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Abracemos lo Nuestro: Encouraging New Ideation with Traditional Paraguayan Textiles

Andrea Gonzalez Esteche¹ and Melissa Dawson²

Rochester Institute of Technology

¹*axg1446@rit.edu*

²*mdmfaa@rit.edu*

Traditional artisan work is deeply rooted in Paraguayan cultural identity. Specifically, the traditional textiles of ñanduti, a'ó po'í, encaje jú, and po'yví promote a significant sense of pride and self in the Paraguayan people. However, in recent years textile artisans have been exhibiting an increasing lack of innovation and newness in their design ideation, resulting in analogous products flooding the market and diminishing public appreciation for conventional Paraguayan textiles.

In partnership with Paraguayan Institute of Artisans (IPA), this research embraces and builds upon Milton's design objectives that encourage communication, adaptability, expansion, and connectivity to improve interaction and cooperation between the artisans and with those that appreciate their craft. This project implements industrial design strategies to enhance the value of the Paraguayan artisans' pieces by providing customizable ways to approach product design for both the IPA and the artisans. It encourages cross-disciplinary explorations through the combination of traditional and modern ideation through various production techniques.

The Abracemos lo Nuestro Project provides new tools to artisans through a partnership with the IPA and encourages the production of more empathic, creative, and innovative products for both the Paraguayan and international markets. Its goal is to improve the appeal of the new products, the passion of the artisans, and ultimately ensure the future preservation of this important element of Paraguayan cultural identity.

Keywords: textiles, Paraguay, artisans, design strategies, social design

1. Introduction

Traditional artisan work is deeply rooted in Paraguayan cultural identity. Traditional handicrafts such as textiles, ceramics, and woodworking, play an important role in the communication of cultural values and iconic objects. These products offer a unique cultural signature. Specifically, the traditional hand-made textiles ñanduti, a'ó po'í, encaje jú, and po'yví promote a significant sense of pride and self in the Paraguayan people. However, in recent years

the textile artisans have not exhibited much newness nor innovation in their design ideation, resulting in analogous products flooding the market and diminishing public appreciation for conventional Paraguayan textiles. It is necessary for artisans to reinvent and evolve their product offerings to include updated design styling and enhanced value & functionality to address contemporary consumer needs.

The Instituto Paraguayo de la Artesanía (Paraguayan Institute of Artisans (IPA)) was established in 2004 by the passing of Law 2448, to promote the development of national crafts, encourage and protect the artisans, find marketing channels for artisan goods, and foster training opportunities for the craftspeople (Ley No. 2448/2004, 2004). In partnership with the IPA, this case study embraces and builds upon Milton's design objectives that encourage communication, adaptability, expansion, and connectivity (Rogers & Milton, 2011) to improve interaction and cooperation between the artisans and with those that appreciate their craft.,

The Abracemos lo Nuestro Project implements industrial design strategies to enhance the value of the Paraguayan artisans' pieces by providing customizable ways to approach product design for both the IPA and the artisans. Cross-disciplinary explorations are encouraged through the combination of traditional and modern ideation via various production techniques, new tools, and additional artisan resources through a partnership with the IPA. The goal of this research is the production of more empathic, creative, and innovative products for both the Paraguayan and international markets. By improving the appeal and relevancy of artisanal products and the passion of the artisans themselves, it is hoped to ultimately ensure the future preservation of this important element of Paraguayan cultural identity.

2. Paraguayan Textiles & Artisans

“In every country, cultural and traditional products identify the nation (Fayolle, Fenoglio & Lecourt, 2009).” For centuries, Paraguayan artisans have passed down their empirical knowledge from generation to generation in efforts to preserve their cultural heritage through their handicrafts. Today’s Paraguayan textile traditions in particular developed out of the agricultural society of the Guaraní people during Spanish colonialism, starting in the 1500s. It is unknown exactly when or how, but the Guaraní adapted Spanish lace-making traditions into their own. It is important to note, “from that moment on what became significant was no longer the technique but the ornamental motifs (Sanjurjo, 2015).” Paraguayan textile patterns are “inspired by landscape, nature, behavior, food and physical, social and cultural development of people (Plá & González, 1983).”

