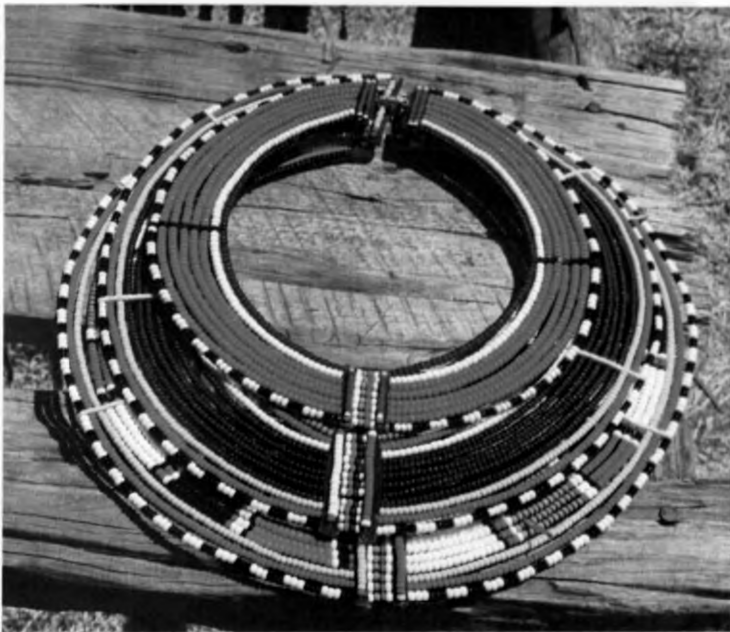




UNIVERSITY OF NAIROBI,
SCHOOL OF THE ARTS AND DESIGN



Design-Jua Kali Craft Collaboration:

A study of Laikipiak beadwork in Laikipia district, Kenya

Norah M.M. Gitobu

This Thesis is submitted in Partial Fulfillment of the Requirement for
the Degree of Master of Arts in Design

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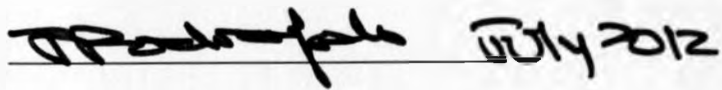
Declaration

I certify that the work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the thesis. I hereby declare that I have not submitted this material, either in whole or part, for a degree at this or any other institution.



Norah M. M. Gitobu

The thesis has been submitted for examination with the approval of University Supervisor.



Dr. Odoch Pido

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Dedication

This thesis is dedicated to my family;

My parents Eng. Justus Gitobu Wambutura and Callista K. Gitobu who have supported me all the way since the beginning of my studies

My daughter Zahara Kanana who has been a great source of motivation and inspiration

And my siblings Kenneth, Rita, Eugene and Tony Gitobu for their love and encouragement

Acknowledgement

I extend sincere thanks to the following individuals and institutions for their assistance and contribution towards the completion of this study

My most sincere gratitude to my supervisor, Dr. Odoch Pido whose tireless effort, guidance and professional advice made this thesis what it is

My appreciation goes to all lectures at the School of the Arts and Design for their contributions in seminars held at different times and when sections of this thesis were presented and discussed

I wish to express my gratitude to the people who agreed to take the time to respond to my questions giving me invaluable data that was used in this study

My deepest appreciation is due to my mother, Callista K. Gitobu, without whose counsel I would not be whom I am today

List of Abbreviations

EPC	Export Promotion Council
GDP	Gross Domestic Product
GoK	Government of Kenya
ILO	International Labour Organization
ITC	International Trade Centre
MS&S	Marketing Strategies and Solutions
MSMEs	Micro, Small and Medium Enterprises
NGO	Non- Governmental Organization
USAID	United States Agency for International Development
VSO	Voluntary Services Oversees
WIPO	World Intellectual Property Organization

Definition of Terms

“Artisans” are people who make products manually (hand or using hand tools); they usually work individually, but can often be helped by family members, friends, apprentices or even a limited number of workers, with whom they are in close personal contact. (ITC, WIPO, 2003)

Craft are produced by artisans either completely by hand or with the help of hand-tools and even mechanical means, as long as the direct manual contribution of the artisan remains the most substantial component of the finished product. Even when an artisan makes quantities of the same design, no two craft are ever alike. Definition adopted by UNESCO/ITC International symposium on Craft and International Markets (Manila, Philippines, October 1997)

Collaboration: Collaboration can be defined as working together for a common goal. This is when individuals with different, but complementary skills work together to seek collective goals.

Design: There are many and sometimes conflicting definitions of design, Design, in this study, is seen as a process of solving problems and a multidisciplinary activity.

Jua Kali craft: Jua Kali craft essentially represents craft made in informal Micro and Small Enterprises (MSE's) in Kenya. Jua Kali is a Kiswahili word, which in direct translation means hot sun and refers to the conditions under which many of these

MSE entrepreneurs work. The use of Jua Kali craft is essentially to give the craft a geographic origin to Kenya. The word craft may be used alone in this study and it is interchangeable referring to all craft in the world and specifically Jua Kali craft.

Maa Speakers: Maa is an Eastern Nilotic language. The Maa (Maasai) language in Kenya is currently spoken by Maasai, Samburu, Camus, Njemps, Ndorobo, Laikipiak and Okiek peoples. Maa speakers were traditionally pastoralists. This study focuses on the Laikipiak (or Mukogodo) Maa speakers.

Market ready/ Market-led: Products that are in tune with the market needs. Products in this case are produced bearing in mind observations made during a market research.

Price points: The value of products if put together into one group and sold for one price **Product Collection:** Families, groups or set of products that have common elements of design linking them to each other e.g. pattern, shape, and finish.

Abstract:

Over the past seven and a half years, this researcher has been involved in designing for the Jua Kali craft industry in Kenya. Her experiences, especially the challenges and frustrations, initiated this study and outcome. While preparing for the study, she came across Voluntary Services Oversees (VSO) Jitolee, which is a Non-Governmental Organization (NGO) that, among other projects, works with marginalized and poor communities in their Secure Livelihood programme. The Secure Livelihood programme focuses on enterprise development initiatives as a means of creating economic empowerment for their target partners. Among these partners are the Maa speaking women of Laikipia district who make beadwork. The researcher took up the opportunity of studying 'Design-Jua Kali craft collaboration' in this community.

The study first explored the present role of design in the Jua Kali craft industry. This formed the backbone to the study which aimed at examining Design and Jua Kali craft collaboration and more specifically if the collaboration is beneficial and if so, how the relationship can be improved or made more effective. As background to this research, a review of secondary sources of information on the issues was conducted. The information was difficult to obtain because it is more often contained in consultancy reports from non scholarly efforts on the field rather than in published books or articles. Primary data was also collected to support the

background data, examine any collaboration between Design and Jua Kali craft and explore how the collaboration can be made mutually beneficial.

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Chapter 1: Background of the Study

Introduction:

The market scene is alive with plentiful vibrant colours, traders calling out to customers, Maasai women threading beads, brokers trying to make an extra shilling from a host of exiting Jua Kali craft. This is Maasai Market, an open air market in Nairobi where all sorts of Kenyan-made Jua Kali craft are sold to both locals and tourists. Such craft include wooden sculptures, beaded ornaments, batik wall hangings, Maasai sandals, Sisal bags and a variety of textiles. According Dr. Donna Pido, a Jewellery designer, the Maasai market was established by African Heritage in 1973. The practice at African Heritage was that every Tuesday was a “buying day”; this was when Maasai brought their beaded-ornaments for sale at Banda Street in Nairobi. However, supply out-stripped demand; Maasai women sold their leftovers to whoever would buy. As the demand for their products grew, the market moved to City Market, the car-park opposite the General Post Office and various Nairobi City locations. The Jua Kali craft sold at the market also diversified to include products, other than Maasai craft, as traders from other communities sold at the market; the two photographs below indicate scenes in Maasai Market in Nairobi.



Maasai women at the market
Source: www.guide2kenya.com



Beaded Craft at the Maasai market
Source: www.kenyasafari-direct.com

Jua Kali, the Swahili words for 'hot sun', was originally used to refer to artisanal fabrication and repair enterprises that operate without shelter, but has with time broadened to cover many types of informal Micro and Small Enterprises (MSEs) and especially include anyone in self-employment, whether in the open or in a permanent premises (King, 1996). MSEs comprise businesses employing between 1 and 49 workers, they range from informal businesses also known as Jua Kali enterprises, to registered small scale businesses such as supermarkets, wholesale and retail shops. (ILO, 2008). Jua Kali craft are essentially handicraft produced completely by hand or with the aid of hand tools, as long as the direct manual contribution of the artisan remains the most substantial component of the finished product. (ILO, 2008).

Jua Kali craft in Kenya has played an important role of creating international awareness on rich cultural and artistic diversity of Kenya and providing a means of

livelihood to millions of persons engaged in production and marketing of these products (EPC, 2004). That the potential of Jua Kali informal sector is, not only as a vehicle for employment generation but also as a tool for wealth creation, was first recognized in the ILO Report of 1972." (UNESCO, 1998) It was only after this report that the government, deliberately, focused on MSEs and the informal sector. There might be other reports that contradict the ILO Report of 1972. Some of the first government initiatives that addressed issues brought out in the ILO report was the establishment of the Jua Kali Nyayo sheds in 1989. Though Jua Kali craft have made great contributions to Kenya's economy, their sales continue to decline in the international market (EPC, 2004). This may be attributed to a general lack of understanding and information on international consumers' taste and preferences during production of Jua Kali craft. (MS&S, 2006). With the expansion of markets, the artisan who makes Jua Kali craft meets new consumers who have different needs and tastes. Markets such as Maasai Market in Nairobi have grown from supplying once a week to one wholesaler (African Heritage at one time) to selling on almost every day of the week to various wholesale exporters, individual retail customers both locals and tourists. The traditional direct contact between the artisan and consumer has been interrupted as Jua Kali craft goes further than the communities in which the artisans live. This challenge requires the kind of creative imagination or conceptualization of new product ideas that is intrinsic to design. Concerns have been raised by craft promoters and distributors around the world for closer links

between design and craft (UNESCO, Craft Revival Trust, Artesanias de Colombia SA, 2005). Design interventions in Jua Kali craft have in the past created an opportunity for new product prospects through the product design and development process (EPC, 2004). Though Design comes in to offer opportunities for new prospects some may consider it as a threat. Thus the aim of the study is to address the issue of Design- Jua Kali craft collaboration and possibly find a level working ground for their successful collaboration.

Design, Jua-Kali and Craft were fundamental in shaping the title of this study. This is because, various aspects of design were discussed; for example design practitioners, user-centered design,, design thinking and design process. Addressing the practitioners alone in the title would not exhaust the discussions in the study. Another argument surrounding the title of the study was viewing the relationship between design and Jua Kali craft as an interface, interaction or collaboration. The researcher settled on collaboration rather than other terms that had previously been considered i.e. interact and interface because neither terms explained the relationship being researched conclusively. Interact happens when two things affect each other's behavior in a mutual or reciprocal action. Interface, on the other hand, is the area where two subjects affect eachother or have links with eachother. Its is the point of interconnection between two entities. This study is concerned with studying mutal benefit of design and Jua Kali craft working together which is best explained by the word collaboration. The word "Jua Kali" was selected and used in the study in

stead of MSE's or informal enterprises as this study is based on a Kenyan experience of craft. Jua Kali is a Kenyan expression that includes MSE's and the informal enterprises in Kenya.

The thesis is organized into five parts. The first part is a background to the study that includes an introduction, the problem statement, objectives, justification, limitations and assumptions and the definition of terms. Following the background is the second part that looks into methods of data collection then the third part is the theoretic review of relevant literature. Part four analyses the primary data collected during the research. The final section was a summary of the findings and proposes recommendations.

Problem Statement:

This research sought to investigate possible collaboration between Design and Jua Kali craft, how it presently exists, in order to propose ways in which the relationship can be mutually beneficial. In the more traditional society, crafts are objects of everyday use. In this case craft is a means of living in a given environment and culture (UNESCO, Craft Revival Trust, Artesanias de Colombia SA, 2005). Craft production is informed by culture, history and technology, thus craft producer were familiar with aesthetic, socio-cultural requirements and appropriate products to meet the needs of the consumers. The craft producer assumed the combined role of designing, producing and marketing (UNESCO, et al., 2005). With the dawn of

globalization and expansion of markets, a gap was created by the international market as this brought diversity where; the new consumers of different cultures bring varied demands for craft. Craft production has increasingly lost touch of the consumer needs (EPC, 2004).

Typically, products must be aesthetically appealing, durable, competitive in price and useful in functionality to make them meet the consumer's needs (Norman, 1988). The traditional craft ought to be adapted to meet the varied user needs. The craft must respond to changes in the market, fashion trends and usage preferences. (UNESCO, et al., 2005) There is a need for the collaboration of Design and Jua Kali craft in order to interpret these changes and conceptualize ideas for production of craft that address consumer needs and preferences.

Objectives and Hypothesis:

At introduction, the concerns were to address the issue of Design- Jua Kali craft collaboration and possibly find a level working ground their successful collaboration.

The following are the main objectives focus of this study:

1. To establish the present role of design in the Jua Kali craft industry
2. To determine whether or not the collaboration of design and Jua Kali craft is beneficial

Following the outcomes of these objectives, the following object may or may not be addressed;

3. To propose ways in which design and Jua Kali craft collaboration can be improved based on analysis of data gathered for this study.

The null hypothesis of this study based on the above hypothesis is: *There can be a mutually beneficial collaboration between Design and Jua Kali craft.* The alternative hypothesis is: *There cannot be a mutually beneficial collaboration between Design and Jua Kali craft.*

Rationale:

There were several reasons that made this research important. First, little has been written about collaboration of Design and Jua Kali craft in Kenya. This research was an effort to add to the pool of knowledge on Jua Kali craft industry to shed some light on design in Kenya. Second, the thesis attempted to address different stakeholder in the Jua Kali craft industry including artisans, relevant government ministries, design practitioners, design students, design educators and design institutions as the recommendations from this study will that will inform the industry. This will contribute to the development Design- Jua Kali craft collaboration.

Scope:

Kenya comprises over forty tribes and, consequently, varying cultures and a wide range of craft. To study and discuss all crafts in Kenya proved hard; this is why the study concentrated on beaded ornaments. Even then, there are very many Artisans dealing with beaded craft; it was, indeed, virtually impossible to visit all of them considering the time allotted to this study. Thus this study was limited to beaded craft made by the Maa speaking community of Il Ngwesi Group Ranch in Laikipia East District, Laikipia Plateau. The ranch covers an area of 16,500 hectares and is north of Mount Kenya. Il Ngwesi Group ranch is located at the northwest edge of the Lewa Wildlife Conservancy and is owned by the Il Ngwesi community, Mukodogo Division, Laikipia district (africanspicesafaris.co); see map below.

