was in my second year we had a teacher called Pat White and he was a master, he was just, just watching him and his work and his finishing so that really inspired me to um you know go that direction or the high end jewellery. And then the other part was to get exposure as I went through the industry.”

6. Eric Holmes: “What differentiates South African jewellery concepts with the worldwide jewellery industry?”

Labi Kapo: “Well I believe South Africa is Um I I for me I I look at South Africa as um, every country I believe has its own exposure because if you notice jewellery related, most of the jewellery is revolved around plants styles of plants, styles of the culture also gives an expression on how it is worn. Whereas here you’ve got a whole new different sets of plants, you’ve got a whole new different sets of insects which you, which aren’t familiar with other parts of the jewellery manufacturers. So it’s a new concept for me, and I believe the young people which I am training, I try to expose them to look at their own environment to come up with their own styles and designs and um that way, you are not competing exactly but your sort of, how can I put it... Your sort of.... um..... I’ve lost the words now for it, but you’re actually complementing your own style with other styles around the world. So you still end up with a nice finish, provided you’ve been taught how to finish your jewellery nicely.”

7. Eric Holmes: “What do you think is the largest hurdle in promoting South African Jewellery abroad?”

Labi Kapo: “Its exposure, and now getting exposure is um it can be challenging, I understand there have been um, um, young students or companies going abroad to show exposure, unfortunately some of it has not been in the um completely in the gold end of the market. A lot of it have been in the crafted side of the jewellery industry. And I think um once, when South Africa exposes itself with the higher quality type of jewellery and the higher type of finishing I think South Africa will go a long way. Its leading I believe now on the continent with its jewellery manufacturer, Manufacturing....”

8. Eric Holmes: “What measures can be put forth to make South African Jewellery more marketable worldwide?”

Labi Kapo: “That sounds related to the last question.... Its more exposure, if, I believe, if um, there are some good companies here, some high end companies who can um, who could make it. How can I say it, um, market or gain a foothold in the market overseas, but most of them just look inward and concentrate on South Africa when if, there was more emphasis on giving more

exposure to South African jewellery outside, I'm sure it would take up and join the rest of the industry and the markets there."

9. Eric Holmes: "What steps do you think can be put into place to enhance the quality of South African jewellery?"

Labi Kapo: "I have to go back to, it's really how you're taught, so you're really talking about um the industry having on board the best and qualified lecturers and teachers. Um now that's, it can be challenging, because not everyone has had the exposure to jewellery at the high end, but as time goes on, it will, that will just naturally fall into place and um as the teachers become better, obviously the students become better. And that plays a huge part, a huge role in the...."

Eric Holmes: "It's all new actually."

Labi Kapo: "Yea, yea."

10. Eric Holmes: "What is your signature style when designing jewellery?"

Labi Kapo: "Well I um, had exposure I said to jewellery manufacturing in Europe, so what I try to do is to make jewellery in the same way that I was taught, now one of the styles is, is that um when we manufacture jewellery, we don't actually make a flat plate. We give things a bit angles so it reflects the stones and Diamonds better, we decorate the back of the jewellery which we call um I call it back holes. Here I understand they use the word azureing, which is, when you drill a hole you don't just leave the hole round, you actually make it square, rectangle, marquise, heart shape, you can uh, horseshoe shape, there's many different styles to decorate the back of the jewellery, and then um the next part of it is giving it what we call edging wire or the gallery. So the plate is actually not sitting against your skin, it's actually sitting on a little frame which is all part of the design and it gives it um much more of a desire, much more um how can I use the word...."

Eric Holmes: "Sophistication..."

Labi Kapo: "Yea more of a sophistication to um and its, you can see the jewellery has got a purpose rather and just like a thing that's just plonked on your skin and uh it looks much better if it has been decorated. So the back of the jewellery looks as good as the front of the jewellery on other words."

11. Eric Holmes: "Which traditional jewellery techniques do you constantly use in Jewellery Manufacturing?"

Labi Kapo: "Yes I have had exposure to enamelling, but um look I also better ad that the exposures I got when I was in Europe, I haven't seen all that taking place here. And um I had exposures in Europe where everybody was a specialist, here what I have noticed, everyone does, It's good that you do a bit of everything. But, but to specialise in it we use to outsource, as we made our jewellery, we would then go to an enameller, for instance to the best enameller in Britain as they had that huge experience. And if we need an engraving, that was another separate industry in London, um stone setting was another separate industry. These were all different fortified apprentices in London so you got specialists who were very good and they could enhance the jewellery that you had made, rather than learn the principles of it and myself try to do it, I wouldn't be as good as someone who is a specialist."

Eric Holmes: "Like, because in South Africa you only have one trade test."

Labi Kapo: "Yea."

Eric Holmes: "You don't have a trade test for enamelling for instance."

Labi Kapo: "Ok, ok that's interesting."

Eric Holmes: "That's exactly what you are saying basically."

12. Eric Holmes: "Do you see jewellery manufacturing as a discipline or art form? Please motivate your answer."

Labi Kapo: "Well its art, and in the art you have disciplines that you work to and principles. And um art form... I... you can't say art in the jewellery industry, without saying geometry. You need those actual measurements, and certain principles and styles that you need to have it, geometrically shaped so it looks balanced, so it's an art, discipline and geometry all tide in together. And it's how you express yourself once you learn all the principles then it's the best way you can express yourself. Um I've got my own expressions, but what's very interesting being a lecture, students come up with a whole lot of new ideas, you'd never even think about, and then you think oh that's a good idea.... and its, and then I, it helps me to enhance how they can express themselves when they are making a piece that I'm giving back to them."

13. Eric Holmes: "How would you describe contemporary jewellery?"

Labi Kapo: "Contemporary well, contemporary I would describe contemporary as, I was taught jewellery from the 70's 80's in London, 1970's 1980's. But you can get contemporary jewellery when you look at the old Bulgari, the old Cartier, um the Faberge. I would say that's contemporary, but there's very few people that make that type of jewellery now, and who've got that type of skill. So I would say jewellery is a dying trade um but at the same time it's a trade that looks like its diminishing, but the spark that South Africa has got I don't think that they are going backwards, they are going forwards to enhance the skills every year on year as they go along."

14. Eric Holmes: "How would you describe South African tourist jewellery?"

Labi Kapo: "Tourist jewellery, um I didn't see too much of tourists here, not in Johannesburg....I have when I have gone to Cape town and gone to Durban, but obviously as a goldsmith you are always looking at other people but they're wearing it and you can't help it and um I do see a lot of the designs and styles I would normally see if I was in Europe, which is what i use to make anyways. So um who knows, as young people as they get the desire to go into the jewellery industry, they may want to see, or see something that they look at and wonder I wonder how they made that and they'd take up the challenge to make it for themselves."

15. Eric Holmes: "How would you describe commercial jewellery?"

Labi Kapo: "Look commercial jewellery is there, obviously because jewellery needs to be it's, it's made affordable for everybody. Its lighter in weight, it doesn't have certain specifications that we would expect to see in the higher end of the jewellery. But at the same time it is also needed to give everybody a chance to purchase a piece of jewellery. It um, you need that type of commercial jewellery to um to be out there for them to be able to afford it. And then everyone has a chance at different levels of affordability."

16. Eric Holmes: "What type of subject matter would you consider when designing a South African jewellery range?"

Labi Kapo: "Well, there's quite a few subject matters, um, I would tend to go for the plants and insects, and I also can't forget, because everybody talks since I came here, I never heard it before in Europe, the big 5. Um, yes, the, Cartier obviously are doing quite well with their panthers and cats and um, with their styles, we do see the elephants a lot but I think rather than what you're continuously looking now, we need the young people to come up with new ideas and concepts around the big 5 and also around the plants and insects that they see in

their environment. And um if we could get people to design and style things around their own environment, you will make South Africa have its own unique designs to its own environment.”

ADDENDUM C

Interview transcription: Liz Loubser

Title of interview: Commercial Jewellery Techniques: Innovating Selected Contemporary Manufacturing Techniques

Date of interview: 03 August 2016

Transcription:

1. Eric Holmes: "Please introduce yourself?"
Liz Loubser: "Liz Loubser, Jeweller, ok Ja ek weet nie of jy meer info wil he nie."

Eric Holmes: "Ek dink die volgende vraag is meer relefant daarop."

2. Eric Holmes: "How and when did you get into the jewellery Industry?"

Liz Loubser: "Um I started about... Ek het jewellery geswot op Stellenbosh Universiteit. Ek het begin in 1977."

Eric Holmes: "ok."

Liz Loubser: "Jy was seker toe nog nie eers gebore nie."

Eric Holmes: "Ek is in 79 gebore."

Liz Loubser: "En ja so ek het op Stellenbosch geswot. Ek het um, wil jy nog um, Ek het so bietjie klas gegee toe het ek getrou en kinders gehad, en toe het ek by Durban Westville Universiteit klas gegee toe het onss Joburg toe getrek en by WITS wat nou Uj is. Dit was ek en 'n ane ou was die eerste lektore daar. Um..."

Eric Holmes: "By die jewellery...?"

Liz Loubser: "WITS Technicon ja dit was nog WITS Technicon. En um, toe het ek dit gedoen, en toet ek besluit ek gaan my eie besigheid begin want my kinders was klein en ek was met hulle aan die gang gewees. En ek het in die tussen tyd as freelance by Stellenbosch klas gegee. In platinum. Thats it, maar met my eie besigheid."

Eric Holmes: "Wou jy altyd 'n jeweller word?"

Liz Loubser: “O nee, nee, nee ek het fine art geswot, begin daarmee maar in jou eerste jaar op Stellenbosch laat hulle jou so bietjie van die ander kursusse doen. Jy weet hulle gee vir jou ‘n week jewellery en ‘n week, ek dink ons het nog ceramics gedoen en sulke goeterse. En toe ek jewellery doen het ek niks daarvan geweet nie. Toe is dit vir my soo lekker.”

Eric Holmes: “Ja”

Eric Holmes: “Dis ‘n ander medium.”

Liz Loubser: “Dis ‘n hele ander en so aan en toe het ek my jaar klaar gemaak en toe “gechange” en begin jewellery swot. So ek is mal daaroor.”

Eric Holmes: “Ja ek het ook eers kuns geswot.”

Liz Loubser: “Is dit? Hoet jy uitgevind van jewellery. Ek het, ek het, my ma het een keer vir my gesê ek moet ‘n ring gaan haal. Ek het op daai stadium by Open Window gestudeer en toe moes ek haar ring gaan haal by die jeweller. Toes ek bietjie moeg vir die graphic design en daai tipe goeters en toe begin ek bietjie met die jeweller te praat. En toe sê hy vir my nou kom design vir my...”

Liz Loubser: “Toe besef jy. Nee, ek dink as dit jou ding is, is dit jou ding.”

Eric Holmes: “Ja.”

Liz Loubser: “Maak jy self fisies jewellery?”

Eric Holmes: “Ja, ek doen.”

Eric Holmes: “Ja”

Liz Loubser: “Ja Ja”

3. Eric Holmes: “Can you provide a short diagnosis of the South African Jewellery industry?”

Liz Loubser: “Kyk ek dink weet ons sê altyd dit gaan maar sukkelend met die jewellery industrie, maar ek dink dit gaan wêreldwyd maar swaar. Met hierdie huidige ekonomiese tye. Ek dink daar is twee bene. Ons bedryf het twee bene. Een is die kommersiële deel wat of die goed invoer, of die goed laat mass “produce” of copy soos jy sê. Die ander ek dink ons het ‘n sterker as wat ‘n mens dink contemporary jewellery ‘n klein, baie klein, maar tog ‘n sterk klein industrie.”

Eric Holmes: “Ja Ja”

Liz Loubser: “Want daar is tog ‘n paar jewellery skole en so aan. En ek weet die contemporary jewellers is baie passionate jy weet so ja ek dink dit is wat op die oomblik aangaan. Ongelukkig dink ek nie die kommersiële ouens en die contemporary ouens sien oog tot oog nie.”

Eric Holmes: “Nee, defnintief nie.”

Liz Loubser: “Um en dis vir my jammer want ek bedoel my besigheid is helfde “commercial” dis al hoe jy geld maak. Jy weet ek maak verloof ringe en jy weet die gewone goeters. Maak dit wel baie mooi... maar dit is maar kommersieel. So dis amper twee bene in ‘n besigheid.”

Eric Holmes: “So as jy kommersiële jewellery maak bring jy bietjie van jou contemporary by dit?”

Liz Loubser: “Nee. Nee, ons maak uit en uit kommersieel.”

Eric Holmes: “Is dit?”

Liz Loubser: “Ja, maar ek maak dit nie fisies self nie. Ek het girls’ wat dit vir my doen. Wat onsettende goeie goudsmede is. Want hulle werk met die hand wat jou asem weg slaan. “Antique” goeters en so aan. So um ja dit is eintlik nogals interessant dat ons hierdie baie kommersiële lyn het. Ons ontwerp dit spesifiek vir elke kliënt. Maar dit is maar baie kommersieel. Ja ja en dan nou en dan kry ek die geleentheid om so bietjie kontemporêr in te sit maar “very seldom“. Ek het of kontemporêre kliente of ek het kommersiële kliente.”

Eric Holmes: “Dink jy die kommersiële jewellery verkoop beter?”

Liz Loubser: “Ja baie! Jy kan amper nie, ek kan nie sien hoe jy ‘n lewe kan maak met kontemporêre jewellery nie. Ek’s “sorry”. “I don’t think so”. Ons wil dit graag doen. Ek en my skoon dogter dink daaraan om ‘n boek te skryf oor “contemporary jewellery”. En sy wil verskriklik graag hierdie ding “push”, maar ongelukkig op die oomblik is dit maar kommersieel.”