2.1. Paraguayan Textiles

While there are many traditional textiles still in production in Paraguay today, this research focuses on the four most well-known techniques (IPA, 2019):

- Ñandutí: needle lace made on radiating warp threads, named in Guaraní for the white and tight net of the spider
- A’ó po’í: fine & delicate embroidery
- Po’yví: thick woven cotton fabric
- Encaje jú: geometric needle lace on a square net or mesh ground

All of these textiles exhibit natural motifs, many of which are extremely recognizable and meaningful to the Paraguayan people, including *arasá* (guava fruit flower) and *nicho* (bird's nest).



Figure 1 - Ñandutí & Encaje jú (Photos by the author); Po'yví (Photo by Pombero); A'ó po'í (Photo by C. Fadul)

2.2. Paraguayan Textile Artisans

All artisans learn how to produce their textiles, ceramics, and jewelry by observing family or other community members producing long-established designs, as no formal training or apprenticeships are available (MIC, 2008). There is very little, if any, cross over or collaboration between artisans of different genres of work. Today, 80% of traditional artisans are between 30 and 70 years old, as the Paraguayan youth have lost interest in traditional textile production. Only 20% of today's artisans have the means to travel outside their immediate area to sell their merchandise. This limits their market to smaller locales that have significantly lower expendable income than in the capital area where more middle- & upper-class citizens live and tourism is more prevalent (IPA, 2019).

While there is variation in execution from artisan to artisan, overall the work is repetitive and generally analogous throughout the marketplace. Both the IPA and MCI report 80% of Paraguayan textile artisans lack design innovation and product application (2019). Without adding any aesthetic or functional variety to their products, their lack of creative innovation

results in few designers or design companies creating modern fashion or product collections using artisanal work. According to the 2012 census, Ministry of Commerce and Industry, and Industrial Chamber of Textiles (MIC, UTEPI, JULY 2018), only 37% of traditional Paraguayan textile artisans are active IPA members who participate in the main activities organized by the institution. The Office of the Secretary of Tourism in Paraguay (SENATUR) and the IPA report there is very little interest in promoting artisanal work both domestically and abroad, due to lack of perceived value to modern lifestyles (SENATUR, 2019; IPA 2018).

3. Industrial Design Strategies

By applying industrial design principles to their work process, artisans can improve the value, innovation, creativity, and applicability of their products. In partnership with the IPA, the artisans will be introduced to new strategies that will encourage them to continue their traditional textile production but deliver new results to market. There are four main components for the IPA Product Design Strategies: Design, Research, Marketing, and Manufacturing.

3.1. Design Strategy

By encouraging collaboration between artisans and industrial designers, new forms, shapes, and functions of the final product will better meet customers' contemporary needs. The design process should "involve the participation of new disciplines that will help to make more efficient design construction (Ulrich & Eppinger, 2012)," such as the adaptation of weaving technologies, pattern production, and product design using aesthetics, ergonomics, user interface, and modern applications.

In addition to the textile artisans, the IPA currently supports additional Paraguayan artisans specializing in woodcrafts, leather working, karaguata and karanda'y basketry, and silver & gold filigrana jewelry (IPA, 2019). The new proposed design strategy will assist the IPA to

facilitate and encourage cross-disciplinary collaborations between the various artisans, to broaden product design offerings both within and across artisan specialties.

3.2. Research Strategy

Industrial designers increasingly act as researchers, looking at the world's cultures and cultural processes through the lenses of anthropologists and ethnographers, using Milton's methods of observation, research, and documentation of people, events, and artifacts (Rogers & Milton, 2013). Artisans need to understand how their customers are using or not using their product to assist in making intentional design decisions for their product offerings. The industrial designer as researcher will help interpret "the process of exploring the real needs and desires of the consumers and social needs (Ulrich & Eppinger, 2012)" to the artisan, increasing the understanding of customer interaction and use of artisan works. The information obtained through this process will support the design and development of new products by allowing the artisans to combine their empirical expertise and skill with anthropological data to create more relevant products for today's market demands.