The ranch is a huge tract of land owned by many Maasai villages. Il Ngwesi Group Ranch actively protects game and has opened a community tourist lodge. Profits from the tourists are divided among the local community and help to support over five hundred households and their schools, cattle dips, water supply among other group ranch operations. (ilngwesi.com). The local community often referred to as

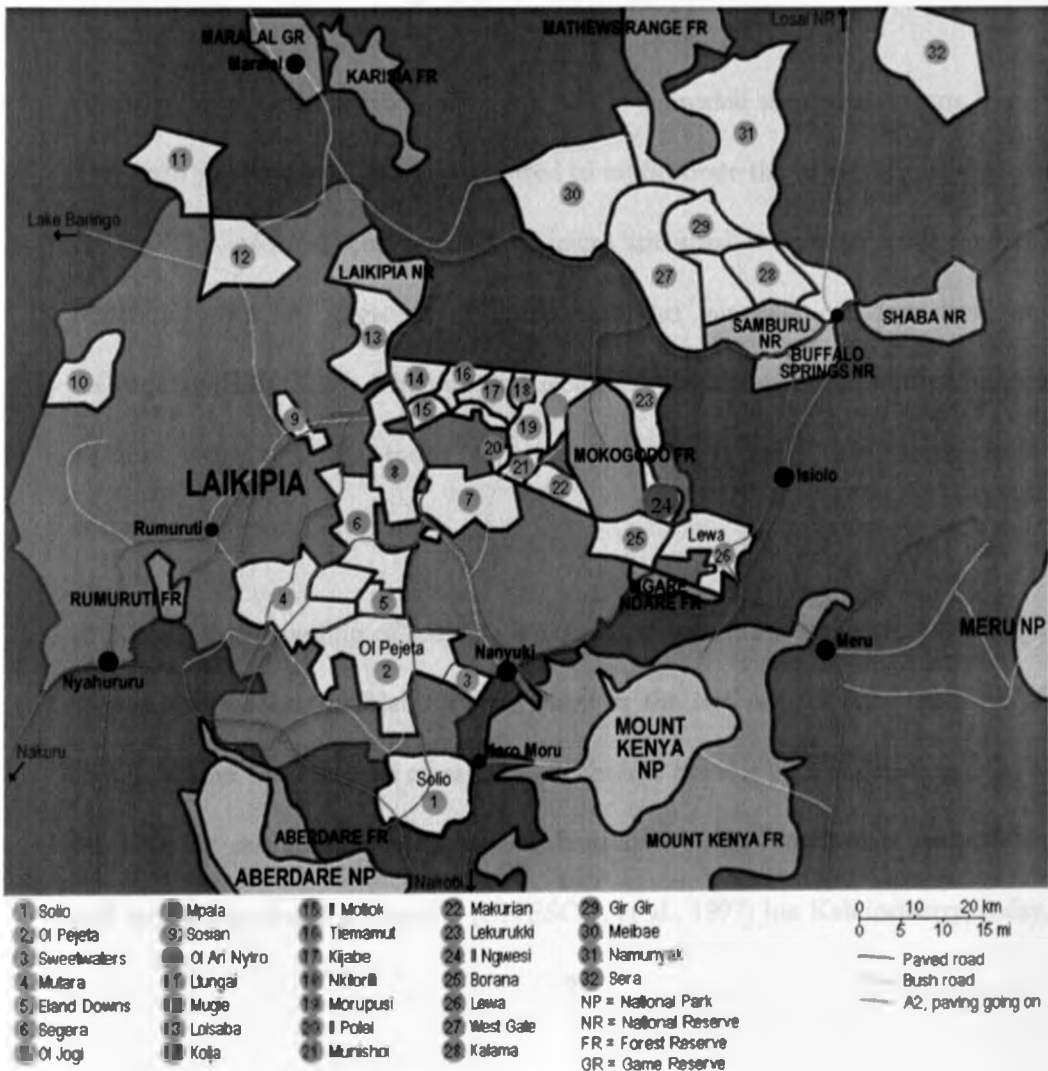


Map of Kenya, http://www.mobileclinicsafrica.org/mobile-clinics-africa-skins/district_map2.gif April 15th, 2011

the Laikipiak who were originally Ndorobo or Yiaku. From the 1920's members of Ndorobo migrated closer to Samburu, this is when added bee-keeping to their traditional custom while others got assimilated to cattle keeping traditions of the local Samburu. They also changed their language from Cushitic to Maa speakers.”

(africanspicesafaris.com). The main economic activities in this area are cattle keeping and tourism.

Among the Il Ngwesi Group Ranch initiative is the Jua Kali craft initiative for beadwork among women. The women in Il Ngwesi Group Ranch have divided themselves into groups according to the area they come from in this vast ranch. Other than beading, the women groups are involved in micro-credit and agricultural production.



Map of Laikipia East, <http://www.safaripatrol.com/laikipia.shtml>, April 15,

Chapter 2: Review of Relevant Literature

Before attempting to establish the theoretical links between design and Jua Kali craft, it is useful to delineate precisely the meaning of design and Jua Kali craft. Hence this literature review is structured into five parts; Jua Kali craft defined, Design defined, Design interventions in Jua Kali craft, Product design and development process and Designer vis-à-vis Artisan.

Jua Kali Craft defined:

As mentioned in the introduction, Jua Kali is a Swahili word that means 'hot sun'. The term Jua Kali has loosely been used to incorporate the entire informal sector in Kenya. This informal sector include all micro and small scale enterprises that are not registered with the registrar of companies and generally use low level or no technology (ILO, 2008). The informal sector in Africa has been described by various authors using different terms such as, 'second economy' and 'unconventional economy' (Brown, 1995).

In Kenya, the beginning of Jua Kali is associated with those mechanics, welders, and sheet-metal workers in Nairobi who toiled in the hot sun (UNESCO, UNEVCO, 1997). Within the Ministry of research, technical training and Technology, the term Jua Kali has assumed an operational definition to mean "small-scale manufacturing and technology-based services". (UNESCO, et al., 1997) Jua Kali industry, today, is

broad, it includes: agri-processing, building, electrical, woodwork, metal work, leatherwork, textile, handicraft, service industry, trade and motor vehicles.

The attributes of the Jua Kali industry include; production done manually or using simple hand tools, lack of mechanical technology, have little capital and informal training. Dr. Daniel Macharia, in his publication "Entrepreneurial Spirit" (2007) describes the Jua Kali industry as encompassing small-scale entrepreneurs and workers who have little capital, lack access to credit, property rights and training. He continues to add that they also carry out their production by manual labor using handmade tools. Orwa (2007), in his case study on 'Jua Kali Association in Kenya', notes that little or no mechanical technology is used in the manufacturing of Jua Kali products. He observes that the Jua Kali enterprises usually lack good working conditions. Another attribute of this informal industry is the transfer of skills through apprenticeship. Apprenticeship is a system of learning a craft from one who is engaged in it. (answers.com) Unlike formal apprenticeship, this training has no agreed programme, no defined time line and is done at a relatively low cost to the trainee. (Walsh, 1992) The Jua Kali industry emerged as a result of the incapacity of formal, regulated industries to absorb new entrants. (Orwa, 2007) These new entrants include school-leavers and graduates of formal training institutions. (Walsh, 1992)

The history of Jua Kali industry as is discussed in Kenneth King's (1996) publication 'Jua Kali in Kenya; Change & Development in an Informal Economy', which looks at Jua Kali in light with the beginning of the recognition of the informal sector. He discusses the informal sector in view of the East African Royal Commission of 1953-5, 1966 Report of Kericho Conference in Kenya published as Education, Employment and Rural Development and African Businessmen publication by Marris and Somerset (1971). King looks at the outcome of the restrictions and regulations that affected the informal sector development as discussed by the East African Royal Commission of 1953-5. One of the issues argued is the lack of security of tenure and no incentives to improve business premises. The commission recognized that the need to preserve African traders' activities as they constituted the only development of African commercial enterprise in Pre-Colonial Kenya. It also affirmed its belief that African enterprise development was inseparable from urban land reform (King, 1996). Education, Employment and Rural Development discusses the need to resolve the issue of unemployment by utilizing the primary school leavers in small-scale service industries in Kenya. This issue of unemployment is also discussed by Angela Langenkamp, in her thesis, Structural Changes of Potter's Craft in Kenya; Regional and gender-based disparities, where she presents a discussion on a plan of a Kamba Training Center at Machakos by various colonial administrators in 1952, Commissioner for Community Development, the Assistant Director of Education, the Chief Inspector of Schools, the District Commissioner

for Machakos, the Rural Industries Officer, the Officer in charge of Trade Testing & Apprenticeships and the Assistant Director of Education-Technical. These colonial administrators recognized the need for the training center as it could offer training to Standard six leavers and assist in the development of reserves by imparting skills to 'handymen' or craft artisans.

African Businessmen, on the other hand, examines 90 small businesses in Kenya supported by Industrial and Commercial Development Corporation (ICDC) and another 850 small business that were established as far back as pre-independence. Marris and Somerset (1971), observes the attitude and creed of those business men. The insights from these three sources were important landmarks in the prehistory of the informal sector in Kenya.

The development of the Jua Kali industry in Kenya according to Haan (2006), in his publication "Training for work in the informal micro-enterprise sector", was in late 1980's after the then president of Kenya, Daniel Arap Moi, visited some groupings of Jua Kali producers, which was the start of concerted action on the part of the government and especially the Ministry of Research & Technology, and Technical Training. This prompted these micro-entrepreneurs to form associations to advocate for their grievances. Today several Jua Kali associations "...have grouped themselves into regional bodies, which in turn have formed the National Federation of Jua Kali Associations." (Haan, 2006). King (1996) discusses the development in the same

light while discussing Jua Kali receiving 'open Presidential Approval' in 1985 when the then president of Kenya, Daniel Arap Moi, took interest in the Jua Kali industry, promising free sheds and title deeds to go with allotted spaces for Jua Kali artisans.

It is interesting to note one of King's (1996) references from Kenya Times Newspaper of 20th November 1985 which recognized that once the promised sheds were complete, the artisans would be properly organized so that their skills could be harnessed to the mainstream of Kenya's industrial development. In 'Entrepreneurial Spirit; The Jua Kali Micro and Small Enterprises of Kenya', Dr. Daniel Macharia (2007) says that "The entrepreneurial spirit of Kenya's micro and small entrepreneurs has translated into a dynamic and powerful economic force that has much to contribute to Kenya's development." The spirit of these Jua Kali enterprises has enabled them to survive and become an important sector of the economy of Kenya. Currently, the Jua Kali "...sector is responsible for over 90 percent of all the jobs created ever year." (Macharia, 2007) With visions of expanded businesses, improved lives and dreams of providing good education for their children, the Jua Kali is extremely important to the developing economy of Kenya (Bettcher, 2007). " Many Kenyans consider the informal sector or Jua Kali to be the predominant – and most important – economic sector in the country, the one in which they all work, which is not far from the truth, given that millions of people are in the Jua Kali sector." (Riley & Steel, 2000) The promotion of the Jua Kali industry, from the above authors,

looks like a viable strategy for achieving national goals such as employment creation and economic development.

There are several challenges facing Jua Kali craft industry, especially entrepreneurs and artisans. They [artisans and entrepreneurs] encounter a number of cumbersome laws and regulations that remain out of step with realities and are hostile to the growth of the informal sector. In his reforms case study, 'Jua Kali Associations in Kenya: A force for Development,' Orwa (2007) states that "The bylaws applied by many local authorities are not standardized and appear to be punitive instead of facilitating in most cases." He adds that the entrepreneurs do not know the laws and their rights. Orwa continues to say that "...the role of the provincial administration in enforcement of regulations and its jurisdiction over land and utilities tend to overlap and conflict with those of the local authority." Local governments harass Jua Kali business owners, assessing arbitrary fees and confiscating goods. (Bettcher, 2007) The Jua Kali entrepreneurs, more often than not, are unable to secure ownership over their shops or land, as property rights are neither granted nor enforced. Most Jua Kali entrepreneurs cannot afford the services of product development consultants to improve their products and their enterprises are situated in idle land that does not belong to them. Developers frequently encroach onto their work space and sometimes some of the Jua Kali enterprises are damaged or forced to close to give way for new developments. "One of the reasons why Jua Kali business owners have difficulty gaining access to credit is that they have no land or

property to use as collateral.” (Orwa, 2007) Other challenges as highlighted by Dr. Daniel Macharia, in his book “Entrepreneurial Spirit: The Jua Kali Micro and Small Enterprises of Kenya” include:

- Taking other person's ideas and using them to your own advantage
- Lack of protection for creativity and innovation
- Uncoordinated authority over the activities of Jua Kali entrepreneurs
- High cost of operating a Jua Kali enterprise
- Insecurity, which also threatens business growth
- Reactive official behavior towards the sector

Mitullah (2000) also recognizes that Jua Kali craft industry faces a number of challenges namely: unfavorable policy environment, inhibitive legal and regulatory framework; limited access to markets, financial services, information, infrastructure and linkages with larger enterprise; inadequate access to business skills and technology, poor quality products, gender inequality; unfavourable taxation regime, entry barriers and health and safety among others. This has affected the productivity and competitiveness of the Jua Kali craft and hindered their growth. (KOSGEY, 2008) Strategic behavior of Jua Kali, like most MSMEs must be understood and incorporated into programs designed to solve challenges identified above if the programs are to benefit the entrepreneurs. Such assistance programs need to be

designed based on the entrepreneurs' needs rather than providing off-the-shelf programs that are invariably of little relevance to the entrepreneur.

Jua Kali craft in Kenya is an assortment of Kenya's material culture heritage and newly introduced manufacturing techniques and products. (Langenkamp, 2001) Its environment and stages of mechanization vary between formal and informal set-ups, seasonal, part-time and full-time participation. Formal and informal set-up refers to the type of enterprise, if it registered or not, if production is purely hand-made versus hand-made with some little mechanization. Part-time and full-time participation shows the amount of time committed to the enterprises.

A full treatment of the whole Jua Kali industry would require another paper, so this discussion will focus on micro and small-scale manufacturing and specifically handicraft produced in the Jua Kali industry. Craft, as earlier defined, are products made by artisans either completely by hand or with the help of hand-tools and even mechanical means, as long as the direct manual contribution of the artisan remains the most substantial component of the finished product. Jua Kali craft essentially represents craft made in informal MSE's in Kenya.

