CRAFT PRODUCTION AND SOCIOCULTURAL CONTEXT: A CASE STUDY OF NASA WERREGUE COILED BASKETRY IN COLOMBIA

A Thesis

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ABSTRACT

According to the Alliance of Artisan Enterprise from the Aspen Institute, the existence of the artisan enterprise is valuable for native communities since it creates jobs and preserves ancient techniques (Aspen Institute, 2012). The design and development of the Werregue (*Astrocaryum Standleyanum*) coiled basket is a source of income for indigenous communities in Colombia. This research uses a case study method which employed semi-structured interviews with fifteen skilled Nasa Werregue coiled basket makers, to analyze the sociocultural characteristics, design, production, and market in Werregue coiled basketry in the Pacific region of Colombia within two research settings, Cali and the village of La Delfina. The findings show that the Werregue coiled basket is seen as a form of cultural currency that can be traded with other indigenous communities as well as with Afro Colombians, and which can also be sold to national and foreign visitors. Within the sociocultural context, there is a division of labor that takes place in its production and market stage. The economic importance of this basket changes the division of labor between women and men in the basketry development process although it was initially a woman's activity. The basket motifs are mainly inspired by nature, gods, and geometric figures that relate to personal and community stories. Four marketing methods are established in order of preference; fairs, craft retailers, indigenous members, and street markets. Conservation methods of the plant species used in the baskets are crucial for preserving the plants and the craft itself. Results in this study contribute to the understanding of the role of the Werregue coiled basket in the economic development of indigenous communities and its contribution to the handicraft culture in Colombia.
CHAPTER 1: INTRODUCTION

While pursuing my undergraduate studies in Environmental Engineering at the National University of Colombia, I enrolled in the Efficiency and Renewable Energy Research Group, one of whose objectives is to provide sustainable solutions in energy supply as well as management approaches for rural communities that are not connected to the national grid, and as a consequence, have limitations in their access to energy sources. We worked to improve people’s living conditions in villages and departments of Valle del Cauca, as well as Cauca, by providing sustainable energy solutions.

Access to energy is crucial for community development since it has several implications for the well-being of communities thanks to its heavy influence on daily activities such as cooking, reading, and lighting. The lack of energy is associated with infant mortality, illiteracy, short life expectancy, and fertility (International Finance Corporation, 2013). During my labor, I contributed to the communities by identifying renewable sources of energy to assist household basic energy needs, while advocating for the implementation of different programs within the community. On this journey, I highly valued native communities that use their resources to develop a source of income, which combines their local knowledge with the use of natural fibers, dyes, and their own artisanship skills.

Thanks to having the experience of working as a researcher in sustainable energy technologies, I have come to value communities that employ sustainable resources by creating products that nurture their economy and also revalue their artisan techniques. The diversity of handicrafts in Colombia is parallel to the variety of natural resources and ethnic groups that compound this region (Cuesta, 2003). The development of Werregue coiled baskets with their
natural fibers and dyes is a clear representation of the use of local resources for economic development.

As an environmental engineer, I seek sustainable models aimed to prevent, mitigate, and eliminate ecological impacts in consumption and production systems. I seek for strategies to keep a balanced relation between socioecological systems and economic development. Therefore, I developed an interest in the Werregue coiled basketry production because it included a combination of artisanship, natural materials, and local development. I, therefore, decided to conduct a study in the coiled basketry production for my master thesis in Textiles, Apparel, and Merchandising, at the Louisiana State University (LSU).

My experience working with native communities and studying their natural resources for economic development provided me with access to the community. The people from the communities contributed to this research willingly and enthusiastically. The combination of my experience in this community along with my environmental engineering background, as well as my studies in Human Ecology, which specialize in Textiles, at LSU, have provided me with the skills needed to conduct this study and identify sustainable practices that can serve as an example for production systems in clothing and textiles.

This research is a case study that explores the sociocultural characteristics, design, and production of Werregue coiled basketry in Colombia, and it was conducted through the lenses of fifteen Nasa skilled coiled basket makers who were interviewed using open-ended questions in four areas: sociocultural context, design, production, and marketing of coiled baskets. Chapter One introduces the production of the Werregue coiled basket, explaining its importance for the indigenous communities that produce the basket. This chapter makes an overview of the implication in design and conservation of the natural resources associated with the plant species
used in this Colombian traditional handicraft. Chapter two contains the literature review on the topic of this study, offering a description of the raw materials (Astrocaryum standleyanum, Bixa Orellana, and Arrabidaea Chica), their properties, and how they are used, as well as the economic impact created by native communities in other regions. The use of these non-timber products has environmental implications that need to be monitored and addressed by the alliance between communities, governments, and environmental organizations to guarantee the availability of these species and consequently to sustain the Werregue coiled basketry tradition. Chapter three explains the methods used in this research and why they are suitable according to the topic and its conditions. It also includes the guidelines for conducting the interviews and the authorization from the Institutional Review Board for human subject research. Chapter four presents the results from the fifteen semi-structured interviews with Nasa coiled Werregue basket makers in Colombia. This includes information on the sociocultural context, design, production, and market of the baskets and demographic information of the participants and their experience as Werregue coiled basket makers. This chapter is complemented with quotations to illustrate the points of views expressed by the basket makers and the characterization of a classic coiled basket. Finally, Chapter 5 presents the conclusions, contributions, and future research based on the results and discussion.

1.1 Purpose of Study

The purpose of this case study is to explore the sociocultural characteristics, design, production and market of Werregue coiled basketry in Colombia. The Werregue coiled basket is a symbol of handicraft production and a demonstration of the diversity of natural resources combined with artisan techniques in Colombia. Its production is based on the empirical knowledge that has been passed down from generation to generation (Ministerio de desarrollo economico, 2002). This research increases the understanding of the design process and the economic impact
of the production of coiled baskets in the Pacific region of Colombia. The need to understand the handicraft production is explained in its direct relation with the economic development of native communities in the use of local materials with artisan techniques.

Previous studies have focused on the ecological importance of raw materials and the consequence of the depletion of the plant species used in the coiled basket production process (Pedersen, 1994; Fadiman, 2003; Runk, 2001; Ceballos & Franco, 2003; Valderrama, 2011; Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007). However, this study, from the basket maker’s viewpoint, complements previous research by offering a context of the design, production, and marketing stage of the basket. It is important to explain the relationship between the use of these plant species to support the local economy and the need to support the artisanal activity with conservation projects for the plant species, as well as the marketing channels of the aforementioned artisan product.

The importance of the Werregue coiled basket lies in its economic impact within the indigenous community. Basketry presents socioeconomic benefits to the community such as an income for buying food, clothing, and access to health. The art of basketry is one of the various practices that contribute to the preserving of the cultural values of the implied indigenous community, and which is also a source of fulfillment and a sense of purpose for the artisans. Basketry is a corpus of knowledge taught from generation to generation. Therefore, the daily practice of basketry is an affirmation of this indigenous group’s cultural heritage. This research will use a case study method with semi-structured interviews to examine the sociocultural characteristics, design, and production of Werregue coiled basketry in the Pacific region of Colombia.
1.2 Research Objectives

The overall purpose of this research is to examine the sociocultural characteristics, design, production and market of Werregue coiled basketry in Colombia. It is necessary to pursue three specific objectives. In the first place, it is imperative to identify the sociocultural context in which coiled basketry is produced, including gender roles in the design and production, as well as the generational aspects entailed. The second objective is to identify the design process in which materials, colors, and motifs are of primordial focus. As a third objective, the conditions of the production of the baskets is analyzed. The last objective is to identify the mechanisms employed to trade coiled baskets, as well as the main buyers. The primary research questions for this thesis include:

1. How are the coiled Werregue baskets produced from the stage of extraction of the materials to the final product?
2. What are the sociocultural factors involved in the production of the Werregue coiled basket?
3. What is the economic importance of the Werregue coiled basket production, its main buyers, and mechanisms to sell the baskets?

1.3 Statement of the Problem

According to Artesanías de Colombia, the National Institute in Colombia for the study and promotion of Colombian crafts, around 58,821 people are dedicated to handicraft production, (Artesanías de Colombia, 2017). For native communities in Colombia, artisanship is seen as a means of cultural value expression and a vehicle for economic development (Vega, 2013). The production of Werregue coiled baskets is highlighted as a contribution to national production due to the use of basketry techniques and of natural materials (Linares, Galeano, García & Figueroa,
The artisan enterprise is of high value for these communities because it creates jobs, preserves ancient techniques—and for the unique Colombian context in which it is performed—it promotes reconciliation, healing, and empowerment (Aspen Institute, 2012).

In our contemporary world, there is a growing need for an environmental and humanistic approach towards the way we produce and consume things due to the fact that our demands are gradually exceeding the planet’s capacity to respond to our repeated demands (Pearce & Turner, 1990). The continued extraction, production, and consumption of products will lead to undesirable environmental impacts (Fischer-Kowalski et al. 2011). Our current approach to economic growth proposes a unidirectional concept of production based on the extraction of natural resources; in linear economy, the rapid economic growth is achieved at the expense of the depletion of natural resources with the resultant accumulation of economic waste (Georgescu-Roegen, 1971). Nature is treated as a source of raw materials that feeds production systems resulting in products that provide utility. Wahl and Baxter (2008) emphasize the integration of an intercultural approach; this development will lead us to adopt more inclusive measures to facilitate a balance between cultural needs and environmental limits. In this exploration, indigenous knowledge cultivated from generation to generation can provide an understanding of the socioecological relationship necessary to guide our contemporary world to balance human needs with environmental lifecycles (Gadgil, Berkes & Folke, 1993).

Indigenous knowledge is a reservoir of relationships resulting from the interaction and observation of nature that can contribute to building a holistic approach to our human-nature systems (Nabhan, 2000). In this line, maintaining indigenous knowledge, and also the ability to perceive the world as a system can contribute to building a holistic understanding of the impact in the way we consume and produce goods (Hopwood, Mellor & O’Brien, 2005). Within the
indigenous knowledge in Colombia, we found that the Werregue coiled basket production with its use of natural fibers and dyes represents a more naturalistic approach to the production of goods for their renewability. It is crucial to understand the process and also to identify the different practices employed. Even the use of natural fibers and dyes imply an environmental impact since it represents an extractive activity that requires the collaboration among community, environmental organizations, and government, to mitigate the environmental impact and sustain artisan enterprises.

Previous studies have focused in the ecological and economic importance of the plant species required in the development of the coiled basket raw materials addressed in this thesis (Werregue, Puchicama and Achiote) by studying the way native people interact with *Astrocaryum Standleyanum* for economic development, from Ecuador (Pedersen, 1994; Fadiman, 2003), Panama (Runk, 2001) and Colombia (Ceballos & Franco, 2003; Valderrama, 2011; Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007). However, there is a gap in the literature concerning how basketry production is integrated into a design process within a given social setting and how the different roles are played in the production of the final product, as well as the mechanisms employed to trade the baskets. This research contributes to the literature by examining the sociocultural context, production, and marketing of coiled baskets.

1.4 Assumptions and Limitations

For this study, the following assumptions have been applied: (a) indigenous knowledge has been recognized as an effective approach for balancing ecological and economic needs in human-environment systems (Nabhan, 2000). However, this does not mean that all indigenous communities have an environmentally friendly mindset toward nature and production. The perception and behaviors toward the use of natural resources may vary for each native tribe within
their natural settings (Jamieson, 2010). (b) The purposive sampling used for this case study assumes that the participants have a deep understanding of coiled basketry and the collection of the raw materials that are subject of this study. When purposive sampling is implemented, findings cannot be generalized to a wider population (Etikan, Musa, & Alkassim, 2016). However, its findings can serve as an example of an illustration of a design process that has its main artisan techniques employed for the economic development of a particular native community. (c) This study assumed that the fifteen interviewees are skilled basket makers, who have been acknowledged by their community for their expertise, and who can explain their basket-making practices.

1.5 Definitions

Achiote: Common name used in Colombia to denominate the fruit of Bixa Orellana.

Artisan: Skilled people who create handmade pieces and generate income from its market (Tung, 2012).

Bud: Pinnae, a group of unexpanded leaves (Valderrama, 2011)

Media luna: Half-moon blade mounted on a pole, used in agriculture for harvesting at heights difficult to reach. The use of the media luna is considered a sustainable management method for harvesting the Werrregue palm (Bernal, Galeano, García, & Palacios, 2013).

Nasa: Indigenous community in Colombia also named Paez (Ministerio de Cultura, 2014).

Pinnae: The primary axes of a twice pinnately compounded leaf. Pinnae bear leaflets. In a triple compounded leaf, the primary pinnae bear the secondary pinnae, which bear the leaflets. (Gargiullo, M., Magnuson, & Kimball, 2008).

Puchicama: Common name used in Colombia to name the Arrabidaea Chica tree.

Spear leaf: Unfurled leaf in the center
Sustainability: development that meets the needs of the present without compromising the ability of future generations of meeting their own needs.” (Brundtland, 1987).

Trueque: Barter; Exchange of products or services without the use of money (Ferraro, 1911).

Werregue: Common name used for the palm tree Astrocaryum Standleyanum

Wounaan: An indigenous community originated from the Colombian Pacific Lowlands. They are descendant of the Choco indigenous family (Bernal, Galeano, García, & Palacios, 2013).
CHAPTER 2: LITERATURE REVIEW

2.1 Basketry

Bartelt (2007) indicates that baskets are cultural artifacts acknowledged as being present in several stages of life such as birth, marriage, and death (Frankie, 2004). Baskets have been particularly important for native communities in their daily activities (Wright, 1977). In recent times, the introduction of synthetic materials and metal has decreased the handicraft of basketry (Frankie, 2004). Baskets have also served as a vehicle for transporting water and food as well as a means for storing provisions (Harvey, 1986). The role of baskets has not changed deeply over the years; primarily, it serves as a functional tool for storing and transporting goods (Cary, 1975). On the other hand, the cultural value of baskets is supported by the ability they have of being traded within a given community and with other ethnic groups.

2.1.1 The basketry technique: Coiling. The Werregue baskets are created by using a basketry technique known as coiling (see Figure 1). This basketry technique is referenced in literature as having its initial stages in the Fayyum settlement in Egypt during the Badarian period (c. 10000 to 8000 BC) (Bobart, 1971). Coiled baskets are characterized by their completion of fibrous material bundles in a spiral style as well as by the successive wraps over the foundation which are sewn with fibrous material (Wright, 1977). Wright (1977) describes coiling as a construction in which a single length or group of plant materials are sewn in concentric rings. The spiraling form portrayed in baskets is what gives the name "coiling" to this technique (Harvey, 1986). It is a method of basketry based on a spirally coiled foundation made with a vertical stitch or weft (James, 1970). One of the advantages of basketry is that it is done with few tools (Harvey, 1986). For coiling, a bone awl is used to make the holes where the stitching material is sewn (Wright, 1977; Harvey, 1986).
The diameter of the rod defines the size of a coiled basket (Nativetech, n.d.). The rod is the center of the basket, and the sewing is made along its diameter (Garcia et al., 2016). In this technique, changes in the color of the fibers determine the overall design of the basket (Bernstein, 2003). Different colors are incorporated into the stitching materials in order to build up over the foundation (Harvey, 1986). In Colombia, indigenous women are responsible for the coiling process while men are in charge of collecting the raw materials. Women coil their baskets while sitting on the ground. They use their fingernails to pull a strip from the fiber, polish it and pass it through the stitch (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007). The most skilled and older female crafters in the community have the role of the basket coiling process in its initial stages while the finishing stages are left to the younger women (Garcia et al., 2016)

The production of baskets using the coiling technique has been a means of economic support for native communities (Grabbatin, Hurley & Halfacre, 2011). In the Gullah–Geechee
communities in the coastal community of Charleston, South Carolinas researchers conducted a study on basketry with sweet grass to identify the economic approaches to its collection and the sustainable management of the species. The researchers focused mainly on the depletion of the sweet grass populations and its associated ecological and economic impact. However, researchers found that the Gullah–Geechee communities used sweet grass to elaborate coiled baskets. Women started doing these artifacts as containers for food and household items (Grabbatin et al., 2011). Researchers conducted several semi-structured interviews with the local people complemented with direct observation and participation in public meetings (Grabbatin, 2011). They transcribed the records and analyzed the qualitative information. Their findings showed the local basket makers’ limitation as access to raw materials due to the depletion of sweet grass by residential development. This situation forces basket makers to request permission to landowners in order to collect sweet grass in their lands. Sweetgrass basket makers consider that educational programs are required to promote the conservation of the plant, complemented with planting programs to increase the sweat grass plant population (Grabbatin, 2011).

Runk (2001) studied and reported on the basket enterprise in the Wounaan and Embera indigenous tribes in Panama. This study used a coiled vase to illustrate the time-consuming work that basket development demands. A vase in the form of a basket made of Werregue measures 10.6 in x 7.48 in and weights 1.92 pounds. The indigenous women spend around 180 hours of work and sell their product for a price of 45 USD to intermediaries (Runk, 2001). This represents around 25 cents per hour of work without including the cost of materials. Intermediaries market this product purchased from the Wounaan and Embera indigenous communities, and sell them in the cities (Runk, 2001).
2.2 Raw Materials

2.2.1 Astrocaryum standleyanum, Werregue fiber.

2.2.1.1 Ecological characteristics. Astrocaryum standleyanum known locally in Colombia as Werregue, is a palm tree with a trunk (stem) measuring up to 12 meters tall and 15 to 20 cm of diameter (see Figure 2a), provided with strong, flattened, black, 12 to 18 centimeter long spines (see Figure 2b) (García, Zuidema, Galeano, & Bernal, 2016). Astrocaryum standleyanum belongs to the Arecaceae family (Forero, 1980) and is distributed from Costa Rica to Panama and along the Pacific slope of Colombia and Ecuador (Garcia et al., 2016). Its fruits are orange and a food source for wild fauna (Cuesta, 2003), whose dispersal probably relies on the proliferation of the plant species (Smythe, 1989). Werregue palm fruits are edible, and its seeds are used for jewelry (see Figure 2c and 2d). The Palm is heavily armed, most notably on the stem, which has flattened spines that may reach up to 20 centimeters in length (Runk, 2001).

Figure 2. Astrocaryum standleyanum palm tree components a) Palm tree (b) Spines (c) Cluster (d) Fruits and seeds (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007, p. 12).
Astrocaryum standleyanum also has other vernacular or common names in other regions such as Black Palm, Chonta, Chontadura, Chunga, Coquillo, Palma Negra (Smithsonian Tropical Research Institute, 2016). In Colombia, this palm faces several threats such as overuse, uncontrolled exploitation of the species, mining, and expansion of the agricultural frontier. These factors lead to a rapid depletion of the species (García, Zuidema, Galeano, & Bernal, 2016), which directly affects the species associated with the Werregue as well as the economic source it represents for native communities.

<table>
<thead>
<tr>
<th>Common Name(s)</th>
<th>Scientific Name</th>
<th>Family</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Werregue, Black Palm, Chonta, Chontadura, Chunga, Coquillo, Palma Negra</td>
<td><em>Astrocaryum standleyanum</em></td>
<td><em>Areceae</em></td>
<td>Construction of houses Basketry</td>
</tr>
<tr>
<td>Achiote, Annato</td>
<td><em>Bixa Orellana</em></td>
<td><em>Bixaceae</em></td>
<td>Dyeing of fibers (Ceballos &amp; Franco, 2003) Food and body painting (Arteaga, 1990).</td>
</tr>
<tr>
<td>Puchicama, Puchama, chica</td>
<td><em>Arrabidaea chica</em></td>
<td><em>Bignoniaceae</em></td>
<td>body painting (Patino, 1967)</td>
</tr>
</tbody>
</table>

2.2.1.2 Economic significance. Astrocaryum standleyanum has been described in the literature as a primary raw material for several indigenous communities along the Andean mountains and Pacific lowlands. It is considered a non-timber product (Runk, 2001) key for the generation of income in a rural community (Wickenes, 1991). Pedersen (1994) studied the use of Astrocaryum standleyanum for handicrafts and furniture development. The purpose of Pedersen’s study was to explore the use and management of Astrocaryum standleyanum in different provinces in Ecuador. This scholar obtained information about the harvest, treatment, and use of
Astrocaryum standleyanum by direct observation complemented with interviews with natives in the provinces of Esmeralda, Guayas, Manabi, and Pichincha in Ecuador (Pedersen, 1994). “Mocora” is the vernacular name for Astrocaryum standleyanum in this community. The Mocora leaves are extracted using a non-destructive method which consists of a bamboo stick with a blade at the end called Media Luna (see Figure 3). Two people are required to harvest the leaves from the palm, one grabs the leaves from the palm using the Media luna, and the other person collects the leaves.

