

THESIS

BEAUTIFUL CONNECTIONS: MARIDADI FABRICS, JACK LENOR
LARSEN, AND THE EAST AFRICAN KANGA

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Trisha Green Logan

Department of Design and Merchandising

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WE HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER OUR SUPERVISION BY TRISHA LOGAN ENTITLED BEAUTIFUL CONNECTIONS: MARIDADI FABRICS, JACK LENOR LARSEN, AND THE EAST AFRICAN KANGA BE ACCEPTED AS FULLFILING IN PART REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS.

Committee on Graduate Work

Patricia Conover

DeLanda A. Sanders

Adviser

John Carlson

Co-Adviser

John Carlson

Department Head/Director

ABSTRACT

BEAUTIFUL CONNECTIONS: MARIDADI FABRICS, JACK LENOR LARSEN, AND THE EAST AFRICAN KANGA

This research examined the *Maridadi* textile collection housed in the Historic Costume and Textiles Collection in the Department of Design and Merchandising at Colorado State University (CSU). The researcher hoped to develop a new understanding of *Maridadi* textile designs utilizing Stuart Smith's "Material History Methodology" (1985), Ann Marie Fiore and Patricia Anne Kimle's Understanding Aesthetics for the Design and Merchandising Professional (1997), and Marilyn Revell DeLong's The Way We Look (1987). The textile designs were placed within the context of both design cultures from which they stem, those of Kenya and the U.S. Specific design elements such as the binary themes (DeLong, 1998) of figure-ground integrated/figure-ground separated, and determinate/indeterminate were analyzed. Design elements also considered include mono-chromatic and chromatic colors as well as organic and geometric shapes (Fiore and Kimle, 1997). The designs were also examined by looking closely at their Material, Construction, Provenance, Function, and Value (Smith, 1985). By comparing the textile designs of the Larsen Design Studio and the *kanga* designs of Kenya in the late 1960s the research addressed the issue of the social time in which the *Maridadi* textiles were produced.

A random sample of thirty-four *Maridadi* textiles, eleven *kanga*, and seventeen images of the Larsen Design Studio textiles was used in the research. The content analysis method was used in the examination of the *Maridadi* textiles. Three trained coders (researcher, one professor, and a graduate student) identified where on a continuum a textile artifact lands between the binary themes from DeLong (1998) and Fiore and Kimle (1997). The Smith (1985) model for studying material culture was also be used to analyze the *Maridadi* textiles. The traditional Kenyan textile, the *kanga*, and the textile designs of the Larsen Design Studio were used as comparative data.

The researcher identified where each of the thirty-four textile samples landed on the continuum between the binary themes. The number of times that each continuum between the themes was landed on was calculated. After all thirty-four textile samples were analyzed by all three coders using the Smith (1985) model and compared with the textiles of the Larsen Design Studio, and the traditional textile, the *kanga*, by the researcher only, the information was carefully scrutinized. Themes such as specific materials, color palettes, and construction methods, were extracted from the information and grouped and re-structured.

Trisha Green Logan
Department of Design and Merchandising
Colorado State University
Fort Collins, CO. 80523
Spring 2003

Table of Contents

Chapter One: Introduction	4
Background	4
Purpose	5
Research Questions	6
Objectives	7
Assumptions	7
Scope and Limitations	8
Definitions	8
Chapter Two: Review of Literature	14
The Study of Art in Africa	14
Formal Features	15
Art History in East Africa/Kenya	17
Kenya	18
Geography	19
Religion	20
Language	21
Political Atmosphere	22
Textile Traditions in Kenya	23
Kikoi	24
Kanga	24
Weaving	26
Late 1960s Textiles in the U.S.	26
Jack Lenor Larsen	28
History of Maridadi Fabrics	30
Textile Designs	33
Screen-Printing Process	35
DeLong Framework-The Way We Look	36
Fiore and Kimle-Elements and Principles of Design	37
Smith Framework-Material History Methodology	39
Development of Model	39
Completed Model	39
Data Defined	40
Questions Defined	41
Chapter Three: Methods and Procedures	42
Introduction	42
Pilot Test	43
Sampling	44
Data Collection	45
Data Analysis	46

Chapter Four: Using Binary Elements and Principles of Design To Analyze Maridadi Textile Designs	48
Introduction	48
Research Questions	49
Objectives	49
Review of Literature	49
1960s Textiles in Kenya	49
Late 1960s Textiles in the U.S.	51
History of Maridadi Fabrics	52
Textiles Designs	54
Elements and Principles of Design From DeLong	55
Elements and Principles of Design Fiore and Kimle	56
Methods and Procedures	57
Pilot Test	57
Sampling	58
Data Collection	59
Data Analysis	60
Table 1. -Binary Elements and Principles of Design Themes Percentages	61
Binary Themes	61
Table 2. - Binary Theme Percentages For Maridadi Textiles	62
Conclusions	72
Significance	73
Future Research	74
 Chapter Five: Beautiful Connections: Comparing Maridadi Fabrics to Those of Jack Lenor Larsen and the East African Kanga	 75
Introduction	75
Background	75
Purpose	76
Research Questions	77
Objectives	78
Review of Literature	78
Textiles Traditions in Kenya	78
Kanga	79
Late 1960s Textiles in the U.S.	80
Jack Lenor Larsen	82
History of Maridadi Fabrics	83
Textile Designs	86
Screen-Printing Process	87
Smith Framework	89

Development of Model	89
Completed Model	89
Data Defined	90
Methods and Procedures	90
Pilot Test	90
Sampling	91
Data Collection	92
Data Analysis	93
Findings	94
Themes from Original Smith Model	94
Smith Model Adaptation	96
Model	101
Figure 1.-Relationships	102
Of Design Themes in Maridadi	
Textiles Model	
Conclusions	102
Significance	103
Future Research	104
Chapter Six: Conclusions	105
Findings	106
Significance of Binary Themes	107
Significance of Smith Model Themes	108
Future Research	109
References	111
Appendix A	114
Appendix B	117
Appendix C	121
Appendix D	123
Appendix E	125
Appendix F	127

CHAPTER I

INTRODUCTION

Background

The Department of Design and Merchandising at Colorado State University (CSU) houses the Historic Costume and Textiles Collection. This collection holds the textiles of *Maridadi Fabrics*, which was the name of both the company and the factory, as well as traditional African textiles. *Maridadi* is a Swahili word meaning “decorative”, “pretty”, or “fancy” (Court, 1973, p.36). The family of former CSU professor and designer, Dorothy Udall, donated the textiles in 1996. Dorothy Udall helped to start the Kenyan textile company in 1966 (Court, 1973). Along with the textiles there is other *Maridadi* paraphernalia such as shopping bags, posters, company brochures, etc. Several photographs of the textiles’ creation, the sources of design inspiration, and the women and men that worked at *Maridadi* were also generously donated by the Udall family to the Collection. Also found in the collection are newspaper articles that Udall saved about the company. In addition to the *Maridadi* textiles, the Udall collection includes traditional East African textiles, such as *kanga* and *kikoi* collected by Udall while living in Kenya. This wealth of materials is a veritable treasure, contributing greatly to the overall Collection of the University. The

opportunity to work directly with this treasure was the inspiration for this research and thesis.

The Maridadi textiles within the Collection were designed during the late 1960s. The *kanga*, which was worn during the late 1960s, has been one of the most popular textiles in Kenya since the mid-nineteenth century (Perani and Smith, 1998). The *kanga* is a screen-printed cotton textile used for a variety of purposes all over East Africa (Perani and Smith, 1998). Also during the late 1960s, American Jack Lenor Larsen was carving out his niche as one of the most prolific textile designers of the period. Larsen's career was booming during this time and he had a major influence on the design world. Interestingly enough, Larsen and Udall both attended Cranbrook Academy of Art before starting their respective careers in the interior design field, an interesting coincidence that deserves further investigation than the intended scope of this thesis (New Stanley, 1969; Larsen, 1998). However, this fact points toward the possible correlation between the two traditions: Kenya influencing the United States and the United States influencing Kenya.

Purpose

This research focused on the *Maridadi* textile collection housed in the Historic Costume and Textiles Collection in the Department of Design and Merchandising at Colorado State University (CSU). The purpose of the research was to develop a new understanding of *Maridadi* textile designs utilizing Stuart

Smith's "Material History Methodology" (1985), Ann Marie Fiore and Patricia Anne Kimle's Understanding Aesthetics for the Design and Merchandising Professional (1997), and Marilyn Revell DeLong's The Way We Look (1987). This was accomplished by tracing the origins of the textile designs by placing them within the context of both design cultures from which they stem, those of Kenya and the U.S. Specific design elements such as the binary themes (DeLong, 1998) of figure-ground integrated/figure-ground separated, and determinate/indeterminate were analyzed. Design elements also considered include mono-chromatic and chromatic colors as well as organic and geometric shapes (Fiore and Kimle, 1997). The designs were also examined by looking closely at their Material, Construction, Provenance, Function, and Value (Smith, 1985). The question of whether or not these textiles represent their social time or style period, the late sixties, and/or culture was of major concern. The social time issue was addressed by comparing the textile designs of the Larsen Design Studio and the *kanga* designs of Kenya in the late 1960s. If the studied textiles were found to be representative of the late 1960s, then the characteristics that make them such were explored.

Research Questions

The following questions were examined throughout the research:

- 1) What place on the continuum between the binary themes (DeLong, 1998) (Fiore and Kimle, 1997) do the 2-D forms on the Maridadi textiles fall?

- 2) May the Smith (1985) model for analyzing material culture be adapted to compare textile designs by the Larsen Design Studio and Maridadi textiles?
- 3) Do similar design aesthetics occur in both the textile designs of the Larsen Design Studio and the Kenyan designed kanga, during the late sixties?
- 4) How are the Maridadi textiles a product of their social space and time, the late 1960s?

Objectives

The following objectives were identified to facilitate completion of this research:

- 1) Discover the binary themes (DeLong, 1998) (Fiore and Kimle, 1997) which make the *Maridadi* textiles a product of the late 1960s.
- 2) Unveil the elements and principles of design that make these textiles a product of both Kenya and the United States.
- 3) Discover whether the Smith Model for analyzing material culture may be adapted to compare the *Maridadi* textiles to those of the Larsen Design Studio.

Assumptions

The project depended upon the following assumptions:

- 1) This work assumes that all textiles in the sample are from the *Maridadi Fabrics* collection and are representative of *Maridadi* textiles.
- 2) All *Maridadi* textiles and *kanga* are assumed to be from 1966-1970.
- 3) All paperwork in the Historic Costume and Textile Collection is believed to be correct and sampling accurate.
- 4) The images of the Larsen Design Studio textile designs examined are assumed to be from 1966-1970.

- 5) All *kanga* designs are assumed to be imported from Kenya during 1966-1970.
- 6) All *Maridadi* textiles are presumed to have been created using the traditional method of screen-printing.

Scope and Limitations

The following scope and limitations were identified for this project:

- 1) Only the specific design characteristics binary themes (DeLong, 1998) (Fiore and Kimle, 1997) such as figure-ground integrated/figure-ground separated, organic /geometric shapes, warm/cool colors, and determinate/indeterminate are to be examined.
- 2) The traditional Kenyan textile the *kanga*, or *khanga* will be the sole form examined.
- 3) The primary examined representative of western textile design on *Maridadi* will be the work of the Larsen Design Studio.
- 4) The historical epoch will be limited to 1966-1970.
- 5) Artifacts held within the textile collection in the Department of Design and Merchandising at Colorado State University will be the sole body used for sampling of the Maridadi Collection as well as the *kanga*.
- 6) The sole body used for the sampling of the Larsen Design Studio textile images will be the online Larsen archive.

Definitions

aesthetics	understanding our response to what we value, and how we view and respond to the apparel-body-construct with evaluation being at the end of the process (DeLong, 1998, p. 339)
asymmetrical balance	when visual weight is perceived as unequally distributed from one side to the other of an imaginary central line or point (DeLong, 1998, p. 339)

batik	an ethnic print usually printed on plain weave cotton broadcloth. The traditional wax-resistant, hand-printed and dyed technique originated in Java. Typical batiks have a softly cracked color that results from the dye partially penetrating the cracked wax surface. (Tate, 1999, p. 246)
color	the spectrum of light perception that provides definition and potential visual relationships through dimensions of hue, value, and intensity (DeLong, 1998, p. 340)
complementary colors	colors directly across from each other on the color wheel. Example- blue and orange, red and green, and blue-violet and yellow-orange (Fiore and Kimle, p. 122-123).
cool colors	comprise the side of the color wheel from blue-violet through blue, green, and yellow-green (Fiore and Kimle, p. 122)
cotton	a vegetable fiber from the boll of the cotton plant; the world's major textile fiber (Frings, 1999, p. 362)
cultural context	a person's cultural environment that influences perceptions, thinking, and overt behavior (DeLong, 1998, p. 340)
culture	the symbolic and learned aspects of a unified societal group (DeLong, 1998)
design	the planning for the structure of a visual form; also, the result of a planning and imaging process (DeLong, 1987, p. 164)
determinate/indeterminate	the range of visual spatial possibility applied to the surface character of the form. Determinate surfaces can appear sharp, regular, clean-cut; indeterminate, or soft-edged surfaces appear less definite in the way they delimit space (DeLong, 1998, p. 104, 340)

edge	line that identifies a bounded area (DeLong, 1998, p. 340)
elements	the most basic components of an apparel-body-construct (DeLong, 1998, p. 340)
fabric hand	describes the way a fabric feels to the sense of touch (Fiore and Kimle, p. 162)
figure	that which we view as having object quality, appears to be in front of ground (DeLong, 1987, p. 164)
figure-ground ambiguity	a viewing situation in which reversals can occur in what appears as figure, i.e., that which at one time appears as figure switches and becomes ground (DeLong, 1998, p. 341)
figure-ground integration	a viewing situation in which the figure and ground are viewed as if on a similar plane (DeLong, 1998, p. 341)
figure-ground separation	a viewing situation in which the figure appears to be on a plane at some distance from its ground (DeLong, 1998, p. 341)
filled space	spaces that have many figures created by a pattern or texture and little or no apparent ground surface (Fiore and Kimle, p. 173)
flat-rounded	the range of visual spatial possibility applied to the surfaces of a form that connect the surface as rounding the body or not (DeLong, 1998, p. 341)
geometric shapes	generally characterized by straight, angular lines or simple forms. Squares, rectangles, triangles, and circles are common geometric shapes (Fiore and Kimle, p. 143)
ground	the field of visual activity of an apparel-body-construct; that which surrounds and appears to lie beneath the figure (DeLong, 1998, p. 341)

grouping	the process of relating similar visual units in perception, and automatic, interactive viewer process that helps in understanding the organization of an apparel-body-construct when brought to consciousness (DeLong, 1998, p. 341)
hard-edge lines	lines that are simple, angular, decisive, and sharp (DeLong, p. 176)
irregular shapes	may be bounded by a combination of straight and curved lines and are often viewed as more fluid and less separated as figure (DeLong, p. 185)
line	actual or imagined linkages between points or areas; a contour (DeLong, 1987, p.165)
loom	any mechanism which holds the vertical or warp threads under tension and so facilitates the insertion of weft material to produce cloth (Talley, 1982, p. 200)
maridadi	Swahili word meaning "decorative", "pretty", or "fancy" (Carlson, 2001, p.57)
mono-chromatic colors	multiple tints, tones, or shades of a single hue (Fiore and Kimle, p. 122)
neutral colors	includes colors such as beige, tan, taupe, brown, white, gray, and black (Frings, 1999)
ordered pattern	shapes are interspersed at regular distances from each other in uniform positions (Fiore and Kimle p. 143)
organic shapes	usually have curvilinear lines and are similar to objects found in nature (Fiore and Kimle, p. 143)
pattern	viewing and orderly sequence consisting of repeated parts (DeLong, 1998, p. 342)
planar effects	appearing to be on a flat surface parallel to the visual field (DeLong, 1998, p. 342)

point	the dot in perception; the intersection of two or more lines; a source of focus if single and strong (DeLong, 1987, p. 165)
primary colors	yellow, blue, and red (Fiore, p. 121)
random pattern	shapes that are arranged with no uniformity or regularity in their distance or placement (Fiore and Kimle, p. 143)
regular shapes	bounded by straight or curved lines and are often viewed as simple figures separated from ground, for example, circles, squares, and triangles (DeLong, p. 185)
secondary colors	green, purple, and orange (Fiore and Kimle, p. 121)
silkscreen	technique used in textile printing in which the desired pattern design is inscribed on a fine mesh surface, stretched taut in a frame. Subsequently, the ink or dyestuff is squeezed through the framed stencil to render a pattern on the fabric surface (Talley, 1982, p.200)
shape	a bounded area often perceived as having at least the two dimensions of length and width or three dimensions by including depth (DeLong, 1987, p. 165)
soft-edge lines	lines that are curving, indistinct, and blurred (DeLong, p. 176)
structure	source of organization or arrangement of visual parts within context of the whole, especially those form features that direct movement (DeLong, 1987, p. 166)
Swahili	a Bantu language spoken along the entire coast of Kenya and Tanzania (Knappert, 1987, p. 375)
symbolic qualities	culminate in meaning or content, communicating an idea about the world (Fiore and Kimle, p. 9)

symmetrical balance	when visual weight is perceived as equally distributed from one side to the other (DeLong, 1998, p. 344)
tertiary colors	yellow-green, blue-green, blue-purple, red-purple, red-orange, and yellow-orange (Fiore and Kimle, p. 121)
textured	having a surface that appears filled and active, often from weaving or printing (DeLong, 1987, p. 166)
unfilled space	has few or no figures on the surface (Fiore and Kimle, p. 173)
warm colors	include the range of colors from red-violet through red, orange, and orange-yellow (Fiore and Kimle, p. 122)
weaving	the process of producing a cloth by interlacing warp and weft threads (Talley, 1982, p. 200)

CHAPTER II

REVIEW OF LITERATURE

The Study of Art in Africa

As Art History developed as a discipline, so too did the study of African art; however, it was not studied extensively by mainstream scholars until after 1900. In 1905 the arts of the continent gained wider appreciation when European artists, in Germany and France, acknowledged the importance of the art on their own work and philosophy. Following this "discovery" the excitement for African arts rose, and the first private collections were acquired (Vansina, 1984). However, this excitement was limited, as it took only form into account, disregarding cultural investigation. The most interesting questions that revolve around African Art, such as the uses of the objects in cultural representation and cycles of exchange, were for the most part ignored (Rosette, 2002). As Vansina (1984) stated that, "Only artistic form mattered, social context and meaning were irrelevant" (Vansina, 1984, p. 19). It was not until 1933 that the first field research was directed towards art specifically, and not until 1945 that an "African art" specialty developed in anthropology. From 1956 to the present the historical perspectives have developed slowly (Vansina, 1984). Today the study of African

art continues to grow into a major field of study, with increasing emphasis placed upon cultural and societal factors.