What is the role of design in solving challenges of Jua Kali craft industry? Strategic behavior of Jua Kali craft, like most MSEs must be understood and incorporated into programs designed to solve challenges identified in this chapter if the programs are to benefit the entrepreneurs. Assistance programs need to be considered based

on the entrepreneurs' needs rather than providing off-the-shelf programs that are invariably of little relevance to the entrepreneur.

Design Defined:

The definitions of design are many and differ widely (Lawson, 2006). He [Lawson] notes that design is both a noun and a verb and can either refer to the end product or to the process. It is important to clarify at this point that the researcher will look into design as a process. One of the common views is that design involves idea generation and development of the idea into a product. Victor Papanek (1972) defines design as the planning and patterning of any act towards a desired, foreseeable end. The important part is the translation of the idea, though design's ability to spark the idea in the first place shouldn't be overlooked. The concise Oxford Dictionary (2005) explains design as a mental plan, a scheme of attack and in view, adaptation of means to ends. This study adopts the view that design can be viewed as carrying an idea all the way through to completion in terms of a physical product and its actual performance.

Design has also been described as a method of solving problems (Forty, 1986). Here Forty describes design as a problem solving activity that involves a trial-and-error process for making meaningful order. The problem solving is multidisciplinary and takes the user needs, aspirations and abilities as its starting point and focus (EU, 2009). This problem solving involves research, information queries, feasibility studies

up to the obtaining of prototypes ready for production. Design as a method of solving problems may be used in all disciplines; in sciences and mathematics, in the arts and music, in commerce and marketing, in communication and information technology and even in simply day to day life. (Seymour, 2002) Design, as a basic methodology solves problems in products, services and systems.

This problem solving is not only technical, design requires a well developed aesthetic appreciation (Lawson,2006). In arguing his case Lawson looks at tools of the design trade as space, form and line, as well as colour and texture. He continues to say that understanding the aesthetic experience, particularly of the visual world is paramount in design. Design, in a sense, share territory with art. More to this is the understanding of the nature of the users and their needs whether it is in terms of the ergonomics of chairs or the semiotics of graphics. " Along with a recognition that the design process itself should be studied, design education has more recently included material from behavioural and social science." (Lawson, 2006)

Traditionally and in some instances today, design of craft was done with lack of understanding of the theoretic background of design. This is not to say that the products lacked design sophistication. Such a procedure is often referred to as 'blacksmith design.' (Lawson, 2006). Objects were traditionally designed as an artisan crafted them, working to undrawn traditional patterns handed down through apprenticeship. Blacksmith design works well if the problem remains the same, but

once a new problem occurs, Bryan Lawson states that the craft process is not likely to yield suitable results. Jua Kali craft, have relied highly on blacksmith design. The emergence of new markets brought about new consumers with new needs hence new problems to be solved. Rapid changes of materials and technologies also affect the Jua Kali craft process. Consequently design comes in to respond to changing problems in the Jua Kali craft industry. While looking at Jua Kali craft production, design has been associated with the nature and characteristics of materials and components, ergonomics, form, price and quality of the products. Products must be competitive in price, pleasing in aesthetics, efficient and useful in function. Design solves product requirements not only by giving a physical look to a product, but also weaves in- together marketing- considerations of an intangible nature related to user needs, aspirations, image and culture (UNESCO, et al., 2005). Though design starts with definition of the product's objectives, it does not confine itself to product, but it may also concern the related product cycle process (Langdon & Rothwell, 1985). Therefore, design may resolve systems in Jua Kali craft such as production, assembly, packaging, storing and transportation and disposal of used products.

There have been many arguments surrounding the question, 'What is good design?' In the publication, citizen designer, Heller (2003) raises questions; "Is it the rightness of form of aesthetic perfection? Is it flawless conception or intelligent usability?" Japan recognizes good design through its G-Mark (Good Design Award) which was established in 1957. The award does not screen design solely on relative merits of

design creativity, insight, conceptual abilities, imagination and intellect or evaluate popular products based on their performance on the market. Good Design Award seeks to address the question "What value does a product bring to Society?" The screening policy of the Good Design Award can be summarized in five important words

HUMANITY: Inspiration for products and conceptual embodiments

HONESTY: Perceptiveness toward contemporary society

INNOVATION: Concepts to pioneer the future

ESTHETICS: Imagination for prosperous lifestyle culture

ETHICS: Reflecting on society and environment

These five words can be expressed in a single phrase as "giving people the central role and taking a high ethical standard in identifying the essence of our lives and engaging in appealing creative endeavours" (www.g-mark.org). Hence G-Mark seeks to enrich industry, lifestyles and social environment. G-Mark's philosophy states that design is a humanitarian act put in the service of the human community. The Good Design Award seeks to reward design meeting these standards.

There are four view points on which the entries to the Good Design Award are evaluated, including;

- **Viewpoint for human body:** This is consideration for the safety, for aged or disabled people, usability and user-friendliness, everlasting design and suggestion to prompt user's creativity
- **Viewpoint for lifestyle:** This viewpoint looks into suggestion of new etiquette or manner, consideration for the user and living environment, suggestion for the way families or communities are, suggestion for new working style or the way to join the society and creativity of lifestyle for the near future
- **Viewpoint for Industry:** This viewpoint considers solution utilizing new technology or new material, new direction to utilize design, suggestion for new method of production or supply, contribution to create new industry or business and suggestion for new style of industry or company
- **Viewpoint for society and the environment:** This last view point is about suggestion for the new personal communication, creation of social or cultural value, contribution to expand social infrastructure, contribution to develop global cooperation and contribution to realize sustainable society (www.gmark.org).

The first viewpoint for human body has considerations for safety, aged or disabled people as well as usability, user-friendliness, everlasting design and suggestion to

prompt user's creativity. This viewpoint allows for ergonomics concerns where the good designed products optimize human well-being in terms of body movement and its experiential abilities. Such criteria would be useful in Jua Kali craft, which should analyze and foresee how user is likely to use a product and get the most out of the product while interacting with it. The second viewpoint for lifestyle has suggestions for new etiquette, for the way families or communities are, for new working style or the way to join the society as well as consideration for the user and living environment, and creativity of lifestyle for the near future. The researcher is drawn to looking at this viewpoint further as regards livelihood of those involved in making Jua Kali craft. Good design should look further than the lifestyle of the user. It should assess the sustainability of the livelihoods of the Jua Kali craft artisan in terms of their finances and vocation. Good design should also address the livelihood of the user by providing products that address the basis needs in the user's life rather than wants as suggested by the word- Lifestyle.

The third viewpoint is looking into industry in regard to new technology and new materials, new methods of production, new industry, new style of industry and a new direction to utilize design. This is a relevant viewpoint to Jua Kali craft as it ensures the improved quality of the products. Many collaborative efforts between Jua Kali craft and design as discussed in the next part of the literature review look into new tools, machinery skills, materials, methods of production and markets as a way of enhancing the Jua Kali industry. For example, the introduction of hand tools in

cutting where teeth and hands were previously used. New style of industry may be a way forward for the Jua Kali craft industry as Good design may find fresh ways of resolving problems hence renewing the industry and possibly improving the performance of the industry. The fourth viewpoint is concerned with society and the environment in terms of new personal communication, creation of social or cultural value as well as contribution to expand social infrastructure, develop global cooperation and working towards a sustainable society. Jua Kali craft industry would benefit from this viewpoint as Good design practices would ensure that the cultural values intrinsic to most Jua Kali craft are preserved as well as building global cooperation while ensuring the sustainability of the community especially in terms of their livelihood.

Public opinion surveys in Japan show that products with the G-Mark logo indicating receipt of a Good Design Award are viewed not only as well-designed but also of outstanding quality and functionality. The G Mark system has made great impact on the incredible industrial development in Japan for half a century. "The system, as is today, is really a paradigm for a nation using sophisticated designs to upgrade its industrial level, quality of life, and environmental protection, serving at the same time as the best model for nations aiming to elevate its international competitiveness" (Quincy, 2006). Other countries, especially in Asia, are looking to have Good Design standards in order to advance their industries. Such countries include India

and Thailand. India has launched their own version of meriting good homegrown designs with I-Mark (India Design Mark). Japan is playing the lead role in helping India crack the design code. The Thailand DE mark, Design Excellence Award, is another of the standards developed through the guidance of Japan.

From definitions discussed in this section, design, is seen as a process of solving problems and a multidisciplinary activity. The researcher views good design as more than the surface of a product, it also includes function, aesthetics, purpose, ethical practice, innovation, sustainability and how a product/service/process interacts with human beings and the environment. Although Good Design Award is of the view point that good design addressing issues of lifestyle, it does not consider the livelihood of the user. The researcher believes that good design starts with the needs of the consumer. Finding out what a consumer needs is a critical stage of designing. Understanding and resolving consumer needs is the key to successful design. It is only then that a designer's solutions can be turned into something desirable, unique and viable that adds value to people's lives.

Design collaboration with Jua Kali craft:

It is unclear when and how the deliberate relationship between craft and design was first identified. One school of thought traces it to the art and craft movement of the

19th Century. It is described as a design movement that influenced architecture, domestic design and decorative arts, using simple forms and a medieval style of decoration. More to this is that it advocated truth to materials, traditional craftsmanship and economic reform. (Wikipedia, April 15th, 2011) It was claimed to be a movement aimed at recreating the virtuous world of craft that was being destroyed by industrialization. "The Arts and Craft Movement started as a search for authentic designs and decorations and as a reaction against the styles that had developed out of machine-production." (Design museum, 2011) This movement aimed at promoting a return from industrialization to hand-craftsmanship. Two British designers, Walter Crane and Lewis Foreman Day, were especially influential from the earliest days of the movement. "Walter Crane (1845-1915), who first made his way as a book illustrator, worked within the educational system at the Manchester School of Art (1893-8), and as Principal of the Royal College of Art (briefly but effectively, 1898-9); he wrote widely; and he had a high reputation throughout Europe. Lewis Foreman Day (1845-1910) was another practical freelance designer (specializing in flat pattern), who wrote prolifically and taught at the Art Schools at South Kensington." (Design museum, <http://designmuseum.org/design/art-and-craft-movement>, April 15th, 2011) The Arts and Crafts style was based in design principles and truth to material, structure and function. Items were highly ornate and there was an emphasis on qualities of materials. (Wikipedia, http://en.wikipedia.org/wiki/Arts_and_Crafts_movement, July 19th 2012) Arts and

craft movement influenced architecture, sculpture, interior design, graphics and even illustration.

In Kenya, a number of design interventions have existed over the years. One of the most recognized was the Product Design and Development Center (PDDC) that was established in 1998. PDDC was established by the Kenyan Government in collaboration with UNDP and the Artisan Trust- UK with EU funding. It aimed at supporting and promoting the work of Kenyan craft producers by improving their technical skills and providing them with information on market trends and new designs to improve local and international exports (Seney, 2000). PDDC strived to address poor performance of Kenyan products on the global market. Basically, people brought ideas to the centre, where they were discussed by the artisans and designers for possible adoption and implementation. There were a number of seminars and workshops held there, where new skills were taught. PDDC also published and sold technical, business and discussion papers on subjects affecting the stakeholders. This center was unfortunately closed in 2003 due to corruption allegations. PDDC served as a platform for Design-Kali craft collaboration. It had structures, tools and facilities that smoothed the progress of the collaboration. PDDC was also a research center that provided knowledge of the market and established new market links.

Another Design- Jua Kali craft intervention in Kenya was a Jua Kali programme “A process to progress” project implemented by Terra Nuova in co-operation with The school of the Arts and Design (StAD) of University of Nairobi, Istituto Europeo di Design of Rome, Italy and Jua Kali Artisans. Terra Nuova is an international NGO and membership-based association that focuses on promoting equitable and sustainable socio-economic development in various African and Latin American countries. “A process to progress” was a three-year Italian Government funded programme launched in 2006 that aimed at providing training and support to “Artisanal Micro Enterprises in the Jua Kali Informal Sector.” (Di Bugno, Abade and Olel) The program was a collaborative effort that involved both StAD students and lectures, professional designers from Terra Nuova and Jua Kali craft Artisan. The student were directly involved in designing for the project while the lecturers supervised the project implementation. The project basically implemented its collaboration through an Open Source knowledge dissemination approach.

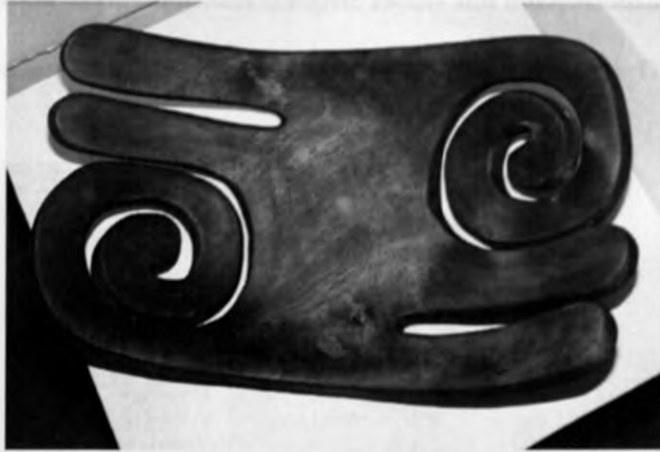
“Open Source Technology is a term borrowed from the world of computer programming. It means that the original idea/design/development work on a tool or product is made public for others to develop further.” (Jua Kali Information, 2011) Essentially, the development or improvements made from the original ideas are then fed back into the system for others to benefit from. Open source “...is the creative practice of appropriation and free sharing of found and created content.” (Wikipedia, 2011). “At each stage of development credit for the work is retained by

each of the developers.” (Jua Kali Information, 2011). Any improvements in design are tested and demonstrated by empirical evidence and data, and then peer reviewed before acknowledgements are given. The “A process to progress” program thus essentially brought together a pool of student designers who developed ideas that were translated by the Jua Kali artisans in creating products. This was a learning process for the students while benefiting the artisans. Open Source thus encourages constant development and innovation, while also creating a community of shared information between the students and the artisans and also amongst artisans.

Below are examples of products developed during the Terra Nouva project:



Traveling Metal Cases



Salad Bowl inspired by the Adinka

Other design interventions in Kenya include projects of different NGOs dealing with empowerment of marginalized communities by tapping into their traditional craft as a source of revenue for the communities. Such NGOs include Undugu Society of Kenya, VSO Jitolee and Action Aid, which the researcher has worked with. Design interventions in all three NGOs include the collaboration of design professionals and craft artisans in developing Jua Kali craft into products that can compete locally and internationally while sustaining the livelihoods of the target communities. Most products in these projects had only gone through the craft process with blacksmith design intervention. The craft artisans went through basic design training in all projects, design professionals worked as both trainers and also design consultants in product design and development. Successes of these projects

include creation of products that compete locally and internationally. Below are some products made during VSO Jitolee Secure Livelihood Programme Design initiatives.