According to Pedersen (1994), the harvesting process takes around 8 to 10 hours to collect an equivalent of 200 kilograms of leaves from 102 palms. The leaf collectors apply the preventive measure of taking the larger leaves from the palms and leave the shorter leaves to support their growth to guarantee the availability of this plant material in the future. Regarding its economic use, the native people develop hats, hammocks, mats, and furniture with Mocora (Pedersen, 1994). They submerge the fiber into the water for up to 20 minutes, then they leave the fiber out to dry between 2 to 3 days, and subsequently, they bleach the fiber with sulfur for 4 to 5 hours to remove the yellow-greenish color. After the bleaching, they work with the fiber by weaving them in braided bands into hats, mats and several other forms of furniture (Pedersen, 1994).

Runk (2001) conducted an ethnographic study with the Wounaan and Embera indigenous people in Panama, where Astrocaryum standleyanum is locally known as Chunga, and it is used for basket development. The collectors of Chunga are men from both indigenous communities who cut down the palm making the cut at a height at which they can have access to the leaves. This technique is evinced to be a destructive harvesting method. Harvesters cannot climb this palm due to the spines in the upper levels (Figure 2b) (Fadiman, 2003). They harvest the leaves in the waning moon to ensure the strength of the fiber. In the extraction process, the fiber is extracted
from the epidermis of the leaves, dried and dyed with natural dyes (Runk, 2001). The women are primarily responsible for coiling the baskets whose most traditional motifs are geometric designs. Some artisans weave their signature on the bottom of the basket as a symbol of their style. This correlates with previous research in which women have been found to be weavers and men collectors of raw materials (Twining, 1978).

The baskets are created using the coiling technique. The products are the main source of household income for the Wounaan and Embera people; the products are commercialized in Panama City by intermediaries who travel to these communities, buy products from the Wounaan and Embera people and sell them in an urban context. In both studies, Pedersen (1994) and Runk (2001) emphasize the use of sustainable practices for the harvesting of *Astrocaryum Standleyanum* to ensure the availability of the species and the continuous access by the native community for their handicraft production.

Figure 3. Media luna, the tool used to harvest sustainably the Werregue palm tree (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007, p. 14).
The Ministerio de Ambiente, Vivienda y Desarrollo Territorial (2007) reported on the Werregue fiber work by the Wounaan community, who belong to the same ethnic group reported by Runk (2001) but in the Colombian territory. The Wounaan are a native community in Colombia distributed along the banks of the San Juan River, at the lower region of the Atrato River in the department of Choco and the Panamanian Darién. They are mostly dedicated to agriculture, fishing, hunting, and basketry handicraft with the Werregue fiber. The women of this community initially began making baskets to have a means to store and transport food as well as water (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007).

In the Wounaan group, men are responsible for the extraction of the raw materials; if they do not find any around their settlements, they have to travel to the forest in canoes through the San Juan River. Men cut the Werregue leaves on a waning moon to ensure the strength of the fiber (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007) and then cut the palm up to their height before the palm reaches a height not accessible for the extraction of the pinnae. The pinnae will take about six months to regenerate. When the men arrive at their communities after a day of collection, the women collect the pinnae and open them to extract the fibers from the interior. They wash the fiber with soap and dry them. The women sitting on the ground have the tip of the fiber between the spaces of their toes and using their hands they tear the fibers following different widths. (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007).

The Wounaan women go in search of Achiote fruits, extract their seeds and leave them in water so that the pulp that covers the seed detaches itself inside the water, thus precipitating the color (Ceballos & Franco, 2003). The resultant solution is heated, and after cooling it is stored in glass jars. The process of fiber tincture with Achiote starts by leaving the fiber in the previously prepared solution for 5 minutes stirring the mixture constantly on the stove. Once the fibers obtain
the desired color, they are removed from the hot water, left out to cool down, and placed under
direct sunlight until the fibers lose their moisture. The other essential component for the Werregue
fiber tincture is Puchicama, whose leaves are macerated in water. The dyeing of the Werregue in
Puchicama is achieved with the fiber placed in the previous solution and left there for 30 minutes.
Also, the other source of the color comes from the mud, which provides the black color. The fibers
are the buried for 48 hours, and after that, they are removed and verified to have the desired black
color. The intensity of the color depends on the time it is buried (Ceballos & Franco, 2003).

Once all the fibers are dyed. The Wounaan women coil the baskets inserting the darning
needle between the coiled segments to give firmness. After making the coiled segments, the
women insert a darning needle with thin Werregue fibers in the completed coiled segments. This
step unifies the coiled segments and provides firmness to the basket. The women called one meter
of the soul when they finish a coiled segment (Ceballos & Franco, 2003). The women vary their
basketry labor (3 hours of daily dedication) with other daily activities such as agriculture, cooking,
and childcare.

According to Valderrama’s study, in the value chain of four Colombian Palm Species, the
Werregue coiled baskets are considered the most valuable by buyers compared to other forms of
handicrafts (Weave baskets and jewelry) made from other palms (Astrocaryum chambira and
Astrocaryum malybo) given that the Werregue coiled baskets are seen as art pieces due to their
detailed motifs and the basketry techniques employed. Valderrama (2011) presents several
mechanisms for the commercialization of Werregue coiled baskets. The primary mechanism is the
direct sale the indigenous communities and with visitors to their community (Valderrama, 2011;
Linares, Galeano, García & Figueroa, 2008). The second is when the native people participate in
the main art fairs, invited by Artesanias de Colombia, and thus selling directly to consumers from
many destinations taking advantage of being able to display their products for larger publics. The third mechanism is having intermediaries who visit the indigenous communities, purchase their products, and sell them in the main cities of Colombia. These intermediaries are connected with boutiques, art fairs, and museums. Some of these coiled baskets purchased by intermediaries are exported mainly to Ecuador, the United States and Europe (Valderrama, 2011).

As demonstrated by the above ethnographies, the similarities among the ethnic groups are primarily that they have developed an economic approach toward the use of Werregue fiber for handicraft production. This represents a source of household’s income and a form of community work. In all the studies, men are primarily responsible for harvesting the Werregue leaves. During the harvesting phase, we have seen some differences in comparing the ethnic groups. Pedersen’s study with Ecuadorian indigenous communities presents the use of the Media luna to harvest thereby sustaining the palm’s leaves by allowing the smaller leaves to grow while the collectors harvest the larger leaves.

2.2.1.3 Sustainable management. The fiber used to make the coiled basket is obtained from the spear leaves of the Werregue Palm (Bernal, Galeano, García, & Palacios, 2013). According to Perdesen (1994), this palm produces between three to seven spear leaves each year. The height of the palm as well as its strong spines located in the superior level of the Werregue palm restrict the harvesting to two methods: the sustainable method that demands the use of media luna to reach the spear leaves, and the destructive method that requires cutting down the palm (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007). This last form of harvesting creates depletion in the production of the Werregue basket and may diminish the availability of the species, therefore restricting its economic use.
During the 1990s there was a scarcity of adult plant species in the Pacific region due to the heavy use of the palm for construction by the indigenous communities (Perdesen, 1994). Artesanias de Colombia and environmental authorities have urged Afro-Colombian and Wounaan members to make use of the Media Luna, which help create more sustainability while harvesting the fiber. Artesanias de Colombia have intervened with campaigns as well as by distributing posters illustrating and promoting the use of the media luna for harvesting the palm (Bernal, Galeano, García, & Palacios, 2013). Some of the harvesters who do not use Media Luna argue that they have to carry the media Luna during a long-time period, which represents additional weight compared to the conventional easy approach which is to cut the palm at a near distance to the harvester’s reach (Ministerio de Ambiente, Vivienda Desarrollo Territorial, 2007). Furthermore, they argue that in a given village sometimes there are not enough media lunas available compared to the number of people who require this tool within the community. In this situation, Environmental authorities and Artesanias de Colombia have implemented an educational program directed towards Wounaan and Afro-Colombian communities in the lower San Juan to promote the use of Media Luna and reduce the number of palms that are hewed (Linares, Galeano, García & Figueroa, 2008).

Among the sustainable strategies for harvesting the palm are the use of the media luna during crescent moon without destructively limiting its growth (Chízmar, Lu & Correa, 2016), the development of conservation workshops in communities, and the publication of brochures with recommendations on the sustainable management for harvesting the palm (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007). Although the use of natural fiber and dyes represents an effort for sustainable design, there is still an environmental impact in the way the
materials are obtained. The sustainable management of the non-timber products according to this thesis is crucial for the survival of the handicraft production and its cultural meaning.

2.3 Natural Dyes

Natural dyes are a gift from earth which have been used by civilizations to represent their cultural heritage through the centuries (Cardon, 2010). Natural dyes are pre-mixed by nature, a process which provides them with a special beauty (Liles, 1990). The dyeing process is the extraction of color from a source and transferring that color to another material (Bliss, 1981). The transference of color among several materials has allowed native communities to bring color to their history (Bliss, 1981). Natural dyes were widely used in the Western textile industry before the introduction of synthetic dyes in 19th Century (Green, 1995). Synthetic dyes overcame the use of natural dyes because they were less expensive, easy to apply and were able to provide more intensity (Green, 1995; Cardon, 2010). Synthetic dyes raise concerns due to their association with respiratory and skin problems in humans (Anliker, Durig, Steinle & Moriconi, 1988). In regards to the environment, the use of synthetic dyes has been associated with a series of environmental problems (Kant, 2012) such as difficulties in water treatment due to the heavy solution of particles and the mix of synthetic dyes which pollute the water (Ali, Nisar & Hussain, 2007).

Textile processing industry is one of the major environmental polluters (Kant, 2012). An estimate of 230 to 270 tons of water is consumed to process a ton of textile (Mirjalili, Nazarpoo, & Karimi, 2011). This stage is the most polluting in the production process due to energy consumption, the mix of synthetic dyes, and the use of heavy metals (Fletcher, 2013). Natural dyes have been proposed for the substitution of synthetic dyes in the fashion industry to reduce the environmental impact of the dyeing process. They have been reported as eco-friendly, less toxic, and less allergenic in comparison with synthetic dyes (Hill, 1997, Vankar, Shanker, Verma, 2007;
Sarkar and Seal, 2003). Fletcher (2013) proposes the replacement of hazardous ingredients in the dyeing process, preferably with biodegradable dyes to reduce the environmental impact in the dyeing process. The use of natural dyes has been promoted in the textile industry since they come from renewable resources and represent less risk to human health (Hill, 1997) Natural dyes have large acceptance because they are non-toxic and biodegradable in essence (Mirjalili, Nazarpour, & Karimi, 2011). Natural dyes do not have regulations as those imposed in the production of synthetic dyes due to the related environmental and health concerns (Hill, 1997). The use of natural dyes in large scale in the fashion and textile industry is limited by the availability of resources, research progress and the commercial approach for their marketing (Hill, 1997).

2.3.1 Bixa Orellana, Achiote. Bixa Orellana is a tropical plant attributed to the production of the Annatto color (Marco, Carbo & Vaccarella, 2008). Annato is a small tree measuring 2 to 3 meters of height (6 to10 feet) (Cannon & Dalby-Quenet, 1994). The tree is from the Bixaceae family originally from tropical America (Da Costa et al., 2013) and has a large-scale distribution in the lowlands and tropical valleys of South Central and Middle America. Annato seeds provide ranges of color from yellow to red including orange. Annatto is valued for its lack of toxicity, wide range of color and tincture capacity (Giridhar, Venugopalan, & Parimalan, 2014). In regards to the chemical composition of Bixa Orellana, the seeds deriving from their fruits have two main components: Bixin and Onixin. Bixin is soluble in oils upon heating and weakly soluble in supercritical CO₂ (Nobre et al., 2006). Norbixin has a solubility in water but it is insoluble in oils (Degnan et al., 1991). The main component found in Annato seeds largely responsible for this range of color is carotenoid bixin (C₂₅H₃₀O₄) (Scotter et al., 2009). Annato was used widely for textile dyeing before the introduction of the fast dyes into the industry in the 19th century (Green, 1995). Annato is fast in light and air, especially in cotton and linen (Liles, 1990). Also, Annato has
been largely studied for the uses of its range of colors in several industries such as in food and beverages, cosmetics, pharmaceutical products, as well as when employed as natural dyes for textiles (Povoa, 1992).

Several indigenous communities have been reported using Annato (Moreira, Lins, Dequigiovanni, Veasey, & Clement, 2015) (See Figure 4). The main use of Annato in communities such as the Maya and Azteca in Mexico and the Inca in Peru, refers to its use in body painting and in ceremonies with a mystical meaning (Cannon & Dalby-Quenet, 1994). According to these studies, the Annatto seeds are submerged in water to allow the precipitation of the color (Ceballos & Franco, 2003). The Annattos seeds color are then mixed with animal fats and vegetable gum (Moreira et al., 2015). In the Wounaan community in Colombia, at the early stages of the process, crafters macerate the Annato seeds, leave them in water, and heat the mix. Afterwards, they leave them out to cool down and then store the resulting mix in glass jars. The annatto pigments are used in fiber dyeing (Ceballos & Franco, 2003). The Achiote is used by the Embera and Katie indigenous people for body painting and for medicinal applications such as alleviating respiratory and digestive issues (Arteaga, 1990).
Figure 4. Bixa Orellana’s fruits and seeds (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007, p. 12).

2.3.2 *Arrabidaea chica*, Puchicama. *Arrabidaea chica* is a Bignoniaceae (Aro et al., 2013) known in Colombia with the vernacular names of Puchicama, Puchama, Chica, and in Brazil, it is recognized as Carajurú, and Puca Ponga in Peru (Roquero, 2008). Its green, elongated leaves are sources of a range of red colors depending on the maturation stage of the leaves (Arteaga, 1990). The main components that provide color from the Puchicama leaves are Arajurin, Arrabidin and 3 Hydroxyarrabidin (Arteaga, 1990). The dyes are extracted by cooking or macerating the leaves (Arteaga, 1990). When the fibers dyed with Puchicama are buried in the mud, the dyes turn into a black color (Arteaga, 1990).

Among these Amazonian communities, Puchicama is distinguished for its healing properties (Aro et al., 2013) for treating inflammation, intestinal colic, sanguine diarrhea, leucorrhoea, and anemia. (Zorn et al., 2001) The crude *Arrabidaea Chica* leaves extracts are used by native people in body painting (Patino, 1967). The Wounaan people in Colombia macerate the leaves of Puchicama (Figure 5) in water to extract its range of reds, and use Puchicama extracts to dye coiled baskets made of Werregue (Ceballos & Franco, 2003). This community immerses the seeds in boiled water for 30 minutes and then leave the fiber to dry in the sun (Linares, Galeano
In order to obtain the dark color, the fibers are buried for 48 hours (Linares, Galeano G, García & Figueroa, 2008). The intensity of the color is defined by the time period that the fibers are buried into the soil (Ceballos & Franco, 2003).

Figure 5. Arrabidaea chica (Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007, p. 12).

2.4 The Community

2.4.1 Nasa people. The Nasa people is a native community in Colombia, also named the Paez Indigenous people (Rappaport, 1985). They call themselves “Nasakiwe”; the denomination “Paez” is a term that was used by the Spanish in the Colonial period (Rappaport, 1985). They are located in the region called Tierradentro, on the eastern slope of the Central Mountain Range, a geographical triangle formed by the eastern buttresses of the central mountain range with the Paez and Yaguará rivers to the East, and La Plata and the Paez rivers in the south side, in the Andean Colombian central mountain range (Ministerio de Cultura, 2014). According to the 2005 DANE census, the Nasa population is of 186,178 people which represent 16.93% of the total nationwide indigenous population; of their total amount, 49% are women, and 51% are men (DANE, 2005). Within the Nasa families, the older family members are the authority, and they are the source of
wisdom for resolving any given concern (Cunda & Ruales, 2000). The Nasayuwe, their native language is spoken by just 41.9% of their population, which is a sign of the continuing loss of their cultural heritage within the current and future generations (Ministerio de Cultura, 2014). The origin of Nasa Yuwe remains unclarified, which gives space for different stories such as that which narrates how the Nasa Yuwe language is so old that it was a gift from the sun. Other stories tell a man-shaped snake was the one who taught the Nasa people to speak Nasa Yuwe since before that they were merely communicating through signals and gestures (Noguera, 2013).

2.4.2 Philosophy. The Nasa people express their philosophy of life with the term “Kiwe.” The term “Kiwe” is a holistic concept that includes all the natural elements in a territory (Rappaport, 1985). The term “kiwe” complements the term “Nasa” to form the word “Nasa Kiwe” (Ministerio de Cultura, 2014). Nasa means “people of life” and “people of water” (Gómez, 2000).

For the Nasa people, the notion of temporality is previously determined by their ancestors. In other words, their ancestors’ legacy guides them into how to live the future. The collective memoir from their ancestors has already defined the future life of the Nasa indigenous (Hurtado & Molina 2013). According to Nasa mythology, their first grandparents and parents lived on the other land, in one home. Now, the current Nasa people are living in a new home (the Earth), their ancestors are the watchers and protectors of the Nasa world (Cunda & Ruales, 2000). The vigilance by part of their ancestors over contemporary Nasa people affects the interaction between themselves and their environment since their behavior has to honor their ancestors by preserving an ecological equilibrium (Cunda & Ruales, 2000). The violation of ancestor guidelines can effect for the Nasa indigenous limitations for growing food or even being the target of diseases as a way their ancestors of punishing them for not acting following and according to their living principles. Therefore, the harmony between human and environment should always be maintained. The
imbalance with nature produces diseases in humans and personal conflicts (Cunda & Ruales, 2000).

Rappaport (1985) describes Nasa or Paez Indians as farmers, with an agricultural awareness to the extent that members who do not contribute to the tribe’s labor demanded by their agricultural lifestyle, are marginalized from the community (Rappaport, 1985). The Nasa indigenous use rudimental tools to cultivate the land and are driven by a self-sustaining conviction. Nasa people mainly cultivated onion, corn, bean, arracacha, squash, chilli, potato, wheat, ulluco, quinoa, cabbage, peas, pumpkin, and medicinal plants. It is crucial for the Nasa families’ younger generations to learn agriculture, basketry work, fishing, and hunting (Consejo Nacional Indigena, 2007)

2.4.3 Nasa indigenous history. Before the Spanish invasion, the Nasa people were living dispersed in the region of Tierradentro in the form of “cacicazgos” (Rappaport, 1985). Cacicazgos were pre-hispanic government structures where the leader was chosen for his magical power and was responsible for commanding the socioeconomic activities in the group of indigenous (Laverde, 1988). When the Spanish arrived in the 18th century, Nasa people were challenged by the imposition of the new colonial system called the “Encomienda” a tributary commitment where indigenous paid tariffs to the Spanish Colony in the form of labor (Cashmore, 2004). After the independence in 1810, a culture of landowners persisted in Tierradentro, threatening the Nasa’s territorial ownership (Cunda & Ruales, 2000). In the beginning of the 20th century, the Nasa people organized a civil movement led by Quintin Lame with the help of José Gonzalo Sánchez, a native of the municipality of Totoró, with the aim of reclaiming their territories as well as their lost indigenous rights (Ministerio de Cultura, 2014). Quintin’s Lame argument to lead the civil movement was that these lands where the indigenous were living initially belonged to them and to
their ancestors (Cunda & Ruales, 2000). The Spanish colonists did not have ownership of those lands because their occupation was the result of the usurpation to the Nasa territory. These claims were sufficient to wake the Nasa people to reclaim their rights. In 1972. The Nasa indigenous then created the Regional Indigenous Council of Cauca (Consejo Regional Indigena del Cauca) with the purpose of representing the indigenous people’s rights (Kurachi, 2009). These mechanisms of defense have allowed the Nasa people to protect their culture and territory (Hurtado & Molina, 2014).