4. Eric Holmes: “Considering the enormous transformation with the advent of a democratic South Africa, how did this change affect the Jewellery industry in South Africa?”

Liz Loubser: "I don't think it affected it. It hadn't any affect. No affect. I think the industry is the industry. Ek weet nie."

Eric Holmes: "Ek, ek dink..."

Liz Loubser: "Ek kan nou 'n political "speech" hier vir jou afsteek ma ek dink nie dit het enigsins, dis regtig 'n irrelefonte vraag dink ek."

Eric Holmes: "Kyk vir my um ek dink die jewellery industry was nog altyd um dit was nie regtig Suid Afrikaners wat dit oorweldig het nie, dit was maar mense van oorsee wat ingekom het."

Liz Loubser: "Um, um, baie internasionaal, baie dink ek, oor die spectrum van kleur en ras en so aan. Um ek bedoel ek het klas gegee voor '94 by Durban Westville Universiteit, dit was nou wel 'n universiteit vir oorwegend swart en kleurling studente maar daar was nie, hulle het ook die industry betree, jy weet hulle was nie uitgesluit van die industrie nie, hulle was van klomp ander goed uitgesluit, maar as jy 'n jeweller was of 'n goudsmit of 'n appie of wat, was jy ene, en jy het jou ding gedoen. Ek dink nie dit het 'n vreeslike invloed gehad nie."

5. Eric Holmes: "What skills is the most important to master to become an accomplished jeweller/Goldsmith?"

Liz Loubser: "I think basic good technical skills. Um, and that doesn't come within this three years you study. Ek dink dit is iets wat jy leer. In die trade waar jy werk of waar ookal jy werk maar tegniek is vir my 'n big contemporary of kommersieel is tegniek vir my ontsettend belangrik."

Eric Holmes: "Kwaliteit."

Liz Loubser: "Want dis wat jou differensieer, 'n goeie jeweller."

Liz Loubser: "En dit is amper die een ding wat my irriteer van swak commercial werk, goeie "commercial" werk is vir my "fabulous", maar swak tegniek is swak."

Eric Holmes: "Klomp gecaste goeters...."

Liz Loubser: "Wel, jy kan cast.... maar jy moet goed cast. Ja, jy weet."

Eric Holmes: "Die stene moet nie uitval en..."

Liz Loubser: "Uh uh."

Liz Loubser: “En die hele bewustheid van proporsie en sulke goeters en ag ja tegniek. So ek is nogals erg oor tegniek.”

6. Eric Holmes: “What differentiates South African jewellery concepts with the worldwide jewellery industry?”

Liz Loubser: “I don’t think there is a lot of difference, theres not a lot. Um I think, ek dink nie so nie. Ek dink daar is ‘n craft deel van ons wat anders is, soos die “bead workers” en die “weavers” en daai soort ouens. En dit kan, dit dink ek is baie belangrik om in te trek in gewone jewellery in. Dit sal wonderlik wees en ons try dit al vir jare doen maar dit werk nie. Um maar ek dink nie, ek dink gewone goed is maar, hoe dit hier lyk, lyk dit in flippen Prague, en lyk dit in Munich en lyk dit in Tokio.”

Eric Holmes: “Dit is so...”

7. Eric Holmes: “What do you think is the largest hurdle in promoting South African Jewellery abroad?”

Liz Loubser: “Shoe... Um.... I, ek dink as ons ‘n bietjie meer van ‘n identiteit het, omdat die goeters so universeel die selle lyk, Ag why? Jy weet hoekom sal iemand oorsee ons goed koop as dit presies soos hulle goeters lyk.”

Eric Holmes: “En duurder dan ook.”

Liz Loubser: “Ja “

Liz Loubser: “Ek dink wat belangrik is as ons kan iets “create” wat ‘n bietjie van ‘n South African, African. Uh... taal het.”

Eric Holmes: “Ja, Ja...”

Liz Loubser: “Sal dit dalk amper werk. Die mense is baie “keen”. Die mense is ek dink... Afrika is hot. En die mense is keen op die goed. Maar dit is nie maklik nie.”

Eric Holmes: “Dit is moeilik...”

8. Eric Holmes: “What measures can be put forth to make South African Jewellery more marketable worldwide?”

Eric Holmes: “Ek dink jy het eintlik die antwoord gegee.”

Liz Loubser: “Ek het eintlik gesê as ons daai, as on ‘n bietjie ja...”

9. Eric Holmes: “What steps do you think can be put into place to enhance the quality of South African jewellery?”

Liz Loubser: “Good technical opleiding, wat vir my flippen “sad” is, is laat die opleiding in die, by die instu... ek dink nie die ouens wat die opleiding gee, en dit sluit nie almal in nie is noodwendig bevoeg, hulle is nie master goldsmiths nie. So hulle leer nie vir die student nie en en ek dink dit is hoekom ons so problem het tussen die kommersieele kant en die meer akademiese kant, is omdat die akademiese outjies nie tegnies deur master “goldsmiths” geleer is nie. En ek kan nie dink jy moet dit in drie jaar doen nie, maar jy gaan, ugh ogh hulle moet gaan kommersiële werk doen om te leer.... so wat was die vraag nou weer, ek kan nou nie onthou nie.”

Eric Holmes: “Nee dit is. Jy het die regte antwoord gegee.”

Liz Loubser: “Ja”

Eric Holmes: “Nou nie dat daar ‘n regte of verkeerde antwoord is nie, maar dit is absoluut ‘n relefante vraag. Um so basies jy weet, um die “trainers” moet “getrain” word.”

Liz Loubser: “Die “trainers” moet baie beter “getrain” word.”

Eric Holmes: “Ja, ja.”

Liz Loubser: “Dit help nie jy stel iemand aan wat so half, weet jy wat dink ek, ek dink die trainers moet bietjie van ‘n kommersiële agtergrond he.”

Eric Holmes: “Ek het nou al ook gedink die studente wat ons inkry, elke jaar is dit vir my asof hulle bietjie swakker, bietjie swakker, bietjie swakker.”

Liz Loubser: “Omdat die trainers bietjie swakker word. Dink ek...”

Eric Holmes: “Um ek weet nie, ek dink dis dalk op skool, jy weet in die verlede het die mense kuns gedoen en nou...”

Liz Loubser: "Ek weet ongelukkig nie, ek is nie, ek is, ek het nie meer kontak met skool, en jy weet ek weet nie wat hulle doen op skole nie soos ek kan nie daarvoor 'n "comment" lewer nie."
Eric Holmes: "Soos ek sal byvoorbeeld vir 'n student se, die ding moet perfek "square" wees, jy weet, hulle weet nie wat dit is nie. Jy moet hulle eers gaan leer, dit is 'n "square"."

Liz Loubser: "Ongelukkig ek het ek het 35 jaar gelede 'n student gehad wat in sy 3de jaar nie geweet het wat is die verskil tussen vertical en horizontal nie. So toe ek dit uitvind toe kom ek agter shit hier is 'n groot probleem. Ek dink so.... Ek dink daar moet, ek dink die skool moet tog 'n invloed daarop he, ek dink dit maak net die teachers se job soveel groter, maar as die teacher ook 'n veer voel."

Eric Holmes: "Ja, ja."

Liz Loubser: "Um of nie goeie opleiding gehad het "to start with" nie, um ek bedoel is dit 'n verlore saak. Jy weet as ek sien wat iemand soos Marchant hier bo doen, van jy weet iemand maak, sê nou maar 'n ketting, en hulle maak ronde links, "sorry" dis nie rond nie, doen dit oor, "sorry" dit lyk soos 'n aartappel, nee jy kan nie aan nee, dit, dit, dit te, um en ek dink 'n "lecturer" moet sien die ding is nie rond nie. Ek dink parykeer sien hulle dit nie, hulle kan dit nie sien nie. Dit breek my hart."

Eric Holmes: "Ja nee ek is self as dit daai measurement moet wees dit moet reg wees."

Liz Loubser: "Maar dit is, hulle moet dit oor en oor doen. Maar nou ja jy weet wat moet 'n mens doen. Ek dink die lecturers moet dit kan sien. Want ek dink baie van die lektore, "couldn't give a stuff..."

Eric Holmes: "Dankie."

10. Eric Holmes: "What is your signature style when designing jewellery?"

Liz Loubser: "Ek lag so my kinders se dis boesmanbiesankuns. Ek dink ek het 'n baie sterk "African", dis klasiiek en tog, dit is vir my baie belangrik om 'n bietjie van 'n "African", of goeters weet jy jy kan nie help nie, ek bedoel dis wie ek is en dis waar ek leef. So dit is ook tema, en ek is mal oor Afrika, so ek dink dit het net automaties net 'n invloed op my. So ek dink ja dit is my styl. Ek dink dit is... kyk ek is deur 'n Duitser opgelei. Jy weet so dit, ek kan 'n bietjie ras "centric" wees maar met 'n met 'n..."

Eric Holmes: "Afrika gevoel?"

Liz Loubser: “Ja”

Eric Holmes: “So maar as jy nou design, ontwerp, sal jy met intensie Afrika goed gebruik.

Liz Loubser: “Um um, uhm uhm, dit gebeur net.”

Eric Holmes: “Dit kom net uit.”

Liz Loubser: “Nee ek dink nie jy doen dit “intensionally” nie, ek dink ons kyk baie, ons is baie, ons het boeke en ons kyk en ons word beïnvloed deur die Europese goed ok ma, maar ek dink die bottom line as ek myself kom kry dan het dit tog... jy weet is dit tog ‘n baie belangrike invloed.”

Eric Holmes: “Dan kom dit deur.”

Liz Loubser: “Ja dit kom deur.”

11. Eric Holmes: “Which traditional jewellery techniques do you constantly use in Jewellery Manufacturing?”

Eric Holmes: “Soos byvoorbeeld, soos mokume of daai tipe goeters... Gebruik jy enige van hulle?”

Liz Loubser: “Ek doen. Ja! Ek doen, ek doen, ek probeer nou dink ek het nou onlangs ‘n uitstalling gehad, toet ek Khum boo.... Ken jy kum boo?

Ja dis amper dieselfde ek dink as...”

Eric Holmes: “Dit is wat jy jou metal um... Dis amper soos inlay is dit nie?”

Liz Loubser: “Ja maar jy sit die fyn goud, wat jy doen is jy vat jou silver en jy quench dit in “acid”, en “quench” dit en dis ‘n klomp kere, en dan sit jy jou fyn goud op.”

Eric Holmes: “Sterling silver?”

Liz Loubser: “Ja vat Sterling.”

Liz Loubser: “En dan vat jy fyn goud wat jy verskriklik dun uitrol, amper soos “gold leaf“, ‘n klein bietjie dikker en dan “cut“ jy jou patrone uit, en dan sit jy dit op en jy “fuse“ dit, dis ‘n “fusing“ tegniek, so ek doen dit...”

Eric Holmes: “Ek dink daars ‘n word vir dit, “antitlastic fusing“, ek dink.”

Liz Loubser: “Ja maar keum boo, is ‘n bekende, dit is ‘n Korean “technique” nogals, snaaks genoeg. Bietjie mokume, ek het nou die dag vir ‘n girl ‘n mokume ring gemaak, um, en al hierdie gewone tegnieke wat ons gebruik, ek het daar bietjie mosaïek ek dink daars goeters wat oorspoel, uit ander kunsvorme uit, wat mens ook maar gebruik.”

Eric Holmes: “So jy geniet dit om die tipe goed te gebruik?”

Liz Loubser: “Ja! Ja dit gebeur, maar die stuk lei my maar, ‘n “fly press“ uhm ek, ek ons gebruik dit nogals graag.”

Eric Holmes: “Daai een wat jy so draai?”

Liz Loubser: “Ons het sommer so ‘n ou kleintjie wat ons met ‘n jack gemaak het. O wag. Standing up...” (Showing me examples)

Liz Loubser: “Ek hou van twee kleure metaal.”

Eric Holmes: “Maar mens sien nie daai tegnieke in kommersiële jewellery nie.”

Liz Loubser: “Nee, ek dink dis te “time-consuming“, en dis te, ugh, onbepaald. ‘n Ding gebeur en jy gebruik hom omdat hy so uitgekome het.”

Eric Holmes: “Ok waar was ek...”

12. Eric Holmes: “Do you see jewellery manufacturing as a discipline or art form? Please motivate your answer.”

Liz Loubser: “I think it depends, as dit “commercial” is, is dit jaa! Ek wil dit baie graag as ‘n “art form” sien...”

Eric Holmes: “Ja.”

Liz Loubser: “Maar ek dink dis meer ‘n “craft“. Ek dink nie dit is “fine”, dis nie ‘n “fine art” nie, lets be honest.... Dit is ‘n toegepaste.”

Eric Holmes: “Daar is sekere “recipes“ waarvolgens mens moet werk.”

Liz Loubser: “Ja, ja behalwe as jy ongelooflik avongarde of so is dan bound jy konseptuele werk, is vir my ‘n baie moeilik kuns, Maar ek dink dit is eintlik ‘n “craft“, lets be honest, ek wou altyd gehad het dit moet ‘n “art“ gewees het, Maar ek is nou mooi groot, ek weet dit is ‘n “craft“.”