Formal Features

A History of Art in Africa (Visona, Poynor, Cole, Harris, 2001) provides a framework for the study of African Art. There are several characteristics that stand out when looking at art in Africa. These distinctive features are: innovation of form, visual abstraction, parallel asymmetries, sculptural primacy, performance, humanism/anthropomorphism, ensemble/assemblage, and multiplicity of meaning (Visona et al., 2001).

Innovation of form- The fact that one continent can have such diverse art traditions proves its concern with creativity and originality. A single town or region can have a variety of art forms. This innovation of form has also been seen throughout history. One can look back at early works at a site and see the differences from the twentieth century pieces (Visona et al., 2001).

Visual abstraction- Much of African art abstracts naturalistic depictions of form. This stylization of forms can be subtle or unmistakable, but is almost always present in African art (Visona et al., 2001).

Parallel asymmetries- Visona et al. (2001) stated that, "African artists often reveal a fundamental concern with a visual combination of balanced composition and vital asymmetries" (Visona et al., 2001, p.16). Broken lines are more common than straight, direct ones when used in sculpture, architecture,

and textiles. Pattern elements that vary as well as fractures and alterations in the pattern are also preferred over literal replications (Visona et al., 2001).

Sculptural primacy- The majority of African art is assembled or shaped into three-dimensional forms and even two-dimensional art forms are generally meant to be seen three-dimensionally. For example, textiles are generally worn on the body, used to create tents or structures, or hung on the wall (Visona et al., 2001).

Performance- Often, African art forms are seen within the context of performances. People perform with art and collectively become art.

Masquerades continue to be the most complex form of art in Africa (Visona et al., 2001).

Humanism/ Anthropomorphism- Africa has historically placed major importance on the adornment and transformation of the human body (Visona et al., 2001). These forms of art include masks, body painting, beadwork, and costume.

Ensemble/ Assemblage- Works of art in Africa are generally assembled together. These materials are composed things such as shrines and masquerades to form a single body of art (Visona et al., 2001).

Multiplicity of meaning- African art is comprised of multiple meanings and intellectual complexity. These meanings transpire in a single work of art. For example, a single textile can mean different things to people of different ages, genders, and levels of knowledge (Visona et al., 2001).

Art History in East Africa/Kenya

Throughout history, East Africa has continued to have the least studied and most varied art traditions in Africa. The majority of the art from the inland of the region is not dated and most of it is of recent origin. The only exceptions are a few rock paintings and some ceramic pieces from Uganda and Bigo. It is not known when the hunters, herders, and farmers stopped their painting of rocks (Vansina, 1984).

In arid regions such as Kenya and Tanzania, where nomadic peoples reside, chief forms of art include rock painting, transportable objects, and art relating to the human body (Vansina, 1984). These transportable objects include shields, jewelry, and hide garments. Perani and Smith (1998) stated that, "pastoralist peoples focus aesthetic attention on the body and utilitarian domestic items, thereby imparting a social significance to items of dress and ornament, which visually express differences in ethnic identity, sex, age, and social position" (Perani and Smith, 1998, p. 309). Dress and ornament play a crucial role in shifts of status during life, and in particular beaded jewelry (Perani and Smith, 1998). In Kenya, among the pastoralist peoples, the time of the most extreme displays of human adornment occur during adolescence and early adulthood in order to attract the opposite sex (Perani and Smith, 1998).

Because the region is so ethnically and culturally diverse, it is hard to classify its artwork. These different cultures are each known for their own unique art forms. For example, those of Nilo-Saharan languages are known for

their amazing body art, whereas the Bantu-speaking groups create regalia and perform masquerades. A useful means of classifying the art is to examine its function within the society. For instance art forms that are worn or held help to identify things such as the owner's age, ethnicity, and status. Visona et al. (2001) also explains that, "Lineage affiliation, leadership roles, and adherence to Islam are also proclaimed by some forms of art and architecture" (Visona et al., 2001, p. 441).

Although several Europeans settled in East Africa, they had little influence on the arts beyond their settlements (Vansina, 1984). They had less effect on the arts of this region than they did on those of the West African coast (Vansina, 1984). This region remained true to its origins, with very little obvious external influence up until the time of the Udall's residence there.

Kenya

Kenya is a country with strong contrasts, not only in landscape, but in language, religion, and politics as well. All of these factors contribute to the shortage of textile traditions in Kenya as well as factoring into the textile traditions that do exist.

Geography

East Africa is home to two of the highest peaks on the entire continent, Mt. Kenya, and Mt. Kilimanjaro (Sayer, 1998). In and around these mountains there is a great variation in altitude from tropical plains to snowy peaks (Knappert,

1987). This wide variation in climate causes a diversity of plant and animal life (Knappert, 1987). In the forests reside such incredible animals as the elephant, buffalo, large cats, and baboons (Knappert, 1987).

Kenya is also home to a number of lakes including some of the largest in the world. The northernmost lake in Kenya, and on the border of the Great Rift, is Lake Turkana. The vast lake has a shoreline twice the length of the Kenyan coast. West of the Great Rift lies Lake Victoria, the source of the Nile and the second largest freshwater lake in the world (Sayer, 1998).

The Kenyan coast is bordered by the Indian Ocean. The coast is lined with beaches full of palm trees and tropical vegetation. Fruits of just about every species are grown on this fertile coast, including coconut, mango, cashew, watermelon, and pumpkin (Knappert, 1987).

The arid zones of northern and eastern Kenya are unsuitable for agriculture and except for a few nomadic herdsman there is not much activity. This arid zone makes up for about 50 percent of the area of the country, and this number continues to grow (Knappert, 1987).

The Eastern or Great Rift bisects Kenya, and from its rim one can view the savanna grasslands (Sayer, 1998). This vast open grassland is the region that the Maasai peoples converted from forest and agricultural land in order to suit their herding needs (Knappert, 1987). This part of Kenya receives an abundance of rain and therefore remains green for most of the year (Knappert, 1987).

Because of its geography, the textile traditions in Kenya are few and far between. For example, the wide open grasslands and arid zones are only inhabitable to pastoralist peoples, and cultures that revolve around herding. These peoples simply cannot haul the materials and tools needed in the creation of large textiles around with them. Additionally, this land does not have the ability to grow the sufficient crops needed for fibers and textiles. The cultures, such as the Maasai and Kikuyu, rely on the hides of their animals instead (Perani and Smith, 1998). Jewelry and adornment of everyday objects make up for this lack of textiles in allowing the people to express themselves.

Religion

There are four primary religious categories in East Africa. These include traditional African religions, Islam, Christianity, and Hinduism (Forester et al., 2000).

The traditional African religion includes many variations (Forester et al., 2000). This is an indigenous religion that differs from region to region (Forester et al., 2000). Islam came to East Africa through coastal trading, and makes up 6 percent of the population in Kenya (Forester et al., 2000) (Sayer, 1998).

Christianity is the largest religious group in Kenya, encompassing 70 percent of the population (Sayer, 1998). Christianity was brought to the region by European missionaries in the nineteenth century (Forester et al., 2000).

Hinduism, which is by far the smallest of those mentioned, is a religion primarily

practiced by Indians (Forester et al., 2000). Hinduism has had little effect on other ethnic groups in Africa (Forester et al., 2000).

Religion has had an influence on two of the textile traditions of Kenya. On the coast of Kenya, Muslim men wear a cap embroidered with Islamic motifs (Visona et al., 2001). Also, the *kanga* textiles of East Africa often include religious proverbs on them in Swahili (Perani and Smith, 1998).

Language

Because of the region's ethnic intricacy, one of the best methods of classifying the groups is by language (Sayer, 1998). The two official languages in Kenya are Swahili and English.

The Swahili language is spoken in large numbers in Kenya, Tanzania, and Uganda (Sayer, 1998). This word comes from the Arabic word 'sawahil', which means 'coasts' or 'shores' (Sayer, 1998). The Swahili people live in settlements, including settlements and smaller villages, along the coast of Eastern Africa including the islands bordering (Horton and Middleton, 2000). They have occupied this area since the first millennium (Horton and Middleton, 2000). Bi Kaje (1972-73) explains, "The Swahili are the kernel of Mombasa, indeed the navel of this town" (Mirza and Strobel, 1989). At the heart of their culture is a substantial trading system that they are at the center of, which reaches from central Africa to Indonesia, China, and from Europe to southern Mozambique (Horton and Middleton, 2000). In turn, they have controlled most of the intercontinental trade between eastern and southern Africa and Europe (Horton

and Middleton, 2000). The Swahili language, which was transported from the coast inland, has become the standard tongue in Kenya today (Sayer, 1998).

The Swahili language can be seen on textiles throughout Kenya. The *kanga* is the primary textile that utilizes the Swahili language. *Kanga* have become an increasingly important means of expressing ones views politically and socially through the addition of political slogans and social propaganda to the fabrics (Perani and Smith, 1998).

Political Atmosphere

In 1963 Kenya established independence with the help of the Prime Minister, Jomo Kenyatta. Since its independence, the country has experienced stability and peace relative to its neighbors. The compensation of this stability includes decent roads, schools, and water-supply systems, which all were built immediately following independence. Because of its stability, and pro-Western policies, Kenya has been generally regarded well in the West. Kenya however is not the picture of perfect political stability. Unfortunately, despite all of this progress made during independence, the rich continue to get richer and the poor get poorer (Sayer, 1998).

The political views of Kenya can be seen on the popular textile, the *kanga*. Because of its high visibility in the community, the government is increasingly using this textile as a means of getting its messages out to the Kenyan people (Perani and Smith, 1998).

Textile Traditions in Kenya

East African countries in general are not particularly known for their textiles, although there are a few traditions in the region (Court and Mwangi, 1976, p. 38). Because of their nomadic herding lifestyle, the peoples of Kenya could not carry all of the tools and materials required to create large quantities of textiles and as a result created jewelry and other small objects of personal adornment (Court and Mwangi, 1976, p. 38). Consequently, garments constructed out of hides and minimal amounts of woven textiles were produced. Court and Mwangi (1976, p.38) explain, "Although Kenya has a rich tradition in the crafts of personal adornment of nomadic peoples, there was little weaving or cloth design before the Arab and European intrusions."

Even though the region is not an area typically associated with weaving, the book, African Textiles, has several old photographs of people weaving on horizontal single-shaft looms. The reason weaving is in evidence is that at the time of the photos cotton was still a cultivated crop in Kenya and Tanzania; however, in the nineteenth century the colonial powers replaced these cotton farms with coffee plantations. With the virtual disappearance of the cotton plant, hand weaving disappeared as well (Carlson, 2001). There are two distinct Kenyan textile traditions worth mentioning: the *kikoi* and the *khanga*.

Kikoi

The *kikoi* is a woven cotton rectangle of cloth worn predominately by men, specifically fishermen. This colorful textile is usually woven in a striped or

plaid pattern and has fringed edges. The color palette almost always consists of red, yellow, white, and black but sometimes will include green, purple, pink, and turquoise. The *kikoi* is typically made of two narrow strips of fabric sewn together down the center to form a single, wide piece. It is worn tied around the waist lengthwise and is held in place by folding down the top edge to form a waistband. With their vibrant colors and bold stripes, these textiles create a striking appearance. The *kikoi* is considered a "traditional" item of clothing because of its long history of use among men on the coast of Kenya (Schoss, 1996).

Kanga/Khanga

The *kanga* or *khanga* is also a rectangular piece of fabric, usually 64" wide by 44" high, and persists as the most popular garment in Kenya even today (Perani and Smith, 1998). Cliff (1968) explains about the neighborhood that the *Maridadi* factory is in, "In Pumwani you will see more kanga worn than anywhere else in Nairobi" (Cliff, 1968, p. 20). These fabrics were the first printed cloth in the region (Court and Mwangi, 1976, p. 38). Women all over East Africa have been wearing this cloth since the mid-nineteenth century (Perani and Smith, 1998). *Kanga* are typically a female garment and can be worn in a variety of ways (Perani and Smith, 1998). These garments can be worn alone but are usually used over other garments to keep them clean (Perani and Smith, 1998). They are sometimes bought as a pair or as an ensemble called a "doti" (Perani and Smith, 1998). Men can be seen wearing *kanga* tied around the waist in the

same manner as the *kikoi* (Schoss, 1996). This textile is extremely soft and comfortable on the skin due to its fiber content of 100% cotton, which is one of the reasons for its popularity (Perani and Smith, 1998).

Historically the *kanga* designs were created by coastal traders from India and Portuguese, and today East Asia and East Africa. *Kanga* were originally made in India and Europe using a wooden block printing technique, but this has been replaced by screen printing. In the past, the cloth was exported from Europe, but by the 1960s and 1970s mill-made *kanga* from Kenya and Tanzania replaced the European ones. Today, a more inexpensive version from India can also be purchased (Perani and Smith, 1998).

Another reason Kenyans love the *kanga* is for its bold designs and bright colors (see Appendix A). A border almost always frames the motifs and patterns, which are often very elaborate (Schoss, 1996). Early this century, Swahili sayings and proverbs were added to *kanga*, sometimes to make a political statement and other times just for fun (Schoss, 1996). These sayings are at times ambiguous and enigmatic, left up to the reader for interpretation. Different regions are distinguished by different designs. For example, in Kenya mottos are more popular whereas in other regions of East Africa, political statements are more common (Perani and Smith, 1998). Traditional and contemporary vegetal and floral motifs are also frequently seen on *kanga* (Perani and Smith, 1998). A predominant motif used is the paisley, which represents the cashew nut in East African society (Perani and Smith, 1998). *Kanga* remain as some of the most

creative and entertaining textiles on the continent and in recent years have even been used by the Kenyan government for educational and communicational purposes (Perani and Smith, 1998).

Weaving

In East Africa, men perform the majority of the weaving in contrast to other areas such as North Africa, where women do the bulk of it. All over the continent of Africa distinctively different types of looms are used based on region and in East Africa only one type of loom is commonly utilized, the ground or horizontal loom. Two beams are pegged into the ground or mounted onto a framework. The method used to keep the warp tension is to stretch it between these two beams (Mack and Picton, 1979).

Although Kenya is not known for its textiles, because this craft is often overshadowed by the elaborate jewelry crafted in the region, there are some truly unique textile traditions in this country. The *kanga* and *kikoi* are unique textiles that contribute to the vibrant country that is Kenya.

Late 1960s Textiles in the U.S.

"It was during the decade of the 1960s that the "new" textiles began to appear." - Janiero (1996, p.18)

Textile design in the U.S. during the late 1960s struggled somewhat to develop its own look apart from Europe (Jackson, 1998). Jackson (1998, p.150) stated of the American designers that, "having exhausted the Contemporary

style, many began to fall back on the traditional sources of inspiration." These traditional styles mainly included floral patterns (Jackson, 1998). However, textile design in America had a few major developments.

The foremost new trend in textiles in the U.S. during the 1960s was the use of simple shapes based on colored stripes, as well as the growth in popularity of Thai silks (Jackson, 1998). Another new development was on the textural effects in woven fabrics (Jackson, 1998). Janiero (1996) stated that, "Fiber itself, and its constructive possibilities became the focus of the subject matter" (Janiero, 1996, p. 19). This trend, as with the trend for striped patterns, reflected the fondness for simplicity and understatement (Jackson, 1998).

Also of interest during the late 1960s were ethnic textiles. This started when several fiber artists used pre-Colombian textiles from Peru as a source of inspiration (Janiero, 1996). Janiero (1996) explains, "The 'discovery' of the archeological artifacts fueled an interest in ethnic textiles and, at this point, there was a convergence of the professional, the technical, and the populist textile maker" (Janiero, 1996, p. 36). The Peace Corps was also a major reason for the popularity of ethnic textiles, as personnel often brought back samples of indigenous weavings and textile products from all over the world (Janiero, 1996).

Other textile design trends in the late 1960s included using vivid coloring and vigorous patterns. Janiero (1996) explains, "work was created using fully saturated, heightened color, active all-over patterning (related more to the *horror vacui* of ethnic textiles than to the discoveries of the Abstract Expressionists) and

that reclaimed narrative and figuration in primarily non-illusionistic presentations" (Janiero, 1996, p.36). As the 1960s progressed and became more political, the textiles reflected this by including more topically direct imagery. The "back to earth" movement during this time also rekindled interest in domestic textiles such as quilting, crocheting, embroidery, and knitting (Janiero, 1996). One textile designer that remained on top of and often ahead of these trends was Jack Lenor Larsen.

Jack Lenor Larsen

Often called the dean of modern fabric design (Jack Lenor Larsen stands synonymous with American textiles of the Fry, 2002), 1960s. Born in 1927 in Seattle, he studied architecture, interior design, and weaving² at the University of Washington and continued his education with an M.F.A. from the Cranbrook Academy of Art (Fry, 2002). Larsen then moved to New York in 1951 where he set up a textile studio (Fry, 2002). Two years later, in 1953, he established Jack Lenor Larsen, Incorporated and then the Larsen Design Studio in 1958 (Fry, 2002). "Larsen, who was described in 1998 by *The New York Times* as possibly the most accomplished textile designer living, certainly one of the most innovative and influential in the second half of the 20th century, has created thousands of textile patterns that have appeared on everything from Pan American airplanes to rooms in Frank Lloyd Wright's Taliesin" (Masello, 2001, p. 82).

Although the 1960s were not the best of times for American textile design, Jack Lenor Larsen's design work remained strong. "Larsen's eclectic approach to

pattern design stands out as being in a totally different vein to that of his competitors. There was a fearlessness about his choices and a level of drive and commitment uncommon in the American design scene of the time" (Jackson, 1998, p.152). While the rest of the American market was playing it safe and turning to traditional sources such as floral patterns for inspiration, Larsen took risks and opted for something new (Jackson, 1998).