In the 1960s, the Revolutionary Armed Forces of Colombia - FARC were formed (Hough, 2011) and then in the 80s their adversaries, the paramilitaries, were created (Hristov, 2005). The latter had their origins within the employees of private security schemes and groups belonging and at the service of rich landowners, industrialists, regional politicians, as well as drug traffickers. These illegally armed groups were used for the acquisition of land (Hough, 2011). Paramilitary violence is responsible for most of the displacement in the country’s conflict (Hristov, 2005). Both groups exacerbated the struggle of the Nasa people and their defense of their territories (Kurachi, 2009). For five decades, the populations of about 100,000 people in the mountains of northern Cauca have withstood more than 600 attacks and harassment by the Revolutionary Armed Forces of Colombia, FARC, as well as from the paramilitaries. According to the Association of Indigenous Cabildos of the North Cauca. Between 2000 and 2008, the FARC left 80 leaders killed for opposing the authority that the guerrilla group intended to impose on the Nasa territory (Navia, 2012). As a consequence, Nasa families were forced to break their family structures by being displaced from a rural to an urban context—an environment where everything is unknown to them (Kurachi, 2009). As a result of their perseverance and advocacy, the Constitution of 1991
recognizes the Nasa indigenous territories as a special territorial entity. This law gives the indigenous the right to govern by their own laws in their territory (Noguera, 2012).

2.4.4 Government structure. The Nasa people created a political structure to protect themselves from the oppressive external factors that emerged since the arrival of the Spanish colonists (Rappaport, 1985). The Nasa indigenous made from the cabildos a form of protection for their community since colonialism (Cunda & Ruales, 2000). The “cabildo” is a council whose primary function is to defend the community and the land from oppressive external forces (Consejo Nacional Indigena, 2007). The Colombian constitution of 1991 declares Colombia as a Multiethnic and pluricultural nation (Ministerio de Cultura, 2014). As a result, the Colombian constitution recognizes the “Cabildo” as an indigenous form of government, and it is considered a special jurisdiction, therefore cabildos have the authority to issue mandatory decisions for their communities (Rudqvist & Anrup, 2013). This inclusion was the result of indigenous perseverance in the advocacy for their rights and represents a significant advancement in law guided by socio-cultural particularities and interests of the native communities (Consejo Nacional Indigena, 2007).
CHAPTER 3: METHOD

This research used a case study method along with semi-structured interviews to collect data on the sociocultural characteristics, design, and production of Werregue coiled basketry in Colombia. The case study research provides details in the description of processes and attitudes (Yin, 1984). It can also be used to uncover perspectives, motivations, and attitudes towards any issue (Curry, Nembhard & Bradley, 2009). This method is open to a diversity of sources such as documents, reports, interviews, news, artifacts, and visual materials (Rowley, 2002) to complement the information gathered from the interviews. The case study serves as a form of description of a phenomenon and behavior, and its findings can be applied toward the development of explanatory models (Fidel, 1984). Researchers have used case study methods for the exploration of the interaction of native communities within their natural environments (Runk, 2001; Valderrama, 2011; Garcia et al., 2016).

The method is organized as follows: data collection, data analysis, and ethical considerations. The data collection consists of semi-structured interviews with open-ended questions (Appendix D) with Nasa Werregue coiled basket makers, to identify specific themes used to describe the basketry development process, from the collecting of the fiber to the final product, and how the indigenous ecological relationship affects their approach to develop the baskets. The interviews were recorded and transcribed in Spanish. In the data analysis, I used coding to identify the research themes in regards to the qualitative data, using the qualitative research software Nvivo 11. The themes were grouped for the construction of concepts that leads us to describe the basketry process. In ethical considerations, I provide the guidelines and concerns included in the study.
3.1 Data Collection

Colombia is a multicultural country recognized as such by the Constitution of Colombia of 1991. This study included two research settings in the Pacific region of Colombia, an urban context, the city of Cali and a rural setting, the village of the Delfina. The first research setting is the city of Cali, the capital of Valle del Cauca, located in the southwest of Colombia, in South America. It is the third most populated city in Colombia, with a population of 7’824,702 inhabitants (Department of National Statistics, 2005). Within the cities of Colombia, Cali is especially diverse due to its geographical location in which there is a diversity of indigenous communities who have been displaced from their places of origin (Misak, Nasa, Embera Chamí, Totoroez, Camëntsá, Inga, Eperaara Siapidaara, Quillasinga and Wounnan). These indigenous groups coexist with mestizos and Afro-descendants in Cali. In Valle del Cauca, the Nasa indigenous people, amounts to 7,005 inhabitants. They have been displaced by threats made to their indigenous leaders who have been in defense of the territories. I met this community during my work in energy projects. I chose this community because of my previous work with them despite not being a non-indigenous member. However, being a non-indigenous member has an implication on the level of information provided regarding their practices.

Since August 2017, I identified ten artisans and five participants in December 2017 who had been referenced as Nasa Werregue coiled basket makers. They were identified by an indigenous leader, a supplier of Werregue and craft retailer in the city of Cali. The data collection was executed from December 18, 2017 to January 2, 2018. In order to proceed with the analysis of the information during the following weeks, the first research setting was the city of Cali, Colombia, in which I have previously lived. I decided to start conducting the interviews in Cali because the indigenous basket makers here would have a better understanding of the market aspect
of the Werregue coiled basket. They are producers and sellers of baskets, and they have been displaced from their rural setting in the pacific region. They have experimented challenges with selling their craft, issues that are important to include in this study. They provided a landscape of the marketing challenges with the baskets. They also provided information on how the baskets are sold. The five participants located in Cali are people who knew the entire production chain, from the forest to the final product.

In the city of Cali, I conducted the interviews with the Nasa indigenous people who live in the city in the places where the participants were located selling their Werregue coiled baskets. The places for the interviews were: Loma de la Cruz, the public space outside the Cali city hall, and the Valle del Cauca Governors’ office building square (San Francisco square). In Cali, I went to the Loma de la Cruz, which is considered a street craft market, where tourists go to find Colombian handicrafts. The aim was to know about their basketry and how they trade their baskets. I included the urban context since I was aware that in rural areas the access for tourists is still very difficult because of the presence of armed groups. Therefore, the market in the rural context tend to be scarce. The data collection in the city of Cali was crucial because the five participants could explain in detail many of the intricacies involved in the basket making process. The commercialization with outsiders is very poor. Therefore, the baskets are sold in the cities. Evidently the indigenous who live in the cities are more knowledgeable in the description of the market process of the coiled baskets.

The second phase of research was in the village of La Delfina, in the rural area of Buenaventura, on the 44th kilometer. I took a bus from Cali to Buenaventura: the trip took around 5 hours one way. At the 44th kilometer there is bridge to access to the village. The Village of the Delfina is comprised by 425 inhabitants grouped in 96 families. The inhabitants of the Village of
the Delfina are Nasa indigenous people, Embera indigenous people and Afro-Colombians. Their main economic activities are the production of baskets, other handicrafts (weaving and seed work) and fishing. Their houses are made of Guadua (bamboo) in the interior and the exteriors. Regarding the sources of food, their main crops are corn, yucca, potato, bean, banana, sugar cane, fish and other plants species. The closest river to the settlement is the Dagua river, indigenous travel in canoes through the river. The Village of La Delfina is a territory targeted by the presence of guerrillas and paramilitaries, specifically, the National Liberation Army -ELN, I could accessed with a member of the village. Previous contacts with indigenous people made it easier to conduct the interviews in this timeframe. The daily work was mainly between 8:00 am to 4:00 p.m. I found the Nasa indigenous people in the central settlement of the village with three exceptions for which I had to walk to a more remote area. Since the recordings were made during the day, the transcription of the interviews were completed during the nights in order to present them to the participants for their review.

It is important to point out that in the Pacific region, where native communities live in Colombia, there are areas of high risk for conducting research. There are private interests in these territories for the possession of the land for drug cultivation and trafficking, exploitation of natural resources such as minerals and metals, timber, oil, gas, and coal. The village of the Delfina is categorized as are of risk for the presence of paramilitaries. These conditions make the researcher’s work difficult since there are restrictions imposed on their inhabitants as well as their freedom to discuss these issues. Being a non-indigenous researcher conducting research in a high risk conflicted area creates a complex environment. First, as an outsider to this community, other people who live in the village may think that I am a journalist or somebody who has been hired to extract information for other issues that conflict with private interests in this region. As a
researcher, it is very intimidating to be in a territory where there are interests for land ownership in the same area where my research had to be carried out diplomatically. Confidentiality plays a crucial role in these cases due to the convergence of different armed actors who have possession of the territory and who do not want outsiders to have access to information on the dynamics of the territory. Additionally, participants who speak with people outside the community are at risk. At the time of this study, I could access the territory with the help of a local even though my movement was restricted to my lodging place and the houses of the indigenous making baskets.

Figure 6. Map showing the location of Cali and the village of Delfina within the Pacific region of Colombia.
3.1.1 Semi-structured interviews. This study used semi-structured interviews which consist of a group of questions to explore views and experience toward the topic being researched (Gill, Stewart, Treasure, & Chadwick, 2008). Interviews are the most common instrument to gather qualitative data (Holloway & Fulbrook, 2001). Qualitative research is interpretive by nature, and it is aimed at understanding meaning beyond people, ideas, and processes (Ritchie, Lewis, Nicholls, & Ormston, 2013). In qualitative research, the researcher and her/his questions are the main research instrument (Giorgi, 1997). Qualitative interviews should be conducted more as a conversation rather than a data gathering process to aid responsiveness and self-disclosure (Benbasat, Goldstein, & Mead, 1987). I used open-ended questions (see Appendix C and D) to interview skilled members of the basket coiling process, as well as the collectors of the raw materials needed (Werregue, Achiote, and Puchicama). Qualitative interview research commonly focuses on relatively small samples even in single cases (N=1) (Patton, 1990).

Open-ended questions are defined as questions that allow other queries to emerge from the conversation between the interviewer and his/her interviewees (DiCicco-Bloom & Crabtree, 2006). Open-ended questions are ideal when researchers want to give flexibility to the respondent to explain their perspective toward a phenomenon (Aberbach & Rockman, 2002). In Appendix D, the research questions are the main instrument in the collection of qualitative data. The semi-structured interview is broken down into four groups of questions: (a) sociocultural context (b) design, material, and color; (c) production, and (d) market. In the first group of questions, sociocultural context focuses on identifying the factors that shape the context in which the baskets are made, as well as the processes and tools involved in the collection of raw materials and the treatment of these resources for their integration into the coiled basket production. I identified the raw materials and tools required for the extraction and further collection of the main resources
required for the production of coiled baskets. With this group of questions, the intent is to recognize how the collection and treatment processes work. In the second group of questions, I inquire about the production of basketry within the community, and how people learn and perform the coiling technique. The third group of questions aims at identifying how the baskets are commercialized, what the marketing mechanisms are, and who the main buyers of this coiled baskets are. The above group of questions provide an overview of the coiled basketry process.

The selection of participants is made by using the technique known as purposive sampling, a nonrandom technique where participants are selected based on their knowledge in a specific area, or their expertise in a subject of study (Etikan, Musa, & Alkassim, 2016). These participants are capable of providing information based on their knowledge or experience (Teddlie & Yu, 2007). This method is ideal for information-rich cases, where the aim is to gather ideas in regards to the purpose of the inquiry (Patton, 1990). Before collecting the data, the researcher sought and obtained approval from the Institutional Review Board (IRB). Previously, the researcher had trained in human subject research. Fifteen individuals participated in this research. In this case, the participants are skilled coiled basket artisans and collectors of the raw materials who are capable of providing information about the topic under research. In cross cultural interviews, it is essential that the interviewer can establish rapport with the interviewees to enable them to speak freely about their experiences (Kvale, 1996) thus facilitating their cooperation (Gubrium & Holstein, 2002).
3.1.1.1 Summary of Interview procedure. The procedure for the conduct of interviews followed the protocol below:

1. Identification of the fifteen participants whom the community recognizes as skilled collectors and basket makers by using a purposive sampling technique (Teddlie & Yu, 2007).
2. Contacting of the fifteen participants, and filling of the information required for the conducting of the interviews by choosing a convenient time that suited both the interviewer and interviewee.
3. Conducting of person to person interviews and recording of the interviews using a phone recording application. Before the interview, the equipment was in place and ready to record (Hill, Thompson & Williams, 1997).
4. Providing the protocol for the interview, and handwritten signature as stated in Appendix B (Interview Consent Form – Spanish version)
5. During the interview, I procured to avoid sounds that indicate affirmation, agreement or disagreement with the respondents’ answers (Hill, Thompson & Williams, 1997). However, I sometimes re-structured or reorganized a question depending on the aim of the interview (Tong, Sainsbury, & Craig, 2007). Research on interview effects shows that age, gender, and interviewing experience almost has no significant impact on interviewees’ responses (Singer & Presser 1989).

3.1.1.2 Demographic information. The fifteen participants were asked their age, gender, and how many years of experience they had gained in Werregue coiled basket making. With the age and gender questions, the respondents were asked the gender differences in the basket production as well as the learning process in which they started with the craft.
3.2 Data Analysis

The discourse analysis is a corpus of meaning and knowledge creation (Talja, 1999). When the discourse became text through transcription, it also became an object of analysis and representation of human experience (Denzin, 2008). Once all the recordings had been transcribed into Spanish, the next step was a qualitative analysis of the information using Nvivo 11. The data analysis technique used is coding, a method to analyze content in which we identify different themes relevant to the subject of study (Denzin, 2008). Themes are categories created by content with similar meanings (Hollowaay & Fulbrook, 2001) Themes are extracted from the qualitative data (Connolly, 2003). Initially, themes may seem to be broad categories. However, as coding progresses, the researcher can identify smaller themes or subthemes (Hill, Thompson & Williams, 1997). These themes were organized in groups or domains (Zarley & Yan, 2013) to form a codebook to provide an interpretation of a context (Chen, Bussolini, Cheng, 2004) and a characterization of meaning found in the data (Hollowaay & Fulbrook, 2001). In this study, twenty-eight themes emerged from coding the interviews; they were grouped into major themes such as (1) Socio-Cultural Context, (2) Design, Material and Color, (3) Production, and (4) Market as shown in Table 2.
Table 2. Themes and Sub-Themes from Coding the Interviews in Nvivo 11

<table>
<thead>
<tr>
<th>Themes</th>
<th>Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socio-Cultural Context</td>
<td>Activities when they are not making the baskets</td>
</tr>
<tr>
<td></td>
<td>Age</td>
</tr>
<tr>
<td></td>
<td>Age differences</td>
</tr>
<tr>
<td></td>
<td>Basket use community</td>
</tr>
<tr>
<td></td>
<td>Children and baskets</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
</tr>
<tr>
<td></td>
<td>Gender differences</td>
</tr>
<tr>
<td></td>
<td>How did you learn?</td>
</tr>
<tr>
<td></td>
<td>Importance of the basket in the community</td>
</tr>
<tr>
<td></td>
<td>Myths</td>
</tr>
<tr>
<td></td>
<td>Who did teach you to make the baskets?</td>
</tr>
<tr>
<td></td>
<td>Years of experience making basket</td>
</tr>
<tr>
<td>Design, Material and Color</td>
<td>Design</td>
</tr>
<tr>
<td></td>
<td>Color meaning</td>
</tr>
<tr>
<td></td>
<td>Materials</td>
</tr>
<tr>
<td></td>
<td>Motifs</td>
</tr>
<tr>
<td>Production</td>
<td>Basket timing</td>
</tr>
<tr>
<td></td>
<td>Dyes</td>
</tr>
<tr>
<td></td>
<td>Dyes use</td>
</tr>
<tr>
<td></td>
<td>Number of basket per week</td>
</tr>
</tbody>
</table>

(Table 2. continued)
### Themes & Subthemes

<table>
<thead>
<tr>
<th>Production</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sourcing materials</td>
</tr>
<tr>
<td></td>
<td>Tools</td>
</tr>
<tr>
<td>Market</td>
<td>Basket price</td>
</tr>
<tr>
<td></td>
<td>Basket use - tourism</td>
</tr>
<tr>
<td></td>
<td>Buyers</td>
</tr>
<tr>
<td></td>
<td>Cost</td>
</tr>
<tr>
<td></td>
<td>Importance of the income from the coiled basket</td>
</tr>
<tr>
<td></td>
<td>Increasing - decreasing baskets</td>
</tr>
<tr>
<td></td>
<td>Market – community</td>
</tr>
<tr>
<td></td>
<td>Market - fair</td>
</tr>
<tr>
<td></td>
<td>Market - street</td>
</tr>
<tr>
<td></td>
<td>Market craft retailer -contracts</td>
</tr>
<tr>
<td></td>
<td>Price</td>
</tr>
<tr>
<td></td>
<td>Why are increasing and decreasing basket sales?</td>
</tr>
</tbody>
</table>

### 3.2.1 Data analysis procedure

This section describes the procedure used to import and analyze the qualitative data collected from fifteen interviews. The data analysis procedure covers from importing the qualitative data in Nvivo 11 to the reporting of the findings and interpretations in English.

1. Verbatim transcription of the interviews was done in Spanish verbatim (May, 1991). The transcription did not present names or places that identify the participants to preserve the
interviewee’s confidentiality (Hill, Thompson & Williams, 1997). The interviewees were identified as participant 1 to 15. The transcriptions were presented to the participants for review.

2. The interview transcriptions were imported into Nvivo 11. This is a software for qualitative analysis, assists researchers to store, search, and code the qualitative data (Lee & Esterhuizen, 2000).

3. The interviews were coded in Spanish. As a native Spanish-speaker, I have sufficient proficiency to analyze the data in Spanish and translate the results into English. In the coding of interviews, I labeled responses to specific questions (Appendix D). Some participants answered multiple questions in one answer, therefore, in coding, the researcher did not assume that a fragment was associated with only one question. One response from participants can contain multiple themes and was coded as such (Hill, Thompson & Williams, 1997).

