Apparel, Textile, and Design Showcase

American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: *reJEANerated*

Author or Authors:
Lauren Lansdell, Auburn University

Level: Student

Category: Apparel

Abstract (500 words maximum)

Introduction to the Design Concept: This design, reJEANerated, has taken damaged skinny jeans and "regenerated" them into another garment. Apparel waste is one of the highest pollutants in the world (Maiti, 2005) and upcycling has become a popular creative way for discarded clothing to be reused (Blaazer, 2024). Sanders (2006) suggests four levels of creativity doing, adapting, making, and creating, which rely on an individual's motivation and skill level. Creating is the highest level which consists of not using pre-made patterns and relies more on the individual's eexperience. In terms of upcycling, Lapolla and Sanders (2015), suggest learning new skills was a barrier when beginning to upcycle clothing, but once those skills were achieved, they were inspired to create more. Thus, the goal of this design was to creatively give a second life to unwearable jeans to create an elevated garment.

Method/Design Development Process: This design consists of a strapless corset-style bodice with hip gussets developed using a combination of draping and flat pattern methods. The neckline was slightly rounded to mimic the line of the hip gussets and plastic ½" boning was added to the corset bodice for shape and structure. Each pair of jeans was deconstructed along the inseam and rise. To maximize the amount of fabric for the hip gusset pieces, two pant legs were sewn together, allowing for the hip gusset pieces to be cut. The length of the dress was determined by how much fabric was available to cut the hip gussets. The original side seams from the jeans are showcased on the gusset, creating a three-panel pieced look. To accommodate the different washes, the lightest colored jeans were used at the hip gussets while the darkest shade is located on the corset sides. The remaining two medium shades were used at the center front and back. Additionally, there was not enough length to cut the center front and back panels, therefore the pattern was adjusted to create a curved seam to reflect the neckline. An invisible zipper was added at the center back for donning and doffing and the dress is lined in 100% polyester satin.

Conclusion: Although working with skinny jeans creates limitations with designing, it also allows for more creativity when working around the problems that arose during its construction. The fabric limitations required the designer to alter her original plan to accommodate the pant shapes. This design furthers research with upcycled clothing by drawing on Sanders's (2006) highest level of creativity, creating, to regenerate five pairs of skinny jeans into a new garment.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: *Sequoia sempervirens*

Level: Student

Category: Apparel

Author or Authors:
Kassandra Lee and Ann Wright,
University of Arkansas

Abstract

Introduction to the Design Concept: Drawing inspiration from the majestic *Sequoia sempervirens* of Northern California's coast, this dress design serves as both an artistic tribute and an environmental statement for the protection and awareness of our national forests. This dress emerged from a deep-rooted connection I have to these ancient giants, transforming sustainable fashion principles into wearable art. Every element was purposefully integrated, including utilizing the scientific name of the Redwood trees as the title of my dress. This conscious material selection directly challenges the fashion industry's traditional practices, which have historically prioritized profit over planetary health (Fletcher & Grose, 2012). My design aims to demonstrate how high fashion can harmonize with environmental stewardship, creating a visual dialogue between nature's timeless beauty and contemporary design. By interweaving traditional dressmaking techniques with sustainable materials and processes, this piece exemplifies how fashion can evolve beyond mere aesthetics to become a powerful medium for environmental advocacy.

Method/Design Development Process: The creation of the *Sequoia sempervirens* dress was an intricate journey that began with my experience and love for the Redwood trees of Northern California. The design process was meticulously crafted to reflect my connection, starting with the selection of organic cotton as the primary fabric, chosen for its eco-friendly attributes. Ethically sourced Redwood seed cones turned into extracts were used to dye the fabric, infusing it with the very essence of these majestic trees. The dyeing process was conducted using well water, natural tannins, and soda ash, which was later recycled for garden irrigation, exemplifying a closed-loop system. To achieve the natural green of the snake ferns, dehydrated marigold petals and indigo powder were applied to cotton fabric to create fern motifs reminiscent of the Redwood National Park's iconic Fern Canyon (Krause, 2024). All the dye pulp was later composted for my home garden. The dress design incorporated a custom-developed pattern I created in Browzwear, featuring pin tucks across the bodice that embodied the textural elements of tree bark. The strategic placement of cut out snake fern frond appliqués adorn both the neckline and the hem, creating a whimsical aesthetic. I repurposed the invisible zipper and used remnants of interfacing and horsehair from prior projects. Each step, from conceptualization to the final stitch, was a blend of technical skill and creative exploration, aiming to harmonize fashion with the principles of sustainability and environmental consciousness.

Conclusion: Every element of the design works in cohesion to tell a compelling story: from the naturally dyed organic cotton that captures the essence of the Redwoods (*Sequoia sempervirens)*, to the brilliant green snake ferns (*Botrychium virginianum)* that pay homage to the forest's other ecosystems. This dress pushes boundaries in sustainable fashion by demonstrating how natural dyeing processes can achieve sophisticated results while maintaining environmental integrity. By

incorporating actual elements and motifs from Redwood National Park, my design bridges the gap between fashion and environmental stewardship. This approach can be inspirational for future designers, showing how fashion can become a medium for environmental storytelling while maintaining minimal ecological impact.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: Streams of Fate: Rekha's Fighter Robe

Level: Student

Category: Apparel

Author or Authors:
Audrey Anhart and Dr. Jinhee Nam,
Ball State University

Abstract (500 words maximum)

Introduction to the Design Concept: This costume design is part of a series developed alongside an original fictional storyline set in a neo-medieval period, exploring the narrative of conflict between heart and duty.