Ragged Necklace



Beaded Cup



Braided Belt

Locally, contemporary Jua Kali craft are sold in curio shops, high end craft stores and open air markets including the famous Maasai Market. From its inception in 1973, the Maasai Market has become a Jua Kali craft Market in Nairobi. And as was said before demand for Maasai beaded ornaments grew causing the City council to relocate the women as they were interfering with the street adjacent to where they worked. In 1984, they moved to the steps of the city market and then the street next to the market. The market was relocated again to the parking lot opposite Nyayo House on Kenyatta Avenue. Here, more traders, other than the Maasai women, joined the market. It then moved again to the hill at the globe cinema roundabout.



Assorted Jua Kali Craft at the Maasai Market

Sources www.letsgotoafrica.com

and www.kenyangift.com

In the early 2000's, the Maasai market grew and is in different locations on different days other than the initial Tuesday. There is Maasai Market on weekends at the Law Courts parking. On Friday at Village Market, this serves UN and American embassy staff. Other locations include Yaya center, Westgate Mall, Galleria and one in Karen. At Maasai Market, you will find an array of Kenyan made Jua Kali craft. The growth of this market has brought about competition in Kenyan craft industry and a need for creative imagination or conceptualization of new products.

Different countries have structured ways of having Design collaborating with craft. The researcher encountered a case of Design-Craft collaboration in India 'Design Clinic' that she wishes to discuss as a working scheme. Design Clinic Scheme is a

design intervention where, Design expertise in India collaborates in the Micro, Small and Medium Enterprise (MSME). This is an initiative of the Ministry of MSME under the National Manufacturing Competitiveness programme that was an idea of National Institute of Design (NID). NID in Ahmedabab assists the ministry as a nodal agency for implementing the scheme. Part of the content in this section is primary data collected during an interview with Pradyumna Vyas, the director of NID and secondary data from NID website. Pradyumna says that Design Clinic Scheme was set up after the realization that there was a lack of soft skills in terms of design, management and business by MSMEs who are the vendors of the large scale industries. Competition from China was another reason that he gave for the establishment to the setting up of Design Clinic Scheme to ensure the survival of Indian products. The objectives of this initiative is design awareness, design intervention and competitiveness improvement for MSMEs that contribute to approximately 45% of the total industrial production and 40% exports. MSMEs in India are the second largest employer, with an estimated 41million people.

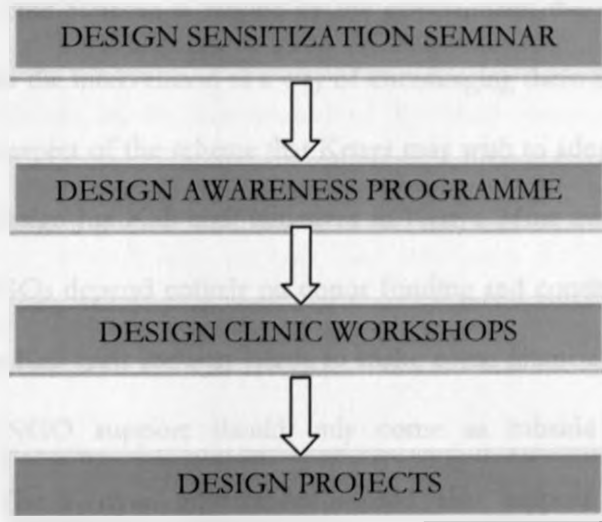
The Design Clinic Scheme brings together MSMEs and Design Expertise into a common platform to provide expert advice and solutions on real time design problems, resulting in continuous improvement and value addition for existing products. This model brings design exposure to the door step of industry clusters for design awareness, improvement, evaluation, analysis and design related intervention. Design Clinic Scheme essentially assists MSMEs to open a channel for

design information inflow for creative, innovative and futuristic approach towards the product, process, operations, manufacturing and business design. It generates insight for opportunity identification and design intervention for competitive and breakthrough solutions for MSMEs.

Design Clinic Scheme brings MSMEs as well as the Indian design experts – the design consulting firms, independent designers, various design institutes of the country and also the design students to engage them to assist the country's large MSME sector move up the value chain through increasing the value and competitiveness of their products and services. The scheme targets to reach MSMEs through Design sensitization seminars, Design awareness programme, Design Clinic workshops and Design projects (that will include student design projects and thesis such as this one)

Design sensitization seminar helps generate awareness about design methodology and approach for MSMEs. Design awareness programme, on the other hand, begins a needs assessment survey where a design expert visits the industry and conducts an audit of the MSME, its products, market and related business functions. Design Clinic Workshop is a program where the design experts presents the opportunity areas in the MSME, insights for opportunity areas and design interventions as quick remedies on the first level design problems/opportunities. The programme at the end will generate insights and directions for design projects. Design projects are

opportunities identified as design interventions, for example, products, process, operation, communication and multifunctional activities. MSMEs are matched to design expertise in their locality to carry out the design project. Design Clinic Scheme also organizes four exposure visits in a year. Currently, Design Clinic Scheme is in collaboration with the Japan Industrial Development Promotion Organization (JIDPO) who facilitates the exposure visits in Japan.



Design Clinic Scheme Model

This is an ideal model for Design-Jua Kali craft collaboration in Kenya. Like India, Jua Kali industry is a large contributor toward the GDP and in one of the largest employers. Learning from this scheme would contribute to Kenya's economic development. The Design Clinic Scheme has a data bank of design expertise

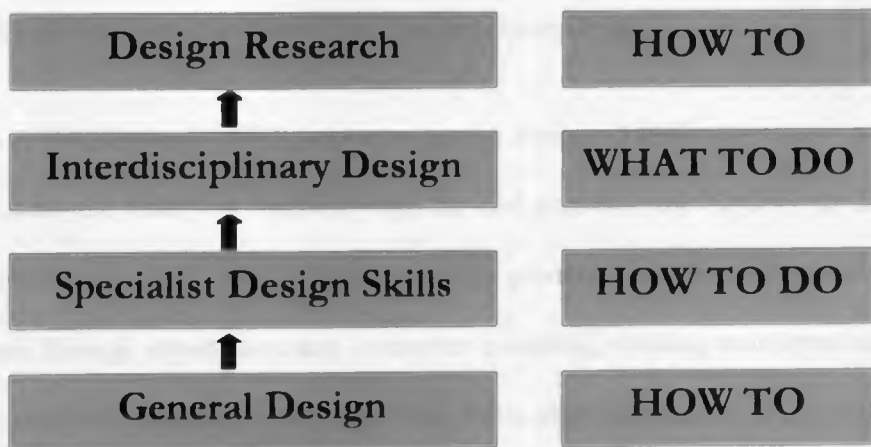
including institutions that facilitates Design initiatives. There are many design experts in Kenya and University of Nairobi, which has a full fledged School of the Arts and Design, may perhaps champion the Scheme. The support from the government, as identified in the recommendations, is important in driving the Design Clinic Model. India's government identified the role of design in improving the national manufacturing competitiveness. Kenya's government should also consider being involved in promotion of Design-Jua Kali craft as an economic stimulus.

The Design Clinic Scheme is funded by the government; the MSMEs contribute partially towards the intervention as a way of encouraging them to own the process. This is another aspect of the scheme that Kenya may wish to adopt. Currently many NGOs drive Design-Jua Kali craft initiatives in Kenya. Most initiatives' life span is short as the NGOs depend entirely on donor funding and continues support is not guaranteed. Jua Kali craft industry needs to make some financial investment in the collaboration, NGO support should only come as subside so as to ensure sustainability. The Kenyan government should also support this collaboration financially through the National Economic Stimulus program.

Designer vis-à-vis Jua Kali craft artisan:

Is there a need for a design professional? Can anyone design? There is a school of thought that states that everyone is a designer. Bill Moggridge, explains design thinking in four levels, forming a simple hierarchy. At the simplest level, he argues

that people make choices about the design of their clothes or the environment they live in based on their awareness of design qualities and issues. "Greater sophistication is achieved by people when they learn specialist design skills; they become designers, knowing how to design with greater fluency and expertise; they become adept at the craft of designing, but they usually rely on other people to decide what to design, to define the brief." (Moggridge, 2008) Moggridge adds that it is becoming more widely recognized that design processes can also advantageously be used to decide what to do, employing interdisciplinary design teams in processes that harness the powers of intuition, where the shared mind is more productive and creative than the sum of the individual mind. He finally views that at the highest level, design research can give access to knowledge; both research for a particular project and also research into methods and processes. Below is the hierachial depiction of this school of thought.



LEVELS OF DESIGN THINKING

Bearing the hierarchy in mind, it takes more than general design awareness to resolve the challenges identified in the Jua Kali craft industry. Greater sophistication regarding how to design requires specialist design skills, for example, the industrial revolution transformed traditional craft as a need arose for improved production methods, modification of traditional forms, invention of new form and a need for emphasis on aesthetics of products to meet the needs of the growing mass-market. The emergence of professional product designers was due to the expansion of productive capacity of industries which consequently led to consumer boom. (Heskett, 1980). In the industrial revolution, for instance, the Deutscher Werkbund stressed the importance of the quality of products, in the more recent society, 'stylists' have been at the forefront of the consumer society (Langdon & Rothwell, 1985) Designers thus act as a link between traditional and contemporary life, helping match craft production to the needs of contemporary living.

More to this, Papanek (1995) pegs a range of a designer's skills and talents outlined to include; the ability to research, organize and innovate, the capacity to develop appropriate answers to new or newly emerging problems and the skills to test these answers through experimentation, computer modeling, working prototypes or real-world test runs. Papanek (1995) also views other skills and talents of a designer as; the training to communicate such developments through drawings, models, mock-

ups and feasibility studies, video or film, as well as through verbal, computer-generated or written reports, the talent to combine form-giving with rigorous technical considerations and with a sense of humane and social factors and aesthetic enchantment. Finally, other skills and talents of a designer outlined by Papanek(1995) include; the wisdom to anticipate the environmental, ecological, economic & political consequences of design collaboration and the ability to work with people from many cultures & different disciplines

Most Jua Kali craft artisans in Kenya have only undergone basic education i.e. primary school; while others are illiterate. Statistics show that with respect to education and training, over 67% of operators in the MSE sector have either primary level education or no formal education, while 8.3% of them have had some technical training. (Republic of Kenya, 2001) Consequently, currently majority of Jua Kali craft artisans in Kenya perform blacksmith design. Those who involve themselves in designing may not afford the time and concentration demanded by the design process. There is a gap that exists to offer specialist design skills. Pertinent questions thus arise; Is there a need for inclusion of trained product designer or can artisans carry out the design process after design training and if so, what kind of training do they require?

Chapter 3: Methodology

Methods of collecting data:

Information for this research was gathered through archival research, semi-structured interviews, focus group discussions and participant observation. Archival research was used to review relevant literature for the study. This was sourced from publications such as books, reports, articles, journals, academic papers as well as web sources. The information gathered from this archival research gave a background to design and Jua Kali craft, design collaboration with Jua Kali craft and the relationship between professional designers and Jua Kali craft Artisans.

Primary data was collected in the following ways. First, semi structured interviews targeted information from designers and Jua Kali craft artisans. Respondents for the semi-structured interviews consisted of four groups of Jua Kali craft Artisan working in Laikipia East District. Two of the four groups had design training while the remaining two groups never had design training. That one group had design training while the did not have allowed comparison and contrast of the groups in terms of the contribution of design in the craft they produce. The groups selected were from the same area and have similar experiences; doing so afforded minimal assumptions in terms of the socio-economic situation of the groups being observed.

With the aid of an interpreter, sixty artisans were interviewed. An interpreter was used to facilitate the interviews as most women are Maa-speakers, the researcher and designer does not speak Maa. The interpreter was selected independent from the participant to discourage biases and misinterpretation from the interpreter. The researcher preferred the use of semi-structured interview as a qualitative research method as this allows flexibility in the responses. A set of guiding questions were prepared to aid the interview. A tape recorder and pen and paper were used to record the data collected. Before collecting data, the researcher spoke to the respondents to get their consent. The researcher explained the purpose of this research and also explained the issue of taking notes and confidentiality. Thereafter, the researcher started to collect data. Following these interviews, the researcher examined what the respondents thought was the role of Design in Jua Kali craft, how the respondents had been involved in the design process, the impact of Design (if any) had on their Jua Kali craft.

The sample of designers was selected from a population of product design professionals and design students that have previously been linked to a Jua Kali craft artisan group. Purposive sampling technique was used to select the design respondents. The researcher targeted twenty eight designers for semi structured interviews. From these interviews, the researcher analyzed what the designers thought the role of Design in Jua Kali craft was, How they as designers had been involved in implementing the role of design while working with various Jua Kali craft

artisan groups, the impact (if any) of the involvement of design in Jua Kali craft and how best they thought the collaboration of Design and Jua Kali craft could be improved.

In addition to interviews, the researcher participated as a designer in the design process, testing various techniques used to implement the role of design in Jua Kali craft production and observing the impact of the collaboration of design and Jua Kali craft. This process was carried out on the groups that had no previous design training. The researcher collected samples of products pre design training and post design training from the same group. The data from this participant observation was recorded by use of a camera and through narrative method of recording data. Jua Kali craft products made before and after the design collaboration process above were subjected to a focus group discussion. The focus group constituted of design students, designers from different fields including fashion designers, graphic designers, interior designers and architectural designers. The researcher examined if there is value in having design collaborating with Jua Kali craft, what role does design play in the collaboration and proposed ways in which Design and Jua Kali craft collaboration can be improved.

The researcher is a product designer and has been involved in working in the Jua Kali craft industry in Kenya for the past six years. From this position, the researcher interrogated her previous experiences. As a product designer, it was possible for the

researcher to participating in and observing the collaboration of design and Jua Kali craft while training various Jua Kali craft artisan groups. The researcher facilitated trainings once a month for at least five days, eight hours a day over the period of six years, observing how artisans use design or do not use design and the consequences of either situations. These trainings were held in different parts of Kenya for a variety of Jua Kali craft.

Since this study is qualitative and descriptive, in depth interviews were held. Subjects were selected from Jua Kali craft artisans, Design professionals and students. This research went according to plan as the researcher found the right sample. Most of what was planned in the Research Methodology was fulfilled. In some parts, the research did not go according to plan. For example, the researcher wanted to use a tape recorder in all cases, at times, it failed so the researcher decided to take field notes instead. The researcher used purposive sampling to select the sample. This sampling is based on the judgment of the researcher regarding the characteristics of a representative sample. It was at first difficult to find the right respondents especially regarding Design professionals but once the researcher got the right sample, things ran smoothly. All in all, the researcher interviewed 28 designers, 60 Jua Kali craft artisans and a focus group of ten participants.