4. Findings and interpretations are presented in English.

3.3 Institutional Review Board Considerations

This investigation does not cause harm to the interviewees. It was conducted following the procedures specified by the Institutional Review Board. I have been granted with an Exemption from the Institutional Oversight Committee to conduct the interviews. The identification of the interviewees will remain confidential. The IRB at LSU has approved this exemption with registration number IRB# E10811. The approval of the IRB Exemption can be found in Appendix A and the consent form in appendixes B and C.
CHAPTER 4: RESULTS

The overall purpose of this research is to explore the sociocultural characteristics, design, production and market of Werregue coiled basketry in Colombia. This research is a case study conducted in the Pacific region of Colombia from December 18th, 2017 to January 2nd, 2018. There were two research settings, Cali and the village of La Delfina. I visited each of the participants in their homes (rural setting) and places of work (urban setting: street market and public spaces). The majority of them were working on the baskets when I arrived for the interview. The qualitative information gathered from the interviews is complemented with an observation from the researcher on their context and process with the Werregue baskets. This research includes perspectives and reflections of skilled coiled Werregue basket makers. Previous experiences with the indigenous communities facilitated the intervention for conducting the interviews. Each interview received a numerical code and was transcribed verbatim in Spanish. This was done to facilitate the coding of the interviews in Nvivo. In this study, twenty-eight themes emerged from coding the interviews (see Table 2). The ages of the fifteen participants of this study ranged from 23 to 65 (see Table 3). The percentage of male and female participants are sixty and forty percent respectively. The participants were identified based on their knowledge in coiled basketry. They are skilled artisans acknowledged by craft retailers, indigenous members, and artisan organizations for their expertise in coiled basketry. The average years of experience in basket making among the fifteen participants are of 20 to 26 years. A 65-year-old woman with 50 years of experience has the longest time of experience. In contrast, the youngest person interviewed on basket making is a 23-year-old man with five years of experience.
Table 3. Demographics of Participants

<table>
<thead>
<tr>
<th>Participant #</th>
<th>Age</th>
<th>Gender</th>
<th>Years of experience making coiled baskets</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>65</td>
<td>Female</td>
<td>50</td>
<td>Cali</td>
</tr>
<tr>
<td>002</td>
<td>23</td>
<td>Female</td>
<td>5</td>
<td>Delfina</td>
</tr>
<tr>
<td>003</td>
<td>28</td>
<td>Male</td>
<td>14</td>
<td>Delfina</td>
</tr>
<tr>
<td>004</td>
<td>49</td>
<td>Female</td>
<td>34</td>
<td>Delfina</td>
</tr>
<tr>
<td>005</td>
<td>47</td>
<td>Male</td>
<td>23</td>
<td>Delfina</td>
</tr>
<tr>
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<td>7</td>
<td>Cali</td>
</tr>
<tr>
<td>007</td>
<td>40</td>
<td>Female</td>
<td>28</td>
<td>Cali</td>
</tr>
<tr>
<td>008</td>
<td>31</td>
<td>Male</td>
<td>8</td>
<td>Delfina</td>
</tr>
<tr>
<td>009</td>
<td>57</td>
<td>Female</td>
<td>35</td>
<td>Cali</td>
</tr>
<tr>
<td>010</td>
<td>29</td>
<td>Male</td>
<td>13</td>
<td>Delfina</td>
</tr>
<tr>
<td>011</td>
<td>31</td>
<td>Male</td>
<td>9</td>
<td>Delfina</td>
</tr>
<tr>
<td>012</td>
<td>27</td>
<td>Male</td>
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</tr>
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<tr>
<td>015</td>
<td>45</td>
<td>Male</td>
<td>27</td>
<td>Cali</td>
</tr>
</tbody>
</table>

4.1 The Werregue Coiled Basket

Werregue coiled baskets are included among the artifacts that represent the handicraft production in Colombia (Figure 7). The Werregue coiled basket is created using the single rod coiling technique (Figure 1). The principal materials are Werregue palm fibers dyed with Achiote and Puchicama. In the Nasa indigenous community, the basket serves a functional purpose of
transporting goods such food items and beverages, and if the fibers have strong cohesion between each segment of the baskets, it can even be used to transport water. One participant stated: “The basket is important to go the mountain, to carry things like crops, bananas, potatoes, yucca, and everything which can be loaded in the basket” (Participant 01). The baskets are like personal vessels (Participant 13).

The size (height from the bottom to the opening) determines the functionality of the basket. If the basket is small (approximately 4.33 inches), it is used to store food in small portions, such as eggs and beans. If the basket is medium (approximately 6.29 inches) or large (approximately 8.66 inches), it is commonly used to carry food such as bananas, potatoes, yucca, and meat. If the basket was fabricated well, the bundles are joint in a cohesive manner; then the basket is used to transport water. “Everything is carried in those baskets; whatever, meat, groceries,” (Participant 1). Although participants can describe the regular use of the basket within their households and community, they are currently making baskets as an economic pursuit rather than for their own use in their community. Participant 1 states this idea when she said: “We only make them for selling them, we do have some for us, but we only produce them to market.” As participant 1, the other fourteen interviewees stated that basket making nowadays is a profit endeavor. Even if they coil a basket without having a placed order of purchase, the intention is to have the baskets ready for selling in the market or to exchange for other goods. In regard with what participants consider the use of the basket for their buyers to be, Participant 9 said: “There are people who fill it with flowers, there are people whom I do not know what they use it for, but it is more like a decorative piece.”

The finest baskets are those in which the materials are integrated smoothly so that the coiled bundles are aligned; the bundles are deeply joint together. For example, if you pour water into a
basket, the water will have very low filtration. Participant 9, a female basketmaker stated that age differences might affect the basket’s strength. Participant 7 stated that age differences may have an effect in the basket’s strength, he said: “young basket makers polish better the older crafters, because elders do not polish well while the young do. They polish well, well-polished, well worked.”

The level of strength of the baskets reveals the first generational difference between young and old basket makers whose ability to tie the basket differ; a young person compared to an old basketmaker can exert different levels of strength to the basket. He also pointed out that in order to achieve this purpose, the basketmaker has to integrate the new segments with the previous coiled segments in a cohesive manner.

Participant 15 is a 45-year-old man with 27 years of experience in basket making. Despite his long experience, he recognized that his age and the depletion of his sight over time has decreased his ability to provide strength to the basket. He sells baskets, but he is aware that the quality of the strength is not as tight as it used to be in earlier days. He said: “I used to coil better when I had my sight well.”

This basketmaker affirms that the quality of his baskets is not as well defined as before. His sight is not in optimal conditions according to his opinion. However, he continues making baskets, but he is aware that the quality is not as good. Despite the fact that the basket does not have a high quality in terms of the coiling technique. He is one of the participants who were interviewed in Cali and who sells his baskets in public areas. If he is selling to tourists, some may now know that the coiled baskets do not have the strength that they should have.

The basket represents an artifact of trade within members of the same indigenous communities as well as with other ethnic groups. The symbolic value of the basket is the
connection between their ancestors and their present which is represented in different motifs that are allusive to stories, nature, gods, and geometric figures. The economic value of the baskets form relies on their ability to be sold to other indigenous members, Afro-Colombians, foreigners, and national visitors. The best way to trade the baskets is to exchange them for cash. On the other hand, receiving food for the basket is also an option for trading the baskets. In the market, baskets are considered an art piece and they are used by its buyers (foreigners and nationals) for decorative purposes.

Figure 7. Characterization of a Coiled Basket.

4.2 The Werregue Coiled-Basket Makers

From the interviews conducted, the making of baskets is one of the principal occupations for the Nasa indigenous people. The Morning hours of the day are reserved for the production of the baskets, in which participants pointed out to be from 8:00 am until noon. When they are not making baskets, they are doing house chores. Participant 2 said: “In my daily life, I make baskets,
I rest and sometimes I go and prepare lunch and meals, all of that, or I wash the dishes, I do house chores that is all.” This woman combines her daily activity with basket making. She states that the morning is for the work on baskets and the afternoon for doing the chores at home. When men combine basket making with other activities, they are usually dedicated to agricultural activities while women are responsible for the internal household activities.

The Werregue coiled basket represents the main source of income for twelve participants. Three participants manifested having other sources of income, but all those sources derive from other crafts: beadwork with ‘chaquiras’ and weaving with other natural fibers (cabecinegro and fique). For example, participant 5 has a diversity of income that he explained saying “I make handicrafts, bracelets, earrings, hair bands, necklaces, bibs, tiger necklaces, and many things, leather drums, and shawms.” He is the same participant who refers to the scarcity of fiber and his inability to continue making baskets while he does not have fiber. The diversity of his source of income may explain the connection between the lack of access to the materials and his occupancy in other crafts. Similarly, Participant 6 affirms “At this time, I do not have fiber; when we have fiber, we do it all day.” In summary, the making of coiled baskets depends more on the availability of the fiber than the basket makers’ interest to produce the basket; if the materials used for basket making were always available, basket making would be done daily and for longer hours.

When there is a purchase order to complete, they will work from 8:00 am to noon, and then in the afternoon from 1:00 to 6:00 pm. In this case, the basket will be finished in less than a week. Participant 1 said: “Every day, two hours, three hours, four hours, if you want to finish it quickly, and then you spend three days there.” The urgency to meet the purchase order changes the daily dynamic, therefore home activities lose priority to attend the principal economic need
4.2.1 Gender and age. The division of labor by gender is structured according to the different stages of production. In the rural areas, men search for the Werregue palm while women coil the baskets. If there is a purchase order from a craft retailer or an indigenous leader, men and women coil baskets equally to complete the purchase order. Participant 12 said: “Men and women work equally.” However, another participant contradicts this position by affirming that when there is not a purchase order, it is only the women who work on the baskets. A woman in the study affirms “Women know how to make the baskets while there are men who do not know” (Participant 3). The other distribution of work is when women and men are assigned different roles in the development of a basket, as a Participant 3 stated: “Men separate and cut the fibers, they cut and arrange the fibers and then women coil the basket.” The distribution of work in the form of a production line is defined by gender, in which men prepare the materials as an extension of their previous task of seeking for the materials in the forest, while women are completely responsible for coiling the baskets. In this case, the coiling of the baskets does not exempt men from finding the material.

The displaced indigenous women and men living in the urban areas such as Cali, Medellin, and Bogota, buy the material from the natives that come from the Pacific region. Both female and male basket makers work to provide an income for their families in the city. Parezo (1982) affirms that when the craft production becomes the most important source of income in a community, the division of gender tends to become indistinct. Women and men coil the baskets, five interviewees stated that in a more remote area, women are the ones who do most of the handicraft work, but when they arrive in the city, men are the ones who take leadership in the development of baskets to financially support their families. Participants reaffirm that this unclear idea of the gender
division of labor stems from the need to support their families financially through basket production.

4.2.1 Learning process

4.2.1.1 Mother, the initial thread. During the interviews, a persistent theme in question was in regards to whom had taught each basketmaker to make the baskets, to which thirteen participants responded that it had been their mothers who had initiated them in this craftsmanship. She is the caregiver and the performer of all the home activities. Overall, the mother is the person who introduces their family members into coiled basket making. Participant 02 pointed out: “My mother… my mother taught me the coiling of a basket”

The mother had introduced her children to basket coiling and even introduced her neighbors’ children when their mother was not available. However, the instruction is not a permanent condition, and some of the participants manifested that they had learned by observing the women in their families: grandmothers, mothers, and sisters.

In a second place, the approach to learning the coiling technique is through observation; twelve participants revealed that they were introduced to basket making because they were observing family members when they were making coiled baskets. The learning process starts with the child’s interest; the child observes his/her family members and requests to be taught. One participant stated that at the beginning he saw everything like a game. The young individuals become interested in learning the art of coiled basketry, so they sit and observe how the baskets are made. For example, one participant said that when her mother went out, she observed other members of her family making the baskets and asked for permission to learn. The Mother is the primary instructor, but also the father and the uncles can instruct during basket making “Ah, the mom… the mom first, then the uncles, the nephews and so on” (Participant 5). There are specific
cases in which the basketmaker will learn the technique from outside their households. One of the participants pointed out that he started learning to make baskets because a teacher at his school introduced the topic during the class and gave it as an art assignment. The participant 2 expressed: “They taught us to learn, and we learned from school, having teachers who already knew this in the Spanish language which they used to teach us most of the time.”

The introduction of artisan techniques in a school environment within the context of an art class is what is described by the response of participant 2. From these interviews, it is important to emphasize that the school has a formal education within an indigenous setting. This shapes the structure of the class in which the coiling technique is included within the curriculum of the art program.

4.2.3 Children and baskets. Regarding the continuity of art, many of the basket makers are passing down the knowledge of basket making to their children. As mentioned before, women are the commanders of this labor in their families. A female basketmaker indicated: “I teach my children, my sons, my daughters, all the family” (Participant 2). Another woman is instructing her daughter in basket making. She mentioned “I am teaching… I mean, my daughter is 11 years old, she is already learning.” A woman with seven children emphasized that one of her daughters has started making baskets. She said “My 12 year old daughter has begun to know a little about the basket making.” These early ages to be introduced to the craft give the opportunity to the basketmaker to achieve a large experience when an adult.

In regard to the differences among the younger generations, who are being inspired by the same sources such as nature, Gods, geometric figures, participants argued that they would like their children to continue making baskets if they have a secure marketplace to sell the baskets without difficulties. However, a participant indicated that younger generations are making designs
that differ from the designs that are being made by the current older generations because they are exposed to other forms of information such as the internet, magazines, television, and videos, all of which can shape the motif designs they craft in their baskets. It is relevant to highlight that Participant 9 is an older basketmaker (57 years old). She affirms “Yes, yes because they continue to take back the original part, but they are also joining the forms in another way, and some have left to study, the Sena has arrived there too, then they have access to the internet, to the computer, and then they begin to see other things, then they seem to take other very urban ways, but they mix them, not ceasing to be original”. The participant 9 refers to SENA, which is an institution for technical training in aspects such as product development, food production, and customer services. This participant indicates that the access to the emerging technologies to the younger generation may have an influence in the designs they create for the baskets.

The ethnic diversity in Colombia also plays a role in the conservation of basketry, this is seen in the case of a fifty-seven-year-old indigenous female basketmaker. She is an indigenous woman who got married with an Afro-Colombian man, she had nine children with this man and according to her, the nine children considered themselves Afro-Colombians. They have shown more interest in their Afro-Colombian heritage than in their indigenous tradition. She expressed: “My children are afros, I do not have children of my color, my eyes, I have nine children, all of whom are afro. My children help me to sell or when I have to deliver something, one of them goes and makes the delivery. He has helped me in a fair, but he is more interested in afro cooking” Her children are not interested in Werregue basket making. However, her granddaughter has shown interest in the craft of basketry. She highlighted this aspect in another part of the interview when she said: “My granddaughter sits with me when I coil the baskets and she makes them with me” (Participant 9). Participant 9 is aware of how the ethnic diversity in her family affects the
generational aspect of her craft. She understands that her children have a preference for her father's culture, the Afro-Colombian heritage, to which she does not object. Nevertheless, she continues passing down the craft by instructing her granddaughter, who according to this participant has shown interest in learning the craftsmanship of baskets.

4.3 Sourcing the Material

“We bring the material from the mountain and work with it” (Participant 5). The Werregue coiled basket makers obtain the material with their own means from the forests available in the Pacific region of Colombia. According to the interviewees, men search for the palm and women go in search of the dyes. According to them, men search for the Werregue because it is an activity that requires more physical strength. The trip to find the materials can take around 7 hours. There are occasions where a group of 3 to 5 members of the community search for the materials in groups. In this case, they take less time. They also prepare lunch beforehand, which they take into the forest. One participant refers to the days for finding Werregue. He said: “You have to search very deep for many days, very deep; you have to search a lot” (Participant 4). This participant refers to the time-consuming process of finding the materials because it is becoming increasingly scarce.

Regarding the methods of harvesting, some participants mentioned that they had used the media luna to access the spear leaves. If the palm is not within reach and they do not possess the media Luna, they harvest the palm by cutting it down to their height so that they can access the spear leaves. One participant stated that the palm could take up seven to eight years to grow into a stage that will provide the bud. The bud can regenerate in two to three months. The perception that the material is “free” is common in this practice since it is available without any restriction in the forest that will affect the way the basket is priced. This is evident when basket makers live in urban areas, where they realize the difficulty of getting the material and how costly the basket is when
being in a city (Bogota, Cali, Medellin, Buenaventura, Cartagena, and Pereira), where they have to buy the material from the indigenous that come from the Pacific region. When they trade the material for money, they can pay around $20,000 COP (7.20 USD) for a bud which is 1 kilogram of leaves with which they may fabricate a small basket. It also comes with previously dyed Puchicama and Achiote. Natives who are living in the cities take the material from remote areas to sell it to the natives living in cities. However, participants who have bought the Werregue in these cities from their indigenous fellows, indicate that materials are expensive when bought in the city. This perception is supported by the idea that the palm is obtained freely from the forest since it is there where the fiber is collected by their own means; therefore, there is not an economic advantage for the urban buyers. Lately, this perception will affect the trade of Werregue in any given urban context in which the indigenous community will continue pursuing the art of basket making, but in this case, they cannot have access to the materials by their means. Participant 5 expressed his concern about the pricing of Werregue in the last years, he manifested the degree of worry for not being able to find materials easily and then having to buy them from the Afro-Colombians “The fiber price is up this year” (Participant 5). This participant refers to the increasing value of sourcing the material and buying Werregue.

The Werregue palm has become scarce in recent years, indigenous travel longer distances to find the material. “If you walk in the forest for one day, from six to four in the afternoon and with ten people, you can find it “(Participant 11). Contingency measures are used to secure the availability of the plant species; participants have their plantation at the back of their house to secure the material. Participant 9 described an initiative in which they gather as a community to plant the palm. He said: “When we are going to plant the palm we go the whole community, we
take food and we go to plant it once. There are times when I go with my wife. It depends on the work that we want to do, if we want to do it quickly, we take food with us and everybody works.”

This participant is referring to a group of men in the community who meet to plant the palm to secure the availability of the material in the future, he refers to his wife as a companion during the long trip. Another participant who has taken action in conserving Werregue for the production baskets said, “When we have the palm in our place and the palm has the bud, we take it and open the leaves, dry them and put them under sunlight for five days and then we take the fiber out.” Both participants who describe the strategies to plant Werregue are men, who as stated previously, are responsible for sourcing the material. The women participating in these interviews refer to the role of men when they are asked about the sourcing of the materials. Their participation in the sourcing process is carried out by providing the food for the long trips to search for the palm.

Participant 15 described the criteria for cutting the palm compared to using the media luna to harvest the bud. “At a height of three to five meters, we use the media luna, more than that, we cut down the palm.” This participant refers to the height that the media luna can reach, when he refers to three to five meters which is the height that the media luna can reach, after that height, the indigenous cut down the palm with a machete.

Despite the fact that two participants from the interviews stated that they had taken measures for securing the materials, the rest of the participants go in search for wild grown Werregue. The use of the palm is well known in the region; therefore, other ethnic groups such as the Afro-Colombians and the mestizos search of the palm to sell it to the indigenous. One participant buys it from other individuals to meet purchase orders. “We have to pay for them to go and bring it” (Participant 02). The non-indigenous group view finding Werregue as an opportunity to generate income because they know that it is used for basketry making. The Werregue as a plant
species can also be traded for food such as bananas and potatoes. This form of exchange is known as “trueque.” Barter is a common practice among the indigenous groups, as the material has become harder to find, so the fortunate ones who can find Werregue are able to trade it for food and money.

Besides the ecological and economic role of the palm, the Werregue palm plays a role in the mythology of the indigenous community; a participant mentioned a story told by the “taitas” - a term used to describe parents. The story was about a monster that was eating the indigenous people; one by one they started disappearing in the forest. The indigenous council decided to make a bundle of Werregue and placed it on the sites from where the indigenous members had vanished from. The council members placed the Werregue bundles in highly visible locations for the monster to eat, the monster get poisoned, and consequently die. After placing the Werregue in these sites, the disappearance of indigenous people ceased. Another mystical attribute of Werregue is its ability to provide good luck. Therefore, it is placed in the entry of houses, and also its leaves can be taken by individuals in their pockets. These two narratives were the only ones found in the interviews, participants mainly refers to the Werregue baskets as a subsistence strategy.

4.3 Process, Tools, and Dyes

The spear leaves of Werregue are exposed to the sun for five days. When the fibers are dried, the fibers are separated one by one to obtain thinner fibers that will be used in the process of coiling. In the case of the dyes, participants described that the Achiote seeds are extracted by hand, and boiled with water in a wooden stove. The Werregue fibers are immersed in the same water where the dyes separately have been boiled. In the case of the Puchicama, the leaves are mashed with a stone and submerged in hot water. This dye has a broader color spectrum than the Achiote; it can give a chromatic range from green to black when the dyed fibers are buried in soil. Participant 15 refers to the intensity of color that they are able to achieve when he said: “In 15
minutes, when it is well cooked, the fiber is already with an intense orange” (Participant 15). He refers to the practice of cooking the dyes and the fibers which get an intense color after fifteen minutes under fire. The Werregue fibers dyed with Puchicama are buried for 24 hours in the mud until it gets a deep black color. The degree of darkness in color is directly proportional to the time the dyed fiber is buried.