Eric Holmes: “Ok”

13. Eric Holmes: “How would you describe contemporary jewellery?”

Liz Loubser: “Ek dink dit is, uh juwele waar die konsep baie belangrik is, die konsep is, dra die selfde gewig as die tegniek of bietjie of “howl” ‘n bietjie oor na die konsep ding toe dit is ‘n ugh half contemporary jewellery is ondersoekend, en ‘n bietjie meer intellektueel. Ja ek dink dit is ‘n bietjie meer “intellectual”.”

14. Eric Holmes: “How would you describe South African tourist jewellery?”

Liz Loubser: “Shame ontsettend lelik, ogh maar die mense is mal daaroor. So ek dink ons doen entlik nogals nie bad daarmee nie. Die goed is vir my vrek lelik, maar dis omdat omdat ons gekonfronteer is daarmee vandat ons so groot is. Maar as ek sien jy weet my man het ‘n internasionale maatskapy, en as ons nou oorsese toeriste kry wat kom.... O hulle love dit, ‘n Afrikatjie, of ‘n jy weet ‘n suiderkruis, dit is vir hulle verskriklik mooi. So ek dink entlik ons toeriste jewellery doen eintlik goed. Ek dink dit is nogals ‘n gesonde, baie lelik maar baie gesond.”

Eric Holmes: “Dis nie vir hulle lelik nie...”

Liz Loubser: “Nee hulle “love” dit, dis vir hulle verskriklik mooi...”

Eric Holmes: “Dis wat hulle soek as hulle hien toe kom.”

Liz Loubser: “Ja! Ja so ek dink eintlik daai aspek doen nie te bad nie.”

Eric Holmes: “Ok.”

15. Eric Holmes: “How would you describe commercial jewellery?”

Liz Loubser: “Same old same old”, jy weet wat dwars oor die wêreld gemaak word. Jy weet dit dit ja. Mense se behoeftes word maar voorsien. Jy sien die wêreld het nou so klein geword lat of dit nou van Taiwan of daar gemaak, “wherever”, die goed lyk maar net dieselfde.”

16. Eric Holmes: “What type of subject matter would you consider when designing a South African jewellery range?”

Liz Loubser: “O ek dink ek sal met texture en kleure werk, “texture patterning colour”, “patterning”, ja. Kleur, maar nie noodwendig bond kleur nie, ek sal met kleur, ek sal defnintief die “basic hand craft techniques” gebruik, krale werk, weef werk.”

Liz Loubser: “Ken jy vir Chris de Beer?”

Eric Holmes: “Van Durban? Ek weet van hom...”

Liz Loubser: “Ja, Hy doen “amazing“ werk....”

Liz Loubser: “Jy weet uhm, so ek sal die “hand craft” tegnieke gebruik om te kyk of ons dit in “jewellery“ kan bring en dan sal ek teksture kleure dis my “tactile” ding. Ja gevoel ja ek dink so.”

Eric Holmes: “Jy sal nie daaraan dink om miskien iets kultureels te gebruik?”

Liz Loubser: “Ek weet te min... As ek kultureels gebruik...”

Eric Holmes: “As jy jou eie kultuur gebruik?”

Liz Loubser: “Ja dit doen ek tog, jy weet, en waar mens vandaan kom en so aan, ek het ek ja, defnintief, maar meer, ek dink ek neig meer na die “basic African”, die natuur en daai goeters is vir my belangriker, so patrone op velle of jy weet, patrone in bome, of jy weet so iets sal ek baie meer gebruik, bietjie meer “organic”.”

ADDENDUM D

Informed Consent Forms

Informed Consent

Dear prospective candidate,

My name is Eric Holmes. I am registered for a Masters degree in Design at Central University of Technology Free State. You are hereby invited to partake in my study in the form of a verbal interview. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information.

TITLE OF STUDY

COMMERCIAL JEWELLERY TECHNIQUES: INNOVATING SELECTED CONTEMPORARY MANUFACTURING TECHNIQUES

The title of my thesis is: Commercial Jewellery Techniques: Innovating Selected Contemporary Manufacturing Techniques. My research will extend to investigate the South African Jewellery industry in order to identify innovating techniques which can aid in the establishment of a South African Jewellery design style in Jewellery Manufacturing.

PRINCIPAL INVESTIGATOR

Eric Holmes
Central University of Technology Free State
Department of Design and Studio Art
Tel: (051) 507 4043
E-mail: eholmes@cut.ac.za

PURPOSE OF STUDY

The fundamental aim of this study is to identify rare, underutilised jewellery manufacturing techniques which can aid in the establishment of a uniquely South African jewellery design style.

STUDY PROCEDURES

In order to make informed decisions about the course of the study, the researcher will conduct short interviews and questionnaires with stakeholders in the Jewellery industry which will consist of the following:

Specialists in the field of jewellery manufacturing
Jewellery graduates or apprentices
University lecturers or trainers

The questions formulated for the interviews will be structured in order for the respondents to provide a thick description of their lived experience in order to obtain expert information and reliable data from the respondents through the interview. All questions will be open ended questions in order for the respondents to provide their own account on the questions.

RISKS

Page 1 of 5

Participant's Initials: EH

Informed Consent

You may decline to answer any or all questions and you may terminate your involvement at any time if you choose.

BENEFITS

Besides being afforded an opportunity to voice their own opinions regarding the subjects under discussion and related to this study, the respondents will not benefit directly by taking part in this study.

The elevation of South African jewellery designing concepts will cultivate and enhance the jewellery industry contribution to beneficiation of raw precious materials used in jewellery manufacturing. In the past South African recourses such as gold and diamonds were exploited and exported without benefitting the South African jewellery industry.

This research can assist in the pedagogy of a jewellery design and manufacturing learning curriculum by finding original ways of combining uncommon jewellery manufacturing techniques with commercial jewellery designs.

A remedial and fresh approach may be provided for the South African jewellery industry to follow in the daunting task of competing on the worldwide jewellery platform.

This research will contribute to the formulation of a South African style of jewellery which will provide a unique way of promoting African cultural patterns, materials and identity to the global community through jewellery.

This study will also provide the opportunity to assess South African cultural designs in an assortment of South African cultures and assist in developing these designs for a larger and more competitive global stage.

CONFIDENTIALITY

For the purposes of this research study, your comments will not be anonymous, yet no private information which may arise in the interviews or questionnaires will be published without the consent of the participants. Only information relevant to the specific study will be made public. The findings of this study will be published in peer review journals and presented at both national and international conferences.

CONTACT INFORMATION

If you have questions at any time about this study, or you experience adverse effects as the result of participating in this study, you may contact the researcher whose contact information is provided on the first page.

VOLUNTARY PARTICIPATION

Your participation in this study is voluntary. It is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form on the next page. After you sign the consent form, you are still free to withdraw at any time and without giving a reason. Withdrawing from this study will not affect the relationship you have, if any, with

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Participant's Initials: LT

Informed Consent

the researcher. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed.

If you agree to partake in this study, please sign the consent form on the next page and send it back to the principle investigator.

Participant's Initials: LS

Page 3 of 5

Informed Consent

CONSENT

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Participant's signature  Date 3rd/Aug/2016

Investigator's signature  Date 03/08/2016

Participant's Initials: LK

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Informed Consent

Dear prospective candidate,

My name is Eric Holmes. I am registered for a Masters degree in Design at Central University of Technology Free State. You are hereby invited to partake in my study in the form of a verbal interview. Before you decide to participate in this study, it is important that you understand why the research is being done and what it will involve. Please read the following information carefully. Please ask the researcher if there is anything that is not clear or if you need more information.

TITLE OF STUDY

COMMERCIAL JEWELLERY TECHNIQUES: INNOVATING SELECTED CONTEMPORARY MANUFACTURING TECHNIQUES

The title of my thesis is: Commercial Jewellery Techniques: Innovating Selected Contemporary Manufacturing Techniques. My research will extend to investigate the South African Jewellery industry in order to identify innovating techniques which can aid in the establishment of a South African Jewellery design style in Jewellery Manufacturing.

PRINCIPAL INVESTIGATOR

Eric Holmes
Central University of Technology Free State
Department of Design and Studio Art
Tel: (051) 507 4043
E-mail: eholmes@cut.ac.za

PURPOSE OF STUDY

The fundamental aim of this study is to identify rare, underutilised jewellery manufacturing techniques which can aid in the establishment of a uniquely South African jewellery design style.

STUDY PROCEDURES

In order to make informed decisions about the course of the study, the researcher will conduct short interviews and questionnaires with stakeholders in the Jewellery industry which will consist of the following:

Specialists in the field of jewellery manufacturing
Jewellery graduates or apprentices
University lecturers or trainers

The questions formulated for the interviews will be structured in order for the respondents to provide a thick description of their lived experience in order to obtain expert information and reliable data from the respondents through the interview. All questions will be open ended questions in order for the respondents to provide their own account on the questions.

RISKS

Page 1 of 4

Participant's Initials: _____

Informed Consent

You may decline to answer any or all questions and you may terminate your involvement at any time if you choose.

BENEFITS

Besides being afforded an opportunity to voice their own opinions regarding the subjects under discussion and related to this study, the respondents will not benefit directly by taking part in this study.

The elevation of South African jewellery designing concepts will cultivate and enhance the jewellery industry contribution to beneficiation of raw precious materials used in jewellery manufacturing. In the past South African recourses such as gold and diamonds were exploited and exported without benefitting the South African jewellery industry.

This research can assist in the pedagogy of a jewellery design and manufacturing learning curriculum by finding original ways of combining uncommon jewellery manufacturing techniques with commercial jewellery designs.

A remedial and fresh approach may be provided for the South African jewellery industry to follow in the daunting task of competing on the worldwide jewellery platform.

This research will contribute to the formulation of a South African style of jewellery which will provide a unique way of promoting African cultural patterns, materials and identity to the global community through jewellery.

This study will also provide the opportunity to assess South African cultural designs in an assortment of South African cultures and assist in developing these designs for a larger and more competitive global stage.

CONFIDENTIALITY

For the purposes of this research study, your comments will not be anonymous, yet no private information which may arise in the interviews or questionnaires will be published without the consent of the participants. Only information relevant to the specific study will be made public. The findings of this study will be published in peer review journals and presented at both national and international conferences.

CONTACT INFORMATION

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RISKS

Participant's Initials: EH

Page 1 of 5

Informed Consent

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CONFIDENTIALITY

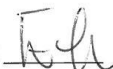
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Participant's Initials: *RL*

Page 3 of 5

Informed Consent

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Participant's signature *H. Hambro* Date 26/7/16

Investigator's signature *[Signature]* Date 26/07/2016

Participant's Initials: *FH* Page 4 of 5

ADDENDUM E

Practical Journal

ADDENDUM E

Practical Journal

Introduction

This Journal is a testament to experiments done with selected techniques such as niello, enamelling and mokume gane. This journal is formulated to showcase a practice-led methodology whereby the outcomes of initial experiments will subsequently inform the process of further experiments and ultimately lead to the production of jewellery artefacts which will take into consideration the outcomes of the experiments. The actions or formulations of the experiments are done *ad hoc* as to draw on Paul Feyerabend's concept of epistemological anarchy which is a methodology which can be explained as an anti-method methodology where prescribed methods might actually inhibit the discovery process which is traditionally formulated to lead to new knowledge. According to Feyerabend (1975:14-15): "There are circumstances when it is advisable to introduce, elaborate, and defend *ad hoc* hypotheses, or hypotheses which contradict well-established and generally accepted experimental results, or hypotheses whose content is smaller than the content of the existing and empirically adequate alternative, or self-inconsistent hypotheses, and so on. There are even circumstances – and they occur rather frequently – when argument loses its forward – looking aspect and becomes a hindrance to progress" (Feyerabend P. 1975:14-15).

The process of documenting the work is done by making inscriptions into this journal which consists of four columns, as illustrated below. With an additional column to show an image of the actions taken.


Facts and actions	Immediate reactions	Preliminary reflections	Reflections





In the first column “Facts and actions” the researcher will mention the intent and actions which is to be taken in order to execute the project or experiment. In the second column “Immediate reactions” the researcher states the actions which is being done and highlights the methods and tools used to execute the action. In the third column “Preliminary reflections” the researcher states the train of thought just before the action is completed as well as remedial actions to be taken before the action is completed. In the last column “Reflections” the researcher reflects on the action which was just completed and also provides remedial actions to be taken as well as the next action to be taken. This column additionally provides a final reflection on further experiments to be done as a reflection on the outcome of the current experiment.



It is important to note that this journal is a reflection of the researcher’s ongoing personal ideas and thinking whilst manufacturing the body of work, thus is written in an informal mode.




Niello provision piece 1




Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	Engraved random channels into plate of metal.	Patterned channels about 0.5mm deep.	Channels seem deep enough, yet thin.	Fill channels with Niello.
	Cover plate with niello and heat up from bottom in order not to have direct flame on niello.	Niello melts at low temperature.	Niello is evenly distributed.	File off niello until flush with metal.
	File off niello until flush with metal surface.	Filing niello takes a while. Use Bastard file.	Can see some pits and cavities developing. Reason unknown....	Niello surface is full of pits and cavities. Recover surface with niello.
	Recover surface with niello and heat up slowly with low heat until niello flows into cavities.	Flow of newly covered niello is uneven and difficult to control.	Add flux to see if niello flows more evenly.	Niello flows more evenly with addition of Flux. Repeat filing.