Larsen turned to ethnographic sources to inspire his textile designs (Jackson, 1998) (see Appendix B). "As with Alexander Girard, his eclecticism was a reflection of his historical and ethnographic interests: Larsen was constantly seeking out and absorbing visual ideas from textiles of the past and from other countries" (Jackson, 1998, p.152). In countries all over the world, Larsen followed the threads back to the villages from which the cloth was made, not just the markets that sold it (Fry, 2002). Fry (2002) explains Larsen's textiles, "They are informed by his exhaustive study of the world's textile traditions and contemporary technological innovations" (Fry, 2002, p. 48). The author (Fry, 2002) also describes one of Larsen's designs, *Chimu*, as a "perfect blend of ancient design, primitive technique, and modern material and dyes—connecting in common endeavor people of three continents and several divergent cultures" (Fry, 2002, p. 48). The source of design inspiration is not always self-evident in Larsen's designs, reflecting the level of his creativity (Jackson, 2002). Masello (2001) describes Larsen today, "With the energy and radiance of a man far younger, Larsen is famous for being many things: collector, teacher, master

gardener, garden designer, and most of all, textile designer—or ‘weaver’ as he prefers to be called” (Masello, 2001, p.82).

History of Maridadi Fabrics

“The truth of the matter is that it would take much more than merely hours to smash Maridadi Fabrics since, over the years, it has become not merely an organization that helps Nairobi women, but a symbol of the dynamism and spirit of Kenyan women as a whole.”

- Margaretta wa Gacheru (October 19, 1982, p.8)

Former CSU Interior Design professor, Dorothy Udall, helped create the Kenya-based textile company, *Maridadi Fabrics*, which was also the name of the factory where the textiles were created (Court, 1973). As Court (1973, p.36) explains, “Designer Dorothy Udall and one-time Pumwani social worker the Rev. Anne Barnett initiated the Maridadi Fabrics project in 1966.” Although a variety of outside influences from Kenyan and western cultures influenced the designs, the fabrics were intended to be uniquely Kenyan (Court, 1973).

Dorothy Udall received a B.S. and M.S. from Cornell University and studied at the Cranbrook Academy of Art (New Stanley, 1969). Udall taught Interior Design at Cornell University and Colorado State University (CSU) in the then Home Economics Department (New Stanley, 1969). She moved to Kenya with her husband Rob in 1965 (Kimenye, 1969). Rob Udall was also on the faculty at CSU in the College of Veterinary Medicine and Biomedical Sciences (*Fort Collins Coloradoan*, November 6, 1973). The two moved to the continent of Africa to allow Rob to teach at the veterinary school at the University of Nairobi in

Kenya (*Fort Collins Coloradoan*, November 6, 1973). Shortly after her arrival, Udall became concerned with the state of the women in the area (Kimenye, 1969). As she (Udall) explained in 1969, "I wanted to be more than just a visitor, so, like most people, I looked around for something in which my own experience could be useful." Deciding to take action, she wished, specifically, to help these women gain financial security (*Fort Collins Coloradoan*, November 6, 1973). With the help of the St. John's Community Center, an Anglican organization, the dream became reality (*Fort Collins Coloradoan*, November 6, 1973).

Maridadi Fabrics initially created batiks but soon discovered that the process was not time efficient (Kimenye, 1969). Udall decided to try screen-printing, which because of its efficiency quickly became their primary method of applying designs to the textiles (Cliff, 1968). Udall did not have an extensive background in the screen-printing of textiles but had a rudimentary understanding of the process.

She found screen-printing to be a practical way for some of the women in the most impoverished parts of Nairobi, specifically the Pumwani Shauri Moyo neighborhood, to make some additional money for their families (Kimenye, 1969). As one of the oldest and most impoverished in Nairobi, the neighborhood made an ideal choice (Court, 1973). The workers were chosen based on a list from social workers of the neediest women in the area (*Fort Collins Coloradoan*, November 6, 1973). The name Maridadi Fabrics was chosen for the company after the Swahili word meaning "decorative", "pretty", or "fancy" (Court and

Mwangi, 1976, p. 38). The company started out with only five employees and created small textile products including placemats, ties, pillow covers, and wall hangings (Court and Mwangi, 1976). As word got out about the vibrant company, they rapidly grew. As one journalist Susan Williams (1986) explains, "In just over 10 years the original handful of employees had swelled to a workforce of 80. Its first humble home, a disused brewery on loan from the city council, was outgrown, and Maridadi Fabrics, now almost a household name, moved into a purpose-built modern factory on Jogoo Road." This highlights the impact that the homegrown industry had on this poverty-stricken community in Nairobi. As the company grew in size, they began producing large yardages of fabric and ready-made apparel (Cliff, 1968). The fabrics were sold in upscale shops in Nairobi, exported to the United States and Britain, and bought to use in the interiors of several local businesses and hotels (*Fort Collins Coloradoan*, November 6, 1973).

Unfortunately, vandals ransacked the company in 1982. A local writer explained the situation of this first attack, "On the fateful August 1, however, Maridadi lost more than one million shillings in looted stock which included cotton cloth, special reactive dyes, lots of furniture and nearly two dozen sewing machines. They suffered another half million in damages which ranged from smashed walls and windows to bullet-riddled doors" (Gacheru, 1982, p. 8). These were all terrible to lose, but the loss of jobs for the women working at the factory had the greatest impact. Gacheru (1982), continues, "Perhaps what was

the most devastating of all was the effect that the day had on the lives of those eighty women and their children, since most of them had to be released from their work. They consequently have had no immediate source of income to pay for imperatives like food and school fees" (Gacheru, 1982, p. 8). The company luckily did not lose their most treasured items, their hand screen-printed designs (Gacheru, 1982). The fact that they retained these designs allowed the company to get back on its feet.

The Udall's' continued their involvement in the company after leaving Kenya to return to the U.S. by opening Maridadi West, a small factory outside of Fort Collins, CO, in 1970 (*Fort Collins Coloradoan*, November 6, 1973). Udall remained passionate about the project throughout her lifetime and kept in close contact with those running the operation after her departure.

Textile Designs

At the beginning, Udall was the primary designer of the textiles (Court, 1973). Eventually a larger design team including two primary designers and fourteen freelance designers worked for Maridadi as needed. Later, the design team grew even larger. The designs and motifs incorporated in the textiles were also an important part of the company's goals (Court and Mwangi, 1976). The designers aimed to use motifs and colors inspired by life in Kenya (Court and Mwangi, 1976). These motifs included people, geometric patterns, and animals (Court and Mwangi, 1976). Another major source of design inspiration was the

traditional art of the region such as jewelry, carvings, and everyday household objects (Williams, 1986). The designs all have specific Swahili, Kikuyu, or English names (Court and Mwangi, 1976). Court and Mwangi (1976) gave an example, "Wilson Waswa began his design career with a delightful, primitive butterfly pattern, followed by *Maendeleo*, Swahili for "progress", expressed in rockets and airplanes" (Court and Mwangi, 1976, p. 38-39). Eventually, more realistic designs depicting typical village life in the region were introduced (Court and Mwangi, 1976). These aspects gave the textiles a distinct connection to the culture and people of Kenya (Kahiga, 1971). This also helped Maridadi create a reputation for designing essentially Kenyan textiles in a region that had few textile traditions of its own (Court and Mwangi, 1976). The company was pressured by the western market to create designs that were not so large in scale, and they obliged, straying from their mission of creating completely Kenyan-inspired designs (Kahiga, 1971). Maridadi fabrics were never marketed specifically to locals but were used in some local businesses' designs (Kahiga, 1971). The designs that were created specifically for the western market are obvious. There also can be distinctions made between those designed by Kenyan artists and those created by Udall. The spatial arrangement, scale, and colors used bring these differences to the forefront. The same designers also created ready-made garments, ties, placemats, and pillow covers (Cliff, 1968).

Screen-Printing Process

Screen-printing is a contemporary method of applying color and pattern to a textile. "Screen printing is a particularly good labor-intensive business activity as well as an easy and inexpensive way to decorate cloth" (Court and Mwangi, 1976, p.38). There were several steps involved in the creation of the finished textiles at Maridadi (Court, 1973). The cotton fabric used by Maridadi was purchased from a commercial source in large quantities (Court and Mwangi, 1976). This base textile varied in weights and was not woven by hand but by machine (Court and Mwangi, 1976).

First, the artist created the design on paper and then it was transferred to the screen photographically (Court and Mwangi, 1976). The second step in the process involved pinning the cotton fabric to 10-yard long tables (Court and Mwangi, 1976). In the third step, the fabrics were printed by hand with a screen stencil process (Court and Mwangi, 1976). Fourth, the design was transferred to a plastic stencil using a light sensitive mixture (*Fort Collins Coloradoan*, November 6, 1973). Next, the stencil was repeatedly placed on the fabric in intervals (*Fort Collins Coloradoan*, November 6, 1973). The dye was then brushed across the stencil (*Fort Collins Coloradoan*, November 6, 1973). A small brush was used to touch up specific areas (*Fort Collins Coloradoan*, November 6, 1973). This dye was left on to set for two weeks at a time (*Fort Collins Coloradoan*, November 6, 1973). In one of the final steps, the fabric was boiled in large tubs over charcoal fires to eliminate all excess dyes (*Fort Collins Coloradoan*, November 6, 1973). Finally, the

completed textiles were hung to dry outdoors (*Fort Collins Coloradoan*, November 6, 1973).

The teaching process was explained, "These tasks are taught to all the women by the supervisory staff that also perform the skilled jobs of dye mixing, cloth checking, and managing Maridadi's two shops" (Court and Mwangi, 1976, p.38). After completing the series of tasks, these colorful textiles were complete and ready to be sold.

Elements and Principles of Design from DeLong

In her book, *The Way We Look: Dress and Aesthetics*, Marilyn Revell DeLong (1998), offers several design elements and principles for the further investigation of the Apparel-Body-Construct which includes the textiles worn by the wearer. Among the most relevant for the examination of textiles are the following binary elements: figure-ground integrated/figure-ground separated, flat/rounded, and determinate/indeterminate (DeLong, 1998).

Figure-ground integrated includes indistinct edges and interrelated shapes filling the surface of the textile. Figure-ground separation is defined by more distinct edges and discrete shapes dispersed on the surface (DeLong, 1998).

Flat incorporates those shapes that are two-dimensional and non-reflecting, smooth fabric surfaces. Rounded on the other hand, consists of curved and reflecting surfaces with three-dimensional shapes (DeLong, 1998).

When looking at determinate vs. indeterminate one refers to surfaces specifically. Determinate includes a plain, smooth surface, few or no shapes, and no light or shadow effects. Indeterminate surfaces tend to have many irregular shapes. These surfaces also include heavy light and shadow and strong surface texturing (DeLong, 1998).

DeLong (1998) includes other valuable elements and principles applicable to the investigation of textiles. Some of these include surface structuring, warm coloring, cool coloring, rhythm, asymmetrical balance, symmetrical balance, and figure-ground ambiguity. One formal feature characteristic of African art, parallel asymmetries, introduced by Visona et al. (2001) can be directly related to the design elements and principles of asymmetrical and symmetrical balance presented by DeLong (1998). Both are concerned with the visual combination of balanced compositions and asymmetries.

Elements and Principles of Design from Fiore and Kimle

Fiore and Kimle provide several design elements to be used in the study of textiles and apparel, in their book Understanding Aesthetics for the Merchandising and Design Professional (1997). Binary elements such as warm/cool colors, organic/geometric shapes, ordered/random patterns, and filled/unfilled space can be used in the examination of textiles (Fiore and Kimle, 1997).

Warm colors include the range of colors from red-violet through red, orange and orange-yellow. Cool colors involve the other side of the color wheel from blue-violet through blue, green, and yellow-green (Fiore, Kimle, 1997).

Organic shapes usually have curvilinear lines and are similar to objects found in nature. On the other hand, geometric shapes are generally characterized by straight, angular lines or simple forms. These shapes include squares, rectangles, triangles, and circles (Fiore, Kimle, 1997).

Ordered shapes are interspersed at regular distances from each other in uniform positions. Random shapes are arranged with no uniformity or regularity in their distance or placement (Fiore and Kimle, 1997).

Filled spaces have many figures created by a pattern or texture and little or no apparent ground surface (Fiore and Kimle, 1997). Whereas, unfilled spaces have few or no figures on the surface.

Other valuable elements of design relevant to textile research are included by the authors. These include different color classifications such as primary, secondary, tertiary, and complementary (Fiore and Kimle, 1997). Also valuable to textile research are the line qualities provided by Fiore and Kimle such as width, length, weight, uniformity and direction (1997). Other design elements and principles mentioned include symbolic qualities, and fabric texture.

Smith Framework-Material History Methodology

Development of Model

While teaching a graduate history seminar during 1983-84 year, Stuart Smith, with the help of his students, developed an extremely useful methodology and research model for studying material culture. Properties for the methodology were reduced down to Material, Provenance, Function, and Value. These properties are to be examined in this order as the starting point. Smith (1985) explains, "The arrangement of the properties also reflected a gradual shift from the more empirical observations gained in Material and Construction to the largely interpretive property of Value" (Smith, 1985, p. 31). The class executed an initial test using the model and ran into several problems, concluding that the model needed to be expanded and reworked. The class was in concurrence when deciding that a graphic format would be the most valuable way of looking at the model. It was also agreed upon that the artifact must be examined by itself first before adding supplementary information (Smith, 1985). The artifact is then to be re-examined after this initial stage.

Completed Model

After the second term during the 1983-84 academic years, the model was completed (Smith, 1985). Smith stated that, "The analysis method encourages the historian to discard, as much as possible, preconceived notions about the artifact under study and to begin by studying the artifact itself" (Smith, 1985, p. 35). The researcher is recommended to examine the artifact thoroughly before

continuing with additional sources of relevant information. After the initial examination of all observable evidence, the examiner will compare the artifact to similar items. Next, after all artifact examination is complete, the researcher will add any other sources of information relevant. Re-examination of the artifact is permissible throughout the research. Finally, the examiner is to draw conclusions based upon all data collected, observable, comparative, and supplementary (Smith, 1985).

Data Defined

The three types of data include observable, comparative, and supplementary. Observable data is determined by simply looking at the artifact at hand and making observations. Smith (1985) explains, "Data can be determined through sensory engagement with the artifact beginning with material composition, then construction, function, provenance and value" (Smith, 1985, p.35).

Comparative data is acquired by looking at the artifact relatively to other similar artifacts. These related objects include ones with the same maker, similar function, and same time period (Smith, 1985).

Supplementary data includes written and printed data. This information should be used additionally to provide information on specific properties of the artifact. This information also includes photographs, oral histories, and any other materials used (Smith, 1985).

Questions Defined

The questions examined include those concerning the concepts of Material, Construction, Function, Provenance, and Value. (See Table 1.)

Table 1. Model Concepts and Questions Defined

Concepts	Questions
Material	<ol style="list-style-type: none"> 1) What materials were used to make artifact? 2) Did the materials used influence the object's final form? 3) Are these materials used in similar artifacts? 4) Where did the materials originate? 5) Do the materials used suggest trade patterns/practices?
Construction	<ol style="list-style-type: none"> 1) How was the artifact fabricated and finished? 2) What construction methods and tools would be required? 3) Is any form of ornamentation or decoration present? 4) How does this ornamentation affect the artifact's appearance? 5) Is the design comparable to like objects?
Function	<ol style="list-style-type: none"> 1) Why was the artifact produced? 2) What function did this artifact perform? 3) How well did it perform its function? 4) What is its function today and has it changed? 5) Does the artifacts function reveal anything about its owner/maker?
Provenance	<ol style="list-style-type: none"> 1) Where and when was the object produced? 2) Who was the maker? 3) Where and how was the artifact used? 4) Who was the original owner?
Value	<ol style="list-style-type: none"> 1) What was the artifact's value to its original owner? 2) What value was placed on the object by society? 3) What cultural values does it reveal? 4) What value does the object have to the society in which it was produced?

CHAPTER III

METHODS AND PROCEDURES

Introduction

The purpose of the research was to develop a new understanding of *Maridadi* textile designs utilizing Stuart Smith's "Material History Methodology" (1985), Ann Marie Fiore and Patricia Anne Kimle's Understanding Aesthetics for the Design and Merchandising Professional (1997), and Marilyn Revell DeLong's The Way We Look (1987). The social time issue was addressed by comparing the textile designs of the Larsen Design Studio and the *kanga* designs of Kenya in the late 1960s to the *Maridadi* textile designs. To attain this purpose the following research questions were crafted:

- 1) What place on the continuum between the binary themes (DeLong, 1998) (Fiore and Kimle, 1997) do the 2-D forms on the *Maridadi* textiles fall?
- 2) How are the binary themes (DeLong, 1998) (Fiore and Kimle, 1997) in the textiles a product of both cultures from which they stem, Kenya and the United States?
- 3) May the Smith (1985) model for analyzing material culture be adapted to compare textile designs by the Larsen Design Studio and *Maridadi* textiles?
- 4) Do similar design aesthetics occur in both the textile designs of the Larsen Design Studio and the Kenyan designed *kanga*, during the late sixties?

- 5) How are the Maridadi textiles a product of their social space and time, the late 1960s?

Pilot Test

An initial pilot test was conducted by the researcher and advisor only, and did not include coders. This pilot test consisted of ten *Maridadi* textiles chosen randomly from those not being used in the actual study. Again, these did not include any of the thirty-four textiles already chosen for the sample. The Larsen Design Studio images and *kanga* were not a factor in the pilot study. The purpose of this preliminary study was to test the instrument to be used on the *Maridadi* textiles.

These instruments include an adaptation of the Smith (1985) model and the Binary Elements and Principles Scale (DeLong, 1998) (Fiore and Kimle, 1997). The ten *Maridadi* textiles sampled went through all concepts of the Smith (1985) model (See Appendix C) but only focused on observable data.

Comparative and supplementary data were not included in the initial pilot study. One table was used for the adaptation of the Smith (1985) model and a separate one for each textile was necessary. Each sample textile also required its own Binary Elements and Principles Scale (See Appendix E).

Upon completion of the initial pilot study, the researcher and advisor both felt it was necessary to change a couple of things. First, an additional adaptation of the Smith Model was added (See Appendix D) because it was felt that an inadequate amount of design elements were present to evaluate the

textiles in the first pilot study. Also added were additional binary themes from DeLong (1998) and Fiore and Kimle (1997).

A second pilot was then done to test the additions. The second pilot study also included ten Maridadi textile samples not included in the master sample. The study was found to be successful.