Participant 9 described the dyeing process as follows: “The fibers are cooked, then they are submerged, and after some time they are removed. They are left to dry outside for an hour. Since they are in a good state, if they are exposed to water and sun, they will maintain the color. The color is not going to fade”. Participant 9 describes a step by step process to process the material. There is a combination of natural elements (water and sun) that allow the Werregue fibers to be ready for the basket development.

4.3.1 Coiling

“Tools, my two hands” (Participant 8). The art of coiling the baskets is mainly a morning activity. Participants indicated that they have schedule between 8:00 a.m. to 12:00 p.m. to work on the baskets. The coiling of a basket takes a substantial preparation from the material treatment to the final product. An individual is responsible for completing a basket from beginning to finish, participant 15 said “One person is responsible to complete a basket”. The majority of participants manifested that their hands were enough to complete the basket. However, sometimes there is the need for the use of a knife to cut the segments of the fiber and an needle to facilitate the insertion of the fibers to create the motifs over the coiled bundles. When they do not have a needle, a crafter can use a stick to push the fibers inside. As a final touch, wood sandpaper is used to smooth out any roughness in the basket and obtain the brightness that is characteristic to them. This finishing is optional and does not represent a characteristic of all the coiled baskets.
Figure 8. Coiling of a Werregue basket.

4.4 Design, Material, and Color

An overall idea from interviews highlights that the design of the coiled basket is made intuitively. The design of the basket is considered empirical. Participant 14 responded “From my mind… from my mind comes the idea and I start doing, I'm thinking while I'm doing.” The design is created while making the basket. None of the participants mentioned a sketching process previous to the making of the baskets. Participant 12 expressed how design is done intuitively when he said: “I think of the designs to make the baskets, I think of different design styles, and I create the design.”
The design process is more restricted to the availability of colors to create the motifs than market trends of color and/or designs. The dyed fibers are freely combined to create geometric, zoometric, and anthropometric motifs. Another factor that can shape the basket making process is the artisans’ emotional stage. One participant commented that when she feels right, she can coil the baskets, she finds inspiration thinking about her story and family, and then creates the products. She said: “It has to do with our emotional state and we are always thinking about nature. I am always thinking about my environment. I am always willing to return to my environment, then one is always longing, one is inspired, how to return there, then one is always doing that”.

From the qualitative information, the main colors are natural: red, black, and beige-brown. The colors are the results of the chromatic capabilities of the plant species (Puchicama and Achiote) used in the process. When it is about colors, the qualitative information provides a diversity of opinions in their significance, one group of participants expressed that the decision to apply a specific color depends more on the availability of a color range that the plant species can deliver rather than a particular meaning. They seek just for the functional value of color, making their baskets look different. In contrast, another group associated specific colors with meanings from their indigenous culture. In regard to the meaning of colors, five participants affirm that there is no meaning associated with the color. Three participants affirm they do not know the meaning of the colors, therefore, they did not provide a meaning for colors during the interviews. Table 3 shows the meaning of the colors. For example, red represents the blood of the indigenous people. As one participant expressed: “The color red has to do with our blood, so it is always in the ones we shape. The black color is for the forest, the darkness” (Participant 14). As an example, the lines represent the diverse directions in which life can be transformed through an individual’s lifetime, but which still can return to its origins (Participant 14). Participant 3 refers to the meaning of white
(natural Werregue) when he said “White means peace.” In an interview in which a participant did not know the meaning of the colors, she did express the use of plants to provide color for other purposes. Participant 14 referred to the use of color in face painting, she emphasized that Achiote, which provides a range from red to orange, was used in indigenous festivities. She expressed: “The Achiote is important because they used it to put its color in indigenous’ faces, in that way, they used to get color in their faces.” This expression clearly states the meaning of the Achiote as a utility for the indigenous. It is important to highlight that she is referring to a practice of the past.

Table 4. Color Sources and Meanings

<table>
<thead>
<tr>
<th>Colors</th>
<th>Meaning</th>
<th>Dye source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red to Orange</td>
<td>Blood and freedom</td>
<td>Achiote</td>
</tr>
<tr>
<td>Beige - Brown</td>
<td>Soil – Pachamama (mother earth)</td>
<td>Achiote</td>
</tr>
<tr>
<td>Black</td>
<td>Stone and Jungle’s darkness</td>
<td>Puchicama</td>
</tr>
<tr>
<td>Natural/White</td>
<td>Peace</td>
<td>Natural color of Werregue</td>
</tr>
</tbody>
</table>
**Table 5. Motifs**

<table>
<thead>
<tr>
<th>Motif</th>
<th>Geometrics</th>
<th>Nature</th>
<th>Gods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Representation of geometric shapes</td>
<td>Representation of recognizable figures found in nature</td>
<td>Representation of divinities.</td>
</tr>
<tr>
<td>Motifs</td>
<td>Lines, squares, circles, triangles, rectangles.</td>
<td>Leaves, Snake, butterfly, cows, frogs, goats</td>
<td>Mother earth</td>
</tr>
</tbody>
</table>

**Example**

- Figure 10 Lines
- Figure 11. Frogs
- Figure 12. Gods

*Note: Figures 10, 11 and 12 are images taken by the author.*

Therefore, we can divide the participants and their knowledge about the meaning of the colors as follows: participants who know the meaning of the colors. These participants associated the colors with known elements, for example, red represents blood or brown represents soil. The second group is the people who do know the meaning of the colors. The meaning of colors is rooted in the culture and has a reference to an element in nature, and each color is used to represent a value of their culture. However, many claimed that colors have no meaning and they are seen
mostly from the perspective of the ability of some plants to provide that color. Then when asking about the meaning of a color, a participant stated:

“The colors, I mean, yes, do not mean that, if you obtain yellow, or red, or green, well, that has no meaning” (participant 5). This participant does not associate a specific meaning to the colors.

4.5 Market

According to different interviews that were conducted, thirteen individuals asserted that the handicraft production is their main source of income. The market of the basket is determined by the availability of raw materials and the effluence of visitors from the major cities. The visitors regularly visit fairs, craft retailers, and public spaces in which the basket makers expose their products. Fig 13 shows the four market channels used for the trade of baskets.

From the interviews, it emerged that the market of baskets is regulated by two aspects; one which is an internal aspect in which the availability of the materials used for the fabrication of the baskets is crucial. This aspect is mediated by the men who to go to find the materials who make long trips which in the last years have become longer since the fiber is scarce by cause of its cutting in its mature state, forcing the seekers of this material to travel longer distances, therefore restricting the use of the media luna considering that long distances mean carrying the tool as well as an additional price.

The external aspect is the affluence of tourists in the inner cities. Baskets are usually sold in the inner cities or are exchanged for other goods. They are exchanged for other products in the rural area; however, baskets are mainly commercial in urban zones. This fact is the main reason why there is an external factor which is the influx of tourists in this city since they do not go to the rural areas to buy them due to the fact that these zones are undergoing territorial disputes among armed groups including the areas where these baskets are produced. Therefore, they are not areas
that are frequented by people who are not native due to the degree of risk they can run in these contexts and even more if it is a person from abroad.

4.5.1 Fair. Fairs are preferred alternatives to sell the baskets since basket makers can price the products the way they like and customers will still buy them. Many participants expressed that they find foreigners who admire the coiled baskets for their structures, motifs, and use of natural dyes. A basketmaker said that foreigners pay the price that the basketmaker asks. The fair does not have to be necessarily about crafts, which are the most preferable. It is a festival of music, culture, and art that attracts people, and which is a suitable environment for selling the baskets. The basket makers’ main goal during fairs is to display their baskets, sell them and network for future events. For example, a fifty-seven-year-old woman basketmaker stated that she participated in an exposition by the Republic Bank of Colombia, an institution that promotes cultural heritage within their corporate responsibility strategy. The Republic Bank of Colombia organizers asked her to leave her baskets in the exhibition with the prices tagged during a week. Visitors who came to the
exhibition bought some of her baskets, and she also received money for the baskets that did not sell after a week.

Regarding craft fairs, basket makers are connected through a national network for the promotion of handicrafts supported by Artesanías de Colombia, the Secretary for Cultural Affairs, and the Bureau of Indigenous Affairs. These offices communicate to the basket makers the dates and locations of the different craft fairs. It is important for crafters and sellers to keep in mind that these events have limited free positions. The previous organization prioritizes crafters basing their criteria for assigning the free positions according to the crafters experience and needs. Otherwise, participants should pay to participate in the fair, in which case, few of them have the opportunity.

4.5.2 **Craft retailers.** The second mechanism for selling the baskets is through purchase orders from craft retailers located in the inner cities. Basket makers establish contacts when they participate in fairs, and then they sell their baskets through purchase orders. Another way to get a purchase order is when a member of the community goes to the inner cities and presents samples of the baskets and then returns with an order. Participant 2 commented: “It is not that they make an order, we make orders; we send the baskets to the other groups for an order, then they send for what they want to buy.” “There are people here who we call indigenous leaders, who get contracts and then take the baskets to the buyers” In this place, the indigenous expressed the mechanism employed by leaders of the community, who go to the major cities and get contracts with craft retailers and then, when they return, they indicate to the indigenous basket makers the number of baskets that they must prepare. Then, the indigenous leader takes the baskets to the craft retailer, receives the money, and returns with the payments.

4.5.3 **Indigenous members.** As a third mechanism, basket makers trade their baskets with their fellow indigenous members in two forms: (1) for goods and (2) for cash income. The
exchange of goods is called “Trueque” (barter), in which there is an exchange of goods and services without the use of money (Ferraro, 2011). This practice is common within indigenous communities (Ferraro, 2011). The main subject of exchange for baskets is food, medicine, and shelter. Participant 9 described bartering when she said: “When we are in our town, we change the baskets for salt, and for other foods, and when one is invited to fairs or when the communities are visited by white people, or free people as we say to one another, then we get their value for money”

This participant states an important difference between the value they gain from the baskets when they are in the community and the value they gain when they are selling them to the “free people” (mestizo or non-indigenous visitor) which is the way they call individuals that are not indigenous, mainly those with European descendent aspect. According to this participant, when they are in community, they trade the baskets with other indigenous for goods, specifically food. In contrast, when they are selling them to the “free man,” they trade the baskets for cash. However, this does not state that the basket that was initially traded for food could not be traded for money later by the indigenous who received the basket.

Food and other products are used to help these people access these products when they find it difficult to sell the baskets in the city. Trading by barter with their fellows helps them obtain these products and helps them return to the jungle quickly. The approach of barter is a situation that was inherited from their history and Colombian roots, making this form of trading very common among indigenous communities. In this context, they consider that baskets, as a cultural currency, can be exchanged for monetary value and goods.

One participant commented that they have a fund in the community in which the participants make contributions with their baskets, then they sell the baskets in the city and the money is obtained from the collection, the members of the endeavor have set up a fund in which
the profits are therein deposited. The several ways of marketing the products are those in which the people of the community go to other communities to take a lot of baskets for sale. The earnings are shared within the people whose contribution is in the fund. This form of association is common throughout artisan enterprises to reduce the costs that can fully finance their business.

4.5.4 Street market. This market mechanism is the least preferable alternative used to sell the baskets since it is the less secure. Basket makers usually travel to the inner cities with their baskets. This system is more familiar with Natives that have been displaced by violence and lack of opportunities in the rural context. They move from one place to another. A participant claimed: “I work in a non-steady way, I go on the streets offering the baskets; there are times when I’m here in Chipichape, on Sixth Avenue, in the downtown. I walk with my baskets, sometimes I sell, sometimes I do not” (Participant 5). “No, the craft is very heavy to sell, because I have not stated that I'm taking advantage of this sidewalk but working on the street is very heavy” (Participant 07). "At this time as displaced people, we have no store or place to sell, we sell on the street as street vendors. There are no stores that buy enough. At the governor’s building square, there is a craft store from Artesanias Colombianas, they buy in low prices, and they want to buy a big basket for $20,000 COP and $30,000 COP. That is not a sale! (Participant 15).

Participants 5 and 7 expressed the difficulties of selling on the street and the level of economic uncertainty. Participant 15 expressed his frustration for selling the basket at such low prices. This participant lives in Cali, an urban context that challenges his ability to survive because he comes from the Colombian pacific region. His income comes from the sales of baskets and he is concerned about how people underestimate the real price of the baskets. It is important to highlight that the store he mentioned is a renowned craft store located in Cali downtown. This is also the participant who has deficiency with his sight which limits him to make baskets. His
physical limitation to make baskets and the under-appreciation of value by buyers exacerbated his frustration.

The previous concerns expressed the insecurity of the street market for the indigenous basket makers, they would prefer to have a secure place to sell their baskets. In the street market, they usually place a sheet of cloth on the ground in public places such as plazas, parks, where there is a large crowd of people. This is quite necessary to achieve exposition, which is only temporary. Since they do not have a fixed place. This level of insecurity affects sales in general. The objective is to display the products during the passing of customers to their places of work and as an example, participant 5 manifested that cities like Cali and Bogota are good places for selling the baskets due to their high level of affluence of workers. He said: “In my community, people are ready with their coiled baskets even if there is no movement. In Cali, we offer the baskets, and we can sell them quickly, the same happens in Bogota”

The common knowledge, among the community, of the cities where the baskets are being sold lead the indigenous into moving to these cities in order to increase their sales, and only for that reason. Members of the community go to the city to sell the baskets funding the journey with contributions from a group of contributors. However, they are disadvantages of traveling to the cities as expressed by participant 6: “Because there are times when you go a long way, there are times when you do not sell, and work is immobilized, spending on transport fares, food, sleeping and all that”. He expressed the frustration of traveling to the city and finding difficulties to sell his baskets. He mentioned that his frustrations stemmed from spending on food and transportation and still not being successful selling his baskets
4.6 Pricing

The pricing of the basket depends on the availability of the raw materials and the market channels in which the baskets are traded (fairs, craft retailers, street markets, and among indigenous members). The materials increasingly get more difficult to find, thus affecting the pricing of the basket. When basket makers dwell in the forest of the Pacific lowlands, they do not consider the cost of the materials since these materials are sourced using their own means and considered free. However, when the indigenous are displaced to an inner city, they have to assume the cost of the Werregue. As illustrated, an individual who makes a basket of 11 centimeters (4.33 inches); this basket requires a “bud.” When the bud is obtained from its source, the cost is $0. However, if the basket makers living in an inner city do not have access to the material, they have to buy it from another indigenous member at the cost of $20,000 COP (7 USD). In this case, an 11-centimeters basket will leave a profit of $20,000 COP (7 USD). Despite the human labor of 40 hours that will be required to complete this basket.

Nowadays, basket making is a profit-seeking activity, either by exchanging for other products or by obtaining money for them. Individuals make on average between two to three small baskets per week. A basketmaker may earn around $57.6 USD (one basket sold weekly) to $172.8 USD (three baskets sold weekly) monthly, in an area where full-time salary is $282 USD per month. According to Runk (2001), a basketmaker has an income range that can vary from $15 to $500 USD a month from this activity. However, this study did not include the goods that can be traded for the baskets, which are valuable for the sustenance of the artisan, such as food and medicine. Therefore, in this context, the basket is considered a cultural currency that can be traded in different forms.
The wholesale price does not leave much profit if the basket makers have been displaced to the inner cities because they have to assume the cost of the material. In other words, if the basket makers are living in an inner city, the calculation of both budget and profit may consider the cost of one pinnae because the individual does not have access to get the material at $0 cost from the forest. The other alternative is to trade the Werregue fiber for food and shelter, with natives that come from the rural area. When they are selling in fairs, they can obtain a fair price; it is important to mention the claim of one of the participants: according to this participant, basketry trading remains linear. When customers see the products, they buy them. However, obtaining the materials is getting harder and harder over time, people have to walk a long distance to find Werregue. The income does not consider the cost of transporting the baskets to the inner cities nor the commission if the basket is traded with craft retailers, in which case, they will require a wholesale price. For instance, participant 15 manifested that selling the basket on the street is very difficult and even more when some possible buyers offer an underpriced value for the basket. The frustration showed by Participant 15 is clear in the following excerpt: “A large basket that is sold for $20,000 or $30,000 COP. That is not a sale!” According to this participant, selling baskets in the street is the most vulnerable environment in which a basketmaker can obtain an underpriced value for their work. Thus, he prefers fairs over street markets. The Table 7 presents the prices and time associated with the baskets’ sizes according to the interviewees. In this case, the diameter of the basket is not a parameter to measure basket’s size. Participant expressed the sizes of the baskets in the height from the bottom to the opening of a basket. For instance, a small basket can require around 20 hours of work and sell for 40,000 COP (14.40 USD). This value means 0.72 cents per hour without discounting the price of the material that indigenous have to pay when they live in a urban setting.
Table 6. Pricing of Werregue Coiled Basket According to size and Number of Rounds

<table>
<thead>
<tr>
<th>Category</th>
<th>Basket Size (height from the bottom to the opening)</th>
<th>Number of rounds</th>
<th>Number of hours</th>
<th>Prince range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small</td>
<td>11 cm (4.33 inches)</td>
<td>16</td>
<td>20 (0.72 cents/hour)</td>
<td>40.000 COP (approx. 14.40 USD)</td>
</tr>
<tr>
<td>Medium</td>
<td>16 cm (6.29 inches)</td>
<td>20</td>
<td>40 (0.72 cents/hour)</td>
<td>80.000 COP (approx. 28.80 USD)</td>
</tr>
<tr>
<td>Large</td>
<td>22 cm (8.66 inches)</td>
<td>26</td>
<td>80 (0.45 cents/hour)</td>
<td>100.000 COP (approx. 36 USD)</td>
</tr>
</tbody>
</table>

Note: The sizes and prices were identified from the coding of the interviews.

The Aspen Institute (2012) highlights the importance of artisan production for driving local economies and preserving cultural heritage in developing nations. They affirm that craftsmanship provides a source of income to supply the main needs of these communities. Also, handicrafts are subject to trade for other goods, a form of capital. The majority of participants mentioned that baskets are subject to barter. From the interviews, the economic role of the coiled basket is described as the primary source of income to cover personal and household expenses: health, food, water, garments, transportation, and other products. The income from the production of the baskets is crucial for the sustenance of the indigenous communities and their craft. “I like to work with that fiber, with that I sustain myself, I pay the rent and the food, that's what I’m doing” (Participant 15).
The work with the baskets allows this participant to obtain cash income to pay for his rent and food. This participant lives in the city of Cali and has been displaced from the Pacific region. He lives with his wife and seven children. The income from the basket is very important for survival in the urban context. This person is the same one who expresses discomfort when tourists ask him for discounts to buy a basket because he considers that the time and fiber that he spends to make each basket are very demanding and expensive. This participant is one that lives in Cali and has to buy fiber from the people who come from the Pacific region. He stated that he had to buy the fiber for around $20,000 a kilogram and then proceed to make the basket. Therefore, he feels frustrated when he is asked to sell a small basket for $20,000 COP (7.2 USD) and $30,000 COP (10.80 USD).

4.7 Buyers

The main buyers of the Werregue coiled basket are divided into three groups in an order of preference given by the basket makers: foreigners, national visitors, students, and indigenous members. The preference is defined by the potential of each target group to pay the requested price for the baskets.

4.7.1 Foreigners. In the first group, foreigners, mainly from the United States and European countries are tourists and art collectors. The natives call this group “White man” or “Free man” regardless of the foreigner’s gender, for example, if the foreigner is a woman from Germany, she will still be identified as “White man.” They have expressed their fondness for the baskets to the basket makers. Some of the tourists usually say that they like the baskets because they have not seen this kind of art before, and also the surprising fact that the materials are dyed naturally. “Here, Foreigners, Colombians, and rich people buy from me. About five months ago a foreigner from Mexico took several baskets that I sold to him at a good price. He bought from me twice, but
at this moment he is not here in Colombia” (Participant 15). Coiled baskets are mainly used by visitors as decorations, as a representation of the handicraft culture of Colombia. One participant stated that “They use it as a vase, to put dried flowers in the vase.” Several respondents suggested that their buyers obtained the baskets as a reservoir for flowers.