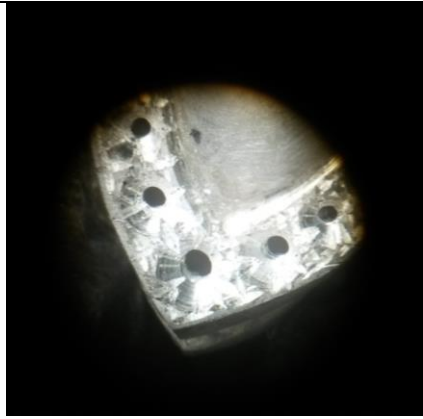
	File niello again flush with surface.	Pits and cavities still visible in other areas.	Deeper pits and cavities develop as flush filing gets closer to surface.	Burr out cavities and refill only cavities with niello. Reheat with addition of flux and more intense heat.
	Burr out cavities and pits and refill with the addition of flux and more intense heat.	Niello flows easily but eats large holes direct into silver plate resembling asteroid strikes.	Metal seems to have reticulated at bottom and developed holes.	File off final layer of niello.
	File off final niello layer.	Deep pits and cavities.	Original pattern distorted.	Deep pits and cavities with additional large holes contrast the original engraved pattern. Although the intention of the original contrasting pattern is overshadowed by the imperfections of the holes, cavities and pits, of the final outcome satisfies my personal aesthetic standards as the holes provides a random, unusual, unexpected and original feast for the eye.
Niello provision piece 2				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections


	<p>Use leftover plate and roll to 0.9mm. Burr random design onto surface of plate.</p>	<p>Burr random design in order only to test the application of niello.</p>	<p>Make sure design is phrased deep enough for niello to melt into.</p>	<p>Design cavities is deep enough. Advance to insert niello into design.</p>
	<p>Fill up all channels of design with niello and heat up.</p>	<p>Heat up plate from back in order not to place direct heat upon niello as direct heat might make the niello create bubbles.</p>	<p>Niello flows evenly over design.</p>	<p>Move on to file off niello to expose the design.</p>
	<p>File off excess niello.</p>	<p>Niello takes a lot of effort to file off even if the layer is thin.</p>	<p>File until all edges of design is exposed.</p>	<p>All edges are exposed and niello is filed flush with silver surface. Buff and polish.</p>
				<p>Final reflection: Niello colour is nice and dark and design stands out due to the dark contrast of the niello against the light silver.</p>
				<p>There is some pits and cavities present in the niello surface but no lead inclusions. The pits and cavities might be due to uneven heat or overheating in some areas.</p>


Strelitzia ring				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	Use Strelitzia plant as inspiration	Design ring with colours and shapes representing the indigenous Strelitzia plant which also appears on the South African 50 cent coin.	Unusual shape for ring.	Could be a viable test for opaque enamel on domed surface as well as in channels on domed surface.
No Image...	Used fine silver for enamelling. Annealed until almost cherry red, quenched in cold water.	Rolled plate until 1.5mm, to allow enough thickness to file out seating for enamelling.	Plate is soft, clean and without any oxidation.	Cut out round shapes to be domed.
	Cut out round shapes and dome.	Domes are to satisfaction.	Cut holes for finger.	Domes needs to be domed to the inside to resemble doughnuts to better represent the original design.




	<p>Punched domes on inside with doming punch to bend inside ring edge to resemble doughnuts.</p>	<p>Use smaller doming punch and place on inside rim and punch in order to forge the inside edge down</p>	<p>Doughnut shapes are domed to satisfaction.</p>	<p>Shape has distorted a bit. Use small punch on the back in order to rectify the shape.</p>
	<p>Use small punch at back to rectify shape.</p>	<p>Shape looks better but surface on outside becomes uneven and dented.</p>	<p>Dents and uneven surface can be filed flush as metal is thick enough.</p>	<p>Domed surface now a bit uneven due to punch which will later be filed flush. Should solder domes together and cut off one side in order to make space for the top domed plate.</p>
	<p>Soldered domes together. Cut out shape for enamelled dome.</p>	<p>Shape looks good but need to bend open thin sides to resemble design.</p>	<p>Ring is a bit too large...</p>	<p>Size is at this moment irrelevant. Should file out channels for orange enamel.</p>
	<p>Filed out channels for orange enamel.</p>		<p>Channels look good and even.</p>	


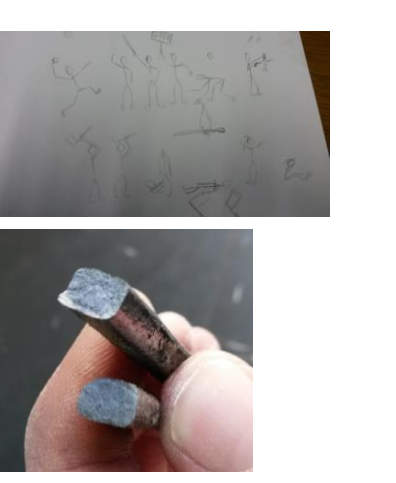
	<p>Soldered in dome for blue enamel.</p> <p>Filed off solder flow on top sharp corner with needle file and minute lens burr under microscope.</p>			<p>Dome looks good with a bit of solder on top sharp corner.</p> <p>Need to file off solder flow on top sharp corner. (Solder will affect colour of enamel).</p>
	<p>Measure stones for pave setting.</p>	<p>Make sure there is enough metal between stones to allow for enough metal to be able to create prongs.</p>		<p>Should phrase out prongs for pave setting.</p> <p>Make sure seating for pave setting is deep enough in order for the girdle of stone to sit just below metal surface. (this will translate into strong prongs which is easily pushed over stones).</p>
	<p>Drilled 0.8mm holes for stones.</p> <p>Burred seating for stones with corresponding setting burr.</p>	<p>Make sure holes are drilled exactly in the centre</p>	<p>Holes are even and in centre of area.</p>	

	<p>Used lens burr to phrase prongs and pave pattern.</p>	<p>Phrased out between prongs under microscope.</p>		<p>Prongs look good with enough metal to form beads with beading tool. Set stones after enamelling.</p>
<p>No Image....</p>	<p>Inserted blue enamel on dome and orange enamel into channels.</p>	<p>Enamelling looks promising and inserted with finesse and accuracy.</p>	<p>Blue enamel came out perfect. Orange enamel cracked.</p>	<p>Refill orange enamel. Enamel probably cracked due to expansion and contraction of metal. Being enclosed in channels enamel is likely to crack more easily as enamel is</p>

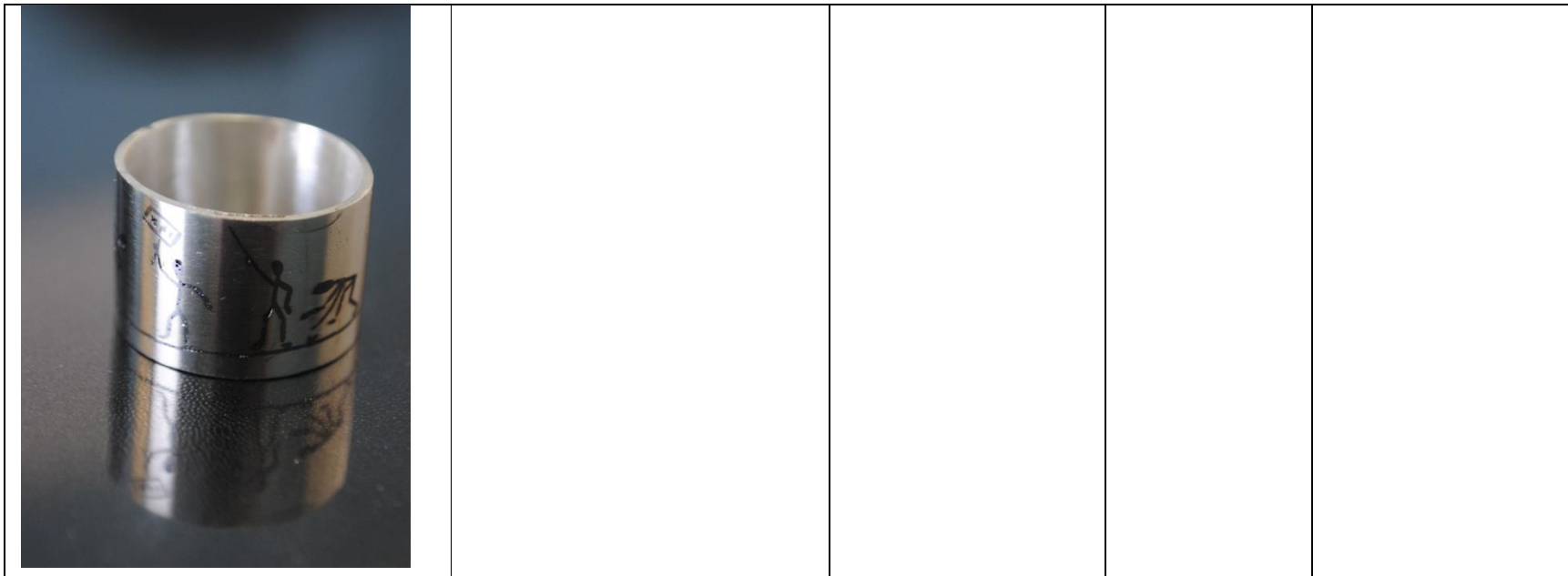
	Refilled orange enamel.	Enamelling looks good but metal is still hot.	Orange enamel cracked again and discoloured with bluish green inclusions.	glass and solidifies before the metal has properly cooled down and contracted (shrunk) resulting in tension being placed on the glass. When the tension is too much the enamel will crack or chip away until the tension is relieved or the tension is eased until the glass is able to withstand the pressure without cracking. Action: remove orange enamel and see if niello will work better.
	Inserted niello. Filed niello flush.	Blue enamelling cracked due reheating of piece. Initially niello looks promising but after filing cavities started to appear in niello. Tried to file out cavities and pits.	Observed metal becoming too thin and channels becoming uneven. Blue enamel cracked due to difference in melting point of enamel and niello.	Note: Do not use enamel and niello on the same project. Project terminated due to too many anomalies.
Marquise, pavé and Niello ring				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections

	<p>Create commercial ring with Marquise centre stone framed by Pavé setting corners and flanked by niello.</p> <p>Manufacture top plate. Cut out Marquise shape. Dome plate slightly. Pierce out centre marquise shape.</p> <p>Cut out bottom plate slightly smaller which will become bottom of gallery. Solder two plates together with a small bars in between which will be the gallery. Solder in centre tube setting which will accommodate the centre marquise stone.</p> <p>Manufacture Knife edge shank to hold top marquise gallery construction. Solder knife edge shank onto ring. Phrase out cavity for niello. Make markings for pave setting stones. Drill holes for pave setting. Prepare pave setting by using a lens burr to phrase out excess metal around stones.</p> <p>Melt in niello into side cavities and file smooth. Set all stones including centre stone. Apply miligrain on side edge of ring to finish off pave setting. Polish ring....</p>	<p>Make sure plate is thick enough for pavé setting as well as to allow for cavity to be phased out to accommodate niello.</p> <p>Niello fills cavity.</p>	<p>After filing there is some pits present in niello.</p>	<p>Prefer to leave small pits as reheating the niello might cause more pits to develop. Personally I enjoy the uniqueness which the pits in the niello causes. It makes the ring look almost antique which is also enhanced by the addition of miligrain on the edges of the ring. As a remedy patterns can be engraved into the niello.</p>

Niello Provision piece 3 & 4 (roll printed texture)				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	Used dry leaves to print texture onto soft fine silver. Placed silver and leaves between hardened copper plate.	Roll print is to satisfaction.	Can observe fine detail.	See if fine detail will be preserved after niello is applied.
	Applied niello.	Distributed niello evenly and heat up slowly in order for Niello to flow evenly over plates.	Niello flows evenly into all cavities.	Niello distribution is to satisfaction. Proceed to filing off niello with a fine file.
	File off niello with fine file.	Filing of niello with fine file takes a lot of time and patience. Switch to fine 1200 grain buff sticks as detail might be lost.	Filing until metal is uncovered; one can start seeing the fine detail. No pits or cavities are present, but detail is astonishingly easily files away.	The results are striking resembling a silhouetted tree landscape as some of the fine detail remains. In future one might consider deepening the pattern by engraving to preserve some of the superb detail created by the roll printed leaf.
Niello Provision piece 5 (Comic motive)				





	<p>Used stereotypical Afrikaans comic on silver plate which was phrased out using a 0.1mm lens burr. Soldered on coiled wire tube to accommodate chain.</p> <p>Apply niello evenly as with provision piece 2 & 3.</p>	<p>Solder flowed into coiled wire.... Detail is difficult to burr even under the microscope.</p> <p>Niello evenly distributed.</p>	<p>Coiled wire too small to file off solder. Engraving looks good with the naked eye.</p> <p>File off niello. No cavities and pits visible.</p>	<p>Lines are burred to perfection but coiled wire should be removed.</p> <p>Niello came out to perfection, but wire coil should be removed. Would rather set the square into a setting with v-loop.</p>
<p>Niello pictogram ring</p>				
<p>Images</p>	<p>Facts and actions</p>	<p>Immediate reactions</p>	<p>Preliminary reflections</p>	<p>Reflections</p>
	<p>Use silver to make ring. Carve design with lens burr under microscope.</p> <p>Make niello using 30g Lead, 15g silver and 15g Copper. First melt copper, then add silver, then add lead. Add Flowers of sulphur in excess and stir with carbon rod.</p>	<p>Being cautious of noxious fumes, I used a mask and air extractor. Cast mixture into ingot....</p>	<p>Seems to be a good batch of niello without any lead inclusions.</p>	<p>Fumes smells like burning matches or gunpowder. All metals melted and fused together well with a bit of lead not mixed.</p>


	<p>Covered ring in niello.</p>	<p>Heated ring from inside. Distributed niello using soldering pick.</p>	<p>Niello spread evenly over whole ring.</p>	<p>Move on to file off niello.</p>
	<p>File off niello.</p>	<p>File off until all metal surfaces are clean and flush. Use bastard file and advance to fine flat file followed by buff stick.</p>	<p>Some cavities visible especially on the heads. Apply another thin layer on areas with cavities. File off again.</p>	<p>Cavities still visible but smaller. Work off ring..... Niello difficult to manipulate and control around a round ring as a result of gravity with the niello easily flowing to the bottom of ring. Best results with niello are achieved on a flat plate or I would presume in Zero gravity.</p>




Niello concave designed pendant.

Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Intent on creating a few <i>ad hoc</i> experimentations with niello on Concave domed plates.</p> <p>Cut out a few oval shapes from 0.9mm plate.</p> <p>Ovals cut.</p> <p>Dome oval plates using small doming punch on wooden forging block.</p>	<p>Used 0.9mm thin plate in order to accelerate the time of heat distribution on plate.</p> <p>File edges even.</p> <p>Edges of domes seem to bend up.</p>	<p>Plate looks fine.</p> <p>Ovals seems to be well cut, clean and the edges smooth.</p>	<p>Set off to cut out ovals.</p> <p>Move on to dome oval plates.</p>

	<p>Hammer edges flat using the round end of a ball pin hammer.</p>	<p>Make sure to only hammer just on top of the edge in order not to distort the domes but just enough to force the edges down onto the steel block.</p>	<p>Need to hammer edges flat.</p>	<p>Move on to hammer edges flat.</p>
	<p>Create setting for cabochon onyx.</p>	<p>Use onyx as the black colour will complement the dark grey lustre of niello.</p>	<p>Dome edges are flat.</p>	<p>A bit of tool marks from the hammer is visible on the back side of the concave domes which can easily be removed by light filing.</p>
	<p>Cut out bottom of setting and solder on half-moon shaped plate.</p>	<p>Dome half-moon shape a bit and file off imperfections in setting hole.</p>	<p>File bottom of setting to fit into concave domed shape and solder.</p>	<p>Setting is well soldered. Move on to cut out bottom and close top with half-moon shaped plate.</p>
	<p>Fill up the inside of the concave plate with crushed niello mixed with silver and copper filings. Add random loose wires resembling spikes.</p>	<p>Added silver and copper filings in order to get a very rough finish on the niello. Heat up whole piece inside furnace at 850 degrees.</p>	<p>No Solder blobs of solder seams visible.</p>	<p>Pendant looks well thus far. Move on to solder tube at back to accommodate chain.</p>
	<p>Polish wires with midget buff in order not to be bend.</p>	<p>Grind niello between wire spikes with diamond burr in order to clean some residue left over after firing in furnace.</p>	<p>Niello flowed nice but uneven due to the addition of silver and Copper filings (which was intended).</p>	<p>Niello reacted as expected, resulted in a rough textured niello surface. All spikes adhered to niello almost as if it was soldered. Move on to finish the pendant. Niello seems to be a bit dull without the expected dark lustre. Might be due</p>

			Some residue remains between wire spikes and some inclusions in the niello itself.	to the addition of copper and silver filings. Top part of pendant might look good with pave set stones...
Niello concave domed ring				
	<p>Manufacture ring by creating a concave domed shape soldered onto a pierced out flat band.</p> <p>Cut small squares and attach it into the concave dome using niello.</p> <p>Assemble square plates in sequence to be attached with niello.</p>	<p>Use clean niello to firstly coat whole concave dome.</p> <p>Slowly heat concave dome until a flash appeared around squares.</p>	<p>Take care not to overhear which would result in concave dome being detached from shank.</p> <p>Squares looks sufficiently attached to concave plate with niello.</p>	<p>Ring is manufactured to satisfaction.</p> <p>Concave dome is sufficiently coated with niello.</p> <p>Polish ring. Final reflection, using clean niello can be substituted for solder to attach objects onto surfaces providing a dark contrasting surface.</p>
Niello and enamel with granulation and cloisonné (provision piece 6)				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections

	<p>Test a combination of techniques. Create piece with niello Granulation and cloisonné to see how these combinations reacts. Firstly place cloisonné wires in place. Add niello on one side and enamel and niello on other side and niello mixed with silver filing in the centre. Add granules. Heat up whole concoction from bottom until all is melted.</p>	<p>Niello melts first evenly. After a few seconds the enamel also starts to melt and in another few seconds it becomes smooth.</p>	<p>Interesting observation: Enamel contracts into itself and flows on top of niello. Niello flows underneath the cloisonné wires and pushes the enamel away. The granules stay in place and adhere to the niello while it sinks to the bottom through the enamel pushing the enamel even deeper into itself. After cooling one of the cloisonné wires got loose and were subsequently removed.</p>	<p>Interesting observations. Although very abstract forms and textures the overall effect is somewhat interesting and I would cautiously interpret it as aesthetically pleasing. Would recommend to do further test with the combination of niello and enamel.</p>
<p>Niello and enamel systematically covered with transparent enamel between firings. (provision piece 7)</p>				
<p>Images</p>	<p>Facts and actions</p>	<p>Immediate reactions</p>	<p>Preliminary reflections</p>	<p>Reflections</p>



	<p>Test the flow of enamel on top of niello by also covering each layer with transparent enamel between firings. At first cover plate with niello and fire until it flows smoothly. Add cross shaped red enamel and fire.</p>	<p>Enamel floats on top of niello. Cross shape distorts slightly.</p>	<p>Enamel contracts towards the largest batch or part.</p>	<p>Satisfying shape into which the enamel cross distorted into.</p>
	<p>Cover whole plate with transparent enamel and fire.</p>	<p>The whole transparent square contracts towards the cross shape.</p>	<p>Would have expected the transparent enamel to cover the whole concoction.</p>	<p>Repeat addition of enamel to see further distortion.</p>
	<p>Plate after addition of transparent enamel</p>	<p>Seems as if the enamel evened out the surface of niello.</p>	<p>Niello stays smooth.</p>	<p>Add another layer of transparent enamel</p>
<p>Add white enamel around red enamel cross shape and fire.</p>	<p>Addition of another layer of transparent enamel and fire.</p>	<p>Cross shape distorts further as it keeps on contracting onto itself. After firing the cross shape is almost completely distorted.</p>	<p>Niello becomes slightly textured.</p>	<p>Repeat addition of layers to see if enamel will fill up whole plate.</p>







Final layer is totally abstract with primary cross shape totally distorted due to the floating of enamel on top of melted niello.


Final square: after about two weeks the final layer of transparent enamel chipped off resulting in something resembling a blood spatter.

Plate totally covered with niello and enamel with the addition of small domed plates. (provision piece 8)

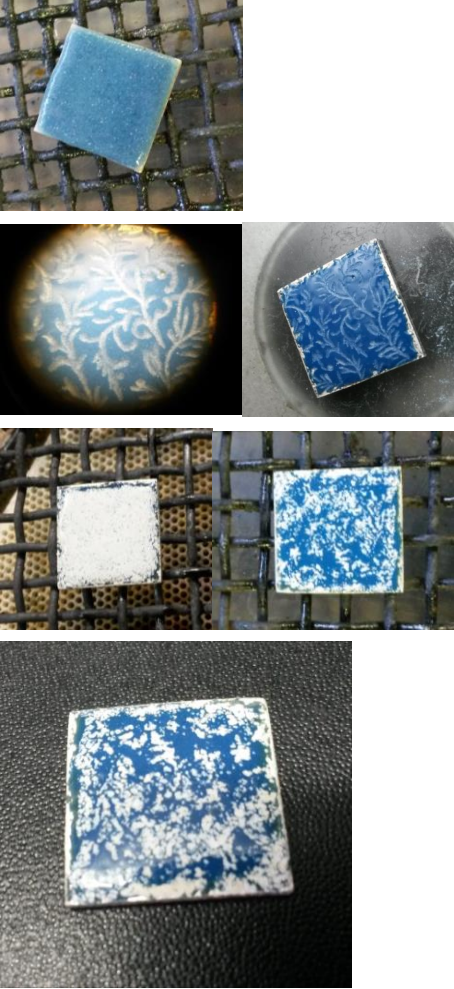
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Cover whole piece with Niello and red and white enamel.</p> <p>Add Small domed plates and fill them up with enamel.</p>	<p>Heat up whole plate from bottom until enamel and Niello melts.</p>	<p>Niello melts first, followed by enamel on plate and lastly the enamel in the domes.</p>	<p>Niello melts and flows up onto the domes and into the domes and covers the whole surface of the domes before enamel melted.</p> <p>Enamel contracted onto itself as expected.</p>
<p>Niello mixed with silver filings and enamel with addition of clean niello on sides as piece is heated. (provision piece 9)</p>				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Cover plate with niello mixed with silver filings on one side and blue and white enamel on other side.</p> <p>Mix edges of niello and enamel and the edges of enamel.</p> <p>Cool down plate and heat up again and add niello on side while hot.</p>	<p>Heat up plate from bottom.</p> <p>Heat up from bottom and add niello on side left empty.</p>	<p>Niello flows underneath enamel.</p> <p>Niello flows and reacts like solder</p>	<p>Enamel melts, contracts onto itself and floats on top of niello.</p> <p>Filings mixed with Niello creates a pleasing texture.</p> <p>Niello flows over whole plate and distorts the enamel further as it flows</p>


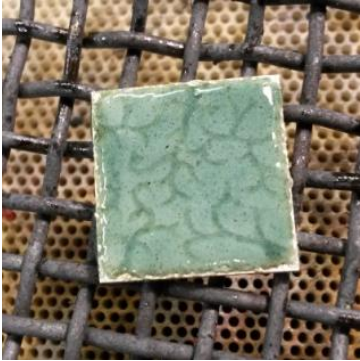
			<p>flowing towards the hottest area of plate.</p>	<p>underneath enamel but does not flow into the textured niello area. Final effect on square is abstract but harmoniously aesthetically pleasing with the bright shiny blue and white enamel contrasting the dark and textured niello.</p>
<p>Niello covered bottom covered with enamel inside cloisonné's. (provision piece 10)</p>				
<p>Images</p>	<p>Facts and actions</p>	<p>Immediate reactions</p>	<p>Preliminary reflections</p>	<p>Reflections</p>
	<p>Cover surface of plate in niello and fire. Bend thin wire cloisonné's resembling Strelitzia shapes and place on top of niello. Add orange, white and blue coloured enamel.</p>	<p>Heat up from bottom, niello flows evenly. Heat up plate from bottom until niello and enamel melts.</p>	<p>Niello flowed evenly over whole plate. Enamel contracts onto itself as it flows on top of niello in all directions.</p>	<p>Move on to add the Enamel and cloisonné's. Cloisonné compartments seems to not have any effect on the random contractions of enamel as it flows on top of niello. Final reflection: Very interesting textures and aesthetically pleasing with the cloisonné wires and contrasting enamel colours hinting to a design inspired by the Strelitzia plant.</p>


Printing foil covered plate covered with various colours of enamel. (provision piece 11)				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>The purpose of this test is to see if printing foils can be used in enamel as aluminium foil is often used at bottom of enamel surface to provide interesting textures.</p> <p>Heat up plate and press foil sheets onto plates.</p>	<p>Foil adheres well to silver plate.</p>	<p>Surface of foil is uneven and broken.</p>	<p>Can in future be fixed with additional applications.</p>
	<p>Cover different colours of foil with a variety of random colours and fire.</p> <p>Heat up plate again until enamel melts.</p>	<p>Heat up plate from bottom until enamel melts.</p> <p>Keep enamel melted and stir enamel colours with solder pic in order to see the effect when mixed while melted.</p>	<p>Foil burns away immediately and completely.</p> <p>Enamel mixes well with colours changing as it mixes with each other.</p>	<p>Have to find an alternative test for plate as printed foil covered plate is unsuccessful.</p> <p>Even though the original intent of this test was unsuccessful the mixing of the melted enamel colours yielded interesting results with some interesting and pleasing patterns emerging from drawing the colours with the soldering pic.</p> <p>Some more interesting results might be achieved if the intent is more controlled.</p>
Due tone Enamel image. (provision piece 12 & 13)				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections




	<p>Intent to create a more realistic image using two colours of enamel. (Painted enamel)</p> <p>Cover plates with one dark colour and fire.</p> <p>Paint on a tree with white enamel on top of red enamel.</p> <p>Cover black enamel square in white enamel and scrape away landscape with tree design whilst enamel is still wet.</p> <p>Both paintings are done under microscope as the plate is extremely small.</p>	<p>Fire plate from bottom until enamel melts.</p> <p>Heat up both plates at the same time from bottom until enamel melts.</p>	<p>Keep enamel melted until smooth.</p> <p>White tree on red enamel plate flows and distorts some of the detail especially the thin branches.</p> <p>White on black landscape flows well but design is also distorted.</p>	<p>Plate is covered with smooth foundation of black and red enamel.</p> <p>Both plates are striking especially with the contrasting colours used. Images distorted considerably but are still very pleasing due to the contrasting colours.</p> <p>Find a way to create more accurate paintings using enamel.</p>
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Due tone Enamel image. (provision piece 14)


Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Instead of painting a design on top of a foundation enamel surface, the intent of this test is to see if a design is carved into the foundation and then filled with a contrasting colour of enamel if the design will be less distorted.</p> <p>Cover plate with dark blue colour opaque enamel.</p> <p>Carve intricate pattern using Diamond burrs.</p> <p>Cover whole area with contrasting white enamel and fire.</p> <p>File off white layer.</p>	<p>Fire plate until blue enamel melts.</p> <p>Diamond burrs works well to carve out design on top of enamel.</p> <p>Keep plate heated until the white enamel has melted into the design cavities.</p> <p>File off until most of the blue is uncovered and the design carved can be seen.</p>	<p>Keep enamel melted until surface is smooth.</p> <p>Should try to carve design deep enough to be filled with contrasting colour.</p> <p>Both colours melt at same time.</p> <p>Design seems to be distorted considerably.</p>	<p>Plate is covered with smooth blue enamel. Move on to carve design.</p> <p>Design looks good and deep enough for contrasting colour to be inserted. White enamel melted to satisfaction and surface is smooth and shiny. Move on to file off the white enamel in order to uncover the design which as I expect is present at the bottom of the white layer. Due to the same melting points of the foundation blue and the top layer of opaque white the design has distorted considerably with almost no sign of the original intended pattern. It might prove helpful if the top layer is done with transparent enamel which has a lower melting point</p>


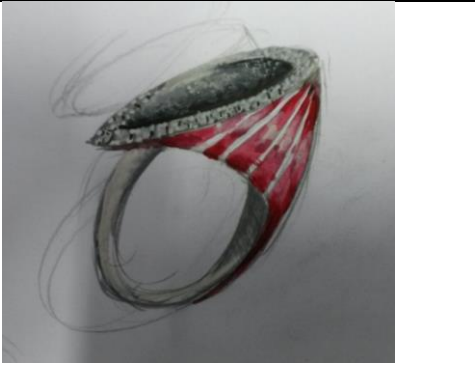
				than the bottom layer of enamel.
Due tone Enamel landscape image. (provision piece 15 & 16)				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
 	<p>Intension is to carve out a design on top of foundation opaque enamel layer and add contrasting transparent enamel with a lower melting point in order to test if the design might be distorted less than adding a top layer of enamel with the same melting point as the bottom layer.</p> <p>Cover plates with opaque foundation enamel.</p> <p>Carve one landscape design and one intricate pattern. Cover with transparent enamel.</p>	<p>Melt enamel on plates.</p> <p>Heat up plate until only the transparent enamel melts.</p>	<p>Enamel flows well, keep heated until enamel is smooth. Use furnace to control heat. Transparent enamel melts at about 813 degrees and smoothens at about 820 degrees.</p>	<p>Enamel has covered plates and is smooth and shiny. Move on to carve out designs and cover with transparent enamel. Integrity of design is kept with designs not distorting as much. See if better results can be achieved by carving design only into the metal without a foundation layer of enamel.</p>



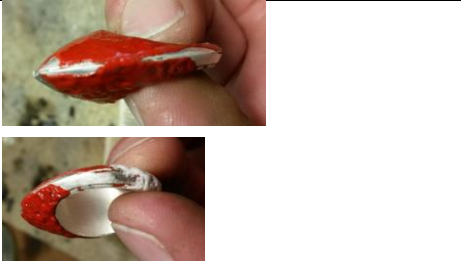
Due tone Enamel on roll printed leaf design pattern. (provision piece 17 & 18)				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Roll printed leaf design onto two fine silver plates.</p> <p>Engraved or phrased details of pattern deeper under microscope using a 0.1mm lens burr in order to get a crisper result.</p> <p>Cover both plates with due tones enamel resembling dried leaf colours.</p>	<p>Places leaves on top of fine silver plates and sandwiched between two copper plates.</p> <p>Burr details deep enough for transparent enamel to flow inside.</p> <p>Heat up both plates in furnace until enamel is melted and smooth.</p>	<p>Roll print by rolling the plates through the metal roller.</p> <p>Some details of leaf are too fine to be phrased with smallest lens burr.</p> <p>The transparent enamel melts at about 823 degrees and smoothens at about 820 degrees.</p>	<p>Design is visible but details of leaf not deep enough. Move on to phrase design details deeper.</p> <p>Design details are crisp and deep enough for enamel to flow into. Move on to cover whole plate with due coloured transparent enamel.</p> <p>Result is striking as the deep grooves are filled with enamel. The deepness of the grooves darkens the transparent enamel resulting in a well contrasted and crisp design.</p> <p>Move on to test this effect with more intricate patterns such as a portrait...</p>

Mono tone Limoges Enamel on carved portrait design. (provision piece 19, 20 & 21)				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
  	<p>Carve out two portrait designs directly into plate. Intent to test the effect of transparent enamel over different depths of patterns in order to create a crisp portrait design with contrasting tones or depth of colour using only one transparent colour.</p> <p>Use two South African Iconic figures namely Nelson Mandela and Paul Kruger.</p> <p>Cover carved plates with enamel. Nelson Mandela plate with a light green transparent enamel and Paul Kruger will be covered with a dark purple transparent enamel.</p> <p>Heat up and quench Nelson Mandela plate in order to chip off light green enamel until it is clear.</p> <p>Cover Mandela plate again with enamel. This time using dark purple.</p>	<p>Carve designs with 0.1mm lens burr. Carve darker areas deeper.</p> <p>Heat up enamel in furnace until enamel has melted and surface is smooth.</p> <p>Enamel adheres and is difficult to remove by heating and quenching.</p>	<p>Designs look good but some details especially around the eyes noses and mouths are too intricate to carve deep enough.</p> <p>Enamel has melted at 813 degrees and smoothed at 820 degrees.</p> <p>Some areas especially inside the fine detail remains and discolour.</p>	<p>Carved out designs is deeper where it should be darker except around some areas around eyes, mouth and nose</p> <p>Advance to fill up plates with enamel.</p> <p>Plates are smooth and very fine detail can be seen. Deeper areas are much darker. The green enamel on Nelson Mandela is too light. Try to remove and add darker colour.</p> <p>Fill up plate with dark purple enamel. Discoloured green enamel remains and detracts from</p>

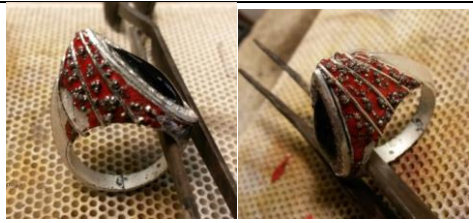
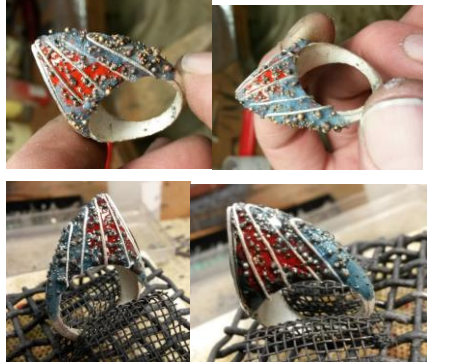

	<p>Make new Nelson Mandela plate and use dark purple from beginning.</p>	<p>Heat up in furnace until enamel runs smoothly over plate.</p> <p>Apply a thin layer of enamel in order for the detail to be seen through transparent layer of enamel.</p>	<p>Enamel is smooth but some detail seems to be lost.</p> <p>Plate looks much better with a lot of detail.</p>	<p>design. Purple enamel is too thick. Plate has distorted and corners bended backwards.</p> <p>Make new plate.</p> <p>In both instances one can see a lot of crisp detail but needed to carve the details in faces a bit deeper as some of the metal shines through the transparent layer of purple enamel.</p> <p>Final outcome is striking and very aesthetically pleasing.</p>
<p>Multi toned Enamel on carved out pattern. (provision piece 22)</p>				
<p>Images</p>	<p>Facts and actions</p>	<p>Immediate reactions</p>	<p>Preliminary reflections</p>	<p>Reflections</p>
	<p>Carve tadpole design on fine silver square plate and fill with green transparent enamel.</p> <p>Add more random colours on top of plate.</p>	<p>Heat up plate slowly in furnace at 820 degrees.</p> <p>Heat up in furnace until all enamel is melted.</p>	<p>Enamel melts evenly and smoothly.</p> <p>Enamel has melted and is smooth and surface shiny.</p>	<p>Enamel has melted smoothly and surface is shiny. Design is a bit boring so I will add more random colours.</p> <p>Final reflection: Design and colours is too random and looks like a mess!</p>

Multi toned Plique a jour Enamel on pierced out fine silver plate. (provision piece 23)				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Pierce out intricate radiating pattern onto square fine silver plate and fill up with transparent enamel.</p> <p>Fill up all compartments again with enamel.</p>	<p>Fill up large half-moon shape with transparent clear enamel and add opalescent clear enamel to see the effect of opalescent enamel.</p> <p>Heat up plate again in furnace but shift position of plate from flat to upright in order for the clear enamel not to flow out of the large half-moon shaped compartment.</p>	<p>Enamel melts well and contracts onto itself as expected.</p> <p>Enamel fills up all gaps but the half-moon shape needs another layer of enamel. Filled up half-moon shape again with the addition of specks of opalescent enamel and fired.</p>	<p>Opalescent enamel melts out and falls out of compartment.</p> <p>Compartment is a bit too large for Plique a jour enamel. Action: fill up again until compartment is filled.</p> <p>All compartments are filled to capacity and enamel flowed evenly.</p> <p>Final reflection: The enamel melted evenly and filled all compartments. The colours are bright and resembles glass stained church windows. The opalescent enamel did not seem to have the desired outcome and can in future be avoided....</p>

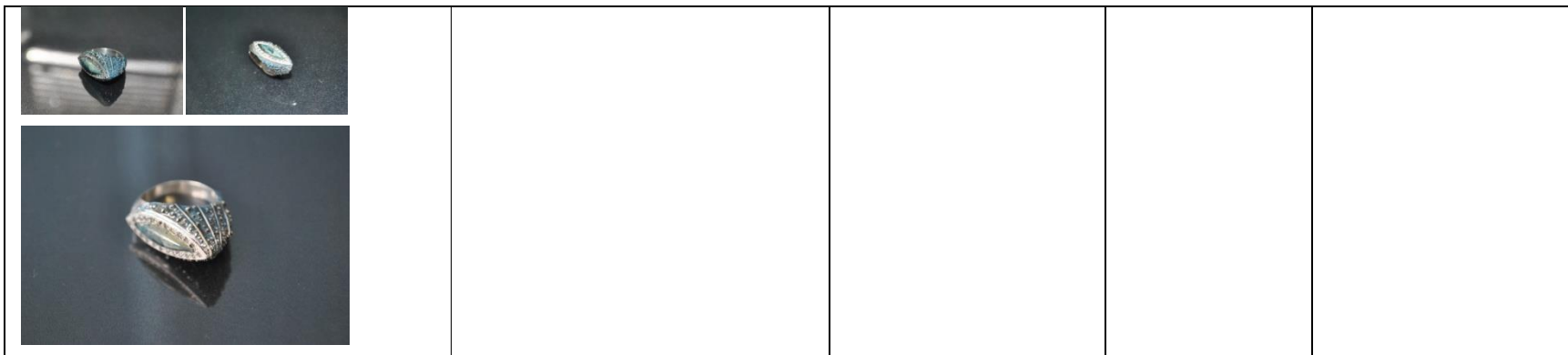
				
<p>Enamelled ring with pave setting.</p>				
<p>Images</p>	<p>Facts and actions</p>	<p>Immediate reactions</p>	<p>Preliminary reflections</p>	<p>Reflections</p>
	<p>The intension of this ring is to test the reaction of red opaque enamel on an unusually shaped ring. Usually due to the expansion and contraction of metal when heated and cooled it can create extra tension onto the enamel resulting in the enamel to crack or chip in order to release the tension.</p>			

	<p>Manufacture ring in fine silver using only hard solder.</p> <p>Drilled holes for the pave setting and prepared the seating for the stones.</p>	<p>Use two domed plates for the basic structure and file according to design. Hard solder is used to construct ring as any other solder will influence the colour of enamel as it melts quicker than hard solder. Phrased out the prongs for the stones using a 0.2mm lens burr.</p>	<p>Insert top flat plate for pave setting followed by domed centre plate for black enamel. Insert sleeve or inside shank of hollow constructed ring.</p> <p>Preparation for pave setting is to satisfaction.</p>	<p>Structure of ring is well manufactured with no solder seams visible. Drill and carve holes or seating for pave setting before advancing to enamelling in order for the enamel not to crack while drilling into metal. Advance to cover ring with enamel.</p>
	<p>Covered top domed plate with black enamel, sides under the pave with red enamel and bottom shank with white enamel.</p>	<p>All enamel was meticulously placed onto ring making sure none of the colours mixed and also making sure the enamel is evenly covered.</p>	<p>Covering the ring evenly proves to be difficult as the enamel is placed onto ring while it is still wet thus the ring needed to be rotated continuously in order to make sure the enamel does not run off ring.</p>	<p>Ring is evenly and meticulously covered with enamel. Advance to melt enamel in furnace.</p>
	<p>Fire enamel in furnace until all enamel is melted.</p>	<p>Melt enamel in furnace at 850 degrees as opaque enamel melts at higher temperature than transparent enamel.</p>	<p>After firing the enamel seems to have flowed well over whole ring but with some uneven texture which can be removed by filing</p>	<p>After cooling the red enamel chips off spontaneously just after ring has cooled off completely. Black domed enamel came out perfectly and covered the dome</p>