Sampling

A sample of thirty-four *Maridadi* textiles, eleven *kanga*, and seventeen images of the Larsen Design Studio textiles were used in the research. The *Maridadi* textiles were chosen randomly by using the Historic Costume and Textile Collection files and database. To ensure random sampling, textiles were selected without ever seeing the actual textile or reading their descriptions. Moving down the list, every other textile in the *Maridadi* collection was chosen, and the accession number on it was recorded. Next, the textiles were pulled based on accession number and separated from the rest of The CSU Historic Costume and Textiles Collection. The textiles were examined by the researcher and advisor to verify that they would work for the study.

All eleven *kanga* from the Udall Collection in the CSU Historic Costume and Textiles Collection were also used in the study. Because these textiles were all imported from Kenya during the late 1960s they are all relevant to the study. Images of the Larsen Design Studio textiles were selected from the Larsen online archive based on the year of the design with the entire sampling taken from 1966-1970.

Data Collection

Content analysis was used to examine the *Maridadi* textiles. The Smith (1985) model for studying material culture was used to analyze the *Maridadi* textiles. The traditional Kenyan textile, the *kanga*, and the textile designs of the Larsen Design Studio were used as comparative data. By comparing the textile designs of the Larsen Design Studio and the *kanga* designs of Kenya in the late 1960s the research will address the issue of the social time in which the *Maridadi* textiles were produced.

Additional sources such as photographs, newspaper articles, and books were used as supplementary data. The three coders were employed to record any observable data, they were not responsible for comparative and supplementary data, which was done by the researcher. They were asked to make observations about the materials, construction, function, provenance, and value. Other observations the coders were asked to make concern design elements such as colors used, line qualities, symbolic qualities, texture, figure-ground relationship, and motif scale.

Three trained coders (researcher, one professor, and one graduate student all with design backgrounds) were also used to identify where on a continuum a textile artifact lands between the binary themes from DeLong (1998) and Fiore and Kimle (1997). This was performed using the Binary Elements and Principles Scale. These binary themes include the following: figure-ground integrated/figure-ground separated, and determinate/indeterminate (DeLong,

1998) as well as warm/cool colors, and organic/geometric shapes (Fiore and Kimle, 1997). Upon completion of the coding process, intercoder-reliability coefficients were calculated for each set of data, that is, the instances of agreements between the three coders from each artifact. For the set of data, $r = .59$. The formula for calculating the reliability coefficient was:

$$r = \frac{\text{agreements} - \text{disagreements}}{\text{agreements}} \times 100$$

Before the examination of the textiles, the coders were trained on the binary themes (DeLong, 1998) (Fiore and Kimle, 1997), and the Smith (1985) model. The coders were then given 34 copies each of the scale on which they recorded their observations.

The training of the coders included an introduction to DeLong (1998) and Fiore and Kimle's (1997) binary themes as well as to the Smith (1985) model and concepts included in it. They were given an instruction sheet to follow (See Appendix F). The coders were shown example textiles and were asked to think about where they would fit into the binary themes.

Data Analysis

The Smith (1985) model for analyzing material culture was used in the examination of the textile artifacts. After all thirty-four textile samples were analyzed by all three coders and compared with the textiles of the Larsen Design Studio, and the traditional textile, the *kanga*, by the researcher only; the

information was carefully scrutinized. Themes were extracted from the coders' observations and the comparative and supplementary data. Themes such as specific materials, color palettes, and construction methods, were grouped and re-structured.

The researcher identified where each of the thirty-four textile samples has landed on the continuum between the binary themes. A calculation of the number of times that each continuum between the themes is landed on was executed.

CHAPTER IV

USING BINARY ELEMENTS AND PRINCIPLES OF DESIGN TO ANALYZE THE TEXTILE DESIGNS OF MARIDADI FABRICS

Introduction

Purpose

This research focused on the *Maridadi* textile collection housed in the Historic Costume and Textiles Collection in the Department of Design and Merchandising at Colorado State University (CSU). The purpose of the research is to develop a new understanding of *Maridadi* textile designs utilizing Ann Marie Fiore and Patricia Anne Kimle's Understanding Aesthetics for the Design and Merchandising Professional (1997), and Marilyn Revell DeLong's The Way We Look (1987). This was accomplished by tracing the origins of the textile designs by placing them within the context of both design cultures from which they stem, those of Kenya and the U.S. Specific design elements such as the binary themes (DeLong, 1998) of figure-ground integrated/figure-ground separated, and determinate/indeterminate were analyzed. Design elements also considered include mono-chromatic and chromatic colors as well as organic and geometric shapes (Fiore and Kimle, 1997). The question of whether or not these

textiles represent their social time or style period, the late sixties, and/or culture is of major concern.

Research Questions

The following questions will be examined throughout the research:

- 1) What place on the continuum between the binary themes (DeLong, 1998) (Fiore and Kimle, 1997) do the 2-D forms on the Maridadi textiles fall?
- 2) How are the Maridadi textiles a product of their social space and time, the late 1960s?

Objectives

The following objectives have been identified to facilitate completion of this research:

- 1) Discover the binary themes (DeLong, 1998) (Fiore and Kimle, 1997) which make the *Maridadi* textiles a product of the late 1960s.
- 2) Unveil the elements and principles of design that make these textiles a product of both Kenya and the United States.

Review of Literature

1960s Textiles in Kenya

There are two distinct textile traditions that were popular during the late 1960s in Kenya: the *kikoi* and the *khanga*.

The *kikoi* is a woven cotton rectangle of cloth worn predominately by men, specifically fishermen. This colorful textile is usually woven in a striped or plaid pattern and has fringed edges. The color palette almost always consists of

red, yellow, white, and black. The *kikoi* is typically made of two narrow strips of fabric sewn together down the center to form a single, wide piece. The *kikoi* is considered a “traditional” item of clothing because of its long history of use among men on the coast of Kenya (Schoss, 1996).

The *kanga* or *khanga* is also a rectangular piece of fabric, usually 64” wide by 44” high, and persists as the most popular garment in Kenya even today (Perani and Smith, 1998). These fabrics were the first printed cloth in the region (Court and Mwangi, 1976, p. 38). *Kanga* are typically a female garment and can be worn in a variety of ways (Perani and Smith, 1998). Men can be seen wearing *kanga* tied around the waist in the same manner as the *kikoi* (Schoss, 1996). This textile is extremely soft and comfortable due to its fiber content of 100% cotton (Perani and Smith, 1998).

The *kanga* designs were created during the late 1960s in East Asia and East Africa. *Kanga* designs were created during the time by a screen printing technique (Perani and Smith, 1998).

One reason for the popularity of the *kanga* is for its bold designs and vivid colors. The designs typically include a border which frames them (Schoss, 1996). Swahili sayings are often added to *kanga*, to make a political statement or just for fun (Schoss, 1996). Vegetal and floral motifs are also common in *kanga* designs (Perani and Smith, 1998).

Late 1960s Textiles in the U.S.

One major new trend during the 1960s for textiles was the use of simple shapes based on colored stripes, and the popularity of Thai silks (Jackson, 1998). Also new was an interest in fibers and the diversity of things that could be done with them construction wise.

Ethnic textiles grew in popularity during the late 1960s as well. This was ignited when fiber artists used pre-Colombian textiles from Peru as a source of inspiration. "The 'discovery' of the archeological artifacts fueled an interest in ethnic textiles and, at this point, there was a convergence of the professional, the technical, and the populist textile maker" (Janiero, 1996, p. 36). The Peace Corps also helped these ethnic textiles come into popularity, as workers brought back samples of indigenous weavings and textile products from all over the world (Janiero, 1996).

Other textile designs were influenced by the styles and motifs of the Arts and Crafts movement and Art Nouveau, whose flowing lines resembled those of the psychedelic art and textiles of the time. During the late 1960s when times became more political, the textiles reflected them by including more direct topical imagery. The "back to earth" movement also rekindled an interest in domestic textile arts like quilting, crocheting, embroidery, and knitting (Janiero, 1996).

History of Maridadi Fabrics

Dorothy Udall, a former CSU Interior Design professor, initiated the creation of the Kenya-based textile company, *Maridadi Fabrics*. It was 1966 when Udall and another female social worker started the project. The fabrics were intended to be the first uniquely Kenyan textiles produced (Court, 1973).

Udall received both a B.S. and M.S. from Cornell and studied at the Cranbrook Academy of Art (New Stanley, 1969). She taught Interior Design at Cornell University and Colorado State University (CSU) (New Stanley, 1969). Udall and her husband Rob moved to Kenya in 1965 so that Rob could teach at the veterinary school at the University of Nairobi in Kenya (*Fort Collins Coloradoan*, November 6, 1973). Upon arriving in Kenya, Udall became concerned with the state of the women there (Kimenye, 1969). She decided that she would help these women gain some type of financial security (*Fort Collins Coloradoan*, November 6, 1973). Dorothy accomplished this with the help of the St. John's Community Center (*Fort Collins Coloradoan*, November 6, 1973).

Maridadi Fabrics began by creating batiks but soon discovered that the process was not at all time efficient (Kimenye, 1969). Udall suggested that they try screen-printing, which quickly became their primary method of design application (Cliff, 1968).

Udall thought that screen-printing would likely be a practical way for women in the most impoverished parts of Nairobi, specifically the Pumwani Shauri Moyo neighborhood, to make some money for their families (Kimenye,

1969). Names of the neediest women in the area were provided by social workers (*Fort Collins Coloradoan*, November 6, 1973). The women chose the name Maridadi Fabrics after a Swahili word which means “decorative”, “pretty”, or “fancy” (Court and Mwangi, 1976, p. 38). When the company began there were only five employees that created small textile products including placemats, ties, pillow covers, and wall hangings (Court and Mwangi, 1976). As one journalist Susan Williams (1986) explains, “In just over 10 years the original handful of employees had swelled to a workforce of 80. Its first humble home, a disused brewery on loan from the city council, was outgrown, and Maridadi Fabrics, now almost a household name, moved into a purpose-built modern factory on Jogoo Road.” As the company grew they were able to produce large yardages of fabric and ready-made apparel (Cliff, 1968). These fabrics were sold in upscale shops in Nairobi, exported to the United States and Britain, and bought for the use in the interiors of local businesses and hotels (*Fort Collins Coloradoan*, November 6, 1973).

The company was destroyed by vandals in 1982. A local writer explains, “On the fateful August 1, however, Maridadi lost more than one million shillings in looted stock which included cotton cloth, special reactive dyes, lots of furniture and nearly two dozen sewing machines. They suffered another half million in damages which ranged from smashed walls and windows to bullet-riddled doors” (Gacheru, 1982, p. 8). The jobs lost this day had the greatest impact on the women of the region. Gacheru (1982), continues, “Perhaps what

was the most devastating of all was the effect that the day had on the lives of those eighty women and their children, since most of them had to be released from their work. They consequently have had no immediate source of income to pay for imperatives like food and school fees" (Gacheru, 1982, p. 8). The company did not however lose their hand screen-printed designs (Gacheru, 1982). Retaining their designs allowed the company to get going again eventually.

Rob and Dorothy Udall left Kenya in 1970 but continued their involvement with Maridadi Fabrics by opening up a small operation in Fort Collins called Maridadi West (*Fort Collins Coloradoan*, November 6, 1973). Udall remained passionate about the project throughout her life and made an effort to keep in close contact with the women running Maridadi.

Textile Designs

Udall started out as the primary designer at Maridadi (Court, 1973). Eventually the company needed a larger design team, including two primary designers and fourteen freelance designers who worked for Maridadi when they were needed. The aim of the designs was to use motifs and colors inspired by Kenya (Court and Mwangi, 1976). The motifs used by these designers included people, geometric patterns, and animals (Court and Mwangi, 1976). One other major source of design inspiration was the traditional art of the region (Williams, 1986). The designs have specific Swahili, Kikuyu, or English names that relate to

the motif or culture group in which the design was inspired (Court and Mwangi, 1976). These designs connected the textiles to the Kenyan culture and people (Kahiga, 1971). This also is what gave Maridadi the reputation for designing Kenyan textiles in a region that had few textile traditions (Court and Mwangi, 1976).

Elements and Principles of Design from DeLong

In her book, The Way We Look: Dress and Aesthetics, Marilyn Revell DeLong (1998), offers several design elements and principles for the further investigation of the Apparel-Body-Construct which includes textiles worn by the wearer. Among the most relevant for the examination of textiles are the following binary elements: figure-ground integrated/figure-ground separated, flat/rounded, and determinate/indeterminate (DeLong, 1998).

Figure-ground integrated includes indistinct edges and interrelated shapes filling the surface of the textile. Figure-ground separation is defined by more distinct edges and discrete shapes dispersed on the surface (DeLong, 1998).

Flat incorporates those shapes that are two-dimensional and non-reflecting, smooth fabric surfaces. Rounded on the other hand, consists of curved and reflecting surfaces with three-dimensional shapes (DeLong, 1998).

When looking at determinate vs. indeterminate the examiner refers to surfaces specifically. Determinate includes a plain, smooth surface, few or no shapes, and no light or shadow effects. Indeterminate surfaces tend to have

many irregular shapes. These surfaces also include heavy light and shadow and strong surface texturing (DeLong, 1998).

DeLong (1998) includes other valuable elements and principles applicable to the investigation of textiles. Some of these include surface structuring, warm coloring, cool coloring, rhythm, asymmetrical balance, symmetrical balance, and figure-ground ambiguity. One formal feature characteristic of African art, parallel asymmetries, introduced by Visona et al. (2001) can be directly related to the design elements and principles of asymmetrical and symmetrical balance presented by DeLong (1998). Both are concerned with the visual combination of balanced compositions and asymmetries.

Elements and Principle of Design from Fiore and Kimle

Fiore and Kimle provide several design elements to be used in the study of textiles and apparel in their book Understanding Aesthetics for the Merchandising and Design Professional (1997). Binary elements such as warm/cool colors, organic/geometric shapes, ordered/random patterns, and filled/unfilled space can be used in the examination of textiles (Fiore and Kimle, 1997).

Warm colors include the range of colors from red-violet through red, orange and orange-yellow. Cool colors involve the other side of the color wheel from blue-violet through blue, green, and yellow-green (Fiore, Kimle, 1997).

Organic shapes usually have curvilinear lines and are similar to objects found in nature. On the other hand, geometric shapes are generally characterized by straight, angular lines or simple forms. These shapes include squares, rectangles, triangles, and circles (Fiore, Kimle, 1997).

Ordered shapes are interspersed at regular distances from each other in uniform positions. Random shapes are arranged with no uniformity or regularity in their distance or placement (Fiore and Kimle, 1997).

Filled spaces have many figures created by a pattern or texture and little or no apparent ground surface (Fiore and Kimle, 1997). Whereas, unfilled spaces have few or no figures on the surface.

Other valuable elements of design relevant to textile research are included by the authors. These include different color classifications such as primary, secondary, tertiary, and complementary. Also valuable to textile research are the line qualities provided by Fiore and Kimle such as width, length, weight, uniformity and direction (Fiore and Kimle 1997). Other design elements and principles mentioned include symbolic qualities and fabric texture.

Methods and Procedures

Pilot Test

An initial pilot test was conducted by the researcher and advisor. This pilot test consisted of ten *Maridadi* textiles chosen randomly and did not include

the 34 already chosen for the sample. The purpose of this preliminary study was to test the instrument to be used on the Maridadi textiles.

The instrument used was the Binary Elements and Principles Scale (DeLong, 1998) (Fiore and Kimle, 1997). This scale was developed by examining both DeLong and Fiore and Kimle's books and pulling out the binary themes that were applicable to the Maridadi textile samples. In the beginning only three sets of themes were found but upon further examination, six more were chosen for the study. The ten Maridadi textiles sampled went through all concepts of the scale. Each sample textile required its own Binary Elements and Principles Scale (See Appendix E).

Upon completion of the initial pilot study, the researcher and advisor both felt it necessary to have additional binary themes from DeLong (1998) and Fiore and Kimle (1997).

A second pilot was then administered to test the additions. This pilot study also included another ten Maridadi textile samples not including the 34 for the final study. This study was found to be successful, and the research moved forward.

Sampling

A sample of thirty-four *Maridadi* textiles was used in the research. The textiles were chosen randomly by using the Historic Costume and Textile Collection files and database. To ensure random sampling, textiles were selected

without ever seeing the actual textile or reading their descriptions. Moving down the inventory list, every other textile in the *Maridadi* collection was chosen, and the accession number on it was recorded. Next, the textiles were pulled based on accession number and separated from the rest of the Collection. The textiles were examined by the researcher and advisor to verify that they would work for the study.

Data Collection

The content analysis method was used in the examination of the *Maridadi* textiles. Three trained coders (researcher, one professor, and one graduate student) were used to identify where on a continuum a textile artifact lands between the binary themes from DeLong (1998) and Fiore and Kimle (1997). These coders all have a background in design. The researcher has a degree in design and art, the professor is a designer, and the other graduate student has an architecture and interior design background. This was performed using the Binary Elements and Principles Scale (See Appendix E). These binary themes include the following: figure-ground integrated/figure-ground separated, and determinate/indeterminate (DeLong, 1998) as well as warm/cool colors, and organic/geometric shapes (Fiore and Kimle, 1997). Upon completion of the coding process, intercoder-reliability coefficients were calculated for each set of data, that is, the instances of agreements between the three coders from each

artifact. For the set of data, $r = .59$. The formula for calculating the reliability coefficient was:

$$r = \frac{\text{agreements} - \text{disagreements}}{\text{agreements}} \times 100$$

Before the examination of the textiles, the coders were trained on the definitions of the binary themes (DeLong, 1998) (Fiore and Kimle, 1997). The coders were then given 34 copies each of the scales on which they recorded their observations. The training of the coders included an introduction to DeLong (1998) and Fiore and Kimle's (1997) binary themes. The coders were shown example textiles and were asked to think about where they would fit into the binary themes.