4.7.2 **Students: National visitors.** Students in the fields of design, art, and anthropology. This group of students show interest along with the main buyers considering that they have a scholarly interest in the artifacts. One participant manifested that the students showed interest in her baskets attracted by the use of natural dyes. The student saw the Werregue fiber as an opportunity since he was in search of a natural fiber that could be used in the manufacturing of clothing. The student asked the participant how they could find the material and evaluate its properties to know more about the characteristics of the fiber. The basketmaker indicated”

“Yes, you can make a very light garment in another way. They made them develop the interest of taking care of the planet because at some moment there remains a residue that the return is generated. Well, it seems that on that part of the environment” (Participant 9).

Participant 9 refers to the environmental benefit of creating products with natural fibers because they will be eventually degraded in the soil. According with this participant, the student was looking for natural fibers for apparel and he was interested in the natural condition of the Werregue fiber.

4.7.3 **Indigenous members.** Within the natives, there is a large percentage of people that buy coiled baskets. Most of them, who are living in inner cities such as Cali, Bogota, Buenaventura, Popayan, and Cartagena, buy the baskets from their fellows to sell them in the street markets. The method of payment is the trading of the basket for money (the most preferable) or goods (food, shelter, and/or clothing). The trade among indigenous creates a sense of mutual trust
among the basket makers from the rural area. Those living in the city benefit because they can sell the products to craft retailers and tourists who come to the city. Other indigenous members opt to return to the jungle, as one participant manifested that their ideal environment is to be back in nature.

4.8 Conservation

The collection of the materials with their own hands can lead to an underestimation of the real cost of the plant material. One participant said: “It does not cost us anything, we take it from the mountains.” Ignorance concerning the environmental cost of the material can lead people to underestimate the inherent value of the materials used in the basket making. However, this view is quickly dismissed when a basketmaker living in an urban area without access to the materials continues making baskets. Paradoxically, in the urban context, baskets gain a greater economic value compared to rural contexts. In the urban context, sourcing the Werregue is a major challenge. Even a basket without the dyes, and only with its natural color, can also be sold. In this regard, sustainable management should be implemented to guarantee the long-term availability of the plant species as well as the existence of Werregue coiled baskets.
CHAPTER 5: DISCUSSION

The overall purpose of this research is to examine the sociocultural characteristics, design, production and market of Werregue coiled basketry in Colombia. Werregue coiled baskets are a source of economic security for women and men because they can trade them for cash income or other goods. Scholars have largely studied the division of labor by gender and defined it as the most organic division of work (Parezo, 1982). The dynamics of gender in the design and production of the Werregue coiled basket is structured according to the different stages of the production. While the men search for materials to fabricate the baskets, women are engaged in household activities. However, when a craft retailer or an indigenous leader places an order, both women and men work equally to complete a purchase order. In addition to the basketry labor, women have to take care of home chores. Stephen (2005) described how critical women’s’ labor in the weaving production was to sustain the labor force and maintain the household activities in Teotitlan, Mexico. Similarly, in the case of Shetland Islands knitting community, the interaction between women around craft helped them to form identity as their contributors to the local economy and the exchange of goods (Abrams, 2006). Another example comes from an indigenous basketry study in California where this artisanal activity was also primarily female, apart from their domestic labor (Mason, 1904). When crafting becomes the substantial economic source for survival, other native communities have experimented changes in their gender dynamics to respond to the market demands (Costin, 1998). For example, in the Wanabaki basketry, both women and men make baskets with sweet grass, while it was initially considered an activity pertaining to women only (Neuman, 2010). They are in the transition of women searching for heavy brown ash, activity which was considered a men’s activity (Neuman, 2010). The above
studies illustrate the disruption of gender roles when the income from an artisanal activity becomes the main source of income for the household as presented in the Werregue coiled basketry.

The learning process of the coiled basketry is often driven by a desire for recreation. According with the participants, their children have seen in basketmaking a form of entertainment while also testing their creativity (Pöllänen, 2013). In the Werregue coiled basketry, women are the leaders in instructing the art of basketry in their families. The female figures started instructing their children from a young age in basketry. In a study on Guatemalan fabrics, a participant hoped that her daughter would continue with the tradition (Olson, 1999). However, she recognized that the market was changing as well as the dynamics which demand diversified products (Olson, 1999). Emerging technologies are changing the interest of new generations to continue pursuing the craft (Scrase, 2003) as younger generations are more prompt to be involved in independent ways of discovery (Cristancho & Vining, 2009). Participants mentioned that young people tend to make different designs than those made by older adults due to young people having access to the internet and other sources of information that their elderly have less frequent access to if any at all. The vast majority of participants manifested that they teach basketry to their children. However, some have concerns for their children’s future in view of how unstable the market is becoming for the commercialization of these products.

The discourse of race emerged during the interviews. Race in Colombia is founded in a mental construct derived from the colonialist domination and thus it has an effect in power relationships in today’s world (Quijano, 2000). When participants refer to the “free man” to describe the white-mestizo or foreigner who buys the baskets, they may be relating to the notion of “white man” being a “free man”, a concept rooted during the colonialism period (Allen, 1994). According to Quijano (2000), Spanish colonizers associated phenotypic traits such as color,
and they categorized skin color as race. The Spanish settlers also denominated themselves as white men (Quijano, 2000). During the interviews, the participants referred to the white man as free man, this may be as a construct of the power relations associated with the European phenotypic trait (Quijano, 2000). For instance, in a study conducted with the Wabanaki people on basketmaking in Maine, a U.S. state in the New England region. They expressed how they are seen by non-natives as incapable to perform other activities different from basket making (Neuman, 2010). Many of the buyers made racist comments in which they affirm that the indigenous people do not know how to read but they still know how to make baskets (Neuman, 2010). The common association between race and behavioral characteristics is the result of the power relationships institutionalized by the domination based on Eurocentric thinking (Quijano, 2000). The fifty-seven-year-old female participant described her children as being black and then she referred to the idea that her children do not have her color of skin. Therefore her children are not having interest for indigenous activities like basketry. This idea may be a clear example of the misconception between phenotype traits and race. Other studies will be required to understand the generational aspect of basketry within interracial couples or indigenous- with non-indigenous relationships.

5.1 Socio-cultural Context.

Indigenous communities who share similar ecological environments may share common technologies (Jordan & Shennan, 2003). The cultural exchange of the basketry technique is seen in the case of the Werregue baskets. The Werregue basket is not exclusive to the Nasa culture, they are also made by the Wounaan and Embera peoples in Colombia and Panama. From the literature review it was previously established that the Wounaan community was the first indigenous tribe in Colombia to use Werregue in the development of coiled baskets. This craft was introduced by a missionary who previously worked with Ba Yei and HaMbukushu people from Botswana.
Wounaan indigenous people are located in Colombia and Panama and continue working with basketry today. (Bernal, Galeano, García, & Palacios, 2013). The Embera indigenous people also are recognized for their basketry and they have been widely dispersed in the Colombian territory (Frausin, Trujillo, Correa, & González, 2008). The historical dispersion of indigenous communities in Colombia (Rappaport, 1994) may explain the adaptation of this coiling technique from other indigenous groups. This situation is particularly common in Colombia, in which the ecological diversity is associated with rural economies and the wide ethnic diversity within their territories for cultural exchange. There is a strong relationship between indigenous knowledge and place (Posey 1985; Ellen & Harris, 2000). The relationship human-environments lead to the importance of documenting the changes in ethnobotanical knowledge of indigenous communities who have been displaced from their territories (Frausin, Trujillo, Correa, & González, 2008). For instance, the Colombian government re-located a displaced Emberá-Katío indigenous community who are known for the development of baskets and who are originally from the Chocó bioregion (southeastern Panama to northwestern Colombia) were displaced to Florencia, Caquetá 36 years ago. In this new setting, they learned and started fabricating jewelry with 34 plants species (Arango & Sánchez 2004). Despite being known for their baskets in their original environment, they learned and started working in other crafts as a strategy for subsistence. This case exemplifies changes in ethnobotanical knowledges used by native communities in their environments. The use of the same species by multiple indigenous groups is strengthened by the fact that several species of plants have wide distributions in the tropical region of the Americas and therefore used by multiple ethnic groups (Frausin, Trujillo, Correa, & Gonzalez, 2008). Astrocaryum Standleyanum is distributed from Costa Rica to Panama and along the Pacific slope of Colombia and Ecuador (Garcia et al.,
Diverse indigenous communities use this palm for multiple purposes (Pedersen, 1994; Fadiman, 2003; Runk, 2001; Ceballos & Franco, 2003; Valderrama, 2011; Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007).

Colombia is known for political instability due to drug trafficking and guerrilla warfare (Escobar, 2003). The dispersion of indigenous communities in the Colombian territory affected the development and commercialization of Werregue coiled baskets. The displacement is mainly driven by the presence of armed groups fighting for territory, for drug cultivation and trafficking in Indigenous and Afro-Colombian areas (Escobar, 2003). According to Gómez (2000), Since the conformation of Tierradentro, where Nasa indigenous people were living organized in families, a diversity of historical events have pushed Nasa indigenous out from their territories. In the 1940s and 1950s, when the bipartisan war between conservatives and liberals started in Colombia, they began a violent time that dispersed Nasa indigenous communities located in Cauca, Huila, Tolima and Caqueta to other regions in Colombia. Following, the armed Colombian conflict starting in 1960s, with the presence of armed organizations such as Revolutionary Armed Forces of Colombia-FARC, the National Liberation Army (ELN) and United Self-Defense Forces of Colombia (AUC), these organizations with their standing armies fighting for territory for running drug cultivation and trafficking mainly where indigenous and Afro-Colombian people live (Rappaport & Saldívar-Hull, 2005). The displacement in Colombia has been changing the indigenous ethno-botanical knowledge (Gonzalez, Ortiz, & Frausin, 2012). Some groups of Nasa indigenous have been relocated in other regions and settled in conjunction with other indigenous tribes (Ministerio de Cultura, 2014). Other situations that sharpen the permanence of the natives in their territories is the conflict caused by private interests for exploitation of mineral and natural resources (United Nations High Commissioner for Refugees, 2018). Under these circumstances,
indigenous people are forced to be displaced and adapted their practices in other territories (Rappaport & Saldívar-Hull, 2005). My two research settings, Cali and La Delfina, Valle del Cauca, one urban context and the other rural context, they are places inhabited by native communities. In the Pacific region, La Delfina is a village where the Nasa and Embera indigenous communities coexist with Afro-Colombians. They are living in reservations that are known as resguardos. In the city of Cali, Nasa indigenous had formed cabildos to adapt to the challenges in the urban context. These situations modify their lifeways and artisanal labor (Escobar, 2003).

Another effect of the Colombian armed conflict in the Werregue coiled basket production is the restriction of tourist’s access to the rural settlements in which the basket is produced because of the presence of armed groups that put tourists in risk. Therefore, Nasa people do not have the opportunity to sell directly to consumers and consequently have to travel to the inner cities to sell their products. Another effect of the armed conflict in the Werregue coiled basketry production is that the indigenous who have been displaced to the inner cities because of the multiple confrontations in their region have to buy the material from people who come from the rural areas. Sometimes, even non-indigenous people like Afro-Colombians sell them the material. The lack of access to the material by their own means and being limited to buy it from individuals who come from the forest has a deep impact in the basket itself. For example, the basket’s size and the intensity of its colors (basket makers tend to be resourceful with the material) when they are living in the urban context. In economic terms, buying the material from others instead of acquiring them by their own means represents less profit from their craft. As a consequence, indigenous are pushed to complement their income with other crafts such as beadwork and weaving. Participant who manifested to complement their income with other craft were generally those living in the urban context of Cali.
5.2 Design

Design is a product of cultural, environmental and material interaction (Sheehan, 2011). In the case of the Werregue coiled basket, the design is made intuitively. The basketmaker combines the materials in the practice of coiling the basket as they work, only the basket makers’ hands are needed to coil the baskets. There is not a previous sketching stage. This intuitive design process could be driven by the mind and its natural tendency to interpret how nature works is reflected as a form or representation of the level of understanding of the world (archetypes), which is externalized with symbols (Lewis, 2012). The design depends more on the color ranges provided by the Puchicama and Achiote than by any specific design trends. Participants tend to focus on specific sources of inspiration that are presented in this work such as geometrics, zoometric, and gods. Wright considers that geometric designs are common in coiled baskets (Wright, 1977). If the dyes are scarce, the basket makers leave the basket with its natural color (Sentance, 2001). This is the case for the basket makers in the inner cities where they have a limited budget to buy Werregue and therefore tend to leave the basket in their natural raw color and small sizes.

Rossbach (1980) reported the practice of burying the fibers to provide a darker color range in Amazonia and Central Africa. The same practice is used for the Werregue baskets’ dyeing process. The effect of buried fibers after the dyeing process could be explained by the action of substances in the soil that act as a mordant (Sentance, 2001). The indigenous did not explain the correlation between the soil and its effect in the change of color in the dyes. However, the empirical knowledge of burying the dyed fibers still persist as a practice. Sentance (2001) argues that the limitation of the colors provided by the dye plants leads many of the natives to incorporate artificial sources of color. This situation has not been stated within the interviews. The indigenous
manifested that in order to have an intense color, it is required to have sufficient Achiote and Puchicama material.

5.3 Sourcing and Conservation

The growing number in handicraft production based on non-timber products raises concerns on natural resource over-exploitation (Arnold & Pérez, 2001). In Colombia, wildly grown raw materials need the support of production systems otherwise, their exploitation will lead to depletion (Kusters & Belcher, 2004). Werregue as a non-timber product establishes a dual debate between conservation and economic growth (Arnold & Pérez, 2001) because of its role in sustaining household income and the continuous scarcity of the plant species. In the last twenty years, the interest of implementing extensive protection programs for the conservation of plant species has emerged (Greene, Hammett, & Kant 2000). Following the qualitative information gathered from the study it was evident how difficult finding the Werregue material has become for artisans. People must travel larger distances to find the material, making trips of 3 to 7 hours. Long trips represent less willingness to carry the media luna since it represents an extra weight during the trip. Despite the fact that coiled baskets are made from a natural fiber and dyes, and also support local economies, the economic benefit does not obscure the fact that it is the result of an extractive process of a vegetal species that has an environmental impact. It is crucial to prevent the use of harvesting strategies that compromise future availability of the plant (Kusters, & Belcher, 2004). Cutting down the palm is part of those strategies that compromise the species existence in the future and therefore, the craft itself. For example, the palm takes between 7 to 8 years to achieve an adult stage (Pedersen, 2014) in which the palm can provide the fiber material. The practice of cutting the palm down is threatening the existence of the species in its adult stages for the continuity of the basketry practice. Focusing the production in one specie implies a risk in
terms of market fluctuation and material scarcity (Arnold & Pérez, 2001). As an example, in a study conducted with collectors in the Michigan Upper Peninsula on grapevine baskets, it was revealed how environmental organizations established as a norm of taking only what is needed (Greene, Hammett, & Kant 2000). Clearly, the scarcity of the palm affects the number of baskets that basket makers are able to make.

Initiatives for conservation and the sustainable management should be implemented to guarantee the survival of the species as well as the continuation of basketmaking. From this study, the current scarcity of the palm indicates as primary causes (1) deficit planning of land use and renewable resources, (2) deficit in adoption of harvesting tools (media luna) by communities (3) low technical assistance in the palm extraction and management. The first problem is deficit planning of soil use and renewable resources caused by the incorporation of extractive process for the palm fiber. This can be alleviated by the implementation of a conservation plan to sustain the use of palm and its availability in the future. As a second problem, the shortage in the adoption of the harvesting tools by communities, in this case, the media luna, can help to alleviate the pressure of the palm, and more modern tools such as monitoring technologies to identify the population of plant species in the area. As a third problem, technical assistance in the palm extraction and management by environmental organizations. The issue of exchanging baskets for food is used as a subsistence-oriented strategy and may indicate food scarcity as an underlying cause that drives the extraction of the palm. There are crop systems with foods such as potatoes, yucca, and fish that can reduce the pressure over the extraction of Werregue. For example, the establishment of a Hectare of the palm "Astrocaryum stendleyanum" by each family producer and basketmaker, establishment of agricultural systems such as potatoes, yucca, papa china (Ministerio de Ambiente,
Vivienda y Desarrollo Territorial, 2007). These measures will help to protect the palm and the conservation of the craft.

5.4 Cultural Capital

In Bourdieu’s work, cultural capital can be embodied in the form of art (Bourdieu, 1984). During the interviews, it was evident that the indigenous believe in their form of art as a subsistence strategy. Some of them consider that explanation of their artisanal process to non-indigenous people may diminish their ability to continue having a lucrative practice from this craft, although the Werregue coiled basket does not have competition from machine-made copies. Baskets still fall into the commodity category. In Bourdieu’s symbolic world, there is a need to evolve from commodity to an art piece in order to access higher cultural capital markets. Participants manifested that their baskets are appreciated by tourists due to their artisan technique and the use of natural dyes. However, the commercial sizes of baskets limit their storage capacity weighing in more symbolic value rather than its functional value (Bourdieu, 1984). The Werregue coiled basket is used for decorative purposes. For example, an interviewee explained that her buyer was thinking of storing flowers in one of the purchased baskets. Another participant mentioned that they did not know the purpose of the basket for their buyers but still his interest is to sell his basket. This situation is parallel to the inconsistent number of baskets participants are able to sell weekly (1-3 baskets).

The size of the baskets is the characteristic that defines the basket’s functional purpose. In the case of the Werregue coiled basket, it has a functional purpose for their artisans (storage and transportation). An analysis of the functional value of basket under Bourdieu’s distinction (1984) depicts them as art object acquired to symbolize a function that they do not actually fulfil. The sizes of baskets may indicate that their symbolic value overpasses their functional value. The
artifact’s function is not questioned and serves as a ritualistic instrument. In the case of the Werregue basket, its size does not fulfill its original functional value due to its limited capacity to store other goods and this fact may be an indicator of the kind of object whose symbolic value overpasses its functional value (Bourdieu, 1984). The storage limitation is compensated through the symbolic value provided by the community who makes the basket. In contrast, the symbolic value associated with the level of authenticity of the piece may be distorted by the mutual interaction between artisans and buyers, the scarcity of the palm, customers and marketing channel in which the basket is priced.

In Campbell (2005) consumers are transformative agents of the authenticity of artifacts. The discussion of authenticity in regard to the meaning of objects started by considering the meaning of the object within the culture that it is created (Dolezal, 2011). In this case, the Werregue basket may mean for its creators, a utilitarian object, in which it serves for storage and transportation. By introducing the indigenous’ need to sustain in a capitalist economy, the werregue basket became a source of subsistence, the pursuit of economic capital value in this artifact changes its current meaning (Scrase, 2003). Nowadays, the Werregue basket may signify for its creators a source of income and reserved value in the case of exchange with other tribes. This research did not include the appreciation of consumers for the Werregue coiled basket. From the participants’ view, it is a product for exchange or trade for goods or cash income and it is not currently used for daily activities. The participants think that their buyers like coiled baskets as a symbol of the Colombian handicraft culture. However, participants stated that they would like to have more basket sales. While they expressed their limitations, they also linked the difficulties in selling the baskets. This establishes the need to innovate using the coiling technique and the Werregue in the development of other forms of craft such as necklaces, rings, and bracelets.
increase the income flow for the communities. This raises the question of authenticity in incorporating this artisan technique into other products that meet a more diverse range of purposes. However, the action of using this material and technique with other purposes falls into the transformation power that consumers have in their craft. However, their difficulties for production and sale of their baskets may require the implementation of basketry techniques in a series of other products that consume less material and time-consuming work but question the concept of authenticity. Comparing this study with previous research in Astrocaryum Standleyanum (Pedersen, 1994; Fadiman, 2003; Runk, 2001; Ceballos & Franco, 2003; Valderrama, 2011; Ministerio de Ambiente, Vivienda y Desarrollo Territorial, 2007), the palm has been used by a diversity of indigenous and Afro-Colombian people in Ecuador, Panama, and Colombia to develop products (baskets, mats, furniture) and is driven by a need-based strategy.