				<p>Action: Clean ring again and add more cloisonné's and add granules to see if this would break the tension even more in order for the enamel to not chip off.</p>
	<p>Add more cloisonné's with the addition of granules.</p>	<p>Created minute granules melting silver filing on a charcoal block.</p>	<p>Granules adhere easily to the wet enamel. Advance to firing enamel in furnace.</p>	<p>After firing the enamel looks very well but after cooling some small areas still chipped off. The granules and cloisonné compartments seems to minimise the tension. Action: fill up chipped areas again and add even more granules in order to minimise tension even more.</p>
	<p>Fill up chipped areas and add more granules.</p>	<p>Fire in furnace again.</p>	<p>Enamel looks promising.</p>	<p>After cooling enamel chipped off again. Note: black enamel is still intact. Action: take a different approach; it might be that the red opaque enamel</p>




				<p>gives way to tension easier than other colours. Fill up chipped area with a contrasting transparent enamel to see if it still chips.</p>
	<p>Fill up chipped areas with transparent blue enamel and add granules again.</p>	<p>Fire in furnace until all enamel melts.</p>	<p>Keep in furnace until enamel has melted smoothly. Initial results look promising.</p>	<p>After cooling no cracking or chipping can be observed. Although the red and light blue colours clash and is not a good combination. Black enamel on dome is still even and smooth. Action: remove all enamel again and replace all red with light blue transparent enamel.</p>
	<p>Removed all red enamel and replaced it with light blue transparent enamel. Add granules.</p>	<p>Fire in furnace until all enamel is melted.</p>	<p>Initially after firing there is no cracks or chipping which can be observed anywhere on ring.</p>	<p>After cooling there is no chipping or cracking. Conclusion: Transparent enamel is more suitable on oddly shaped domed metal and can resist more tension than opaque enamel. Advance to set stones.</p>




	<p>Set stones with beading tool under microscope.</p>	<p>Setting progresses well.</p>	<p>As last stone is set, the stone is accidentally pushed through metal plate leaving a large hole and cracking the centre black enamel on dome.</p>	<p>Action: insert easy solder granule in hole created by stone pushing through.</p>
	<p>Insert easy solder granule.</p>	<p>Heat up in furnace until solder granule melts to fill up hole.</p>	<p>Solder does not want to melt...</p>	<p>Action: Use torch to melt solder granule but first heat up ring in furnace to avoid sudden temperature fluctuations which would result in enamel cracking.</p>
	<p>Melt solder with torch while whole ring is still very hot and just came out of the furnace.</p>	<p>Solder flows evenly to close the gap.</p>	<p>Black enamel dome changes colour. Wet new stone and polish ring.</p>	<p>Final result is surprising as the black enamel changed colour from black to a blue and green opalescent colour due to the direct flame it was subjected to when soldering. Final ring though totally different from initial intension is strikingly original and aesthetically pleasing.</p>
<p>Although the granules are a bit too much and to rough. Consider filing them off or flush with enamel.</p>				







Domed cloisonné enameled ring


Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Used black and yellow beetle as inspiration to design domed cloisonné ring.</p>			
	<p>Use fine Silver for enameled areas. Rolled plate until 1.1mm. Annealed until Almost cherry red. Quenched in cold water. Cut out flat marquise shape.</p>	<p>Plate is soft, clean and without any oxidation.</p> <p>Domed shape until boat shape.</p> <p>Domed plate further until round.</p>		

	<p>Domed and refined shape until it reflected the shape of the design specifications.</p> <p>Solder in sleeve.</p>	<p>Hammered onto doming punch which was fastened onto the vice.</p> <p>Ring looks good and dome is well formed.</p>	<p>No solder seams visible.</p>	<p>Should drill hole to solder in sleeve in case of piece exploding due to expansion of air when soldering.</p> <p>Advance to insert cloisonné's and enamel.</p>
	<p>Inserted the cloisonné wires and applied black and yellow opaque enamel.</p>	<p>Make sure enamel is applied smoothly and evenly. Also make sure black and yellow enamel don't mix. Keep colours separated in their own compartments.</p>	<p>Application of enamelling looks promising.</p>	<p>Advance to fire ring in furnace.</p>
				




	<p>Fire ring in furnace.</p>	<p>Heat up ring until 850 degrees until all enamel is melted smoothly.</p>	<p>After firing ring enamel application looks promising.</p>	<p>After cooling there is no cracks and no chipping, but yellow enamel has discoloured especially in the centre of the cloisonné compartments. Action: remove yellow enamel and fill compartments with alternative colour.</p>
	<p>Remove yellow enamel.</p>	<p>Remove yellow enamel firstly in the centre of all compartments using a round diamond drill.</p>	<p>The silver where the enamel was carefully removed seems to add some aesthetic value to ring.</p>	<p>The yellow edges left after the yellow compartments were partially removed looks interesting and I have to consider keeping the effect. Action: keep the yellow frame around compartments and leave the silver exposed. Fire once more to see the final effect.</p>
	<p>Fire ring once more.</p>	<p>Fire ring in furnace until all enamel has melted evenly.</p>	<p>All enamel has melted evenly and looks promising.</p>	<p>After cooling there are no cracks or chipping present in entire piece. Ring looks a bit too shiny maybe consider texturizing the black enamel.</p>


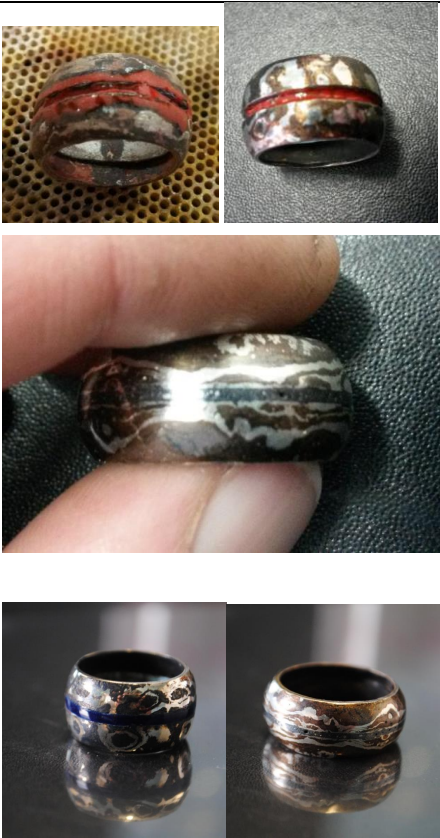
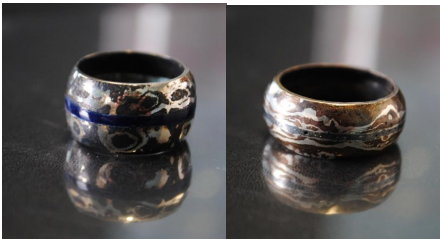
  	<p>Texturize black enamel.</p>	<p>Texturize areas closer to the sleeve more leaving a thin layer of shiny enamel in the centre around the ring.</p>	<p>Initially the ring looks good and original as the black enamel is left texturized which is uncommon in general enamelling practice.</p>	<p>I personally like the idea of texturizing enamel as it is unusual and provides an original and unusual effect most people will probably frown upon. It seems that the opaque enamel fares well on smoothly domed surfaces especially when inserted into cloisonné compartments which lowers the tension placed upon the enamel as the metal expands and contracts due to heating and cooling down. I would presume that transparent enamel would fare even better. It might prove beneficial to do some Limoges enamelling in the empty silver spaces or even some pave setting...</p>
<p>Domed cloisonne enamelled ring with pavé setting</p>				

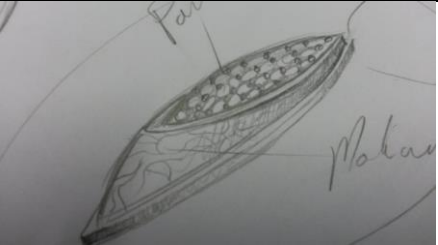

	<p>Create domed ring following same procedure as with previous domed ring. Solder in sleeve.</p> <p>Create a push over ring with pierced out patterns which will accommodate the pave setting.</p> <p>Measure and fit in stones for pave setting. Drill holes and prepare seating's. Phrase out excess metal between stones.</p> <p>Substitute opaque enamel with transparent enamel.</p> <p>Set stones and polish.</p>	<p>Domed ring created by forging shape in doming punch. Sleeve soldered in.</p> <p>Create flat push over ring, pierce out design, insert over domed ring and bend into place and solder.</p> <p>Meticulously apply two colours of transparent enamel.</p>	<p>Domed ring is well defined. Sleeve is soldered in sufficiently.</p> <p>Care should be taken to fit edges of push over ring into the sleeve in order for no solder joints to be visible.</p> <p>Take care to not apply any enamel into the pave settings. Fire enamel at 850 degrees.</p>	<p>Move on to solder push over ring.</p> <p>Push over ring is sufficiently fitted onto dome ring. Move on to prepare holes and seating for pave setting.</p> <p>Pave settings are adequately prepared.</p> <p>Transparent enamel has melted to satisfaction with no cracking or chipping.</p> <p>Final reflection: The transparent enamel fares much better than opaque enamel especially over a round domed area without any cracking, chipping or discolouring.</p>
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Mokume plate (provision piece 24)				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Create mokume plate using fine silver and copper by fusing plates together without the addition of solder.</p> <p>Create three silver and three copper plates of 1mm thickness.</p> <p>Place silver and copper plates consecutively on top of each other between two steel blocks which is held together with a clamp in order to place pressure on the plates.</p>	<p>File these plates totally flat on both sides. Buff them and clean them thoroughly with spirits.</p> <p>Place steel blocks with plates on top of charcoal blocks in order for the charcoal to absorb any oxygen (reduction atmosphere) which will minimise the oxidation of the plates.</p>	<p>Filing the plates perfectly flat is extremely time consuming.</p> <p>The silver at the moment when it is supposed to sweat (just before melting temperature) on the sides pushes out almost completely due to the pressure of the clamp onto the steel blocks.</p>	<p>Plates are flat and clean.</p> <p>Advance to placing the plates under pressure and fuse them in the furnace.</p> <p>Although this is the advised procedure of making mokume plate, applying pressure to the plates does not quite make sense as it will obviously push out the metal with the lowest melting point the moment that the metal reaches its melting temperature.</p> <p>Action: See if the plates can be fused by using an annealing torch which is also a reduction atmosphere as no oxygen can intrude through the annealing torch.</p> <p>Advance to finish off the billet using an annealing torch and adding new silver plate between already fused billet.</p>

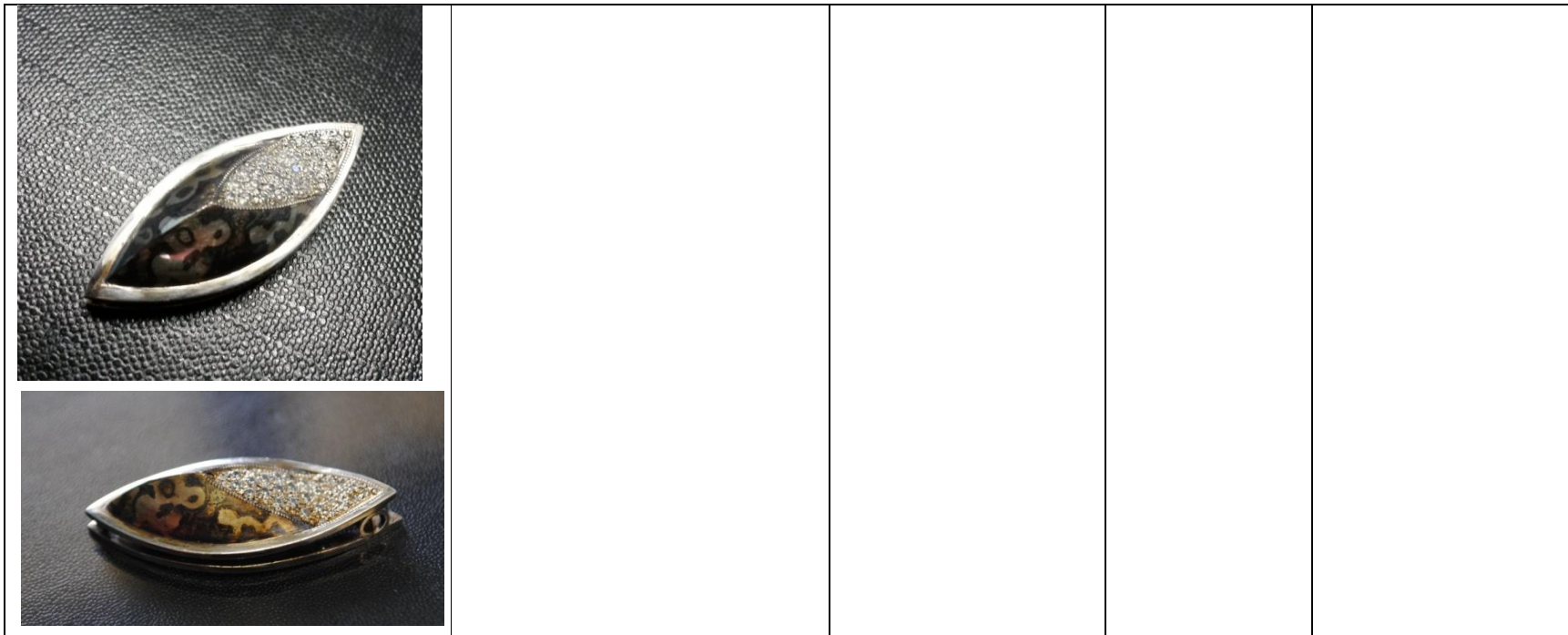
	<p>Create another silver plate to place between already fused plates.</p> <p>Rolled billet thinner and punched some indentations into the plates from back and finally filed off the top of the indentations.</p> <p>Repeat steps of fusing the plates together using the annealing torch.</p>	<p>Heat up plates with annealing torch without applying pressure until silver sweats on the sides.</p> <p>Absolutely no chipping or cracking of the plate during rolling or during the filing of the billet.</p> <p>Plate looks promising.</p>	<p>The moment when silver sweats remove torch and place the billet upon a steel block.</p> <p>Hammer the entire surface of billed in order to induce the fusing of the metal plates.</p> <p>Usually when filing punching or rolling a billet which was soldered together the laminates would come loose or start to chip which should then be subsequently soldered again.</p> <p>No cracking or loosening of laminate layers.</p>	<p>Metal plates fused to perfection. Advance to roll mokume billet through rolling mill and punch in depressions.</p> <p>Mokume billet looks very good thus far. Continue to cut and fuse the plates using the annealing torch followed by rolling punching and filing until the plate displays a satisfying wood grain pattern.</p> <p>Plate is to my satisfaction. In future I would only use the annealing torch to fuse the plates together as this mokume billet came out perfect according to my own observations or other mokume plates I have seen done before by soldering.</p>
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Mokume rings 1 & 2 with enamelled and niello channel centre				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	Create a more controlled pattern on the mokume plate.	Using a self-made punch, I punched a controlled pattern onto the back of the mokume laminate and filed off the dents it created on the top.	The pattern seems to be a bit more controlled.	The pattern on the billet resembles a symmetrical wood grain. Advance to roll billet through rolling mill to minimise the punch holes on the back of the laminate.
	Rolled mokume billet and created a flat ring shank.	Is curious to see if the mokume laminate will crack when it is bend up into a ring shank.	No cracking when laminate is bend into ring shank.	Ring shank looks pleasing and mokume pattern is to satisfaction. Continue to dome ring slightly.
	Ring is domed slightly.	Is curious to see if there will be any cracking or splintering of mokume plate as ring is domed in doming punch.	No cracking or splintering of mokume plate can be observed.	Ring is domed to satisfaction with mokume pattern in tack without any flaws. Advance to cutting rings in half and soldering in a channel.