3.3. Marketing Strategy

Per their mission statement, the Instituto Paraguayo de la Artesanía was established to promote craftsmanship as the cultural heritage and identity of their nation, to promote its conservation as a way for the economic development of the artisan producers, and preserve the artisanal heritage of Paraguay (IPA, 2019). For this reason, it is a natural fit for the IPA to manage marketing developments & strategy, as it is at the intersection of artisanal product development and contemporary consumer needs. The IPA will facilitate the following:

- Dissemination of product information – communicating materials & technique, brand, packaging & services

- Increased promotion – establishing community & retail partners to expand market opportunities
- Develop product placement – encourage collaboration between artisans and production of “cross-over” products to reach new customers
- Price determination – help customers realize the value and importance of traditional works to support a living wage for artisans

The IPA will also be responsible for the marketing efforts to launch, promote, and communicate new products to the marketplace, as emphasizing their cultural importance will, in turn, increase their value and demand.

3.4. Manufacturing Strategy

Integrating the “participation of the [industrial] designers in the manufacturing process (Lockwood, 2010)” of artisanal textile production will expose artisans to new manufacturing processes. Laser cutting, laser engraving, and 3D printing will expand artisanal product offerings, while potentially increasing production speeds and improving quality consistency. It is important to note, however, that the intent is not to replace traditional textile production methods with newer mechanization and manufacturing methods. The new technologies will be used alongside traditional production methods to increase market shares and product categories.

4. Project Objectives

Industrial designers participating in traditional Paraguayan textile production will help artisans to (a) discover new uses for their textiles, (b) updating their application of textiles, and (c) better address user needs and contemporary desires.

There is significant opportunity to optimize “bringing together complementary functionalities (Fayolle, Fenoglio & Frédéric, 2009)” to artisanal textile products. This will be

done by using traditional patterns and production methods in new ways. Expanding and suggesting new uses for textiles will provide more interest in artisanal products and enhance the functionality of what was previously simply a handmade decoration. Updating the application of textiles into new products and market segments will improve saleability and expand the economy of the artisanal sector. Addressing consumer needs will also increase sales and make traditional textiles more relevant to today's societal needs.

5. Case Study

An industrial design graduate thesis project entitled The Pyaha Collection was developed as an initial case study for evaluation. The design concept was to create a small tableware collection for traditional Paraguayan food, based upon traditional artisanal motifs & textiles. The collection should also enhance not only the value of the products but also the dining experience itself. The *arasá* (guava fruit flower), *nicho* (bird's nest), and *canastito* (little basket) motifs commonly found in ñandutí lace were the main inspiration for the Pyaha collection.



Figure 1 -Types of Ñanduti (1983), Plá, Josefina (Spain - Paraguay 1903-1999).
Paraguay: El Ñandutí. Asunción: Museo Paraguayo De Arte Contemporáneo.

5.1. Design Process

The standard Industrial Design Process was followed for the development of this collection: research, ideation, refinement, prototyping, and final model development. The work was completed over the course of two academic semesters.

Extensive research was done on traditional textile production methods and materials to understand the artisans' viewpoint. Interviews with IPA officials and Paraguayan designers increased industry understanding and helped identify areas for improvement and innovation. Traditional textile motifs were researched and selected according to classification of nature, flora, fauna, landscape, and according to the weaving system to make this pattern of these textiles.

Through sketching and small-scale models, initial concepts were developed and shared weekly with 11 others 2nd year Industrial Design MFA thesis students and faculty. Prototyping concepts were selected by the patterns of textiles related to themes that are connected to the purpose. In this case was narrow down in a tableware collection focus for Paraguayan food with ingredients from our nature. An example is that one of the designs is a tableware that represents the guava flower that in Guarani is Arasá and is for serve guava cake.

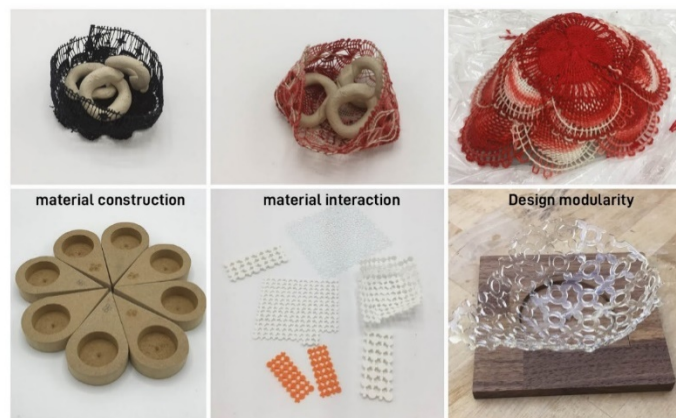


Figure 2 - Process photos by Author

Many techniques and technologies were explored, including 3D printing, laser cutting, laser engraving, CNC cutting, textile starching & forming, as well as more traditional cut & sew methods. Several material explorations were performed using wood, clay, acrylic, and ceramics.