5.5 Market

Four channels have been identified primarily to sell the baskets: Fairs, craft retailers, indigenous members, and street markets. The market channels are preferable according to the level of income security they can provide to the indigenous. Craft fairs are considered the best opportunity to sell their baskets. This exhibition spaces provide a sense of pride for the artisans. For the dissemination of art though fairs, the role of government institutions is critical. They have the economic resources to place environments for craft exposure. From the interviews, participants considered this scenario as the most suitable for selling the baskets since these fairs can attract a more specialized client.

Basketmaking is known as one of the oldest form of textile crafting (Wright, 1977). Historically, baskets created by native communities have been used for storage, gathering, and carrying goods (Cary, 1975). Basketmaking was initially an activity for local consumption rather
than a trade in which long distances had to be traveled for commercialization (Rossbach, 1980). Nowadays, Werregue coiled baskets are produced for a profit pursuit rather than for private consumption. In a study in Botswana basketry in Southern Africa, the baskets are also made for a profit pursuit, around 15,900 baskets are created every year and sent to export, they have replaced the use of the basket in their daily activities for plastic buckets (Yoffe, 1978). In the case of the Werregue coiled basket, it still has a functional purpose that overtime has become limited due to the sizes of the baskets for commercial purpose. The interviewees referred to the common use of baskets within the community. However, they affirm that they make baskets with the purpose of trading them for money or other products. Three people expressed separately specific sizes when they were asked about the prices (see Table 6). The agreement of the same sizes with an assigned price among the interviewees may attest to standardized definitions of sizes for touristic and cultural consumption. In the discussion concerning the use of baskets, the participants manifested that the baskets are mainly designed for decorative purposes, and depending on their size, they can hold flowers. Despite the basket having a functional value, the size of baskets for touristic consumption tends to be small. One argument is that the time-consuming work of coiling one small coiled basket is around 20 hours, plus the scarcity of the Werregue materials, facts which lead to a higher price compared to other Colombian handicrafts (molas, beadwork with chaquiras and embroidery). Other products made by artisans have more affordable prices than the Werregue coiled basket. For example, a bracelet made in beadwork with artificial beads can cost between $10,000 COP - $20,000 COP ($3 USD and $7 USD), compared to a small Werregue basket that will cost around $14.40 USD. Therefore, in the case of a tourist looking for multiple souvenirs, price will be an essential criterion that may influence their willingness to acquire either several small baskets or a large one. According to the interviewees, the small sizes tend to sell more than
the large ones. The large baskets (8.66 inches or more) are commonly requested by craft retailers or institutions for art exhibitions.

In Bourdieu's symbolic world, commodities can become art objects through an associated meaning (Bourdieu, 1984). Craft retailers as the second most preferable channel perform their function as explainers of the cultural value of their commodities in order to promote their worth (Shultz, 2015). Therefore, they add to the product’s symbolic value. In a study conducted with craft retailers in the United States, one of the aspects considered by craft retailers to evaluate success in their business was their ability to educate consumers about crafts (Paige & Littrell, 2002). Craft retailers also play a role in reducing the level of uncertainty created by selling baskets in a street market (Olson, 1999). The perspective from craft retailers was not the objective of this study. However, participants manifested that craft retailers are the second most preferable way to trade the baskets because of the income security provided by a purchase order. When indigenous people sell their baskets in the street market, they may have to mobilize from rural settings to the inner cities, coming to the inner cities with their baskets without a purchase order does not guarantee success in selling their baskets. They can spend money on transportation, food, and shelter, and still have difficulties selling the baskets on the street. As it was expressed by a participant, the mobilization to the inner cities without having the certainty of participating in a craft fair, or delivering their product to a specific craft store, is a risk that the indigenous people would like to avoid by having an order from a craft retailer. In the mechanism of indigenous members as a market channel, two roles are discovered from the qualitative data. The indigenous leaders get contracts from craft retailers from the inner cities and then return to the pacific region to start production, and the indigenous members who live in an urban context, and therefore source
material from indigenous members who are coming from the Pacific region and create the baskets and sell on the street.

The street market as the least preferable means to sell the baskets. For example, participants who claimed their frustration regarding craft selling on the streets have complemented basketry with other crafts such as beadwork and weaving since these artisan techniques take less time, and they can also use synthetic materials easily found in the city. The street market is challenging for the Werregue basket makers as a result of income insecurity and informality. This mechanism is used by indigenous who have been displaced from the pacific region to the cities. Participants expressed their concerns on this situation. They mainly focused on the disadvantages of street markets. Other craft communities in the global south have faced the same challenges on selling in the street. For instance, crafters in Eastern Cape, South Africa, expressed three problems for selling their products on street markets: They are vulnerable to people who would like to buy their products on credit, people who bargain for lower prices, and individuals who steal their crafts (Pereira, Shackleton, & Shackleton, 2006). In this study, participants expressed concern about the number of baskets that they are able to sell in a given time. They long to sell more baskets in order to sustain their household expenses. The participants who expressed these situations are primarily those who sell in street markets. As expressed in Scrase (2003) being an artisan in the street markets is being a subject of fluctuations between income and poverty, craft production can provide a sense of symbolic power, but it can become unsustainable overtime. The participants proposed that it would be easier for them to have monthly contracts with a craft retailer, so they can have a continuous source of income and avoid the challenges generated by selling by themselves on the street.
Artisans organized in the form of cooperatives may have a stronger structure to trade their products in national and international markets (Chambers, 1997). They can request a premium price for the products while being associated as a cooperative, and they can pay less in the sourcing of materials (Olson, 1999). In the case of the Werregue coiled basket, the structure of organizing group trips to search for Werregue identified by three participants may be a parallel activity to the act of purchasing the supply materials in group. In addition, being part of a cooperative, they can join labor capacity to fulfill purchase orders from craft retailers in foreign countries (Olson, 1999). Another example from the interviews that can be similar to a cooperative structure is the collecting coiled baskets to be sold in cities. Members contribute baskets to the collective, and then the leaders are responsible for taking the baskets and selling them in fairs or to craft retailers. When the indigenous leaders return, the profit is distributed proportionally according to the contribution of each member. This contrasts with the cooperative mechanism described in an experience in which the author critiqued the unequal distribution of profit among the community. Being organized as a cooperative also draw more the attention to receive institutional support (Olson, 1999) to be used in education building programs in business skills, marketing, and networking. In a study comparing four craft communities, Kuna, the Zapotec, the Otavalan and Quechua (Stephen, 1991). This study found common characteristics of a successful craft enterprise; ethnic solidarity, control on the marketing of their craft and maintenance of non-capitalist forms of exchange (Stephen, 1991). These conditions allowed the crafts communities to keep a healthy craft environment and facilitate their product commercialization. In the case of the production of the Werregue basketry, strategies such as a group of baskets to sell and being part of a cooperative also provides a level of pride to the artisans (Chambers, 1997). For instance, at the Qualla Arts and Crafts in Cherokee, North Carolina, their members have expressed a sense of pride for being
invited to multiple craft shows and receiving federal assistance for their contribution on the revival of the art of crafting (Chambers, 1997). In regard to the exporting of the Werregue basket, just one participant manifested being asked by a Mexican intermediary who claimed to be interested in buying baskets. The participant was enthusiastic about the idea of receiving a purchase order from the Mexican craft retailer, but the Mexican intermediary did not place the order. Olson (1999) suggests that cooperatives should be more largely implemented in craft enterprises to strengthen the artisanal activity and as a way of sharing knowledge among the participants. From the interviews, the challenges in obtaining a steady income from crafting reaffirms the idea of the importance of implementing cooperatives to alleviate this issue.

5.5.1 Customers. Consumers value crafts for their utility and perceived symbolic value (Costin, 1998). The understanding of the market channels for selling the handicrafts helps improve marketing strategies (Dash, 2010). Dash’s (2010) study on the Orissa handicrafts in India found that (76.7%) of participants had been motivated to purchase handicrafts for their artistic nature. In the case of the Werregue basket, the indigenous affirm that their customers buy the baskets for their artistic value (Dash, 2010). The first group is comprised by foreigners and locals, both in the category of tourists, people who the indigenous refer as “free man”. The tourists play a double role; first they have an effect on the numbers of baskets that the indigenous can sell. However, their second role, which is their sole presence, leads to the commoditization of traditional crafts (MacCannell, 1973).

Campbell (2005) makes the distinction of the symbolism of the product and the meaning of the action for which the consumer acquire the products. In other words. The meaning of the objects and the meaning of the actions. For example, one argument to justify the acquisition of crafts made by indigenous communities is the need to reaffirm the historical power hierarchies
created during colonialism. As the consumption of craft is seen as signifier of taste of high cultural
capital (Campbell, 2005). Tourists involved in crafts consumption may seek for a gratifying
experience in which they perform as altruist feeling for buying from “indigenous” people (Taylor,
2001). In the discussion of the role that buyers play in the modification of crafts, during the
interviews, the indigenous did not manifest how power relationships affect the design since they
mainly refer to be driven by an intuitive process. However, the current small sizes of the baskets
may be an indicator of a consumer driven impact on the characteristics of the baskets. Similarly,
in Pueblo Cuatro, Mexico, artisans care more about the number of products that they sell, more
than the kind of products they prefer to make (Olson, 1999). The study of the Wanabaki community
in Maine described how native artisans analyzed visitors’ perspectives of their Wanabaki identity
and used this information to plan their strategies to make their baskets more attractive (Neuman,
2010). Indigenous and Afro-Colombian groups who suffered during colonialism from level of
inferiority created by the colonialist settlers, are still present today in the power relationships
between artisans and buyers. While in the position of conspicuous consumers in the role of
manipulators of the meaning of the artifacts (Campbell, 1995). The cultural consumption from
tourists may be driven by their need of exoticism to reaffirm their distinction within a society
(Scrase, 2003). Therefore, the changes that artifacts undergo are driven by the idea of making them
more interesting to the non-indigenous people (Cohen, 1988).

5.5.2 Economic importance. Craft production for local consumption is commonly
individually managed and household based (Littrell & Dickson, 1999). The income from the
production of coiled baskets is regulated by the availability of materials, the basket makers’ ability
to sell their baskets, and the inflow of tourists to the inner cities. One internal aspect is the
availability of the materials that people use for the development of baskets. The external aspect is
the influence of tourists in the inner cities. There is a strong connection between the decline in the flow of tourists and the sales of handicrafts (Cohen, 1988). In these conditions, a monthly income can range between $57.6 USD monthly (one basket weekly, 14.40 USD per basket) to $230.4 USD monthly (three baskets weekly, 14.40 USD per basket). In comparison with a study in Panama, in which the income can vary from $15 to $500 USD a month from this activity (Runk, 2001), this study did not state the ability of these indigenous communities to trade their baskets for other products as it occurs in Colombia. Basketmaking as a money pursuit activity is also seen in a Village in San Juan Guelavia, Mexico. In this study, the basket makers have described that this activity quickly became a money pursuit activity rather than a tradition (Cohen & Browning, 2007). One member of a household was sent to the United States to get contracts for selling baskets. In this community, men are basket makers. A male, head of household work on household activities and basket making has learned his craft from his father and has been able to share it with his children (Cohen & Browning, 2007). He considers that basket making is more an economic security activity. As the pursuit of basketmaking is driven by the need to obtain money, it raises a discussion of its commoditization and how it shapes its implicit art form. Commoditization is described as the process in which goods are evaluated according to their exchange value (Cohen, 1988). As concluded by Stephen (2005), the production of handicraft relies in the commoditization of indigenous culture.

The baskets are usually sold in the inner cities or exchanged for other goods in the rural context. The influx of tourists to the inner cities, in which the baskets are sold by the indigenous on the street markets, fairs or by craft retailers. From the information gathered in the interviews, people have to move to the inner cities to sell their baskets because their location in the forest in the Pacific region restricts the presence of foreigners due to violent incidents that take place in
these territories. The practice of barter, exchanging goods without the use of money (Ferraro, 2011) plays a crucial role in the trade of baskets allowing the basketmaker to have access to products and services in exchange for her/his baskets. The flexibility of barter helps the indigenous to access goods in exchange for their artisanal labor. Similarly, natives from a community in Eastern Cape, South Africa (Yoffe, 1978) use crafts as a form of payment for services or goods received from neighbors, and thus contribute to the household income. Within a cashless barter system, in the knitting community of in the Shetland Islands community in Scotland, a group of women traded their cloth in exchange for hosiery, others were more selective in exchanging knitting work for sugar and tea (Abrams, 2006). The women exchanging for hosiery were criticized for receiving the benefit of dressing well however they were not fulfill their need of food supply in exchange of their work as the cases seen in South Africa and Colombia.

Scrase (2003) criticizes the overproduction of crafts in the global south. He acknowledges that artisan production plays an important role in rural communities who are not able to access to the cash economy, as well as in how they use local resources for their own subsistence, such as in the case of an artisan’s labor that allows him/her to exchange his/her products for other goods. However, he argues that the mass production of goods imitating those products are in high competition for handmade products. In the artisanal labor there is a high risk in generational relations when the craft becomes the primary source of household income. In regard to the competition of the Werregue coiled baskets in the craft context, during the interviews, one participant did not express any concern on machine-made copies competing with the Werregue coiled baskets. A participant claimed that the lack of competition with machine-made copies of the Werregue coiled basket is due to the complexity in the original basketry technique, as well as the use of natural dyes that makes it difficult to imitate by a machine. From my experience visiting
craft retailers, I have not seen a machine-made copy of the Werregue basket because they are currently inexistence. This states an advantage for the artisans’ ability to sell their baskets and not competing with machine-made copies which is a challenge faced by other craft communities in developing nations that diminishes the artisans’ visibility in the market and increases their difficulties to trade their products (Dash 2010).

5.6 Addressing the Research Questions

This study explores the sociocultural traits, designs, production, and marketing of Werregue coiled basketry in Colombia. During the development of this study, three research questions were answered. The first research question is how coiled Werregue baskets are produced from the initial stage of material extraction to the final product. This question was answered by identifying the changes in the sourcing of the material according to the location of the Nasa basket makers. In a rural setting, basket makers have access to the plant species of Werregue, Achiote and Puchicama which are sourced by their own hands. In contrast, when basket makers live in an urban context, the lack of access to the plant species consequently reduces the basket makers’ profit margins since they have to pay for the materials which come from the Pacific regions. In addition, this study reveals that the Colombian armed conflict has played a major role in the modification of the production and commercialization of the baskets given that it is the primary cause of indigenous displacement and the most significant restriction for tourists to access the rural settings in which indigenous people are able to sell directly to customers in the Colombian Pacific region.

The second question is what the sociocultural factors involved in the production of Werregue coiled baskets are. This question was answered by identifying the gender and generational dynamics in the context in which the baskets are produced. In regard to the gender
dynamic changes according to the basketmaker’s location it has been evinced that in the rural settings men search for material and women coil the baskets. In contrast, in an urban setting, both genders work together to complete purchase orders from craft retailers, or with the sole purpose of selling them on the street market with an aim to sustain their household income. The design of each basket is made intuitively by creating geometric, natural, and god inspired motifs. Basket makers predominantly complete the baskets without the use of tools. In the case of incorporating tools, participants use a needle to insert the stitches into the intersection of previous coiled segments. Coiled basketry is a time-consuming endeavor and it is transmitted by the observation of the female figures of the family by their children and the new generations who learn at an early age and during their adolescence. Generational aspects have an impact on the basketmaker’s ability to tie the basket. Younger generations of basket makers have greater strength to make baskets than the older basketmaker generations due to their physical strength to polish and adjust the coiled bundles since they have greater body health and suffer from less physical wear on their hands given their short time of work done through their years of life.

The third research question is what the economic importance of the Werregue coiled basket production is, its main buyers, as well as the mechanisms to sell the baskets. This question was answered by finding that the economic importance of baskets relies on the ability to exchange them for other goods (barter) or cash income. Barter is a common mechanism to trade the baskets within indigenous groups and with afro Colombian groups in a given rural context. Cash income is obtained from selling the baskets in the four identified market channels: fairs, craft retailers, indigenous members, and street markets. The market channels are ranked in terms of their proneness to attract customer segments with a large financial capacity to pay the price defined by the artisans. Therefore, foreigners are considered the most preferable customer segment for selling
the baskets, followed by national visitors, art collectors, students, and other indigenous members. The participants affirm that their customers use the baskets for decorative purposes; for example, as a reservoir for flowers or as a representative souvenir of the Colombian. As basketry has become a profit-seeking activity, the functional value of baskets within the community has decreased overtime. The baskets were initially used in the community as containers for carrying food and water. Nowadays, they are not currently made for their personal use, instead they are regarded as a means for sustaining their income. The small size of the baskets is explained by the progressive scarcity of Werregue and the time-consuming work required to complete each basket. For instance, participants affirm that it is easier for them to sell a small basket (approx. 4.33 inches) than selling a large basket (up to 8.66 inches) because the small basket requires less material and time. Consequently, the price of small baskets makes it easier for the basket makers to sell and for the tourist to purchase. The participants affirm that they prefer more sales coming from purchase orders from craft retailers to secure the income over the long term. Participants living in the urban context complement the income from coiled basketry with other artisanal work forms such as beadwork and weaving since these crafts require less time and use synthetic materials which are bought in the city. The three research questions were answered from the data collection and analysis.
CHAPTER 6: CONCLUSIONS, CONTRIBUTION AND FUTURE RESEARCH

6.1 Conclusions

The production of the Werregue coiled basket is an interlock among culture, communities, and the need for conservation. It highlights the differences between sustainable management and economic growth. Its design and production are more restricted to the availability of the materials and color range from the selected plant species rather than the specific acceptance or demand from the market. The use of mud to fix color is a practice seen only in Colombia compared to other studies in the use and management of Astrocaryum Standleyanum in other regions (Ecuador and Panama).

The Werregue leaves are obtained using two methods: the sustainable method that requires the use of the media luna and the destructive method that is performed by cutting the palm to reach its spear leaves. The leaves are separated into thinner fibers and exposed to the sun for five days. The coloration process is done with natural dyes (Puchicama and Achiote). When the colored fibers are ready, the basketmaker coils the basket. This process can take between one to four weeks depending the size of the basket, and it is mainly a morning activity. Basket makers affirm that the process is entirely intuitive and it starts with having the materials dried and ready to integrate through the coiling. Only the use of hands is sufficient to make a basket. Optionally, knives can be used to cut segments of the fiber, as well a needle to facilitate the insertion of the fibers to create the motifs around the coiled bundles.

The practice of the basketry craft is restricted by the availability of Astrocaryum Standleyanum. Unfortunately, recently, this species has become scarce, and basket makers have to make longer trips to find the material. For example, non-indigenous groups, the Afro-Colombian
people, who know the economic value of the palm, harvest it and then sell it to the indigenous people in exchange for goods (plantain, potatoes, yucca, meat, et cetera), or money.

The baskets are traded using four channels; fairs, craft retailers, indigenous members, and street markets. Fairs are the preferable means to sell the baskets since the artisan can access a wide range of public networks for future opportunities. However, this mechanism is limited to the number of events that the basketmaker can participate in during the year, and it requires that the basketmaker travels to the inner cities. Selling baskets to craft retailers favors the basket makers, but the basket makers have to sell at a wholesale price which causes a reduction in their profit. This situation is even more critical when the basketmaker is living in an urban context and has to pay for the Werregue sourced by indigenous from the forest. The third alternative is advantageous to the indigenous members in the sense that they can trade baskets for other goods, or leave their product for their fellows to sell and send the money afterward. This mechanism provides a sense of trust since they are members of the same community. The last alternative are street markets in which the individual seeks public places such as parks, local administrations, and cultural places in the inner (Bogota, Cali, Medellin, Buenaventura, Cartagena, and Pereira), and then places his/her baskets on the ground in order to attract the attention of passers-by. This practice encompasses a level of uncertainty as well as many physical limitations. These four alternatives describe the diversity of strategies employed to sell the baskets. The understanding of the market alternatives helps us identify the most preferred alternative and how organizations promoting handicrafts can help to strengthen these means of trade.