Methods of data analysis:

Overall, this research focused on qualitative data analysis techniques. The researcher first gathered all information obtained from the respondents. This was through transcribing tape recordings and taking note of areas/ words of emphasis so that the researcher can fully understand what the respondent was trying to communicate. The researcher then looked into categories that arise during collection of data from the respondents. Such categories informed the researcher on possible categories under which data will be analyzed. Out of all this, the researcher was concerned with the variety of meanings, attitudes and interpretations found within each category. The report from the findings included some raw data, for example direct quotes from participants, as well as analyses of the data based on the categories. Data was then analyzed in the themes dictated by the three objectives of the research. Below is a table of the themes, categories and sub-categories:

THEMES	CATEGORIES AND SUB CATEGORIES
Role of Design in Jua Kali craft:	Product design and development: <ul style="list-style-type: none"> • Generating Ideas • Idea Development • Quality Control • Standardization • Costing and Pricing • Packaging • Cataloguing
	Research: <ul style="list-style-type: none"> • Market intelligence • Product • Consumer knowledge
	In-vogue Design Trends: <ul style="list-style-type: none"> • Style; • Colour, Texture, Form • Culture • Seasons
	Marketing
	Production/fabrication <ul style="list-style-type: none"> • Materials: • Skills- • Tools and Equipment
Collaboration of design and Jua Kali craft	Empowerment: <ul style="list-style-type: none"> • Economic, Social, Political • Creating Employment • Capacity Building • Information Dissemination:
Way forward for collaboration	Training:
	Government and NGO involvement
	Structures for continued collaboration

The data was then written in narrative form by triangulating data from the Designers, From the Jua Kali craft artisans and from the group discussion. This was done in order to validate the responses. The researcher finally drew conclusions and recommendations out of these findings.

Data Collection and Sampling:

Before collecting data, the researcher spoke to the respondents to get their consent. The researcher explained the purpose of this research and also explained the issue of taking notes and confidentiality. Thereafter, the researcher started to collect data.

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All in all, the researcher interviewed 28 designers, 60 Jua Kali craft artisans and a focus group of ten participants.

Chapter 4: Data Interpretation

This chapter focuses on interpreting data obtained from research interviews, focus group discussions, participant observation and some highlights from review of relevant literature.

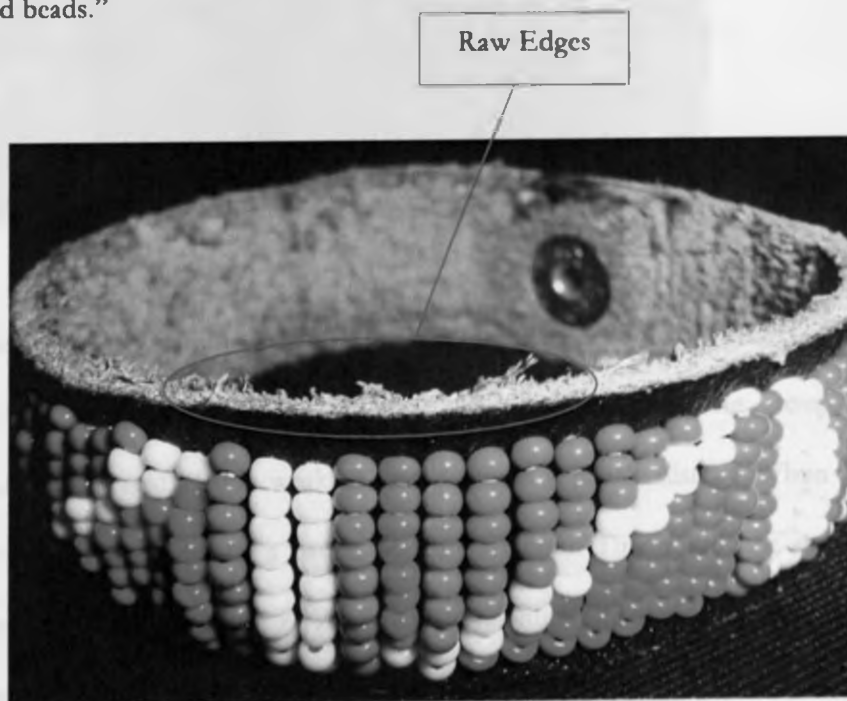
Role of Design in Jua Kali Craft Industry

Data from the above theme will be discussed in various categories including; Product Design and Development, Research, In-vogue Design Trends, Marketing and Production/Fabrication

Product Design and Development:

When asked about what they thought was the role of Design in Jua Kali craft industry, all of the respondents gave at least one reason related to the product design and development process. One respondent from the sample of designer (Kute: May 12th, 2011) said "Design generates ideas; brings new ideas to Jua Kali craft production." Another designer gave Idea Development as the role of Design in Jua Kali craft. A respondent from the group discussion (Florence: May 13th, 2011) added "Most products in Jua Kali craft industry have been reproduced over and over again. There is lack of creativity. Design comes in to develop the ideas in the Jua Kali craft industry."

Typical responses from respondents across the board viewed quality control and Standardization as key roles of Design in this industry. A respondent from the Jua Kali craft artisans group (Benedicta: April 6th, 2011) stated “Before we had any design training, our products were not finished well. Design trainers came with new ways of finishing our product. The quality of our products has improved.” Teresa (April 23rd, 2011), a respondent from the focus group discussion said, “The product that underwent quality control is of a better quality than the one that was produced without deliberate design collaboration.” More to this discussion, Florence (May 13th, 2011) mentioned “Some of the beads used in making the bracelet are of various sizes. The product made with the inclusion of the design process has standardized beads.”



The respondents found that the product above has uneven edges. It was not cut straight. Though they commented that the beading was done well, the bracelet was not well finished. George (May 25th, 2011) said, "The inner part of the bracelet is raw and not comfortable to the wearer. If it had a softer lining, the quality of the product would be higher and hence the value."

Below is a bracelet with finished edges.



Some of the respondents said that costing and pricing was a key role of Design in Jua Kali craft Industry. Waithera (May 25th, 2011), a respondent from the group of Design professionals said "I was working with a group in Kwale district. When we got there, the group was selling a basket for fifty shillings. This could not sustain their day to day needs. By adding value to their product and introducing pricing strategies, the group was able to increase the price of their product to one hundred and fifty shillings and tripled their profits." Chris (May 26th, 2011), a designer spoke

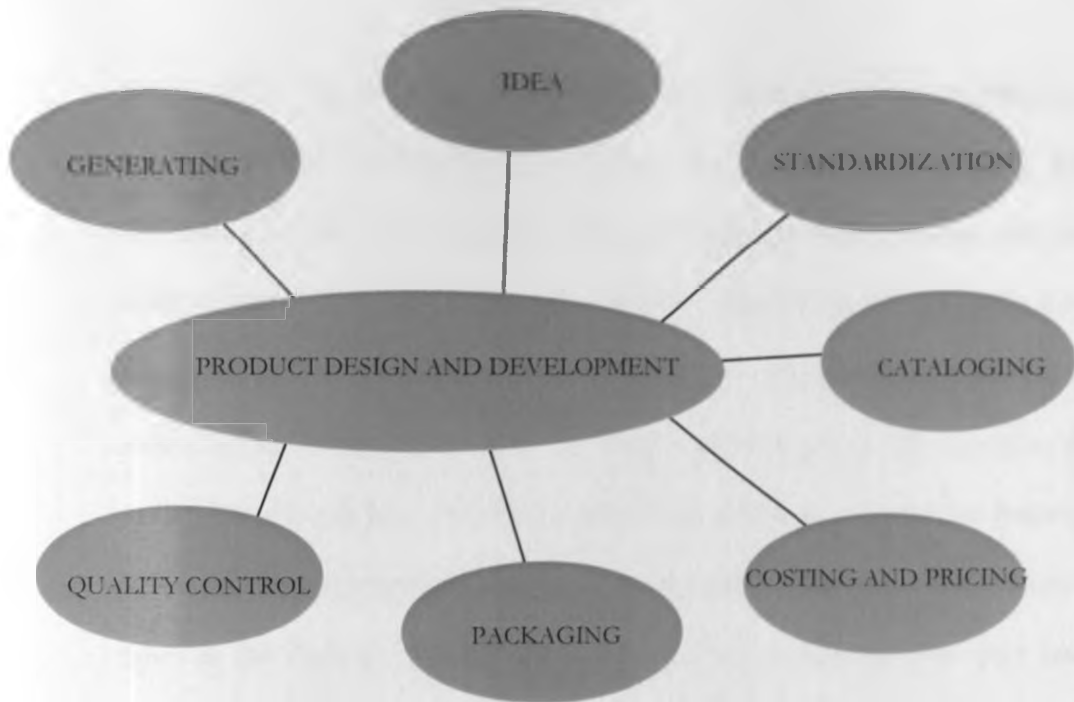
of the value of creating price points “As designers, we are responsible for benchmarking products in the market. Understanding the position of Jua Kali craft in the market and setting the price points is vital for penetration new markets and positioning products in existing markets.” (Chris: May 26th, 2011)

One other equally important role of design in Jua Kali craft industry is packaging. While interviewing the Jua Kali craft artisans, forty six respondents acknowledged the value of packing and packaging. Responses to this from one Jua Kali craft artisan include Mama Kisiyo (April 6th, 2011), “Before we had design training, our products were dirty. The teacher told us that we should put our products in a clear bag to protect it from dirt before we sell it.” Beatrice (May 25th, 2011), a design professional said “Products are made in the field and at home. They sometimes get food stains, dust and dirt. Packing them helps keep the product clean. More to packing is packaging, which gives an opportunity for the Jua Kali craft artisan to present their product in an attractive manner. Some of the Packaging includes labels that help identify them to their product.”

Cataloguing is another product design and development process that was discussed. One of the Jua Kali craft artisans, Margaret (April 8th, 2010) said “Design has helped us put our products together in a catalogue. Previously, we only had products that we would carry in our baskets. The catalogue is good especially to give customers when they visit our stand in an exhibition. They get to know all what we have.” A response

from Beatrice (May 25th, 2011), a design professional is, "Catalogues are an important part of the design process. They include images of the products, descriptions, code and price. This gives a systematic way of looking at products and it is easier to identify them. Also catalogues may be done online as a marketing strategy. This brings products to people who would not otherwise be able to access the products."

From the above responses, it is evident that one of the roles of Design in Jua Kali craft industry is to drive the product design and development process. As the researcher mentioned earlier, she looks at design as a process in this research. Various aspects of the product design and development process have been highlighted, including; Idea generation, Standardization, Quality Control, Packing and Packaging and Cataloguing. Some of these aspects are presented in the literature review where design is described as Generation and Development of Ideas into a product through the production process, assembly, packaging, storing, transport and disposal. The researcher notes this process diagrammatically without necessarily arranging the process in any order as this research does not seek to understand the sequence that the design process follows.



Design processes

Research:

When responding to the question of the role of Design in Jua Kali craft industry, one category identified is research. Subcategories to this include: (1) Market Intelligence, (2) Product information and (3) Consumer Knowledge. Responses to Market intelligence include, "Most Jua Kali craft artisans are based in areas where they cannot access information of markets that are further than their neighbourhoods. Design comes in to bring the information closer by carrying out market research on possible markets for Jua Kali craft. This in turn informs on the type of products that are needed in the market, the other related products that are available in the market

and possible competition in the market. It also informs on how to position the products in the market. Market intelligence also moves towards pricing, giving different price points for a product hence informing the design process. Sometime, after carrying out the market research, a product would be found not viable for the market.”(Muthoni, Designer: February 15th, 2011]. A response from a Jua Kali craft artisan, Agnes (April 9th: 2011), is “Our design trainers took us to the market to show us the different products that were available and to help us compare our prices with others who were in the market. We realized that some of our prices were higher than those in the Nanyuki market. The traders in this market said that they bought products from Maasai market. We need to go to Nairobi and see what makes them produce products that are of such low prices” Another respondent from Martin (May25th, 2011) in the focus group discussion said, “Design is vital is expansion of markets. Designers propagate market needs. Design also places Jua Kali craft in a higher position in the international market. Design does all this by bearing in mind the market intelligence.”

Some discussions around product information from the group discussion include “Research help one find information on products. For example, what the product is used for, how it works, what variations you can have of this product, how can the product be improved, what other related products do we have.” (Anne: May 25th, 2011) A response from Jua Kali craft artisan, Pamela (April 8th: 2011), is “You know, some of the products out there are not things that we have made before. We only

know Maasai products. Now the Design teachers showed us other products that the customer would need. So we needed to know what the product is. For example, we learnt that by reducing the size of a bangle, we could make a napkin ring.”

Lastly, comments on Consumer knowledge include, “Research on what a customer needs is important. More important is finding out who is your customer. Design research goes into this angle to ensure that the right product is made for the right consumer.” (Lorraine: May 20th, 2011). Other comment from a Jua Kali craft artisan, Karmushu (April 13th, 2011), is “Some of us have not been to Nairobi. So when we want to make products for an exhibition, our Design teachers tell us about the consumer and what they will want. Sometimes our group leader goes to Nairobi and tells as what the people she meets there are asking for then we make it.”

These findings are consistent with those in the literature review. The Researcher is of the opinion that design begins with research. Research, as portrayed by the different respondents, informs the design process that was discussed in the previous category; Product Design and Development.

In-vogue Design Trends:

Respondents gave Design trends as one of the roles of Design in Jua Kali craft industry. This is regarding (1) Style, (2) Culture and (3) Seasons. Njeri (May 25th, 2011), a respondent from the group discussions said “...different markets have

different style trends. Design comes in to interpret these style trends into Jua Kali craft in order to produce products that are In-Vogue/Chic/Stylish in a particular market. Style changes often, it is important for a designer to stay on top of issues when it comes to current trends." A Jua Kali craft Artisan, Jane (April 7th, 2011), had this to said, "It is easy for me to make something for Maasai people. For example, we Maasai all know the jewellery that is used for weddings. Maasai even know the colours that we use and this is part of our culture. Other communities may not have these things. I think Design should show us what the other peoples want and maybe we can make products that are used in their communities." Also a Design professional, Nanjala (February 20th, 2011), said "Design also creates new cultures. Yes, we have all our cultures that are married into products. But design also sets some new trend of its own in terms of culture. Some call it pop culture; there is also fusion of cultures." More comments related to this category are "Products out west are dictated by seasons. There are fall collections, winter collections, spring collections and even summer collections. These trends affect Colour, Texture, Form, pattern and even product. The clients that I work with from Europe and the USA provided information on their trends for inspiring products." (Hilda, Product Designer: May 27th, 2011).