	<p>Ring is cut in half and a smaller silver shank is inserted between the two parts in order to create a channel for inserting niello and enamel.</p>	<p>Solder shank between domed rings using hard solder. Soldering the shank between the two parts transpires without any anomalies.</p>	<p>No solder seams present.</p>	<p>The mokume domed rings seem to solder easily even as hard solder was used. Advance to insert red enamel in one ring and niello in the other in order to see the effect of the combination of these techniques.</p>
	<p>Insert niello and enamel into channels.</p>	<p>Insert niello into channel of one ring using a torch whilst heating ring from the inside in order not to place flame directly onto niello.</p> <p>Insert the enamel into the other ring and melt enamel in furnace.</p>	<p>Niello initially looks good but is difficult to cover as the ring is round and the niello flows downwards due to gravity.</p> <p>The red enamel flows smoothly.</p>	<p>After filing some Cavities are present in the niello channel. But overall the cavities seem to not distract from the Aesthetics of the ring as it complements the mokume pattern.</p> <p>After the Red enamel has cooled it started to chip profusely it was removed and only a thin layer of enamel was inserted which also chipped.</p> <p>Action: the red enamel should be completely removed and the channel should be filled with transparent enamel which can take more tension.</p>
				

Mokume pendant with pave setting.				
Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Create mokume billet with same procedure as previous rings and Square.</p>	<p>Use only the annealing torch to create mokume laminate using no solder.</p>	<p>Outcome is similar and no chipping or loosening of the mokume plate.</p>	<p>mokume billet is perfect without any flaws.</p>
	<p>Cut mokume plate resembling design and dome. Cut sedge out from dome and bend two parts together and solder.</p> <p>Use fine silver to assemble rest of the pendant.</p> <p>Create gallery using square wire and plate at the bottom.</p>	<p>No chipping or separation of mokume laminates in the doming of the plate.</p> <p>Insert thicker centre plate to allow for pave setting. Pave setting plate should be thick enough in order to allow the girde of the stones to be set to sit just underneath the surface.</p> <p>After a frame has been pierced into the bottom plate. The bottom plate is soldered onto pendant using square wire at the bottom and a tube on top which will act as a loop for a chain</p>	<p>Plate is without any flaws.</p> <p>All looks well but should add a gallery to the pendant.</p> <p>The gallery looks good adding a bit of sophistication to the pendant.</p>	<p>Initial mokume looks good, and pattern is to satisfaction. Assemble rest of pendant using fine silver.</p> <p>Advance to add gallery to pendant.</p> <p>The pendant is to satisfaction. Advance to set pave stones onto the centre Marquise shape.</p>


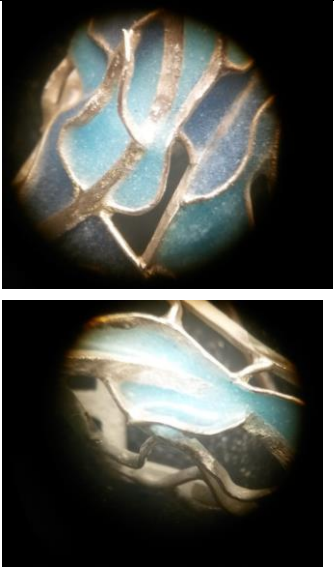
 	<p>Drill holes for the pave setting. Prepare seating for stones using a setting burr. Phrase out pave pattern using a 0.2mm lens burr. Set the stones. Add granules around the settings with a milligrain wheel.</p>	<p>Measure stones meticulously in order to make sure there is enough metal around stone in order to make beads. Mark the centre of each stone where it should be drilled. Drill exactly where mark was made making sure the drill does not move from the marks made. Use setting burr to burr seating deep enough for the stones to be set properly. Use lens burr to phrase away all unwanted metal between stones which is not required for the forming of the beads holding the stones. Set stones using a small beading tool. Use a milligrain wheel to finish off frame of pave setting.</p>	<p>Holes are drilled to perfection with only a few holes being a bit off centre.</p>	<p>Holes are drilled to satisfaction. Seating for stones is deep enough for stones to be set properly. Pave setting pattern is phrased out to satisfaction. Stones are set properly and looks professional. Milligrain adds sophistication to the finishing of the setting.</p> <p>Final reflections: Pendant is well manufactured and aesthetically very pleasing with the brightness of the pave setting complementing the darker mokume plate. The finishing of the pendant is done well with crisp corners adding to the aesthetic quality of the piece. The mokume plate is buffed and placed into blackening solution but left unpolished as it brings out the pattern and complements the bright pave setting.</p>
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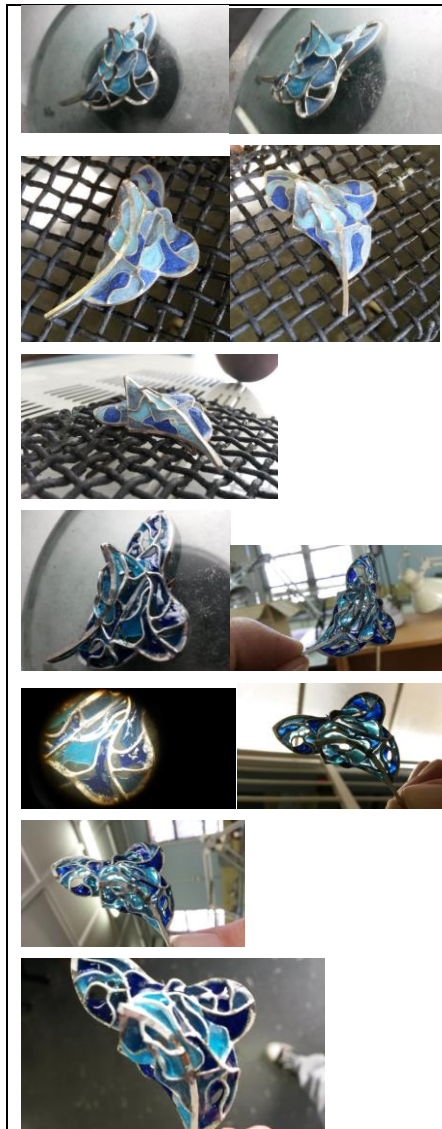


Cloisonné Enamelled sun pendant with pave setting and granules.

Images	Facts and actions	Immediate reactions	Preliminary reflections	Reflections
	<p>Designed a sun flower shaped domed pendant representing the African sun and sunflower.</p> <p>Manufacture pendant using traditional assembling techniques.</p>	<p>Instead of taking the chance of the yellow enamel to discolour and chip, the yellow will be replaced by safer transparent enamel.</p> <p>Make sure the plate for the pave setting is quite thick as larger stones will be set.</p>	<p>Changing the colour of the design will severely alter the meaning of the original design as the inspiration is the African sun and sunflower.</p> <p>All soldering is done with hard solder.</p>	<p>Don't want to take the chance of the enamel to discolour.</p> <p>Piece is well manufactured with no solder seams visible. Plates are clean with no oxidation. Advance</p>

	<p>Cloisonné compartments are prepared and soldered only at bottom using minimal solder. The rest of the cloisonné wires are bend into place.</p> <p>Insert enamelling into cloisonné compartments.</p> <p>Fire enamel in furnace.</p> <p>Fill up chipped areas with thin enamel layer.</p> <p>Prepare pave setting as explained previously.</p>	<p>Use fine silver throughout as sterling silver will alter the colour of the enamel.</p> <p>Make sure the cloisonné wires or compartments are even and radiates evenly smaller to the back.</p> <p>Make sure enamel is evenly distributed and not too thick.</p> <p>Fire enamel at 850 degrees in kiln until enamel is melted and surface is smooth.</p> <p>Fire at 850 degrees until surface is smooth.</p> <p>Set stones using the appropriate beading tool.</p>	<p>Granules is also soldered and smoothed and rounded using a cup burr.</p> <p>A small tube is soldered on top to accommodate a chain.</p> <p>Cloisonné compartments are evenly distributed and radiates evenly to the back.</p> <p>Enamel is easily inserted into compartments.</p> <p>Cool down enamel very slowly to avoid cracking or chipping.</p> <p>Cool down slowly.</p> <p>Set centre blue stone on order to complement the blue enamel.</p>	<p>to make cloisonné compartment for enamelling.</p> <p>Advance to cover or insert enamelling into cloisonné compartments.</p> <p>Preliminary enamel looks promising. Advance to fire enamel.</p> <p>After cooling only small parts of the black enamel chipped of on the edges.</p> <p>Action: only fill up thin layers of enamel where it chipped off to avoid too much tension due to thick enamel.</p> <p>After cooling down the piece slowly there is no chipping or cracking of enamel. Advance to prepare seatings for pave setting.</p> <p>Final reflections: The transparent enamel performed very well with almost no chipping or cracking. The piece is</p>
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				<p>aesthetically very pleasing with the pave setting complementing the enamel very well.</p>
<p>Three Dimensional Plique a jour Fibula.</p>				
<p>Images</p>	<p>Facts and actions</p>	<p>Immediate reactions</p>	<p>Preliminary reflections</p>	<p>Reflections</p>
	<p>The intent of this piece is to see how plique a jour enamelling performs in more unconventional three dimensional compartments.</p> <p>Manufacture skeleton of fibula using thin triangular wire and fill up the frames with even thinner round wire which has been rolled flat in the rolling mill.</p> <p>The enamel is inserted into the partitions of Plique a jour wires.</p>	<p>Traditionally Plique a jour enamelling is done using thin flatly rolled wire but on a flat structure.</p> <p>This piece is manufactured without a set design but the wires are intentionally bend into adverse shapes in order to see how the enamel adheres and perform.</p> <p>The enamel is inserted under the microscope in order to avoid being placed</p>	<p>The piece is everything besides flat with some wires displaying unusual shapes.</p> <p>The enamel is easily inserted into most of</p>	<p>The piece is well manufactured and the wires are soldered excellently by using only hard solder. A spring pin is soldered at the back which is made with 50% silver and 50 % copper in order to hold its tension after it is fired in the kiln as fine silver will surely become too soft after heated.</p> <p>The enamel has been meticulously inserted into all partitions to</p>



The piece is inserted into the Kiln until the enamel melts.
 The opened areas are again filled up with enamel a few times until all the holes are filled up with enamel.

The final application of enamel is inserted into the compartments and fired.

onto areas of the wire where it needs to be clean as the piece will be difficult to finish off at the end due to the three dimensional shape.

The enamel is fired until it is melted and smooth.

The final firing is held a few seconds longer in 850 degrees to make sure the various enamel layers melts and flows perfectly.

the partitions with only some proving to be challenging.

Most of the enamel as expected contracts upon itself as it melts.

The wires are kept as it is with no filing of the enamel on the wires in order to be able to inspect the flow of the enamel.

Before cooling the enamel looks extremely promising.

satisfaction. Advance to fire the enamel in the furnace.

As a consequence of the enamel contracting upon itself as it melts there is quite a lot of holes in the partitions which needs to be filled up again until the compartments is all filled. Reflecting on the design of the fibula these holes actually complement the piece and it would suite the design in leaving it just as it is. But for the purpose of this test I will advance to fill all the holes until it is completely filled with enamel.

Final reflection: even though it took a few applications of enamel to fill up all the compartments, the final result is striking resembling beautifully



stained glass windows. It would seem that the biggest hindrance for enamelling especially Pliqué a jour enamelling is gravity. It would be extremely interesting to see what type of unusually shaped designs might be possible in a zero gravity atmosphere.