It has been evinced that the price of baskets is determined mainly by the availability of the required raw materials as well as by the effluence of tourists from the inner cities (Bogota, Cali, Medellin, Cartagena, Pereira), who visit fairs, craft stores, and public spaces. The economic
importance of the palm and the basket making practice relies on the income and the ability of the basketmaker to support household expenses such as health, food, and transport, with its trade. This relationship helps us understand the value of basketry beyond its cultural heritage.

### 6.2 Contribution

The findings in this research can help other researchers understand the meaning of basketry from a different context, and also to contrast their findings from the meaning provided by buyers and art collectors. This research provides insight of the symbolism represented in the basket through the motifs and colors. For example, the use of lines to describe life and the different points that life can be directed to. A life which eventually returns to its origin. The identification of the motifs and their meanings can serve to deconstruct the cultural significance of a coiled basket in a human setting.

This works links plant species and local economic growth of native communities. The findings can serve as arguments in requesting funding from national and international authorities to support the conservation of the plant species that are the subject of this study. In this case, supporting these crafting activities means the implementation of conservation projects to preserve the plant species used in the coiled basket production. It also means the implementation of capability building programs for the marketing of artisan products and the sustainable management of their raw materials.

The information provided in this thesis can help basket makers, craft retailers, and scholars, understand the commercial value of coiled basketry, the level of complexity in the fiber making processing, and the usage of dyes that can be seen in the final product. These characteristics can build a strong argument to justify the commercial value of coiled baskets. The materials, timing, and level of engagement of the artisan represents an extra effort that should be compensated within
the price. This research helps us understand the background of the basketmaker through her/his experiences and difficulties in making and selling the basket; it also enables us to know if the final price of the product is justified.

Regarding conservation, this work helps explain the economic relation between non-timber products and native communities. Beyond their ecological roles in the environment, these plant species support local economies. Thus, the understanding of their economic value beyond their environmental role can serve as a guide for the implementation and conservation of projects for the reproduction of these plant species as well as a sustainable management emphasizing the crucial role of these non-timber products in the preservation of cultural heritage and the financial survival of communities through the income obtained from their use.

6.3 Study Limitations

In reference to limitations with this study, despite the indigenous community’s proficiency in the Spanish language, a language acquired in schooling. Spanish is not participants’ first language and implies limitations in the communication process. Participants’ range of vocabulary limits the level of details they can provide thus falling in a repetitive loop in the way they explain issues. In reference to conducting the data collection. I am not an indigenous member. This fact affects the degree of confidence from the indigenous members to inform about the basketry production process. Indigenous communities are very reserved with their information. As Freeman (2009) pointed out in the discussion about non-indigenous researchers conducting indigenous studies, these communities see in their knowledge a form of cultural good that must be protected. Therefore, the non-indigenous researcher has to mediate between her/his research interest and indigenous cultural standards. This also requires the understanding that there are details that they want to reserve. The apprehension of indigenous members towards other ethnic groups is justified
in their belief that people who are not of their ethnic background should not conceive this precious secret. During the interviews, participants expressed their concern about this matter. They consider this craft as a secret of their community, so they as individuals are very reserved to comment about it because they fear an appropriation of their knowledge by other groups different from theirs, for the good and benefit of other communities. For example, participant number nine told me that she was afraid to talk about the development of the baskets because a Caucasian woman who asked her about the production of the basket, its techniques, and the cooking times of the dyes, took the information to get funding from the local government in a cultural initiative to support artisan enterprises. In the case of the indigenous community, people who are nonnative to their tribes are not treated the same way as if they had been born and had grown within the tribe.

Thirdly, this research did not include the position of buyers, the opinions about the main buyers are expressed by the participants and do not represent the buyers’ opinion. To identify the consumer’s perception will require future research with the different target groups that have been identified in this study.

6.4 Future Research

This work points to different areas for future research. In the production process, it will be useful to explore the effect of any mud in dyeing process. Participants indicated that mud plays a crucial role in providing a darker range for Puchicama and fixing color in the fibers. After the Werregue leaves are dyed with Puchicama, they are buried in mud to obtain a darker range of color (from green to black). The use of mud to achieve this purpose and fix the color opens an opportunity to identify the components in soi that makes the dyes turn into a darker color. The time the leaves are buried is directly proportional to a darker color in the Puchicama dyed fibers.
Furthermore, to explore the effect of the soil in fixing the color by comparing two samples; Puchicama dyed fiber that has been buried in the soil and other samples that have not been buried.

Regarding the innovative ways Werregue fiber can be used, a participant mentioned that students were interested in the fiber because they saw its potential in the development of clothing. The students told the basketmaker that they would like to explore the fabrication of blouses and t-shirts with the leaf fiber. This opens a research question to investigate the potential of Werregue as the main component for the development of clothing and other leaf fibers such as coir, banana, and jute, which are used for clothing purposes.

The current design of the media luna is aimed at reaching the bud as a sustainable harvesting method. However, many natives argue that this tool is heavy as well as difficult to carry during a trip of three to five hours. These arguments are used to justify the lack of use of this tool and the cutting down of the palm with a machete. This issue opens an opportunity to redesign this tool which will help promote its use during long trips. As the Werregue palm is getting scarce, in procuring the survival of the craft, it is crucial to promote the use of a redesigned means. From this research, a resulting inquiry is how to make the “media luna” a portable tool, lightweight and easy to carry to eliminate the excuse for not using the tool and thus preserve Werregue palms in adult stage.

As the basket makers manifested that it is getting harder to find Werregue, subsequently having to walk longer distances to find the material, in various interviews, individuals expressed that the material is getting scarce and consequently expensive when they have to buy it from other people who have had the chance to find it. This situation identifies the need of implementing more modern ecological mapping in order to facilitate the location of the plant species. Since the last ecological census on Werregue in 2007 (Ministerio de Ambiente, Vivienda y Desarrollo
Territorial, 2007), technology in monitoring species has advanced allowing the creation of tools for mapping and tracking. It would be crucial to implement the tracking of Werregue palms to facilitate their mapping and access by indigenous communities. These strategies can contribute to a sustainable management of the species and the conservation of the art form.

Participants mentioned that young people tend to make different designs from those of older adults since young people have access to the internet and other sources of information that the elderly have no frequent access to, if any at all. Future research can include a comparison on the inspiration sources of younger generations, as well as potential modern approaches in which they are inspired to modify the most traditional designs. Future research can focus on how the use of contemporary technologies by the younger generations of basket makers is affecting the design process and the final products.
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Noguera Vidal, S. P. (2012). *Refrescamiento de los guardianes de la medicina tradicional nasa: actitudes y prácticas en el Instituto Técnico Agropecuario e Industrial Juan Tama del Resguardo Indígena de Canoa, municipio de Santander de Quilichao* [Refreshment of the guardians of Nasa traditional medicine: attitudes and practices in the Agricultural and Industrial Technical Institute Juan Tama of the Indigenous Reservation of Canoa, municipality of Santander de Quilichao] [Undergraduate thesis]. Universidad del valle, Cali, Colombia.


APPENDIX A: APPLICATION FOR EXEMPTION FROM INSTITUTIONAL OVERSIGHT

ACTION ON EXEMPTION APPROVAL REQUEST

TO: Cindy Arroyo
Textiles, Apparel and Merchandising

FROM: Dennis Landin
Chair, Institutional Review Board

DATE: December 6, 2017

RE: IRB# E10811

TITLE: Craft production and socio-cultural context: A case study in the Wixarque coiled basketry in Colombia


Review Date: 12/6/2017

Approved X Disapproved

Approval Date: 12/8/2017 Approval Expiration Date: 12/5/2020

Exemption Category/Paragraph: 2a,b

Signed Consent Waived?: No

Re-review Frequency: (three years unless otherwise stated)

LSU Proposal Number (if applicable):

Protocol Matches Scope of Work in Grant proposal: (if applicable)

By: Dennis Landin, Chairman

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –
Continuing approval is CONDITIONAL on:
1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
8. SPECIAL NOTE: When emailing more than one recipient, make sure you use bcc. Approvals will automatically be closed by the IRB on the expiration date unless the PI requests a continuation.

* All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at http://www.lsu.edu/irb
APPENDIX B: INTERVIEW CONSENT FORM FOR NON-CLINICAL STUDY
(ENGLISH VERSION)

1. Study Title: Craft production and socio-cultural context: A case study in the Werregue coiled basketry in Colombia

2. Performance Site: Cali, Colombia

3. Investigators: The following investigators are available for questions about this study.

   Dr. Jenna Kuttruff (+1) 225 578-2282,
   jkutt1@lsu.edu

   Cindy Cordoba Arroyo (+1) 225 726 9589,
   ccordo2@lsu.edu

4. Purpose of the Study: The purpose of this research project is to analyze the socio-cultural characteristics, design, and production of the Werregue coiled basketry in Colombia.

5. Subject Inclusion: Individuals over the age of 21

6. Number of subjects: 15

7. Study Procedures: The study will be conducted using semi-structured interviews with open-ended questions, the questions are divided in four sections: (1) socio-cultural context, (2) Design, Material and Color, (3) Production and (4) Market.

8. Benefits: Subjects will not be paid to participate in the study.

9. Risks: The only study risk is the inadvertent release of sensitive information. However, every effort will be made to maintain the confidentiality of your study records. Files will be kept in secure cabinets to which only the investigator has access.
10. Right to Refuse: Subjects may choose not to participate or to withdraw from the study at any time without penalty or loss of any benefit to which they might otherwise be entitled.

11. Privacy: Results of the study may be published, but no names or identifying information will be included in the publication. Subject identity will remain confidential unless disclosure is required by law.

12. Signatures:
The study has been discussed with me and all my questions have been answered. I may direct additional questions regarding study specifics to the investigators. If I have questions about subjects' rights or other concerns, I can contact Dennis Landin, Institutional Review Board,(225) 578-8692, irb@lsu.edu, www.lsu.edu/irb. I agree to participate in the study described above and acknowledge the investigator's obligation to provide me with a signed copy of this consent form.

Subject Signature: Date:
APPENDIX C: INTERVIEW CONSENT FORM – SPANISH VERSION
1. Título del estudio: La producción artesanal y el contexto sociocultural: un estudio de caso en la cestería enrollada de Werregue en Colombia
2. Sitio de rendimiento: Cali, Colombia
3. Investigadores: Los siguientes investigadores están disponibles para preguntas sobre este estudio.
   Dra. Jenna Kuttruff, jkuttl@lsu.edu ( +1) 225 578-2282
   Cindy Cordoba Arroyo, ccordo2@lsu.edu, (+1) 225 726 9589
4. Propósito del estudio: El objetivo de este proyecto de investigación es analizar las características socioculturales, el diseño y la producción de la cestería enrollada de Werregue en Colombia.
5. Inclusión del tema: Personas mayores de 21 años
6. Número de sujetos: 15
7. Procedimientos del estudio: El estudio se llevará a cabo a través de entrevistas semiestructuradas con preguntas abiertas, las preguntas están divididas en cuatro secciones, 1) contexto sociocultural, (2) diseño, material y color, (3) producción y (4) mercado.
8. Beneficios: Los sujetos no serán pagados para participar en el estudio.
9. Riesgos: El único riesgo del estudio es la liberación inadvertida de información sensible. Sin embargo, se hará todo lo posible para mantener la confidencialidad de los registros de su estudio. Los archivos se guardarán en gabinetes seguros a los que solo el investigador tiene acceso.
10. Derecho a rechazar: Los sujetos pueden optar por no participar o retirarse del estudio en cualquier momento sin penalización o pérdida de cualquier beneficio que de lo
contrario podrían ser intitulado.

11. Intimidad: Los resultados del estudio pueden publicarse, pero no se incluirán nombres ni información de identificación en la publicación. La identidad del sujeto permanecerá confidencial a menos que se requiera su divulgación ley.

12. Firmas:

El estudio se ha discutido conmigo y todas mis preguntas han sido respondidas. Puedo dirigir preguntas adicionales con respecto a los detalles del estudio a los investigadores. Si tengo preguntas sobre los derechos de los sujetos u otras inquietudes, puedo comunicarme con Dennis Landin, Junta de Revisión Institucional, (225) 578-8692, irb@lsu.edu, www.lsu.edu/irb. Acepto participar en el estudio descrito anteriormente y acepto la obligación del investigador de proporcionarme una copia firmada de este formulario de consentimiento.

Firma del participante: __________________ Fecha:_____________
## APPENDIX D: OPEN-ENDED INTERVIEW QUESTIONS (ENGLISH AND SPANISH VERSIONS)

Participant Number/ Numero de participante:

Age/Edad:

Gender: Female/Mujer Male/Hombre

Years of experience making baskets/ Anos que lleva hacienda canastas:

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<tr>
<th>English version</th>
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<tr>
<td><strong>Basket Makers: Socio-Cultural Context</strong></td>
<td><strong>Basket Makers: Socio-Cultural Context</strong></td>
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<tr>
<td>1. What is the importance of the coiled basket in the community?</td>
<td>1. ¿Cuál es la importancia de la canasta en la comunidad?</td>
</tr>
<tr>
<td>2. What is the role of women and men making the basket(s)?</td>
<td>2. ¿Cuál es el papel de las mujeres y los hombres en la produccion de las canastas?</td>
</tr>
<tr>
<td>3. What other activities do you do besides making baskets?</td>
<td>3. ¿Qué otras actividades hace usted además de hacer canastas?</td>
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<tr>
<td>4. How did you learn to make the basket(s)?</td>
<td>4. ¿Cómo aprendio a hacer la canastas?</td>
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<tr>
<td>5. Who taught you to make the baskets?</td>
<td>5. ¿Quién te enseñó a hacer las canastas?</td>
</tr>
<tr>
<td>6. How does knowledge pass on to the next generation?</td>
<td>6. ¿Cómo pasa el conocimiento de hacer las canastas a la siguiente generación?</td>
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<tr>
<td>7. Would you like your son/daughter to become a basket maker?</td>
<td>7. ¿Desea que su hijo/a se convierta en un fabricante de canastas?</td>
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<tr>
<td><strong>Design, Material and Color</strong></td>
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<tr>
<td>1. What raw materials do you use to make the coiled baskets?</td>
<td>1. ¿Qué materias primas utiliza para hacer las canastas?</td>
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<tr>
<td>2. What are the dyes used in the basket and where do they come from?</td>
<td>2. ¿Cuáles son los tintes usados en la canasta y de dónde provienen?</td>
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<tr>
<td>3. How do you prepare the dyes?</td>
<td>3. ¿Cómo se preparan los tintes?</td>
</tr>
<tr>
<td>4. How did you learn to prepare the dyes?</td>
<td>4. ¿Cómo aprendiste a preparar los tintes?</td>
</tr>
<tr>
<td>5. How do you dye your materials (Process and timing)?</td>
<td>5. Cómo teñir tus materiales (proceso y tiempos)?</td>
</tr>
<tr>
<td>6. What are the most common designs (motifs) used in the baskets?</td>
<td>6. ¿Cuáles son los diseños más comunes (motivos) utilizados en las canastas?</td>
</tr>
<tr>
<td>What are the meanings of the motifs?</td>
<td>7. ¿Cuál es el significado de los motivos?</td>
</tr>
<tr>
<td>7. How do you get the ideas and inspiration to do the basket?</td>
<td>7. ¿Cómo obtienes las ideas y la inspiración para hacer la canasta?</td>
</tr>
<tr>
<td>8. How do you decide what motifs to make?</td>
<td>8. ¿Cómo decide qué motivos hacer?</td>
</tr>
<tr>
<td>9. What are the meanings of the colors used in the baskets?</td>
<td>9. ¿Cuál es el significado de los colores utilizados en la canasta?</td>
</tr>
<tr>
<td>10. Are there differences in the designs made by younger people in the communities than the older people?</td>
<td>10. ¿Hay diferencias en los diseños hechos por las personas jóvenes en las comunidades que las personas mayores?</td>
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</thead>
<tbody>
<tr>
<td><strong>Production</strong></td>
<td></td>
</tr>
<tr>
<td>1. What tools do you use to make the baskets and</td>
<td>1. ¿Qué herramientas usas para hacer las canastas y</td>
</tr>
<tr>
<td>their uses?</td>
<td>sus usos?</td>
</tr>
<tr>
<td>2. Can you describe the process of making the baskets?</td>
<td>2. ¿Puede describir el proceso de fabricación de la</td>
</tr>
<tr>
<td></td>
<td>canastas?</td>
</tr>
<tr>
<td>3. How long does it take you to make a basket using</td>
<td>3. ¿Cuánto tiempo tarda en hacer una canasta usando</td>
</tr>
<tr>
<td>one cogollo?</td>
<td>un cogollo?</td>
</tr>
<tr>
<td>4. Do you make baskets every day?</td>
<td>4. ¿Hace canastas todos los días?</td>
</tr>
<tr>
<td>5. How many baskets do you make each week?</td>
<td>5. ¿Cuántas canastas hace cada semana</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Market</strong></td>
<td></td>
</tr>
<tr>
<td>1. What is the basket used for?</td>
<td>1. ¿Para qué se utiliza la canasta?</td>
</tr>
<tr>
<td>2. Who are the main buyers?</td>
<td>2. ¿Quiénes son los principales compradores?</td>
</tr>
<tr>
<td>3. How long can you use this basket for?</td>
<td>3. ¿Cuánto tiempo puede usar esta canasta?</td>
</tr>
<tr>
<td>4. How do you sell the baskets?</td>
<td>4. ¿Cómo vende las canastas?</td>
</tr>
<tr>
<td>5. What is the price of a basket made of one cogollo?</td>
<td>5. ¿Cuál es el precio de una canasta hecha de un</td>
</tr>
<tr>
<td></td>
<td>cogollo?</td>
</tr>
<tr>
<td>6. What are the costs to produce and sell the baskets</td>
<td>6. ¿Cuáles son los costos para producir y vender las</td>
</tr>
<tr>
<td></td>
<td>canastas?</td>
</tr>
</tbody>
</table>

(Table continued)
<table>
<thead>
<tr>
<th>English version</th>
<th>Spanish version</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Production</strong></td>
<td></td>
</tr>
<tr>
<td>7. What is the importance of the income you earn from your basketry?</td>
<td>7. ¿Cuál es la importancia de los ingresos que obtiene de su cestería?</td>
</tr>
<tr>
<td>8. Are your basket sales on the increase or decrease? And why?</td>
<td>8. ¿Sus ventas de canasta aumentan o disminuyen? ¿Y por qué?</td>
</tr>
</tbody>
</table>
VITA

Cindy Cordoba Arroyo, a native of Colombia, earned a Bachelor’s degree of Science in Environmental engineering from the National University of Colombia while she was volunteering in several nonprofit organizations such as the DRECCA Foundation, Creactiva Foundation and Citizen School. Cindy is a fellow of the Frances Hesselbein Institute of University of Pittsburgh, Pennsylvania for her academic and leadership record.

Cindy has worked as a researcher at the Efficiency and Renewal energy research group at the National University of Colombia, where she designed and provided sustainable energy solutions for rural communities in the departments of Valle del Cauca and Cauca. Her interest is to bring the efficiency of circular systems for the apparel and textile industry. She has worked for more than seven apparel and textile manufacturing companies in the design, implementation and evaluation of their sustainability plans, including life cycle assessment and circular economy principles in Colombia. She is a member of the Latin American network of professionals in eco-design (ECODAL) and the American Association of Textile Chemists and Colorists (AATCC). Cindy is currently pursuing a Master of Science in Textiles, Apparel and Merchandising at Louisiana State University.