It is evident from the above responses of the role of design in identifying the trends that are in the market, developing trends and creating new trends. These trends

inform the Product Design and Development process in idea generation and development.

Production/fabrication:

All respondents said that design is needed in the production or fabrication cycle. A Design professional respondent, Nzisa (May 20th 2011), said "Materials are a key component of the production cycle. Design comes in to ensure that material used is sustainable, suggest more appropriate materials or enhance existing materials. An example is in terms of treatment of the material like the drying process of wood." One Jua Kali craft artisan, Wairimu (April 9th 2011) , said "Our Design teachers (Njeri and Tabitha) taught us how to use new material for fastening the necklaces. They also brought new beads that we mix with our beads." One observation from the group discussion was "The product that has design intervention has better quality materials than the product made without design intervention (refers to products that were being compared in the group discussion)." (Mark: March 17th, 2011)

Raso (April 13th 2011), a Jua Kali artisan respondent said "We have learnt new ways of improving our beading techniques from our teachers. Now I know how to make good corners." One Design professional respondent, Nzisa (May 20th 2011), said, "Most artisans are very skilled; they require finesse in their technique. Jua Kali craft

artisans just need guidance from design to utilize the skills in order to produce the right products for the right markets. Skills upgrading also helps in product diversification." An observation from the focus group discussion was, "The technique seems perfected in the product that has had design intervention than the one without." (Allan: May 12th, 2011)

Other responses regarding production are "Before our Design teachers came, we used to use our hands to cut wire. They introduced use to tool like pliers, round nose and flat nose. This has helped use cut well, make good circles in our work and be able to improve the quality of our work."(Nakushuk: April 13th, 2011) A designer respondent, Waithera (May 25th, 2011), had this to said, "Technology change every day. Design informs and recommends production in terms of new and relevant tools and equipment."

From the above responses, it is apparent that the products improved due to design intervening in the Jua Kali craft production/ fabrication cycle. This is in terms of material selection, production techniques, tools and equipments.

Collaboration of Design and Jua Kali craft:

One of the most powerful statements brought forward by the designer respondents was "Designers cannot work without artisans; Jua Kali craft are the fabricators, design brings innovative ideas to the industry" (Lorraine: May 20th, 2011). There was

a unanimous response that the collaboration of Design and Jua Kali craft is necessary. There were many discussions as to the value of this collaboration. All these ideas boiled down to Empowerment. The subcategories to empowerment are (1) Creating Employment, (2) Capacity building, (3) Socio-economic empowerment and (4) Knowledge Sharing and Information Dissemination. Is it innovative ideas or is it creative ideas? What do you mean by 'many ideas were brought forward'? What are some of the ideas?

Creating employment was one response from all Jua Kali respondents "Without the collaboration of Design and Jua Kali craft, some of us would not have the work that we are currently doing. The collaboration creates jobs for both Jua Kali craft artisans and Design professionals. Design-Jua Kali craft collaboration also teaches Jua Kali craft artisans how to collaborate amongst themselves" (Benedicta: April 6th, 2011). A design professional, Nzisa (May 20th 2011), had this to say, "I work with the Jua Kali craft artisans as fabricators of my designs. It is not possible for me to do all the work on my own. I need them for to be able to run my business." Responses from the group discussions include, "There needs to be a mutually beneficial relationship between Jua Kali craft and Design as this would create employment for designers and Jua Kali craft artisans. They need each other to increase sales of products in the market" (Teresa: April 23rd, 2011).

Other responses on empowerment from Jua Kali craft artisans include, "Working with our Design teachers has helped us build our capacity. Now we are able to produce more while maintaining quality" (Agnes: April 9th, 2011). "We were invited to many exhibitions in Nairobi during the project with our Design teachers. This helped us see new things that we would take back home" (Pamela: April 8th 2011). A response from the designer respondents was, "I am a trainer. I believe one of the values of the collaboration of Design and Jua Kali craft is capacity building in terms of Basics of design, Soft business skills and Group dynamics" (Beatrice: May 25th, 2011).

Knowledge sharing has been portrayed by a designer respondent, Muthoni (Feb 15th, 2011), when she said, "The Collaboration helps both Design professionals and Jua Kali craft artisans think outside the box. I as a designer got exposed to techniques and challenges of Jua Kali craft industry." Another respondent said "Jua Kali craft artisans are in touch with their immediate market hence as a design student, I learnt from them on design sensitive to their market. I learnt on the meaning of the colours they used on their products" (Julie: April 23rd, 2011). One other Design respondent said, "As a Designer, I had never really been in the middle of production. I learnt the nitty-gritty of production from Jua Kali craft artisans. I also learnt about materials, their characters and what they are used for. Design education skips some of these things. You can only learn them in the field" (Kute: May 12th 2011). A design respondent, Kinya (May 17th 2011), also said, "A

consultative design process was established while we worked on the Terra Nuova project. Students learnt from the artisans skills; working practically to get hands on skills." More responses include "Artisans do a lot of improvising, as student designers; we learnt how to work within certain constraints while producing quality designed products. Artisans also gained from us by learning the design process; making use of a formal design institution" (Mike). "Most Jua Kali craft is made from recycled and reused material. We, student designers, learnt to incorporate these materials in our work. We also became sensitive to the need to have sustainable materials in the production of Jua Kali craft" (Chris: May 26th 2011).

When looking into socio-economic empowerment, Kinya (May 17th 2011) said "Design facilitate growth and development of Jua Kali craft. Challenges in the Jua Kali craft industry empower Design as a change agent of our Society. Design brings about sustainability by creating opportunities for wealth creation through trading of Jua Kali craft. Jua Kali craft adds to the GDP of the country". "By discovering the contribution that they had in our society, some of the Jua Kali craft artisans got a sense of ownership for their profession" (Waithera: May 25th, 2011). One respondent discussed empowerment in terms of information dissemination said, "During my collaboration with Jua Kali craft, I was able to write a paper. This paper was published and I got responses from difference people. Hence there was information dissemination on the Jua Kali craft industry" (Lorraine: May 20th, 2011).

Another responded from the designers said, “Terra Nouva published two books after the project” (Beatrice: May 25th, 2011).

From the above responses, it is clear that there is value in having Design-Jua Kali craft collaboration. Both Design and Jua Kali craft benefit from the collaboration whether if it is in terms of creating employment opportunities for stakeholders, capacity building, socio-economic empowerment, Knowledge sharing and Information dissemination.

Way Forward for the Collaboration:

Various recommendations have been made by the respondents in this research on ways of improving the collaboration between Design and Jua Kali craft. The researcher has divided their views into three parts;

- Training, equipment and infrastructure
- Government and NGO involvement
- Structures for continued collaboration

Training, equipment and infrastructure:

Various recommendations were made in terms of training, equipment and infrastructure including; “In order for our collaboration to be improved, there needs to be more capacity building for Jua Kali craft artisans. What are various recommendations? They need more training on the value of product design and development” (Beatrice: May 25th, 2011). One Jua Kali craft artisan, Benedicta (April 6th, 2011), said, “We have learnt a lot but we need to learn more so that our products can improve quality.” The group discussion had various recommendations on ways in which the collaboration can be improved. These include; “Products made after the collaboration are better in quality. There should be more capacity building in terms of design for the Jua Kali craft industry to ensure that the needs of the market are met” (Teresa: April 23rd, 2011). “Continued design intervention is vital in growing the Jua Kali craft industry. This will build the capacity of Jua Kali craft industry” (Martin: May 25th 2011).

More recommendations made to push the collaboration of Design and Jua Kali craft include, “The quality of machinery and equipment we use in the field hinder the growth of Jua Kali industry. Upgrading the machinery and equipments will improve the quality of the products” (George: May 25th 2011). A Jua Kali craft artisan, Karmushu (April 13th 2011), had this to say, “We share the equipment in our group. Sometimes we have difficulties in doing what the teachers told us to do because we

have to wait for other group members. It would be good if we had each tool so that we can make better products." The group discussion had recommendations such as, "Technology changes every day. It is important that Design and Jua Kali craft update the equipment they use so that they can improve their collaboration" (Anne: May 25th 2011).

Other recommendations raised during the group discussions include; "There need to be more workshops and trainings that bring Design and Jua Kali craft together to improve their collaboration" (Allan: May 12th, 2011). Designer respondents had this to say, "I believe that we have a lot more to share with the Jua Kali craft industry. There should be more opportunities for us to share our ideas in workshops and trainings" (Julie: April 23rd, 2011). More Jua Kali craft artisan recommendations include, "I think we can do better if we have more training. We have had only one training in two months. Sometimes we have forgotten what the teachers have taught us" (Agnes: April 9th, 2011). "The trainings we get are good. But now the VSO design trainers have come only once in the past three months. We need more training so that we can sell our products in Nairobi" (Karmushu: April 13th 2011).

Jua Kali craft artisans had this to say on ways of improving the collaboration; "We work under a tree and sometimes we move to other locations. Sometimes the teachers don't know where to find us. We need a workshop in the center where we can meet" (Mama Kisiyo: April 6th 2011). Designer respondents' responses included,

“The groups I work with have now working shelter. They make their products from home. It is a challenge as sometime it is difficult to monitor the quality when they have no central place of working. The workshop is also necessary because sometime we agree to meet somewhere with the women, then they change locations. Time dedicated for the training is lost while looking for them” (Njeri: May 25th 2011). Additional suggestions for improving the collaboration of Design and Jua Kali craft from designer respondents are, “One of the limitations that we have is in terms of funding. We are spread thin and sometimes are not able to do all the trainings that we need with the Jua Kali craft artisans. There needs to be more funding to increase the frequency of trainings” (Beatrice: May 25th, 2011)

Government and NGO involvement:

The Government and NGO involvement is another key issue that fosters the Design-Jua Kali craft collaboration. This can be done in a number of ways. Recommendations from designer respondents include; “There are a number of Government initiatives including Women and the Youth Development Funds. The Government should consider Design as one of the key disciplines that will enhance these initiatives in terms of growing the Jua Kali craft industry were many Women and Youth participate” (Waithera: May 25th, 2011).

Some recommendations from designer respondents include; “In our vision 2030, industrialization is a key aspect of enhancing the Kenyan economy. The Government

introduced the Ministry of industrialization. Our profession needs to be recognized by this ministry as a driver of the industrialization agenda. This is in industries such as Jua Kali craft” (Kute: Mat 12th 2011). “Kenya’s industrialization should be sensitive to the Jua Kali craft industry and include it in a big way” (Julie: April 23rd, 2011).

More comments on the issue of Government and NGO involvement from the group discussion include; “I have been looking for an industry that is in charge of Jua Kali craft and have not found one. The government needs to recognize the role of Jua Kali craft in economic development of our country and deliberately for a Ministry of MSE’s or even a Ministry of Jua Kali” (Florence: May 13th 2011). Some comments from the designer respondent are, “The government has failed to create structures to enhance Jua Kali even if there are so many reports that discuss the contribution of Jua Kali craft in the GDP. It is the high time that the Government did something about it” (Muthoni: Feb 15th, 2011). Jua Kali craft artisans had recommendations such as, “We do not feel like the Government minds our issues. We need a Ministry that will take care of our needs” (Pamela: April 8th 2011).

Designer respondents had more suggestions such as, “Design is a driver of industrialization in many countries. Many Asian countries recognized this and leapfrog-ed their development by investing in the design industry. You find that there are product development trainings sponsored by some parastatal organizations

and NGOs, the trainers are people with no design background. There needs to be deliberate involvement of the Design discipline in product development trainings in the Jua Kali craft industry” (Chris: May 26th 2011).

Participants from the focus group discussions had such comments as, “The Government has a role to play in facilitating establishment of Jua Kali craft enterprise by making it easier for them to get registered and have working shelters. There are some shelters that were sponsored by the Nyayo regime, the ‘Nyayo Sheds’. We need more of these” (Anne: May 25th 2011). One Jua Kali craft artisan said, “A while back, we heard that the Government used to build shed for Jua Kali. They should build one for us. Maybe VSO can build one for us” (Benedicta: April 6th, 2011). Lastly, recommendations from designer respondents on Government and NGO involvement include; “Many countries have product expos in Kenya. Our government needs to fund Kenyan expos in different countries where we can showcase our Jua Kali craft” (Muthoni: Feb 15th, 2011). “Our government should come in strongly to support the Jua Kali craft industry by having Kenyan endorsed international exhibitions” (Nzisa: May 20th 2011).

Structures for continued collaboration:

In order to enhance the Design - Jua Kali craft collaboration, various recommendations were made by the respondents in terms of structures. Designer respondents responses include; “The collaboration should be structured in a way that

it is beneficial for both designers and Artisans. There need to be regulators in the industry to ensure that all parties benefit from the collaboration” (Njeri: May 25th 2011). “Collaboration should start with design learning institutions; have programs where Jua Kali craft and Design work together as a formal part of their learning syllabus. It is important for student designers to learn early in their training how to work in the Jua Kali craft industry” (Nzisa: May 20th 2011). “We designers have a society, Design Kenya Society. May be such design associations should promote this collaboration by including Jua Kali craft as part of their membership” (Lorraine: May 20th, 2011)

Some responses from the focus group discussion include, “There used to be a Product development center a while back called PDDC. Such platforms like the PDDC that facilitate the collaboration need to be introduce and probably based in a higher learning institution or research center to ensure sustainability” (Allan: May 12th, 2011) “Research should be enhanced in the industry. In the University of Nairobi, there is a Fab lab that deals with innovations. Such research centers should be used to improve Design-Jua Kali craft collaboration” (Rono: May 26th, 2011). “Institutions that are working as go-in-between Design and Jua Kali craft need to be promoted. For example, there was Terra Nouva that helped foster this collaboration. The project ended, though I believe that they should have received more funding to promote their work” (Rono: May 26th, 2011). “Jua Kali craft industry will one day

drive our economy. We need to change our mindset to try and see how Jua Kali craft industry can be developed into larger enterprises" (Nzisa: May 20th 2011).

Chapter Five: Summary and Recommendations

The findings of the previous Chapter on the 'Way Forward for the Collaboration' highlighted various recommendations drawn from by the primary data. Below is a summary of these recommendations given regarding (1) Training, equipment and infrastructure (2) Government and NGO involvement, (3) Structures for continued collaboration. Recommendations made in terms of training, equipment and infrastructure include;

- **Increased capacity building:** This will enhance design and Jua Kali craft to work more efficiently and effectively.
- **Improve quality of the tools and equipment used in the industry:** Use of the right tools and equipment will directly improve the quality of the Jua Kali craft.
- **Putting design and Jua Kali craft in contact through more workshops and trainings:** Creating more avenues for contact will improve the collaboration of design and Jua Kali craft. Design looks at concept while Jua Kali craft looks at execution. Workshops that foster the collaboration are essential.
- **Funding for seminars:** One of the hindrances to fostering collaboration between design and Jua Kali craft is having few opportunities to meet and

share ideas due to lack of funds. Funding towards the seminars will improve collaboration of design and Jua Kali craft.