Final design concepts were selected on March 2019 and took 8 weeks to produce. The Pyaha Collection was named for the meaning of the word in Guaraní *Traditional textile*, and each piece has different name according to the textile pattern represented by the shape of the pattern.

5.2. Pyaha Collection

The Pyaha dinnerware collection is designed specifically for serving Paraguayan snacks, such as *chipitas*, and is made from ñandutí, wood, ceramics, and glass. The collection presents the opportunity to intentionally display, arrange, and rearrange the dishes into different positioning, making them more modular and versatile in their uses. Several traditional Paraguayan textiles and motifs combine in new, innovative applications to enhance the dining atmosphere and more closely tie the experience to Paraguayan culture.

6.1. Arasá bowls

The Arasá bowls are made from ñanduti textiles in the *arasá* pattern. This guava fruit flower motif represents a very traditional plant in Paraguay that produces the sweet fruit for several popular desserts, including guava marmalade and pastafrola. The colors are representative of the various colored guava blossoms found throughout Paraguay. The needle

lace has been starched and formed over 3D-printed forms to create and maintain their shape. This process is both food-safe and water-resistant, allowing the dishes to be cleaned & reused.



Figure 3 - Pyaha Collection: Arasá, Photos by Author

6.2. Canastito Plates

The Canastito plates integrate the ñanduti textiles in the *canastito* pattern with a 3D-printed underlayer centered on a wooden coaster. The “little basket” motif represents the traditional Paraguayan baskets made from dried Palmera leaves. The center floral motif symbolizes one of the most traditional flowers that bloom beautifully pink every August on the lapacho tree, which is the national tree of Paraguay. For this prototype, the needle lace has been hand stitched together, but in practice could easily be woven in this trilobal shape.



Figure 4 - Pyaha Collection: Canastitos, Photo by Author

6.3. Nicho Platter

The Nicho platter and bowls successfully explore the *arasá* (guava flower) and *nicho* (bird's nest) motifs using newer production technologies. The bowls were cast and then pressed with *arasá* ñanduti to capture the radiating floral pattern in the porcelain. Due to project time constraints, the flameworked glass underlay in the *nicho* pattern was simulated through 3D modeling and laser cut acrylic. For the wooden platter, the *nicho* pattern was digitized, put into repeat, and laser engraved. In production, this could continue to be laser engraved wage hand carved by woodworking artisans.



Figure 5 - Pyaha Collection: Nicho, Photo by Author



Figure 6 - The versatility and arrangement possibilities of the Pyaha Collection, Photo by Author

7. Initial Market Response

A traditional Paraguayan restaurant in Asunción has already expressed interest in the Pyaha collection and discussions are in progress to begin preparing the designs for production. Currently, the restaurant uses standard disposable paper dishes for their food but feel incorporating the Pyaha Collection into their dining experience would be a good way to distinguish themselves from their competition. While they would most likely reuse any wooden or ceramic dishes, the starched ñanduti bowls would be an easy take-home souvenir that would be very comparable in price to their current disposable options.

8. Conclusion

By integrating industrial designers into the traditional artisan ideation and production processes, new ideas, innovations, business growth, product applicability, and artisan advancement is achievable. Next steps of this research involve a closer partnership with the IPA

to develop and strategize a plan to disseminate these strategies to the artisans, ideally through workshops and community outreach. As most artisan communities specialize in only one medium or technique, the Industrial Designers with assistance from the IPA can encourage, foster, and act as connections for cross-disciplinary design developments. There is also great potential in establishing partnerships with various universities and design programs to promote further artisan advancement, both within Paraguay and internationally. Market research must be done across Paraguay to determine and identify consumer needs, potential new product categories, and new distribution avenues.

This preliminary research and test study make it possible to visualize the opportunities available to explore and apply more versatile applications of Paraguayan textiles for future product development. The Abracemos lo Nuestro Project provides new tools and resources to artisans through a strategic partnership with Instituto Paraguayo de la Artesanía and encourages the production of more empathetic, creative and innovative products. Using traditional textiles in new ways will preserve important cultural traditions, heritage, and sensibilities while improving the artisan way of life and recognition in the society.

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