Data Analysis

The researcher identified where each of the thirty-four textile samples landed on the continuum between the binary themes. The number of times that each point occurred on the continuum between the themes was calculated. After all calculations were recorded and counted, the researcher figured the percentage of times that a specific theme was landed upon. Table 1 illustrates a comparison between the two themes and their percentages

Table 1. BINARY ELEMENTS AND PRINCIPLES OF DESIGN THEMES PERCENTAGES

Indeterminate	83%	17%	Determinate
Figure-ground Integration	90%	10%	Figure-ground Separation
Mono-Chromatic, 0%, Neutral	75%	25%	Chromatic
Warm Colors	59%	41%	Cool Colors
Organic Shapes	34%	66%	Geometric Shapes
Ordered Pattern	75%	25%	Random Pattern
Filled Space	96%	4%	Unfilled Space
Hard-edge Lines	96%	4%	Soft-edge Lines
Regular Shapes	75%	25%	Irregular Shapes

Binary Themes

The Binary Elements and Principles of Design Scale utilized a variety of binary themes provided by DeLong (1998) and Fiore and Kimle (1997). The primary objective of the scale is to assist in the evaluation of a group of related textiles and to discover their overall design qualities or characteristics. Table 2 provides a list of all binary themes utilized and the highlighted box contains the theme in which the majority of the textiles landed.

Table 2. BINARY THEMES FOR MARIDADI TEXTILES

Indeterminate		Determinate
Fig.-ground Integration		Fig.-ground Separation
Mono-Chromatic	Neutral	Chromatic
Warm Colors		Cool Colors
Organic Shapes		Geometric Shapes
Ordered Pattern		Random Pattern
Filled Space		Unfilled Space
Hard-edge Lines		Soft-edge Lines
Regular Shapes		Irregular Shapes

Indeterminate vs. Determinate

Indeterminate surfaces often appear blurred and soft, with infinite levels of figure-ground ambiguity. The shapes are often irregular and soft-edged (DeLong, 1998, p. 98). The majority of the Maridadi textiles, 83%, fell within this theme (see Figure 1). Towards the end of the 1960s shapes began to soften up in reaction to the precise and severe geometric forms of the early and mid 1960s (Jackson, 1998).

Determinate describes surfaces that are definite, sharp, regular, and clear-cut. There is no doubt about what is figure and what is ground. The shapes are also few and are large, simple and repetitious overall (DeLong, 1998, p. 98). Only 17% of the Maridadi textiles used in the study fell within this theme (see Figure 2). The indeterminate textile designs are more reflective of the early 1960s when fluid asymmetrical shapes were favored over severe symmetry and obvious repetition (Jackson, 1998).



Figure-ground Integration vs. Figure-ground Separation

In *figure-ground integration* all parts are integral to the single surface. This also includes shapes that have indistinct edges and that are interrelated, filling the surface (DeLong, 1998, p. 89). This theme accounted for 90% of all samples examined (see Figure 3). Because the textiles of the 1960s were influenced by

such movements as Op art and Art Nouveau, they generally incorporate a variety of shapes filling the surface and connecting with one another creating rhythmic movement (Jackson, 1998).

Figure-ground separation includes distinct edges, discrete shapes dispersed on surface (DeLong, 1998, p. 95). A mere 10% of the textiles analyzed fall under this theme (see Figure 4).

Figure-ground Integration



90%

"Zebra Design"
Figure 3

Figure-ground Separation



10%

"Thorn Tree"
Figure 4

Mono-Chromatic vs. Chromatic

Mono-chromatic colors combinations use multiple tints, tones, or shades of a single hue (Fiore, Kimle, 1997, p. 122). None, 0%, of the Maridadi textiles happened to fall under this theme.

Chromatic means of colors, colored, or multi-colored (Cambridge International Dictionary). Only 25% of the textiles were considered chromatic (see Figure 6). All of the samples that fell within this theme were brightly

colored. During the 1960s there was a new trend for vivid colors such as pinks, blues, purples, and greens, which is believed to have been influenced by psychedelic drugs and the Art Nouveau movement (Jackson, 1998).

The majority, 75%, of the textiles fell under the theme termed *neutral*. Some colors that fall under this theme are beige, tan, brown, white, gray, and black (Frings, 1999) (see Figure 5). The late 1960s also experienced a heightened popularity for natural colors (Jackson, 1998). This trend was closely tied to the “back to the earth” movement, which was created in reaction to the amplified and synthetically bright colors seen previously during the 1960s (Jackson, 1998).

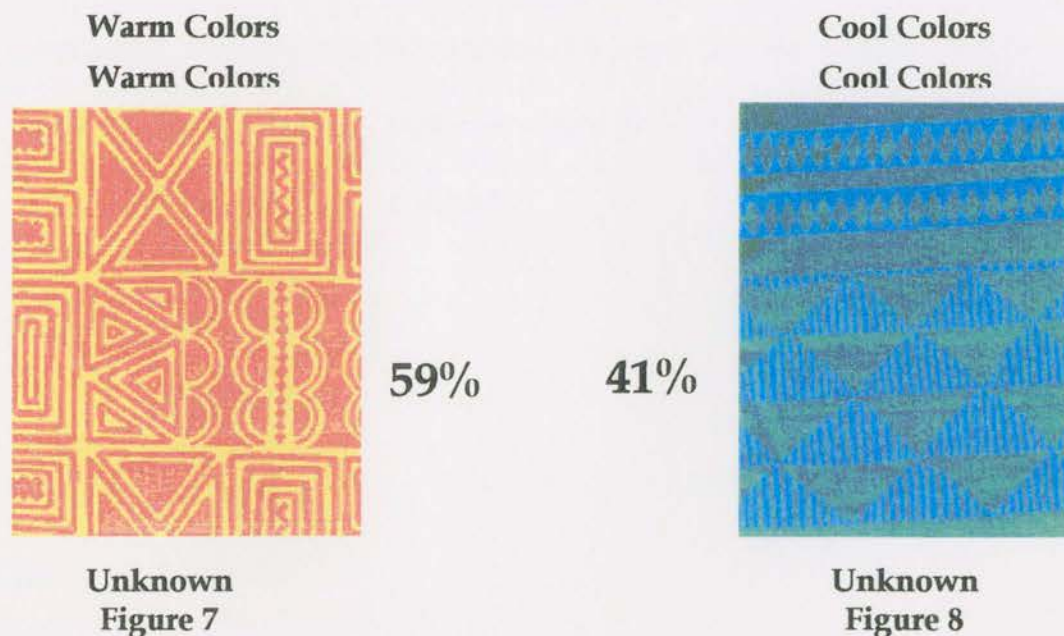


Warm Colors vs. Cool Colors

Warm colors include the range of colors from red-violet through red, orange and orange-yellow (Fiore, Kimle, 1997, p. 122). They are classified as

warm because of their association to fire and the sun (Frings, 1999). 59% of all Maridadi samples fell within the *warm colors* (see Figure 7). This could reflect the influence that the environment, Kenya, had on the textiles. This region is generally arid, and therefore shades of brown are more common than greens and blues. Another influence on color could have come from tribal groups in the region such as the Maasai and Turkana, who adorn their bodies in various forms of predominantly red cloth.

Cool colors comprise the other side of the color wheel from blue-violet through blue, green, and yellow-green (Fiore, Kimle, 1997, p. 122). These colors are termed cool because of their connection to the sky and water (Frings, 1999). This color theme made up 41% of the textiles examined (see Figure 8). Colors such as purple, bright green, and turquoise became popular during the 1960s, and were most likely influenced by hallucinogenic drugs (Jackson, 1998).



Organic Shapes vs. Geometric Shapes

Organic shapes usually have curvilinear lines and are similar to objects found in nature (Fiore, Kimle, 1997, p. 143). Only 34% of the sample textiles were considered organic in nature. Despite this figure, even some of the geometric shapes had organic qualities (see Figure 9). In reaction to the organic shapes used in designs during the 1950s, textile designers chose to use primarily geometric shapes throughout the 1960s (Jackson, 1998). Near the end of the decade however, the designs were beginning to include organic shapes again (Jackson, 1998).

Geometric are shapes generally characterized by straight, angular lines or simple forms (Fiore, Kimle, 1997). These shapes include squares, rectangles, triangles, and circles (Fiore, Kimle, 1997). The majority, 66% of the Maridadi textiles in the sample fell under this theme (see Figure 10). *Geometric shapes* remained very popular throughout the 1960s (Jackson, 1998). Textiles in Africa also use predominantly *geometric shapes* however they are generally arranged in an organic way (Visona et al., 2001).

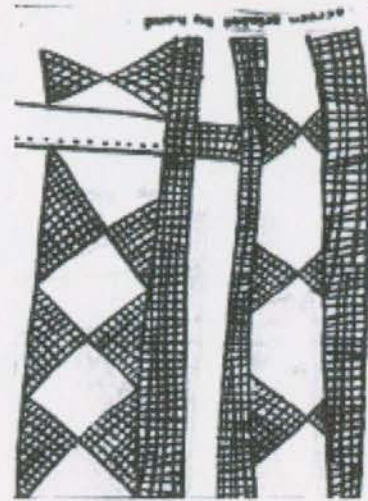
Organic Shapes



"Arabesque"
Figure 9

34%

Geometric Shapes



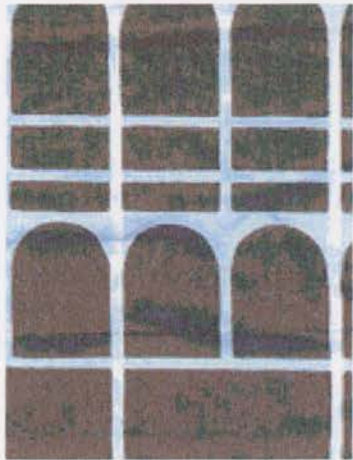
"Tharaka"
Figure 10

66%

Ordered Pattern vs. Random Pattern

In an *ordered pattern*, shapes are generally interspersed at regular distances from each other in uniform positions (Fiore, Kimle, 1997). The majority, 75%, of the sampled textiles were *ordered* (see Figure 11). Although there is some level of order in African art, this is not overly emphasized, resulting in a look that is more random in nature (Visona et al., 2001). However in the U.S. during the 1960s, textile designs were at times extremely *ordered* and grid-like in nature (Jackson, 1998).

Random patterns contain shapes that are arranged with no uniformity or regularity in their distance or placement (Fiore, Kimle, 1997). Only 25% fell under this theme (see Figure 12).

Ordered Pattern

"Old Town Mombasa"
Figure 11

75%

25%

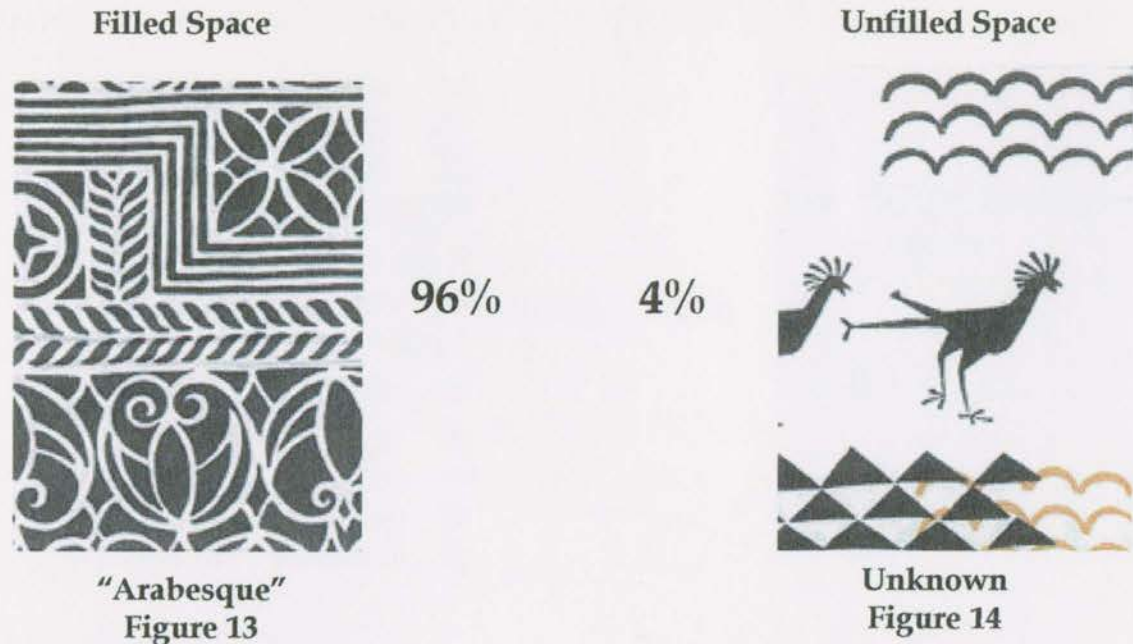
Random Pattern

"Twiga II"
Figure 12

Filled space vs. Unfilled space

Filled spaces comprise many figures created by a pattern or texture and little or no apparent ground surface (Fiore, Kimle, 1997). Almost all of the textiles in the sample were *filled spaces*, 96% (see Figure 13). Very little surface can be seen on textiles from the 1960s, particularly in those inspired by the Op art movement, the ethnic textiles, and Art Nouveau (Jackson, 1998).

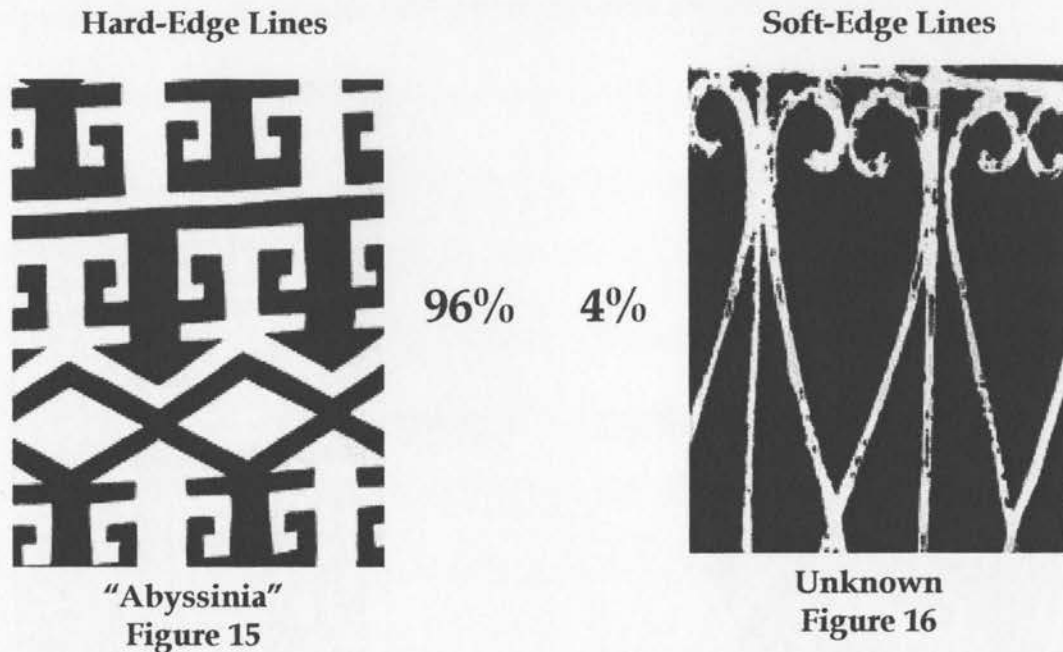
Unfilled spaces include few or no figures on the surface (Fiore, Kimle, 1997). Very few, only 4%, of the Maridadi textiles in the sample were considered unfilled (see Figure 14).



Hard-edge Lines vs. Soft-edge Lines

Hard-edge lines are usually simple, angular, decisive, and sharp (DeLong, 1998, p. 176). Most, 96%, of the sample textiles contained *hard-edge* lines (see Figure 15). *Hard-edge*, precise lines are characteristic of 1960s textiles, specifically those which incorporated geometric shapes in repetition (Jackson, 1998).

Soft-edge lines are curving, indistinct, and blurred (DeLong, 1998, p. 176). Not many, only 4%, of the samples fell under this theme (see Figure 16). This type of line is generally not characteristic of 1960s textiles in the U.S. or Africa.

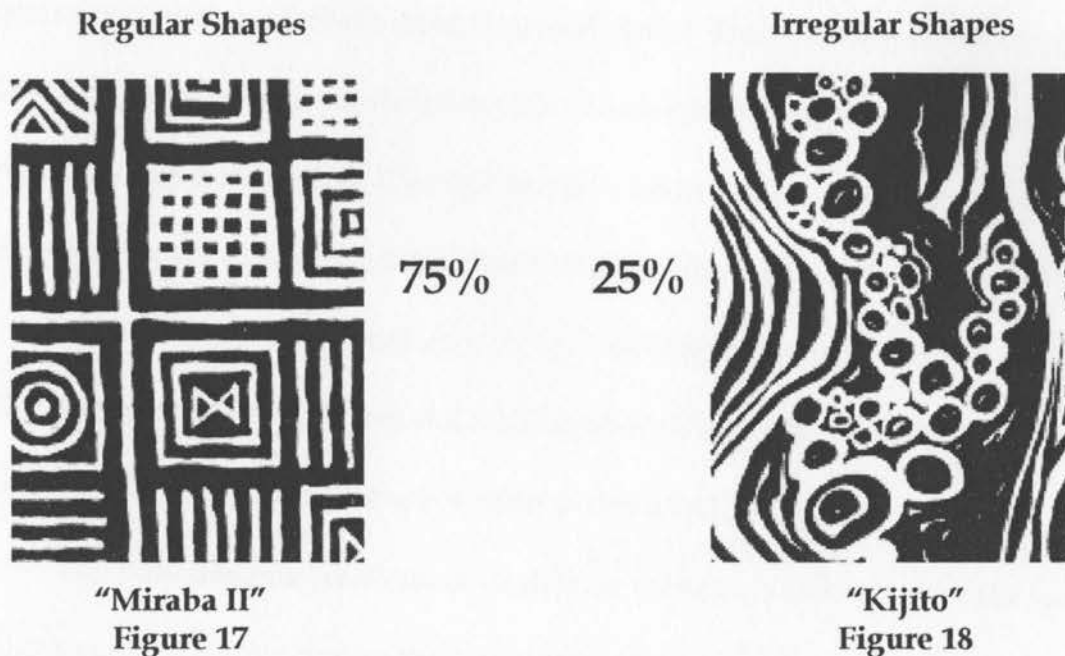


Regular vs. Irregular Shapes

Regular shapes are bounded by straight or curved lines and are often viewed as simple figures separated from ground, for example, circles, squares, and triangles (DeLong, 1998, p. 185). The coders found that 75% of Maridadi textiles generally fell under this theme (see Figure 17). As stated earlier, geometric shapes such as circles and squares encompassed by straight and precise lines, dominated textiles during the 1960s, although the textiles at the beginning and ending of the decade strayed somewhat from this (Jackson, 1998).