- **Need of working shelters to ease the collaboration:** Availability of working sheds will provide a defined place for design practitioners and Jua Kali craft artisans to meet and work.

Recommendations have been made regarding Government and NGO involvement including;

- **Involving Design in government initiatives such and the Women and Youth Development Funds:** There are many government initiatives that are geared towards promoting the activities of Women and Youth. Many Jua Kali craft artisan groups include women and youth. It is imperative for government to involve design as a stakeholder in enhancing the Jua Kali craft activities of women and youth.
- **The Ministry of industrialization involving Design in expansion and improvement of industries such as Jua Kali craft:** The economic pillar of Vision 2030 seeks to improve the prosperity of all regions of the country through, among others, manufacturing. The expansion and improvement of the Jua Kali craft industry with the collaboration of design will contribute to the realization of Vision 2030.

- **Establishment of a ministry in charge of Jua Kali craft:** Though the Jua Kali craft industry plays an important role in the economic development of the country, there is no specific Ministry that is tasked to look into the development of this sector. Establishment of a Ministry in charge of Jua Kali will focus stakeholders, including design, who will bring the overall development of the industry.
- **Deliberate involvement of Design in Jua Kali craft industry through NGO programs:** Various NGOs have livelihood programs that focus on Jua Kali craft in Kenya. Such NGOs should involve design in such programs.
- **Government supporting Jua Kali craft industry through easing registration process and access of workshops:** One of the characteristics of Jua Kali craft industry is their informal operation; many are not registered and some lack shelters for working. Nyayo shed of 1989 was an initiative of the government to promote Jua Kali. More government support in easing registration and building of shelters for Jua Kali craft activities would improve the activities of Jua Kali hence enhance the collaboration with design.
- **Government endorsed more international exhibitions for the promotion of Jua Kali craft industry:** Marketing is an important aspect in promotion of Jua Kali craft products. Government involvement in marketing Kenyan Jua Kali products and endorsing them as Made in Kenya, having a

Kenyan brand will improve the collaboration of design and Jua Kali craft by opening market for their products from their collaboration.

A number of recommendations have been made in terms of structures for continued collaboration. These include;

- **The collaboration should be structured in a way that it is mutually beneficial by bring in regulators of the Design-Jua Kali craft collaboration:** In any collaboration, there needs to be platform on which partners work, which regulates and ensures that all parties are benefiting from the partnership.
- **Learning institutions should include the collaboration of Jua Kali craft and Design as formal part of their learning syllabus:** Awareness of the need for collaboration between Jua Kali craft and Design can be promoted through learning institution, for example, it would be essential for Product design students to learn their responsibility in the Jua Kali craft industry.
- **Introduction of research platforms to foster the collaboration:** In order to enhance the collaboration between design and Jua Kali craft, research on the role of each party in the collaboration and on ways to improve the collaboration is essential.
- **Promotion of the collaboration by having associations that have both Jua Kali craft and Design membership:** There are Jua Kali associations

and Design association currently in Kenya. Having a combined association for both Jua Kali craft and Design will create opportunities for dialogue and strengthen the collaboration.

The researcher would like to conclude by alluding to the Design Clinic model discussed in the Literature Review. This is a working model that is being used in India to guide Design- Craft collaboration. Adopting such a model would benefit the Design-Jua Kali craft collaboration in Kenya.

Areas for Further Research:

This study focused on possible collaboration between Design and Jua Kali craft, how it presently exists, in order to propose ways in which the relationship can be beneficial. In addition, further research is needed to determine other criteria that may be used in the Design-Jua Kali craft collaboration. Research is also needed to examine these criteria and validate them to ensure smooth running of the collaboration.

The data used in this study is viable based on the number of respondents interviewed. Further to this study, more work needs to be done in terms of increasing the number of respondents, selecting respondents from a different region and increasing the number of group discussion.

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http://www.guide2kenya.com/uploads/info/large/070211170052-Maasai_Market.jpg

Kenya Safari, Retrieved April 15, 2011, from http://www.kenyasafari-direct.com/content/activity_280_1_M.jpg

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Appendices:

Appendix 1

Guiding questions for Jua Kali craft Artisans

1. Did you learn design formally or are you self-taught?
2. What value, do you think the training has on the products you produce?
3. Have you had any change in your
4. What, in your opinion, is the role of Design in Jua Kali craft?
5. How can your collaboration be improved?

Appendix 2

Guiding questions for Designers:

1. How were you involved in Jua Kali craft industry? In what capacity?
2. Have you collaborated in the Jua Kali craft industry?
3. What was the impact of your collaboration?
4. What lessons did you learn from the collaboration?
5. What, in your opinion, is the role of Design in Jua Kali craft?
6. How can your collaboration be improved?

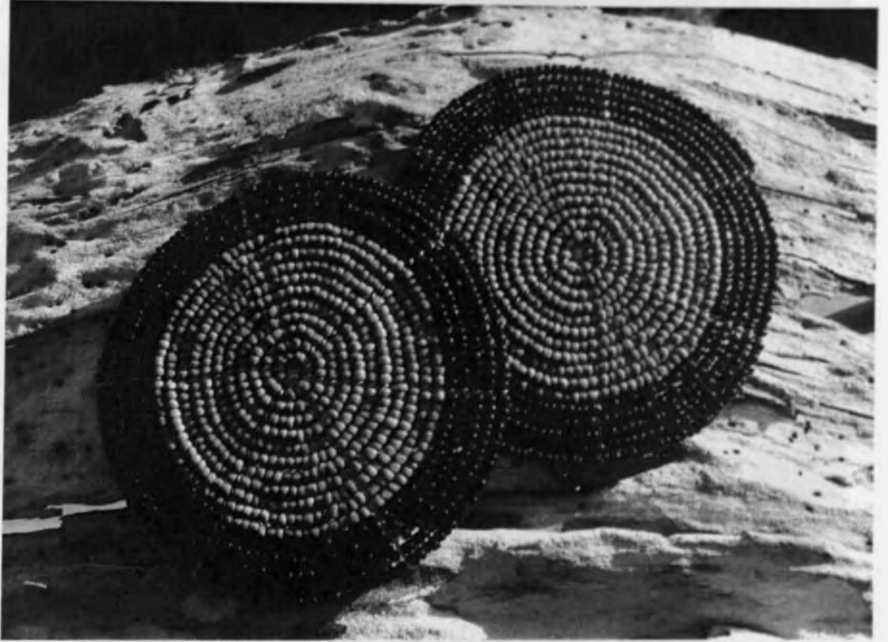
Appendix 3

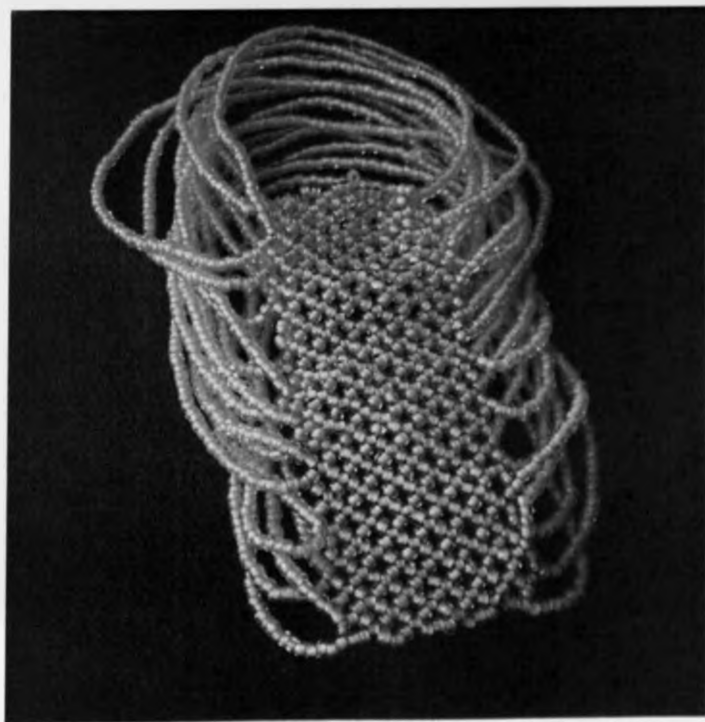
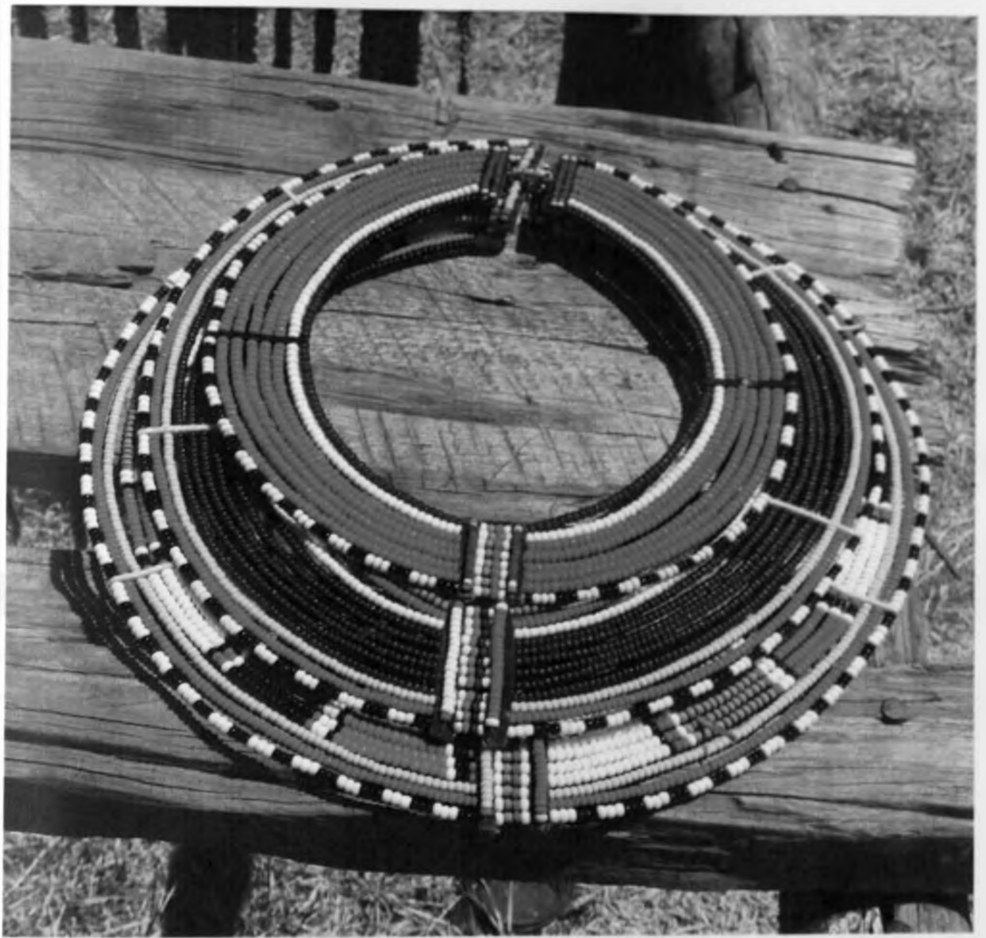
Guiding questions for Focus Group Discussions

1. Is there a difference between the two groups of product?
2. What are the differences considering Design reason (sensitivity)?
3. In your opinion, would you consider an improvement in the products before and after having deliberate Design collaboration? Is there a difference? Do the improvements amount to being better?
4. Is there value in having Design collaborating with Jua Kali craft?
5. What role does Design play in the collaboration?
6. Are there ways in which the collaboration can be improved?

Appendix 4

Products used in Focus Group Discussion





Appendix 5

Raw data from interviews

1) Role of Design in Jua Kali craft:

Product Design and development								
		Generating Ideas	Idea Development	Quality Control	Standardization	Costing & Pricing	Packaging	Cataloguing
DESIGN								
1	Kute	1	1		1	1	1	1
2	Florence	1	1		1	1	1	1
3	Teresa			1	1		1	1
4	George			1			1	1
5	Waithera	1			1	1		
6	Chris		1	1		1	1	
7	Beatrice	1		1	1	1	1	1
8	Muthoni	1		1		1	1	1
9	Martin	1		1		1	1	
10	Anne	1		1	1		1	1
11	Lorraine		1		1		1	1
12	Njarl		1		1	1	1	1
13	Nanjala	1	1	1	1	1	1	1
14	Hilda	1		1	1	1		1
15	Nzisa	1		1	1	1		1
16	Mark	1	1	1			1	1
17	Allan		1	1	1		1	1
18	Julie		1		1	1	1	1
19	Kinya	1	1	1	1	1	1	
20	Mike	1	1	1	1	1	1	
21	Rono	1		1			1	1
22	Justus		1	1		1	1	
23	Christine	1	1		1		1	1
24	Mary		1		1	1	1	
25	Mwangi	1		1	1	1	1	

26	Jared	1		1	1	1	1	1
27	Faith	1		1	1			1
28	Victor			1	1	1		1
JUA KALI CRAFT								
1	Benedicta	1		1			1	1
2	Mama Kisiyo	1	1	1		1	1	
3	Pamela	1		1	1			1
4	Margaret	1				1		1
5	Agnes		1		1		1	
6	Jane	1			1			1
7	Karmushu	1		1				
8	Wairimu		1	1	1		1	1
9	Raso		1	1	1	1	1	
10	Nakushuk	1				1		1
11	Esther	1	1				1	1
12	Riano	1	1	1	1	1	1	1
13	Risiki		1	1	1	1	1	1
14	Ngetalu	1	1			1		
15	Grace	1		1	1	1	1	
16	Mplals	1			1		1	1
17	Tingol	1			1			
18	Kiilu		1	1				1
19	Damaris	1	1	1		1		1
20	Janita		1	1	1	1		1
21	Jasmin				1	1		1
22	Nashim	1	1	1	1			
23	Mama Kiama	1	1	1	1	1	1	
24	Naasha	1	1	1		1	1	1
25	Teresa				1	1		1
26	Sicreda				1		1	1
27	Rosemary	1	1		1		1	
28	Penina	1		1			1	1
29	Naseli	1		1				
30	Minyarit		1			1		
31	Catherine	1		1		1	1	
32	Maseti	1	1		1		1	1