Irregular shapes may be bounded by a combination of straight and curved lines and are often viewed as more fluid and less separated than figure (DeLong, 1998, p. 185). A small sample, 25%, of the textiles fell under this category (see Figure 18). In African art, broken lines and those that are not uniform are preferred over straight and regular ones (Visona et al., 2001). Intentional shifts

and irregularities are common in African textiles and are emphasized over exact replication (Visona et al., 2001).



Conclusions

Upon examination of the Maridadi textile designs through the use of the Binary Elements and Principles of Design Scale, several elements and principles were found to be the dominating overall themes. The themes that are generally characteristic of the textile designs include *indeterminate surfaces, figure-ground integration, neutral colors, and geometric shapes*. Other controlling themes are *warm colors, ordered patterns, filled spaces, hard-edge lines, and regular shapes*. Some of themes may or may not be directly related to the textiles of the late 1960s in Africa and the U.S.

During the late 1960s in the U.S. specifically, ethnic textiles experienced great popularity, and this is one of the reasons that the Maridadi textile designs were very in tune with their social time and space. These textiles also utilized a variety of *geometric shapes* which were also common to the textiles of the late 1960s in Kenya and the U.S. The fact that Maridadi textiles were inspired by the colors and motifs in Kenya places their designs within their social space. At the time that the fabrics were produced, Kenya had only recently become independent (Sayer, 1998); therefore the creation of some of the first textiles that celebrated the region places them within their social time.

The bold designs, *filled spaces*, and *warm colors* are reminiscent of the kanga designs worn in Kenya during the late 1960s. However, they are unique in that the motifs the designers chose to use come directly from their surroundings.

Significance

The research provides an instrument for analyzing the elements and principles of design within textiles. It is a useful system for extracting their overall design themes and calculating their occurrences. These extracted themes allow for a clearer vision of the designs' origins. By pinpointing these textiles characteristics one can more easily place the designs within their social time and space.

Future Research

Additional and future research should explore the relationships of diverse groups of textiles in order to compare and contrast their relative themes. For example the researcher could also use the Binary Elements and Principles of Design Scale on the *kanga* textiles from East Africa, as well as the textiles from the Larsen Design Studio. This would enable the researcher to make the connections between the three. Further investigation could also explore textiles from different culture groups to find similar design characteristics. For instance, textiles produced in Europe during the late 1960s may have influenced the Maridadi designs more so than those of the U.S.

CHAPTER V

BEAUTIFUL CONNECTIONS: COMPARING MARIDADI FABRICS TO THOSE OF JACK LENOR LARSEN AND THE EAST AFRICAN KANGA

Introduction

Background

The Department of Design and Merchandising at Colorado State University (CSU) houses the Historic Costume and Textiles Collection. This collection holds the textiles of *Maridadi Fabrics*, which was the name of both the company and the factory, as well as traditional African textiles. *Maridadi* is a Swahili word meaning "decorative", "pretty", or "fancy" (Court, 1973, p.36). The family of former CSU professor and designer, Dorothy Udall, donated the textiles in 1996. Dorothy Udall helped to start the Kenyan textile company in 1966 (Court, 1973). Along with the textiles there is other *Maridadi* paraphernalia such as shopping bags, posters, company brochures, etc. Several photographs of the textiles creation, the sources of design inspiration, and the women and men that worked at *Maridadi* were also generously donated by the Udall family to the Collection. Also found in the collection are newspaper articles that Udall saved about the company. In addition to the *Maridadi* textiles, the Udall collection

includes traditional East African textiles, such as *kanga* and *kikoi* collected by Udall while living in Kenya. This wealth of materials is a veritable treasure, contributing greatly to the overall Collection of the University. The opportunity to work directly with this treasure was the inspiration for this research and thesis.

The *Maridadi* textiles within the Collection were designed during the late 1960s. The *kanga*, which was worn during the late 1960s, has been one of the most popular textiles in Kenya since the mid-nineteenth century (Perani and Smith, 1998). The *kanga* is a screen-printed cotton textile used for a variety of purposes all over East Africa (Perani and Smith, 1998). Also during the late 1960s, American Jack Lenor Larsen was carving out his niche as one of the most prolific textile designers of the period. Larsen's career was booming during this time and he had a major influence on the design world. Interestingly, Larsen and Udall both attended Cranbrook Academy of Art before starting their respective careers in interior design field, an interesting coincidence that deserves further investigation than the intended scope of this thesis (New Stanley, 1969; Larsen, 1998). However, this fact points toward the possible correlation between the two traditions: Kenya influencing the United States and the United States influencing Kenya.

Purpose

This research focused on the *Maridadi* textile collection housed in the Historic Costume and Textiles Collection in the Department of Design and

Merchandising at Colorado State University (CSU). The purpose of the research was to develop a new understanding of *Maridadi* textile designs utilizing Stuart Smith's "Material History Methodology" (1985), Ann Marie Fiore and Patricia Anne Kimle's Understanding Aesthetics for the Design and Merchandising Professional (1997), and Marilyn Revell Delong's The Way We Look (1987). This was accomplished by tracing the origins of the textile designs by placing them within the context of both design cultures from which they stem, those of Kenya and the U.S. The designs were examined by looking closely at their Material, Construction, Provenance, Function, and Value (Smith, 1985). Also of concern were design elements such as line quality, color, scale, symbolism, etc. The question of whether or not these textiles represent their social time or style period, the late sixties, and/or culture is of major concern. The social time issue will be addressed by comparing the textile designs of the Larsen Design Studio and the *kanga* designs of Kenya in the late 1960s. If the studied textiles are found to be representative of the late 1960s, then the characteristics that make them such will be explored.

Research Questions

The following questions will be examined throughout the research:

- 1) What cultural aesthetics, from both Kenya and America, are present in Maridadi textiles?
- 2) May the Smith (1985) model for analyzing material culture be adapted to compare textile designs by the Larsen Design Studio and Maridadi textiles?

- 3) Do similar design aesthetics occur in both the textile designs of the Larsen Design Studio and the Kenyan designed kanga, during the late sixties?
- 4) How are the Maridadi textiles a product of their social space and time, the late 1960s?

Objectives

The following objectives have been identified to facilitate completion of this research:

- 1) Unveil the elements and principles of design that make these textiles a product of both Kenya and the United States.
- 2) Discover whether the Smith Model for analyzing material culture may be adapted to compare the *Maridadi* textiles to those of the Larsen Design Studio.

Review of Literature

Textile Traditions in Kenya

East African countries in general are not particularly known for their textiles, although there are a few traditions in the region (Court and Mwangi, 1976, p. 38). Because of their nomadic herding lifestyle, the peoples of Kenya could not carry all of the tools and materials required to create large quantities of textiles and as a result created jewelry and other small objects of personal adornment (Court and Mwangi, 1976, p. 38). Consequently, garments constructed out of hides and minimal amounts of woven textiles were produced.

Even though the region is not an area typically associated with weaving, the book, African Textiles, has several old photographs of people weaving on horizontal single-shaft looms. The reason weaving is in evidence is that at the time of the photos cotton was still a cultivated crop in Kenya and Tanzania; however, in the nineteenth century the colonial powers replaced these cotton farms with coffee plantations. With the virtual disappearance of the cotton plant, hand weaving disappeared as well (Carlson, 2001). The one distinct Kenyan textile tradition worth mentioning is the *kanga*.

Kanga/Khanga

The *kanga* or *khanga* is a rectangular piece of fabric, typically 64" wide by 44" high, and persists as the most popular garment in Kenya today. Women all over East Africa have been wearing this cloth since the mid-nineteenth century. *Kanga* are typically a female garment and can be worn in a variety of ways. This textile is extremely soft and comfortable on the skin due to its fiber content of 100% cotton, which is one of the reasons for its popularity (Perani and Smith, 1998).

Historically the *kanga* designs were created by coastal traders from India and Portugal, and today East Asia and East Africa. *Kanga* were originally made in India and Europe using a wooden block printing technique, but this has been replaced by screen printing. In the past, the cloth was exported from Europe, but by the 1960s and 1970s mill-made *kanga* from Kenya and Tanzania replaced the European ones (Perani and Smith, 1998).

Another reason Kenyans love the *kanga* is for its bold designs and bright colors. A border almost always frames the motifs and patterns, which are often very elaborate (Schoss, 1996). Early this century, Swahili sayings and proverbs were added to *kanga*, sometimes to make a political statement and other times just for fun (Schoss, 1996). Different regions are distinguished by different designs. For example, in Kenya mottos are more popular whereas in other regions of East Africa, political statements are more common (Perani and Smith, 1998). Traditional and contemporary vegetal and floral motifs are also frequently seen on *kanga* (Perani and Smith, 1998). A predominant motif used is the paisley, which represents the cashew nut in East African society (Perani and Smith, 1998).

Late 1960s Textiles in the U.S.

Textile design in the U.S. during the late 1960s struggled somewhat to develop its own look apart from Europe. Jackson (1998, p.150) stated of the American designers that, "having exhausted the Contemporary style, many began to fall back on the traditional sources of inspiration." These traditional styles mainly included floral patterns (Jackson, 1998). However, textile design in America had a few major developments.

The foremost new trend in textiles in the U.S. during the 1960s was the use of simple shapes based on colored stripes, as well as the growth in popularity of Thai silks (Jackson, 1998). Another new development was on the textural effects in woven fabrics (Jackson, 1998). Janiero (1996) stated that, "Fiber itself, and its

constructive possibilities became the focus of the subject matter" (Janiero, 1996, p. 19). This trend, as with the trend for striped patterns, reflected the fondness for simplicity and understatement (Jackson, 1998).

Also of interest during the late 1960s were ethnic textiles. This started when several fiber artists used pre-Colombian textiles from Peru as a source of inspiration. Janiero (1996) explains, "The 'discovery' of the archeological artifacts fueled an interest in ethnic textiles and, at this point, there was a convergence of the professional, the technical, and the populist textile maker" (Janiero, 1996, p. 36). The Peace Corps was also a major reason for the popularity of ethnic textiles, as personnel often brought back samples of indigenous weavings and textile products from all over the world (Janiero, 1996).

Other textile design trends in the late 1960s included using vivid coloring and vigorous patterns. Janiero (1996) explains, "Work was created using fully saturated, heightened color, active all-over patterning (related more to the *horror vacui* of ethnic textiles than to the discoveries of the Abstract Expressionists)" (Janiero, 1996, p.36). As the 1960s progressed and became more political, the textiles reflected this by including more topically direct imagery. The "back to earth" movement during this time also rekindled interest in domestic textiles such as quilting, crocheting, embroidery, and knitting (Janiero, 1996). One textile designer that remained on top of and often ahead of these trends was Jack Lenor Larsen.

Jack Lenor Larsen

Often called the dean of modern fabric design (Fry, 2002); Jack Lenor Larsen stands synonymous with American textiles of the 1960s. Born in Seattle, he studied architecture, interior design, and weaving at the University of Washington and continued his education with an M.F.A. from the Cranbrook Academy of Art (Fry, 2002). Larsen then moved to New York in 1951 where he set up a textile studio (Fry, 2002). Two years later, in 1953, he established Jack Lenor Larsen, Incorporated and then the Larsen Design Studio in 1958 (Fry, 2002). "Larsen, who was described in 1998 by *The New York Times* as possibly the most accomplished textile designer living, certainly one of the most innovative and influential in the second half of the 20th century, has created thousands of textile patterns that have appeared on everything from Pan American airplanes to rooms in Frank Lloyd Wright's Taliesin" (Masello, 2001, p. 82).

Although the 1960s were not the best of times for American textile design, Jack Lenor Larsen's design work remained strong. While the rest of the American market was playing it safe and turning to traditional sources such as floral patterns for inspiration, Larsen took risks and opted for something new (Jackson, 1998).

Larsen turned to ethnographic sources to inspire his textile designs (Jackson, 1998). In countries all over the world, Larsen followed the threads back to the villages from which the cloth was made, not just the markets that sold it (Fry, 2002). Fry (Fry, 2002) describes one of Larsen's designs, *Chimu*, as a

“perfect blend of ancient design, primitive technique, and modern material and dyes—connecting in common endeavor people of three continents and several divergent cultures” (Fry, 2002, p. 48). The source of design inspiration is not always self-evident in Larsen’s designs, reflecting the level of his creativity (Jackson, 2002).

History of Maridadi Fabrics

Former CSU Interior Design professor, Dorothy Udall, helped create the Kenya-based textile company, *Maridadi Fabrics*, which was also the name of the factory where the textiles were created (Court, 1973). As Court (1973, p.36) explains, “Designer Dorothy Udall and one-time Pumwani social worker the Rev. Anne Barnett initiated the Maridadi Fabrics project in 1966.” Although a variety of outside influences from Kenyan and western cultures influenced the designs, the fabrics were intended to be uniquely Kenyan (Court, 1973).

Dorothy Udall received a B.S. and M.S. from Cornell University and studied at the Cranbrook Academy of Art (New Stanley, 1969). Udall taught Interior Design at Cornell University and Colorado State University (CSU) in the then Home Economics Department (New Stanley, 1969). She moved to Kenya with her husband Rob in 1965 (Kimenye, 1969). Rob Udall was also on the faculty at CSU in the College of Veterinary Medicine and Biomedical Sciences (*Fort Collins Coloradoan*, November 6, 1973). The two moved to the continent of Africa to allow Rob to teach at the veterinary school at the University of Nairobi in Kenya (*Fort Collins Coloradoan*, November 6, 1973). Shortly after her arrival, Udall

became concerned with the state of the women in the area (Kimenye, 1969). As she (Udall) explained in 1969, "I wanted to be more than just a visitor, so, like most people, I looked around for something in which my own experience could be useful." Deciding to take action, she wished, specifically, to help these women gain financial security (*Fort Collins Coloradoan*, November 6, 1973). With the help of the St. John's Community Center, an Anglican organization, the dream became reality (*Fort Collins Coloradoan*, November 6, 1973).

Maridadi Fabrics initially created batiks but soon discovered that the process was not time efficient (Kimenye, 1969). Udall decided to try screen-printing which, because of its efficiency, quickly became their primary method of applying designs to the textiles (Cliff, 1968). Udall did not have an extensive background in the screen-printing of textiles but had a rudimentary understanding of the process.

She found screen-printing to be a practical way for some of the women in the most impoverished parts of Nairobi, specifically the Pumwani Shauri Moyo neighborhood, to make some additional money for their families (Kimenye, 1969). As one of the oldest and most impoverished in Nairobi, the neighborhood made an ideal choice (Court, 1973). The workers were chosen based on a list from social workers of the neediest women in the area (*Fort Collins Coloradoan*, November 6, 1973). The name Maridadi Fabrics was chosen for the company after the Swahili word meaning "decorative", "pretty", or "fancy" (Court and Mwangi, 1976, p. 38). The company started out with only five employees and

created small textile products including placemats, ties, pillow covers, and wall hangings (Court and Mwangi, 1976). As word got out about the vibrant company, they rapidly grew. As one journalist Susan Williams (1986) explains, "In just over 10 years the original handful of employees had swelled to a workforce of 80. Its first humble home, a disused brewery on loan from the city council, was outgrown, and Maridadi Fabrics, now almost a household name, moved into a purpose-built modern factory on Jogoo Road." This highlights the impact that the homegrown industry had on this poverty-stricken community in Nairobi. As the company grew in size, they began producing large yardages of fabric and ready-made apparel (Cliff, 1968). The fabrics were sold in upscale shops in Nairobi, exported to the United States and Britain, and bought to use in the interiors of several local businesses and hotels (*Fort Collins Coloradoan*, November 6, 1973).

Unfortunately, vandals ransacked the company in 1982. A local writer explained the situation of this first attack, "On the fateful August 1, however, Maridadi lost more than one million shillings in looted stock which included cotton cloth, special reactive dyes, lots of furniture and nearly two dozen sewing machines. They suffered another half million in damages which ranged from smashed walls and windows to bullet-riddled doors" (Gacheru, 1982, p. 8). These were all terrible to lose, but the loss of jobs for the women working at the factory had the greatest impact. Gacheru (1982), continues, "Perhaps what was the most devastating of all was the effect that the day had on the lives of those

eighty women and their children, since most of them had to be released from their work. They consequently have had no immediate source of income to pay for imperatives like food and school fees" (Gacheru, 1982, p. 8). The company luckily did not lose their most treasured items, their hand screen-printed designs (Gacheru, 1982). The fact that they retained these designs allowed the company to get back on its feet.

The Udall's' continued their involvement in the company after leaving Kenya to return to the U.S. by opening Maridadi West, a small factory outside of Fort Collins, CO, in 1970 (*Fort Collins Coloradoan*, November 6, 1973). Udall remained passionate about the project throughout her lifetime and kept in close contact with those running the operation after her departure.

Textile Designs

At the beginning, Udall was the primary designer of the textiles (Court, 1973). Eventually a larger design team including two primary designers and fourteen freelance designers worked for Maridadi as needed. Later, the design team grew even larger. The designs and motifs incorporated in the textiles were also an important part of the company's goals (Court and Mwangi, 1976). The designers aimed to use motifs and colors inspired by life in Kenya (Court and Mwangi, 1976). These motifs included people, geometric patterns, and animals (Court and Mwangi, 1976). Another major source of design inspiration was the traditional art of the region such as jewelry, carvings, and everyday household objects (Williams, 1986). The designs all have specific Swahili, Kikuyu, or

English names (Court and Mwangi, 1976). Court and Mwangi (1976) gave an example, "Wilson Waswa began his design career with a delightful, primitive butterfly pattern, followed by *Maendeleo*, Swahili for "progress", expressed in rockets and airplanes" (Court and Mwangi, 1976, p. 38-39). Eventually, more realistic designs depicting typical village life in the region were introduced (Court and Mwangi, 1976). These aspects gave the textiles a distinct connection to the culture and people of Kenya (Kahiga, 1971). This also helped Maridadi create a reputation for designing essentially Kenyan textiles in a region that had few textile traditions of its own (Court and Mwangi, 1976). The company was pressured by the western market to create designs that were not so large in scale, and they obliged, straying from their mission of creating completely Kenyan-inspired designs (Kahiga, 1971). Maridadi fabrics were never marketed specifically to locals but were used in some local businesses designs (Kahiga, 1971). The designs that were created specifically for the western market are obvious. There also can be distinctions made between those designed by Kenyan artists and those created by Udall. The spatial arrangement, scale, and colors used bring these differences to the forefront. The same designers also created ready-made garments, ties, placemats, and pillow covers (Cliff, 1968).

Screen-Printing Process

Screen-printing is a contemporary method of applying color and pattern to a textile. "Screen printing is a particularly good labor-intensive business activity as well as an easy and inexpensive way to decorate cloth" (Court and

Mwangi, 1976, p.38). There were several steps involved in the creation of the finished textiles at Maridadi (Court, 1973). The cotton fabric used by Maridadi was purchased from a commercial source in large quantities (Court and Mwangi, 1976). This base textile varied in weights and was not woven by hand but by machine (Court and Mwangi, 1976).

First, the artist created the design on paper and then it was transferred to the screen photographically (Court and Mwangi, 1976). The second step in the process involved pinning the cotton fabric to 10-yard long tables (Court and Mwangi, 1976). In the third step, the fabrics were printed by hand with a screen stencil process (Court and Mwangi, 1976). Fourth, the design was transferred to a plastic stencil using a light sensitive mixture (*Fort Collins Coloradoan*, November 6, 1973). Next, the stencil was repeatedly placed on the fabric in intervals (*Fort Collins Coloradoan*, November 6, 1973). The dye was then brushed across the stencil (*Fort Collins Coloradoan*, November 6, 1973). A small brush was used to touch up specific areas (*Fort Collins Coloradoan*, November 6, 1973). This dye was left on to set for two weeks at a time (*Fort Collins Coloradoan*, November 6, 1973). In one of the final steps, the fabric was boiled in large tubs over charcoal fires to eliminate all excess dyes (*Fort Collins Coloradoan*, November 6, 1973). Finally, the completed textiles were hung to dry outdoors (*Fort Collins Coloradoan*, November 6, 1973).

The teaching process was explained, "These tasks are taught to all the women by the supervisory staff that also perform the skilled jobs of dye mixing,

cloth checking, and managing Maridadi's two shops" (Court and Mwangi, 1976, p.38). After completing the series of tasks, these colorful textiles were complete and ready to be sold.

Smith Framework-Material History Methodology

Development of Model

While teaching a graduate history seminar during 1983-84 year, Stuart Smith developed an extremely useful methodology and research model for studying material culture. Properties for the methodology were reduced down to Material, Provenance, Function, and Value. These properties are to be examined in this order as the starting point. The class executed an initial test using the model and ran into several problems, concluding that the model needed to be expanded and reworked. The class was in concurrence when deciding that a graphic format would be the most valuable way of looking at the model. It was also agreed upon that the artifact must be examined by itself first before adding supplementary information (Smith, 1985). The artifact is then to be re-examined after this initial stage.

Completed Model

After the second term during the 1983-84 academic years, the model was completed. The researcher is suggested to examine the artifact thoroughly before continuing with additional sources of information. After the initial examination of all observable evidence, the examiner will compare the artifact to similar items. Next, after all artifact examination is complete, the researcher will add

any other sources of information relevant. Finally, the examiner is to draw conclusions based upon all data collected (Smith, 1985).

Data Defined

The three types of data include observable, comparative, and supplementary. Observable data is determined by simply looking at the artifact at hand and making observations. Smith (1985) explains, "Data can be determined through sensory engagement with the artifact beginning with material composition, then construction, function, provenance and value" (Smith, 1985, p.35).

Comparative data are acquired by looking at the artifact relatively to other similar artifacts. These related objects include ones with the same maker, similar function, and same time period (Smith, 1985).

Supplementary data include written and printed data. This information should be used additionally to provide information on specific properties of the artifact. This information also includes photographs, oral histories, and any other materials used (Smith, 1985).

Methods and Procedures

Pilot Test

An initial pilot test was conducted by the researcher and advisor only, and did not include coders. This pilot test consisted of ten *Maridadi* textiles chosen randomly from those not being used in the actual study. Again, these did not include any of the thirty-four textiles already chosen for the sample. The Larsen

Design Studio images and *kanga* were not a factor in the pilot study. The purpose of this preliminary study was to test the instrument to be used on the *Maridadi* textiles.

These instruments include an adaptation of the Smith (1985) model. The ten *Maridadi* textiles sampled went through all concepts of the Smith (1985) model (See Appendix C) but only focused on observable data.

Comparative and supplementary data were not included in the initial pilot study. One table was used for the adaptation of the Smith (1985) model and a separate one for each textile was necessary.

Upon completion of the initial pilot study, the researcher and advisor both felt it was necessary to make a minor change. Namely, an additional adaptation of the Smith Model was added (See Appendix D) because it was felt that an inadequate amount of design elements were present to evaluate the textiles in the first pilot study.

A second pilot was then done to test the addition. This pilot study also included ten *Maridadi* textile samples not included in the master sample. This study was found to be successful and the research could now continue.

Sampling

A sample of thirty-four *Maridadi* textiles, eleven *kanga*, and seventeen images of the Larsen Design Studio textiles were used in the research. The *Maridadi* textiles were chosen randomly by using the Historic Costume and Textile Collection files and database. To ensure random sampling, textiles were

selected without ever seeing the actual textile or reading their descriptions.

Moving down the list, every other textile in the *Maridadi* collection was chosen, and the accession number on it was recorded. Next, the textiles were pulled based on accession number and separated from the rest of the Collection. The textiles were examined by the researcher and advisor to verify that they would work for the study.

All eleven *kanga* from the Udall Collection housed within the Historic Costume and Textiles Collection were also used in the study (see Appendix A). Because these textiles were imported from Kenya during the late 1960s they are all relevant to the study. Images of the Larsen Design Studio textiles were selected from the Larsen online archive based on the year of the design with the entire sampling taken from 1966-1970 (see Appendix B).

Data Collection

The content analysis method was used in the examination of the *Maridadi* textiles. The Smith (1985) model for studying material culture was used to analyze the *Maridadi* textiles. The traditional Kenyan textile, the *kanga*, and the textile designs of the Larsen Design Studio were used as comparative data. Additional sources such as photographs, newspaper articles, and books were used as supplementary data. The three coders were employed here, but only to record any observable data; they were not responsible for comparative and supplementary data, which was the responsibility of the researcher. They were

asked to make observations about the materials, construction, function, provenance, and value. Other observations the coders were asked to make concerned design elements such as colors used, line qualities, symbolic qualities, texture, figure-ground relationship, and motif scale.

Before the examination of the textiles, the coders were trained on the adaptation of the Smith (1985) model. The coders were then given MS Word files with tables on which they recorded their observations.

The training of the coders included an introduction to DeLong (1998) and Fiore and Kimle's (1997) design elements as well as to the Smith (1985) model and concepts included in it.

Data Analysis

The Smith (1985) model for analyzing material culture was used in the examination of the textile artifacts. After all thirty-four textile samples were analyzed by all three coders and compared with the textiles of the Larsen Design Studio, and the traditional textile, the *kanga*, by the researcher only; the information was carefully scrutinized. Themes were extracted from the coders' observations and the comparative and supplementary data. Themes such as specific materials, color palettes, and construction methods, were grouped and re-structured.

Findings

Themes from the original Smith Model

Material

The majority of the Maridadi textiles used in the sample were *100% cotton*. This was determined through fiber identification. It is known that fabric was bought from a commercial source in large quantities and that is varied greatly in weight and was woven by machine (Court and Mwangi, 1976). In Africa today, machine-spun *cotton* has almost completely replaced locally made yarns except when it is used for ceremonial or prestige purposes (Picton and Mack, 1989). *Cotton* was cultivated in Kenya in the past but during the nineteenth century the cotton farms were replaced with coffee plantations; this obviously remained a popular fiber in the region long after the farms were gone (Carlson, 2001). Only a few textiles within the sample were not cotton, these exceptions were linen.

The majority of the Larsen textiles sampled were labeled as *100% cotton*. All kanga are also 100% lightweight cotton, which was also determined through fiber identification. Most of the Maridadi samples were found to be cotton canvas but some were also lightweight and somewhat sheer cotton sheeting.

Construction

The Maridadi textiles were all identified as *screen-printed* for their design application as were the kanga. A few of the Larsen Design Studio textiles were also decorated using *screen printing*, but a variety of other methods were also employed by the studio. Although Larsen textiles are hard to categorize because

of their diversity, two areas that were important to the firm and to 1960s textiles in general were textured weaves and flat stylized *screen-printed* patterns (Jackson, 1998).

The bulk of the Maridadi cotton samples as well as the kanga were constructed using a *plain weave*. Only one of the Maridadi samples was cotton knit. It is unknown what the weave structure is for the Larsen Design Studio textiles. One of the Maridadi textiles included in the sample was a jacket and additional garment construction characteristics were cited for this piece.

Function

The majority of the Maridadi textiles in this category were classified as being used for *yardage*. A few were noted as being scraps from garment construction and one was classified as a jacket. Although the majority of the Maridadi textiles in the sample were identified as *yardage*, the workers also created small textile products out of the fabrics as well as ready-made garments (Cliff, 1968). All of the Larsen Design Studio textiles in the sample were also identified as *yardage*. The kanga all served the same function as a wrap garment worn predominantly by women in East Africa.

Provenance

This category was often left blank due to lack of documentation on the textiles. Terms often used include "made by Maridadi Fabrics", "owned by Dorothy Udall", and "housed in the CSU Historic Costume and Textile Collection." A designer is acknowledged on some of the Maridadi textiles and if

so this was noted. Also cited was the fact that these textiles were made in Nairobi, Kenya. The Larsen textiles were simply stated as Larsen Design Studio.

Value

This category was found to be insignificant to this research as it was left blank in all instances. The value of all pieces is unknown. The reason this section was left blank could also be that it was not clearly understood by the coders. In the future, this section should be explained better by the researcher or could be left out of research all together.

Smith Model Adaptation - Design Elements

Colors

The *black and white* color combination was the most frequently used one in the Maridadi textiles. The kanga designs during this time also included *black and white* a majority of the time but another color was often introduced into the mix. The *black and white* color palette can be linked to the Op art movement during the 1960s. In Op art, *black and white* were generally the only colors used until 1967, when a little color began to appear (Jackson, 1998).

Neutral color combinations, which included black, gray, and a variety of shades of brown, generally appeared often in Maridadi fabrics and Larsen Design Studio fabrics as well. During the late 1960s a heightened popularity for *neutral* colors was seen (Jackson, 1998). The development was tied to the “back

to the earth" movement in response to the intensified bright colors seen previously in the 1960s (Jackson, 1998).

The most predominant color for the Maridadi and kanga designs was *black*. Heavy use of black appears in textiles throughout the late 1960s. *Black* is also seen in abundance in all forms of African art (Vansina, 1984). Other colors found frequently in all three groups were red, orange, mustard yellow, turquoise, chartreuse green, and brown. Bright colors such as these were also popular throughout the 1960s and this is often credited to the use of hallucinogenic drugs (Jackson, 1998).

Line Quality

Uniform lines were predominant in both the kanga designs and the Larsen Design Studio whereas the lines contained within the Maridadi designs were not generally uniform and typically varied in their width. In African art, broken and undulating lines are preferred to perfectly straight ones (Visona et al., 2001). Textiles during the 1960s in the U.S. generally contained lines of uniform width and length, particularly those associated with the Op art movement; this became less evident towards the end of the decade (Jackson, 1998).

The length of the lines within all three textiles categories was diverse due to the fact that short and long lines were seen frequently as well as meandering lines, and curvilinear lines. Some other types of lines noted include diagonal lines and thin lines.

Lines were equally found that were heavy and light in weight. Maridadi textile designs frequently contained zigzag lines.

Symbolic Qualities/Motifs

Geometric shapes of all sorts were by far the most common in the Maridadi textiles. Among the most frequently seen were circles and half-circles, triangles, diamonds, rectangles, and squares. These shapes were often seen in combination with one another. *Geometric motifs* were also found extensively on both the Larsen Design Studio designs and the kanga designs. The circle is the most dominate motif seen in textile designs during the 1960s (Jackson, 1998). The popularity of geometric forms in design during the 1960s was due to the general shift from the free forms of the 1950s to more controlled ones (Jackson, 1998).

Animal motifs also appeared in Maridadi textile designs. Several of the Larsen textiles included *animals* although none of the kanga designs did. Some *animals* seen in both the Maridadi and Larsen designs include tropical birds, and cheetah and leopards. Maridadi *animals* were influenced by Kenya therefore animals such as zebra and giraffe were common. *Animals* were not used extensively in textile design during the 1960s (Jackson, 1998).

Floral and vegetal motifs were seen on some of the Maridadi and Larsen textiles but are included in all kanga designs. These include motifs such as flowers, leaves, trees, and thorns. The Maridadi fabric designs only incorporated these floral and vegetal motifs if they were related to Kenya. One Larsen and Maridadi design contains a similar tree or bush motif. Floral and vegetal motifs

were common during the late 1960s, which began in 1967 with the “flower power” movement, and were often influenced by ethnic fabrics and Art Nouveau (Jackson, 1998). The Maridadi and kanga designs that utilized floral and vegetal motifs were generally multi-colored.

A heart motif was found on one of the Maridadi fabrics and was also found in several kanga designs. The paisley, which represents a cashew nut in Kenya, was also seen on one of the Maridadi fabrics and is found on the majority of kanga in the sample. Other motifs found on Maridadi designs include nature inspired motifs such as rocks, water, bubbles, sun, and waves. Nature inspired motifs such as these were also seen in textiles during the late 1960s as part of the “back to the earth movement” (Jackson, 1998).

Dots were found on the Maridadi designs and were seen on some kanga designs as well. Some of the Maridadi shapes were often filled with cross-hatching lines and this was seen on a Larsen design as well. An arrow was found on one Maridadi design and one kanga.

Texture

A characteristic cited under the texture column includes the *soft* nature of Maridadi fabrics as well as the East African kanga. The kanga however was often referred to as very *soft* and one coder felt that the Maridadi samples were somewhat rough. The Maridadi textiles were also generally referred to as being compact and somewhat stiff. Nothing was cited for the Larsen samples as they were only images.

During the 1960s there was a balanced popularity for smooth surfaces with geometric shapes, and rough uneven textures with random forms and patterns (Jackson, 1998). These trends at times crossed over and combined strictly geometric patterns with rough textures and vice versa (Jackson, 1998). A purely textural effect on woven fabrics was also a trend in 1960s textile design (Janiero, 1996).

Figure/ground relationship

All of the textiles sampled in the three categories used *figure ground ambiguity* the most frequently. There were however some samples in which the figure was well separated from the ground but the majority of the designs included well integrated figure and ground.

The textiles created during the Op art movement of the 1960s have infinite levels of *figure ground ambiguity* (Jackson, 1998). Those designs influenced by Art Nouveau, hallucinogenic drugs, and ethnic textiles, also exhibit figure ground ambiguity within the patterns (Jackson, 1998). Well integrated figure and ground can be seen within African art as the push/pull of negative spaces is often present in textiles, sculpture, and architecture (Visona et al., 2001).

Motif scale

In most cases the motif scale was referred to as *medium* or medium to large. Not a single textile sampled was referred to as small or small to medium scale. Large scale geometric patterns are seen throughout the 1960s (Jackson, 1998). Evidently Maridadi was pressured by the western market to create

designs that were smaller in scale to appeal to its clients, although this was not evident in the samples used (Kahiga, 1971).

Model

A model was developed to further explore the relationship between the themes extracted from the Smith model adaptation (see Figure 1). Three dominant themes were found to be characteristic of the majority of the Maridadi textiles sampled: *black and white colors*, *geometric motifs*, and *figure ground ambiguity*.

Black and white was the dominant color combination found within the Maridadi designs. The *black and white* Maridadi textiles were generally considered to have a well integrated figure ground or *figure ground ambiguity*. These designs also included primarily *geometric shapes* within their designs.

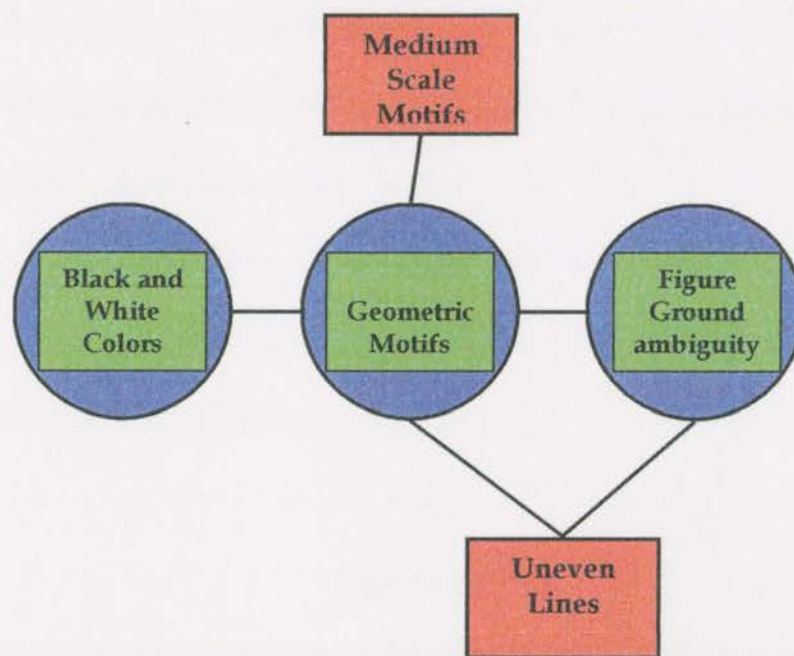
Geometric shapes were integrated in most every Maridadi textile design. The Maridadi designs which included the *geometric* forms were more likely to have infinite levels of *figure ground ambiguity* and were often *black and white* in color. The designs were also generally termed *medium scale*.

Most of the fabrics that were noted as well integrated or *figure ground ambiguity* were *black and white* or included black in their color palette. These fabrics also included an abundance of *geometric shapes*.

Two subordinate themes were also found in relation to the dominant themes: *uneven lines*, and *medium scale motifs*. *Un-even* or not uniform lines were

found in most of the Maridadi designs. These designs were also found to commonly include *geometric shapes* and *figure-ground ambiguity*. Most Maridadi motifs were noted as being *medium in scale*. These designs also generally included *geometric motifs*.