33	Tetu		1		1			1
34	Sipillon	1			1		1	1
35	Natlyo	1	1		1	1		
36	Elizabeth	1	1	1			1	
37	Naseli			1		1		1
38	Nang'uro					1		
39	Maseti	1	1		1			
40	Ntirisen	1	1		1	1		1
41	Kamwaki				1	1	1	1
42	Nalyari	1	1	1			1	
43	Swer		1					1
44	Seleta		1		1	1		1
45	Minyari	1			1	1		1
46	Joyce	1		1				
47	Nasha	1	1	1	1	1	1	1
48	Nadotari		1	1		1		1
49	Ntakayon	1	1			1		
50	Pilale	1	1	1	1			
51	Paslyo	1		1	1		1	1
52	Morijo		1	1	1	1	1	
53	Riano		1			1	1	1
54	Noolkerin		1		1	1		
55	Nandiri	1			1	1	1	1
56	Noolkisaruni	1	1		1		1	
57	Mkesi			1		1	1	
58	Rimpuu	1	1			1		1
59	Linkoine		1			1		
60	Linkoe		1		1		1	
Total		55	50	48	55	52	52	53

Appendix 6

Raw data from interviews

1) Role of Design in Jua Kali craft:

Research				
		Market Intelligence	Product Information	Consumer Knowledge
DESIGN				
1	Kute		1	
2	Florence	1	1	
3	Teresa		1	1
4	George	1		1
5	Waithera	1	1	1
6	Chris	1	1	1
7	Beatrice		1	1
8	Muthoni	1		
9	Martin		1	1
10	Anne	1	1	
11	Lorraine		1	1
12	Njeri		1	
13	Nanjala	1		1
14	Hilda			1
15	Nzisa		1	1
16	Mark	1	1	1
17	Allan	1	1	
18	Julie	1		
19	Kinya	1		1
20	Mike	1	1	1
21	Rono	1		1
22	Justus	1		1
23	Christine	1		1
24	Mary	1	1	
25	Mwangi			1

26	Jared		1	1
27	Faith		1	1
28	Victor		1	1
JUA KALI CRAFT				
1	Benedicta	1	1	
2	Mama Kislyo		1	1
3	Pamela			1
4	Margaret			
5	Agnes		1	1
6	Jane		1	
7	Karmushu	1		
8	Wairimu	1	1	
9	Raso	1	1	1
10	Nakushuk	1		1
11	Esther		1	1
12	Riano		1	
13	Riski	1		1
14	Ngetalu		1	1
15	Grace		1	1
16	Mpilais			1
17	Tingoi	1	1	
18	Kiilu		1	1
19	Damaris	1		1
20	Janita	1	1	
21	Jasmin	1		1
22	Nashipa		1	
23	Mama Kiama	1		1
24	Naasha		1	1
25	Teresa		1	1
26	Sicreda	1		
27	Rosemary		1	
28	Penina	1		1
29	Naseli		1	1
30	Minyarit	1		
31	Catherine		1	
32	Maseti	1		
33	Tetu	1	1	1

34	Sipilion		1	1
35	Natiyo	1	1	
36	Elizabeth	1		
37	Naseli		1	1
38	Nang'uro	1		1
39	Maseti		1	
40	Ntirisen	1	1	1
41	Kamwaki		1	1
42	Naiyari	1	1	
43	Swer	1		1
44	Selelta	1		1
45	Minyarit	1	1	
46	Joyce			1
47	Nasha			1
48	Nadotari	1		
49	Ntakayon		1	1
50	Pilale	1		1
51	Pasiyo	1	1	
52	Morijo	1	1	
53	Riano	1	1	
54	Noolkerin			1
55	Nandiri			
56	Noolkisaruni	1		1
57	Mkesi			1
58	Rimpas	1		
59	Linkoine		1	1
60	Linkoe	1	1	
Total		48	52	54

Appendix 7

Raw data from interviews:

1) Role of Design in Jua Kali craft:

		Marketing	Production/ fabrication		
			Materials	Skills	Tools & Equipment
DESIGN					
1	Kute		1		1
2	Florence	1		1	1
3	Teresa	1		1	1
4	George	1	1		
5	Waithera		1		1
6	Chris		1	1	1
7	Beatrice	1		1	1
8	Muthoni	1	1	1	
9	Martin	1		1	1
10	Anne	1	1	1	1
11	Lorraine	1		1	1
12	Njeri	1	1		
13	Nanjala	1			
14	Hilda		1		1
15	Nzisa		1	1	
16	Mark	1			1
17	Allan		1	1	1
18	Julie	1		1	1
19	Kinya	1		1	
20	Mike	1	1		1
21	Rono		1	1	1
22	Justus		1	1	1
23	Christine	1		1	1
24	Mary	1	1	1	1
25	Mwangi	1	1		
26	Jared	1	1		
27	Faith		1	1	
28	Victor	1			1
JUA KALI CRAFT					
1	Benedicta	1	1		
2	Mama Kisiyo	1	1		
3	Pamela	1		1	
4	Margaret	1			1
5	Agnes			1	1

6	Jane	1			1
7	Karmushu	1		1	1
8	Wairimu	1	1		
9	Raso			1	
10	Nakushuk		1		1
11	Esther		1		
12	Riano	1			
13	Risiki	1	1		1
14	Ngetalu	1	1	1	1
15	Grace			1	
16	Mpilais				1
17	Tingoi	1	1		1
18	Kiilu	1	1		1
19	Damaris				
20	Janita	1	1	1	1
21	Jasmin		1		1
22	Nashipa		1		
23	Mama Kiama	1			1
24	Naasha	1		1	
25	Teresa	1	1	1	1
26	Sicreda		1	1	1
27	Rosemary	1	1		
28	Penina	1	1	1	
29	Naseli	1		1	1
30	Minyarit		1	1	1
31	Catherine	1	1		
32	Maseti		1		
33	Tetu	1			1
34	Sipilon	1	1	1	1
35	Natiyo	1		1	
36	Elizabeth				1
37	Naseli		1		1
38	Nang'uro	1			1
39	Maseti	1			1
40	Ntirisen			1	1
41	Kamwaki	1	1	1	
42	Naiyari			1	
43	Swer	1	1		
44	Selelta	1		1	1
45	Minyarit	1		1	
46	Joyce		1	1	1
47	Nasha		1		
48	Nadotari	1		1	1
49	Ntakayon				
50	Pilale		1	1	1
51	Pasiyo	1		1	1
52	Morijo	1	1	1	1
53	Riano	1	1		

54	Noolkerin	1			1
55	Nandiri		1	1	1
56	Noolkisaruni	1	1	1	
57	Mkesi	1	1		
58	Rimpas			1	
59	Linkoine	1	1	1	
60	Linkoe	1	1	1	
Total		57	50	47	51

Appendix 8

Raw data from interviews

1) Role of Design in Jua Kali craft:

In-Vogue Design Trends				
	Style	Culture	Seasons	
DESIGN				
1	Kute	1	1	1
2	Florence		1	
3	Teresa		1	1
4	George	1		1
5	Waithera	1		
6	Chris	1	1	
7	Beatrice		1	
8	Muthoni		1	1
9	Martin		1	
10	Anne	1	1	1
11	Lorraine			
12	Njeri	1	1	
13	Nanjala	1		1
14	Hilda			1
15	Nzisa		1	
16	Mark	1		1
17	Allan			1
18	Julie	1		1
19	Kinya		1	
20	Mike	1	1	
21	Rono		1	1
22	Justus		1	1
23	Christine			
24	Mary	1	1	1
25	Mwangi		1	
26	Jared	1	1	1
27	Faith	1		1
28	Victor		1	
JUA KALI CRAFT				
1	Benedicta	1	1	
2	Mama Kisiyo			1
3	Pamela	1		1
4	Margaret		1	
5	Agnes	1	1	1
6	Jane		1	1

7	Karmushu	1	1	
8	Wairimu	1		1
9	Raso	1		1
10	Nakushuk	1	1	
11	Esther			1
12	Riano			1
13	Risiki	1		
14	Ngetalu		1	1
15	Grace	1		1
16	Mpilais			
17	Tingoi	1		
18	Kiilu			
19	Damaris	1		1
20	Janita		1	1
21	Jasmin	1		
22	Nashipa		1	1
23	Mama Kiama	1		
24	Naasha	1	1	1
25	Teresa		1	1
26	Sicreda	1	1	
27	Rosemary	1		
28	Penina	1		1
29	Naseli		1	1
30	Minyarit	1		
31	Catherine		1	
32	Maseti	1		
33	Tetu	1	1	1
34	Sipilion		1	1
35	Natiyo	1	1	
36	Elizabeth		1	
37	Naseli	1		1
38	Nang'uro			1
39	Maseti		1	1
40	Ntirisen		1	1
41	Kamwaki	1		1
42	Naiyari	1	1	
43	Swer	1	1	1
44	Selelta			1
45	Minyarit	1	1	
46	Joyce	1	1	
47	Nasha	1		1
48	Nadotari	1	1	
49	Ntakayon		1	1
50	Pilale	1		1
51	Pasiyo		1	1
52	Morijo		1	1
53	Riano		1	
54	Noolkerin			

55	Nandiri			1
56	Noolkisaruni			
57	Mkesi			1
58	Rimpas			1
59	Linkolna		1	
60	Linkoe	1		
Total		44	48	49

Appendix 9

Raw data from interviews

2) Collaboration of Design and Jua Kali craft:

		Creating employment	Capacity building	Socio- economic empowerment	Knowledge sharing and info Dissemination
DESIGN					
1	Kute		1	1	1
2	Florence				
3	Teresa	1		1	1
4	George		1		
5	Waithera	1		1	1
6	Chris	1	1	1	1
7	Beatrice		1		1
8	Muthoni	1	1	1	1
9	Martin	1		1	
10	Anne	1		1	
11	Lorraine	1	1	1	1
12	Njeri			1	
13	Nanjala	1		1	1
14	Hilda	1	1		1
15	Nzisa		1	1	1
16	Mark	1			1
17	Allan	1	1	1	
18	Julie	1	1	1	
19	Kinya		1	1	1
20	Mike	1			1
21	Rono		1	1	
22	Justus	1	1	1	
23	Christine			1	1
24	Mary			1	1
25	Mwangi	1	1	1	1
26	Jared	1	1	1	1

27	Faith	1	1	1	1
28	Victor	1			1
JUA KALI CRAFT					
1	Benedicta	1	1		
2	Mama Kisiyo		1		1
3	Pamela	1		1	
4	Margaret		1		
5	Agnes		1		1
6	Jane	1			
7	Karmushu			1	1
8	Wairimu	1		1	1
9	Raso	1			
10	Nakushuk			1	1
11	Esther	1		1	
12	Riano		1		
13	Risiki	1	1	1	
14	Ngetalu		1	1	1
15	Grace	1	1		1
16	Mpilais	1		1	1
17	Tingoi	1		1	
18	Kiilu	1	1		1
19	Damaris		1	1	1
20	Janita	1		1	1
21	Jasmin	1			1
22	Nashipa		1	1	
23	Mama Kiama	1		1	1
24	Naasha	1	1		
25	Teresa	1	1		
26	Sicreda	1	1		1
27	Rosemary			1	1
28	Penina		1		1
29	Naseli	1		1	1
30	Minyarit			1	1
31	Catherine		1	1	
32	Maseti			1	
33	Tetu	1	1		1
34	Sipillon			1	1

35	Natiyo	1	1	1	1
36	Elizabeth		1	1	1
37	Naseli	1	1	1	1
38	Nang'uro	1			
39	Maseti	1			
40	Ntrisen		1	1	1
41	Kamwaki				1
42	Nalyari			1	
43	Swer	1		1	1
44	Selela	1		1	1
45	Minyarit	1		1	1
46	Joyce				
47	Nasha				1
48	Nadotari		1	1	1
49	Ntakayon	1	1		1
50	Pilale	1		1	1
51	Pasiyo	1		1	
52	Morjo	1	1		1
53	Riano			1	1
54	Noolkerin		1		1
55	Nandiri	1			
56	Noolkisaruni		1	1	
57	Mkesi	1		1	
58	Rimpas	1	1		1
59	Linkoine	1	1		
60	Linkoe	1	1		1
Total		53	45	54	56

Appendix 10

Raw data from interviews

3) Way forward for the collaboration:

		Training, equipment & infrastructure	Government and NGO involvement	Structure for continued collaboration
DESIGN				
1	Kute		1	
2	Florence		1	1
3	Teresa	1		1
4	George	1		1
5	Waithera		1	
6	Chris		1	1
7	Beatrice	1		1
8	Muthoni		1	1
9	Martin	1		
10	Anne	1	1	1
11	Lorraine			1
12	Mjari	1	1	1
13	Nanjala		1	1
14	Hilda	1		1
15	Nzisa	1	1	1
16	Mark		1	
17	Allan	1		1
18	Julie	1	1	
19	Kinyo			1
20	Mike	1	1	1
21	Rono			1
22	Justus	1	1	
23	Christine		1	
24	Mary	1	1	
25	Mwangi	1	1	1
26	Jared	1		
27	Faith	1	1	1
28	Victor		1	
JUA KALI CRAFT				
1	Benedicta	1	1	
2	Mama Kibiro	1		1
3	Pamela		1	1
4	Margaret			1
5	Agnis	1		

6	Jane	1		1
7	Kamushu	1	1	1
8	Wairimu		1	1
9	Raso		1	
10	Nakushuk	1		1
11	Esther	1		
12	Riano			1
13	Risiki			1
14	Mgotulu	1	1	1
15	Grace			1
16	Mplala			
17	Tingoi		1	1
18	Kiilu			1
19	Damaris		1	1
20	Janita	1	1	1
21	Jasmin	1	1	
22	Nashipa	1	1	
23	Mama Kiama			1
24	Naasha	1	1	1
25	Teresa		1	
26	Sicreda			1
27	Rosemary	1		1
28	Penina	1	1	
29	Naseli	1		1
30	Minyarit		1	1
31	Catherine			1
32	Maseti			1
33	Tetu	1		
34	Siglon		1	1
35	Nalya	1	1	1
36	Elizabeth	1		1
37	Naseli		1	
38	Nang'uro	1		1
39	Maseti		1	1
40	Ntirisen		1	1
41	Kamwaki	1		1
42	Nalyari	1	1	
43	Swet		1	
44	Seleta		1	1
45	Minyarit		1	1
46	Joyce	1	1	1
47	Nasha		1	1
48	Nadotari	1	1	1
49	Ntakayon	1		
50	Pilale			1
51	Pasiyo			1
52	Morijo	1	1	1
53	Riano	1	1	1

54	Noolkerin	1		
55	Nandiri		1	
56	Noolkisaruni		1	1
57	Mkesi	1	1	1
58	Rimpas		1	1
59	Linkoine			
60	Linkoe	1	1	
Total		45	52	60