Figure 1. RELATIONSHIPS OF DESIGN THEMES IN MARIDADI TEXTILES MODEL



Conclusions

The adaptation of the Smith model was effective in pinpointing specific design characteristics for the textiles. The original Smith model however tended to repeat itself for each sample. In the future only one of these tables would be needed for the entire group unless a significant difference was found in Material or Construction. The adaptation of the Smith model with the Design Elements

incorporated was appropriate for this particular research in that each sample resulted in different design themes and characteristics.

The Maridadi textiles were similar to the Larsen Design Studio designs in that they both contained *animal motifs* and possessed some similar colors such as black, brown, orange, turquoise, and red. The colors when used in combination with one another however were found to be more like those in the kanga designs. The scale and line qualities were also found to be more like those in the kanga. The kanga designs also utilize a diversity of *geometric shapes* within the designs as do the Maridadi textiles.

Maridadi textile designs possess characteristics of both textiles from the U.S. and Kenya during the late 1960s. However, they are also unique in that they are inspired by their surroundings.

Significance

The findings are significant in that they reveal that the Maridadi textiles are essentially unique. These textiles' designs do not directly mirror those of the kanga or the Larsen Design Studio. They definitely have their similarities to both but are different from them in many ways. For one, the motifs are uniquely Kenyan inspired and therefore are not seen on either of the other textiles. The Maridadi designs also generally consist of only two colors, something that was not seen in either the kanga designs or those by the Larsen Design Studio. They essentially utilize design aesthetics from the 1960s such as scale, color, and

shapes but turn them into something of their own. The company therefore achieved their goal of creating a textile tradition in Kenya unique to the region and reflecting its culture.

Future Research

In future research both the designs of the Larsen Design Studio and the kanga could be used not only as comparative data but could each have their own tables. The textiles could also be used as observable data and go through all sections of the model. This would be a more accurate way to compare the textiles with those of Maridadi.

Also in the future, textiles from other cultures during the late 1960s could be used as a comparison to Maridadi. This would reveal any other sources of inspiration that might have influenced the designs other than those of Kenya and the U.S.

CHAPTER VI

CONCLUSIONS

The opportunity to work directly with Historic Costume and Textile collection at CSU and the fabrics created at Maridadi as well as other traditional East African ones was the inspiration for this research and thesis. The purpose of the research was to develop a new understanding of *Maridadi* textile designs utilizing Stuart Smith's "Material History Methodology" (1985), Ann Marie Fiore and Patricia Anne Kimle's Understanding Aesthetics for the Design and Merchandising Professional (1997), and Marilyn Revell DeLong's The Way We Look (1987). This was accomplished by tracing the origins of the textile designs by placing them within the context of both design cultures from which they stem, those of Kenya and the U.S. Specific design elements such as the binary themes from DeLong (1998) and Fiore and Kimle (1997) were analyzed. The designs were also examined by looking closely at their Material, Construction, Provenance, Function, and Value (Smith, 1985). The question of whether or not these textiles represent their social time or style period, the late sixties, and/or culture was answered by comparing the textile designs of the Larsen Design Studio and the *kanga* designs of Kenya in the late 1960s.

A sample of thirty-four *Maridadi* textiles, eleven *kanga*, and seventeen

images of the Larsen Design Studio textiles was used in the research. The content analysis method was used to examine the *Maridadi* textiles.

Three coders were employed to record any observable data, but were not responsible for comparative and supplementary data, which was done by the researcher. They were asked to make observations about the materials, construction, function, provenance, and value.

Three trained coders were also used to identify where on a continuum a textile artifact lands between the binary themes from DeLong (1998) and Fiore and Kimle (1997). This was performed using the Binary Elements and Principles Scale.

After all textile samples were analyzed by all three coders and compared with the textiles of the Larsen Design Studio, the *kanga*, the information was carefully scrutinized. Themes were extracted from the coders' observations and the comparative and supplementary data. The researcher identified where each of the thirty-four textile samples has landed on the continuum between the binary themes and calculated the number of times that each continuum was landed on.

Findings

The primary objectives of the Binary Elements and Principles of Design Scale and the Smith model were to assist in the evaluation of a group of related textiles and to discover their overall design qualities or characteristics. These

design characteristics and themes will help to place the textiles within their social time and place. The binary themes used within the Binary Elements and Principles of Design Scale included: Indeterminate/Determinate, Figure Ground Integration/Figure-Ground Separation, Mono-Chromatic/Chromatic Colors, Warm Colors/Cool Colors, Geometric Shapes/Organic Shapes, Ordered Patterns/Random Patterns, Filled Spaces/Unfilled Spaces, Hard-Edge Lines/Soft-Edge Lines, and Regular Shapes/Irregular Shapes. The following themes were found to be dominant throughout the Maridadi textile designs: Indeterminate, Figure-Ground Integration, Neutral Colors, Warm Colors, Geometric Shapes, Ordered Patterns, Filled Spaces, Hard-Edge Lines, and Regular shapes. These textile characteristics emerged from the original Smith model: 100% cotton, cotton canvas, plain weave, screen-printed, and yardage. From the adaptation of the Smith model with design elements included, the following themes surfaced: Black and white, black, uneven lines, geometric shapes, animal motifs, floral and vegetal motifs, soft texture, rough texture, figure ground ambiguity, medium scale, and medium to large scale.

Significance of Binary Themes

Upon examination of the Maridadi textile designs through the use of the Binary Elements and Principles of Design Scale, several elements and principles were found to be the dominating overall themes; some themes may or may not be directly related to the textiles of the late 1960s in Africa and the U.S.

During the late 1960s in the U.S. specifically, ethnic textiles experienced great popularity, and for this reason, the Maridadi textile designs were very in tune with their social time and space. The textiles were also in tune with their social space by using motifs, colors, and patterns inspired by their surroundings.

The textiles utilized a variety of geometric shapes which were characteristic of textiles from the late 1960s in Kenya and the U.S. and the bold designs, filled spaces, and warm colors are also reminiscent of the kanga designs worn in Kenya during the late 1960s. However, these textiles are unique in that the motifs, and colors the designers chose to use directly come from their surroundings.

The research also provides an instrument for analyzing the elements and principles of design within textiles. It is useful in extracting their overall design themes and calculating their occurrences. These extracted themes allow for a clearer vision of where the designs were coming from. By pinpointing these textiles characteristics one can more easily place the designs within their social time and space.

Significance of Smith Model Themes

The Maridadi textiles were similar to the Larsen Design Studio designs in that they both contained animal motifs and possessed some similar colors such as black, brown, orange, turquoise, and red. The colors when used in combination with one another however were found to be more like those in the

kanga designs. The scale and line qualities were also found to be more like those in the kanga designs of East Africa. The kanga designs also utilized a diversity of geometric shapes within the designs as did the Maridadi textiles.

The findings are significant in that they reveal that the Maridadi textiles are essentially unique. They definitely have their similarities to both the kanga designs and those from the Larsen Design Studio but are different from them in many ways. The motifs are uniquely Kenyan inspired and the Maridadi designs also generally consist of only two colors, something that was not seen in either the kanga designs or those by the Larsen Design Studio. They essentially utilize design aesthetics from the 1960s such as scale, color, and shapes but turn them into something of their own. The company therefore achieved their goal of creating a textile tradition in Kenya unique to the region and reflecting its culture.

Future Research

Additional and future research should explore the relationships of diverse groups of textiles in order to compare and contrast their relative themes. For example the researcher could also use the Binary Elements and Principles of Design Scale on the *kanga* textiles from East Africa, as well as the textiles from the Larsen Design Studio. This would enable the researcher to make the connections between the three. Further investigation could also explore textiles from different culture groups to find similar design characteristics. For instance,

textiles produced in Europe during the late 1960s may have influenced the Maridadi designs more so than those of the U.S.

In future research utilizing the Smith models both the designs of the Larsen Design Studio and the kanga could be used not only as comparative data but could each have their own tables. The textiles could also be used as observable data and go through all sections of the model. This would be a more accurate way to compare the textiles with those of Maridadi.

REFERENCES

- Behrend, H. (2000). Feeling global: The Likoni Ferry photographers of Mombasa, Kenya. *African Arts*, Autumn 2000, 70-76.
- Benesh, C. (2002). The pulse of a continent. *Ornament*, Spring 2002, 16.
- Carlson, E. (2001). On the Weaverbird Trail. *Shuttle Spindle & Dyepot*, v.XXX II, no. 1, Winter 2000/01, 57-59.
- Cliff, A. (1968). Success by the yard. *Daily Nation*, Friday, July 19, 1968.
- Court, E., (1973). Maridadi fabrics. *Kenya Past and Present*, vol. 2, No. 1, 1973. 36-39.
- Court, E., (1978). The women should have been addressed in Swahili. *Daily Nation*, Monday, April 17, 1978, pp. 7.
- Court, E., Mwangi, M. (1976). Maridadi fabrics. *African Arts*, October 1976, 38-41.
- DeLong, M. (1987). The Way We Look: A Framework for Visual Analysis of Dress. Ames, IA: Iowa State University Press.
- DeLong, M. (1998). The Way We Look: Dress and Aesthetics, Second Edition. New York: Fairchild Publications.
- Fiore, A. M., Kimle, P. A. (1997). Understanding Aesthetics for the Merchandising and Design Professional. New York: Fairchild Publications.
- Forester, P., Hitchcock, M., Lyimo, F. (2000). Race and Ethnicity in East Africa. Great Britain: MacMillan Press Ltd.
- Frieland, S., Pina, L. (1998). African Prints: A Design Book. Atglen, PA: Schiffer Publishing Ltd.
- Frings, G. (1999). Fashion: From Concept to Consumer. Upper Saddle River, New Jersey: Prentice-Hall, Inc.

Fry, W., L. (2002). The dean of modern fabric design. *Fiberarts*, v. 28, no. 4, January/February 2002, 45-49.

Gacheru, M. (1982). Maridadi fabrics struggles to get going again. *The Nairobi Times*, Tuesday, October 19, 1982, pp. 8.

Hassan, S., Oguibe, O. (2001). Authentic/ex-centric at the Venice Biennale: African conceptualism in global contexts. *African Arts*, Winter 2001, 64-75.

Horton, M., Middleton, J. (2000). The Swahili: The Social Landscape of a Mercantile Society. Oxford: Blackwell Publishers Ltd.

Jackson, L. (1998). The Sixties: Decade of Design Revolution. London: Phaidon Press Ltd.

Janiero, J. (1996). The crucible: textiles in the sixties. *Surface Design Journal*, Fall 1996, 18, 19, 36-38.

Jules-Rosette, B. (2002). Musee Dapper: new directions for a postcolonial museum. *African Arts*, Summer 2002, 21-29.

Kahiga, M. (1971). Maridadi. *Kenya Airlines Magazine*, 1971.

Kasfir, R. L. (2000). Artists' reputations: negotiating power through separation and ambiguity. *African Arts*, Spring 2000, 70-77.

Kimenye, B. (1969). Dorothy's designs bring her a silk-lined success. *Daily Nation*, Tuesday, April 1, 1969.

Knappert, J. (1987). East Africa: Kenya, Tanzania, and Uganda. New Delhi, India: Vikas Publishing House.

Larsen, J. (1998). Jack Lenor Larsen: A Weaver's Memoir. New York: Harry N. Abrams, Inc.

Larsen: A Living Archive. The Minneapolis Institute of the Arts.
<http://www.artsmia.org/larsen/intro/index.cfm/>

Mack, J., Picton, J. (1979). African Textiles. London: British Museum Publications Limited.

Masello, D. (2001). Grand Larsen-y. *Art and Antiques*, v. 24, no. 8 September 2001, 77-83.

Mirza, S., Strobel, M. (Eds.). (1989). Three Swahili Women. Bloomington: Indiana University Press.

New Stanley Art Gallery (1969). Trans World Airlines presents: The American artist, Kenya, 1969. Kenya: The Regal Press Ltd.

Perani, J., Smith, F., (1998). The Visual Arts of Africa: Gender, Power, and Life Cycle Rituals. Upper Saddle River, New Jersey: Prentice Hall.

Picton, J. (2001). Undressing ethnicity. *African Art*, Autumn 2001, 67-73.

Sayer, G. (1998). Kenya: Promised Land? Oxford: Oxfam.

Schaedler, K. (1987). Weaving in Africa: South of the Sahara. Germany: Panterra Verlag.

Schoss, J. (1996). Dressed to shine: work, leisure and style in Malindi, Kenya Clothing and Difference: Embodied Identities in Colonial and Post-Colonial Africa. 157-188. Edit: H. Hendrickson (1996). Durham, NC: Duke University Press.

Smith, S. (1985). Towards a material history methodology. *Material History Bulletins* 22, 1985, 31-40.

Tate, S. (1999). Inside Fashion Design: The Fourth Edition. New York: Addison Wesley Longman, Inc.

Williams, S. (1986). Maridadi is now a household name. *Daily Nation*, Thursday, August 28, 1986.

Vansina, J. (1984). Art History in Africa. New York: Longman Inc.

Visona, M., Poynor, R., Cole, H., Harris, M. (2001). A History of Art in Africa. New York: Prentice Hall, Inc., & Harry N. Abrams, Inc.

Appendix A

East African Kanga Designs-Udall Collection (1966-1970)

Kanga Designs/ Udall Collection (1966-70)





Appendix B

Larsen Design Studio Textiles (1966-1970)

Larsen Design Studio Textiles (1966-70)



Ballet Russe
1966



Conquistador
1966



Parrots
1966



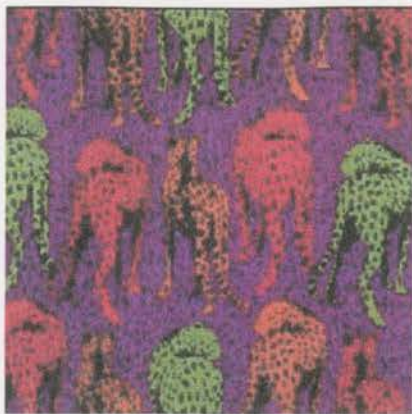
Cosmic
1967



Oriental Stripe
1966



Tigers
1966



Leopard
1966



Chimu
1966



Sundown
1967



Tropic Birds
1967



Nocturne
1968



Rondo
1968



Samarkand
1968



Bas-relief
1969



Cathay
1969



Rapture
1969

Appendix C

The Analysis Method (Smith 1985)

Table 1. The Analysis Method (Smith, 1985)

ANALYSIS PROCEDURE	MATERIAL	CONSTRUCTION	FUNCTION	PROVENANCE	VALUE
Observable Data- Collection					
Comparative Data-Jack Lenor Larsen					
Comparative Data- Kanga					
Supplementary Data- Review of Literature					

Appendix D

The Analysis Method-Design Elements (Smith, 1985)

Table 1. The Analysis Method-Design Elements (Smith, 1985)

Analysis Procedure- Design Elements	Colors- Primary, Secondary, Tertiary, Complementary	Line Qualities- Width, Length, Uniformity , Direction, Weight	Symbolic Qualities- Do the shapes, lines, patterns, have symbolic meanings?	Texture - Fabric hand	Figure/ Ground Relationship	Motif Scale- Relative to the object
Observable Data- Collection						
Comparative Data-Larsen Design Studio						
Comparative Data-Kanga						
Supplementary Data-Review of Literature						

Appendix E

Binary Elements and Principles of Design Scale

Table 1.

Sample # _____

Binary Elements and Principles of Design Scale

Please circle the most appropriate for the textile sample for the overall design

Indeterminate		Neutral	Determinate	
1	2	3	4	5
Figure-ground integration		Neutral	Figure-ground separation	
1	2	3	4	5
Mono-chromatic		Neutral	Chromatic	
1	2	3	4	5
Warm Colors		Neutral	Cool Colors	
1	2	3	4	5
Organic Shapes		Neutral	Geometric Shapes	
1	2	3	4	5
Ordered Pattern		Neutral	Random Pattern	
1	2	3	4	5
Filled Space		Neutral	Unfilled Space	
1	2	3	4	5
Hard-Edge Lines		Neutral	Soft-Edge Lines	
1	2	3	4	5
Regular Shapes		Neutral	Irregular Shapes	
1	2	3	4	5

Appendix F
Coder Instructions

Maridadi Data Collection-Coder Instructions

Introduction

This research will focus on the *Maridadi* textile collection housed in the Historic Costume and Textiles Collection in the Department of Design and Merchandising at Colorado State University (CSU). The purpose of the research is to develop a new understanding of *Maridadi* textile designs utilizing Stuart Smith's "Material History Methodology" (1985), Ann Marie Fiore and Patricia Anne Kimle's Understanding Aesthetics for the Design and Merchandising Professional (1997), and Marilyn Revell DeLong's The Way We Look (1987). This will be accomplished by tracing the origins of the textile designs by placing them within the context of both design cultures from which they stem, those of Kenya and the U.S. Specific design elements such as the binary themes of figure-ground integrated/figure-ground separated, determinate/indeterminate (DeLong, 1998), warm/cool colors, and organic/geometric shapes (Fiore and Kimle, 1997) will be analyzed. The designs will also be examined by looking closely at their Material, Construction, Provenance, Function, and Value (Smith, 1985). The question of whether or not these textiles represent their social time or style period, the late sixties, and/or culture is of major concern. The social time issue will be addressed by comparing the textile designs of Jack Lenor Larsen and the *kanga* designs of Kenya in the late 1960s. If the studied textiles are found to be representative of the late 1960s, then the characteristics that make them such will be explored.

Collection of Data

The following are instructions for the three coders:

- The coders will receive 32 copies each of the Elements and Principles of Design Scale along with a guide defining the terms used.
- The coders will use a lab top computer provided by the researcher to record data and observations on the Smith Model. 32 copies of the Smith Model will be provided in folders with each coder's name.
- Each coder will first try a few examples before starting on the actual study.
- The coders will work independently on each Elements and Principles of Design Scale and Smith Models.
- To begin, check the tag on the textile to make sure that you are working on the correct sample. Then record the sample # at the top of the page on the Elements and Principles of Design Scales and Smith Models.
- When using the Elements and Principles of Design Scale simply circle the number that you feel represents the overall design best. If principles are not clear, refer to the guide provided.
- While recording data into the Smith Model simply type in your observations in the corresponding space. If principles are not clear, refer to the guide provided.
- Make note of any questions or concerns you have to be addressed later on.
- Each coder will then return the computer and Elements and Principles of Design Scales to the researcher.
- The researcher will then analyze the data found and identify themes.