The two main characters, Rekha Ailen and Nyura Íde, embody this struggle. Rekha is from a highly militarized matriarchal society. Her upbringing and culture are distinctive characteristics of her appearance shown in her black and red color palate. Nyura, a kind-hearted scholar-turned-warrior, was orphaned twice before finding purpose in the Knight's Guild, where her intellect earned her a high rank. Their journey unfolds in three acts: Act 1: Streams of Fate, Act 2: Valley of Ash, and Act 3: Death's Shadow, exploring love, rivalry, and identity. This design is created for Act 1, where Rekha and Nyura meet as prisoners, escape together, and fall in love, sealing their bond through the forbidden Ritual of Fate. However, upon returning home, they face rejection and rising tension.

The purpose of this design is to reflect Rekha's unique identity Act 1 through the costume, seamlessly blending elements of Eastern clothing, as well as medieval fantasy motifs.

Method/Design Development Process:

Sketched with Adobe Illustrator, the costumes were developed to align with the historical influences, character personalities, and pivotal acts of the story. The fighter robe, developed from a fitted princess line sloper, was adjusted for an asymmetrical tie front design. Red pleated side panels, starting at the waist and ending at the hem, were drafted using the flat pattern technique. Each pleat was machine-stitched, folded at the top, and sewn into the side seam, allowing the panels to fan out with movement. Black cording was hand-sewn for fastening, similar to a karate gi. Black and silver braid trim across the neckline and outer edges of the robe draw from medieval fantasy motifs, and a buttonhole fastener with leather chording and bone highlights regional influence of organic materials. The harem pants were drafted from a standard straight pants sloper. The waist and ankle widths were increased to accommodate a wide leg design. Interfaced waist and ankle bands were added to contrast and contain the billowing pants.

Conclusion*:* This design for Act 1 captured the historical and cultural influences, character personalities, and pivotal acts of the story. The design is inspired from the elements of Eastern and Medieval clothing including tie front design, fanning pleats, black cording, braid trim, and harem pants. By blending cultural and historical motifs with emotional depth, the design enhances the narrative using elements such as color, silhouettes, and fabrications. This approach offers a dynamic and inclusive framework for character-driven costume designs, combining cultural influences, functionality, and storytelling, with the potential to influence future costume design.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Dress Community (ATD)
2025 Juried Dress Showcase Submission

Dress Title: Transforming and Exploring the Potential of Soy in Fashion

Level: Student

Category: Apparel

Author or Authors:
Kassandra Lee and Ann Wright,
University of Arkansas

Abstract

Introduction to the Dress Concept: My dress design explored sustainable fashion through innovative soy-based materials, drawing inspiration from the transformative nature of moths. I aimed to design a dress with an environmentally conscious alternative to traditional textiles while maintaining aesthetic appeal and functionality. This design addressed pressing environmental concerns in textile production, as conventional methods have contributed significantly to climate change and pollution. The textile industry is a major contributor to environmental degradation, with significant impacts on climate change, water pollution, and deforestation. Traditional textile production relies heavily on non-renewable resources, such as petroleum for synthetic fibers and water-intensive processes, leading to substantial energy consumption and waste generation (Filho et al., 2022). My design and methods aimed to explore the potential of soy-based materials as a sustainable alternative in textile design and production. I was able to successfully demonstrate how soy-derived materials serve as sustainable alternatives in fashion, particularly through a textile made from soy by-product, soy wax flakes, soy silk thread, soy roving fibers, soymilk, earth pigments, and BioTex enhanced luxury soy leather. The moth motif featured on the dress symbolizes the fashion industry's potential for transformation and renewal, perfectly aligning with my design and sustainable vision.

Method/Dress Development Process: My design process began with careful material preparation using soy-based French terry cloth as the foundation. Fresh soymilk, made from overnight-soaked soybeans that were blended and strained, served as a crucial binding agent between the fabric and MAIWA Earth Pigments - a discovery that shaped the entire technical approach. The fabric underwent a meticulous preparation sequence, including a 24-hour soda ash soak and 48-hour curing period. After the material soaked in fresh soymilk for another 24 hours, I created a moth stencil using the BioTex soy leather and strategically applied soy wax onto the fabric with an electric tjanting tool, creating raised relief patterns. Afterwards, I continued with the process of dyeing the fabric with the earth pigment “Rose Earth” from MAIWA and fresh soymilk combination that took two weeks for the pigment bonding period. The reason for the meticulous fabric preparation sequence was to ensure that the protein fibers from the soy were to properly bind to the proteins of the soymilk and earth pigment – acting as a binder and not as a mordant (DuFault, 2023). After the appropriate time frame I washed out the access dyestuff, I followed my process with careful wax removal through ironing between recycled newspaper to absorb the access wax. For dimensional interest, I hand-stitched soy roving fibers with soy silk thread onto the moths' upper bodies, creating a subtle three-dimensional effect.

Conclusion: The finished textile exhibited exceptional qualities, including natural elasticity, antibacterial properties, and a remarkably soft hand feel, while maintaining crucial performance characteristics such as breathability and moisture-wicking capabilities (Pickering International, n.d.). This exploration into soy-based textile design didn't just produce an aesthetically pleasing garment—it revealed a viable path forward for sustainable fashion production. The success of this design suggested that soy-based textiles offer a practical alternative to conventional materials, supporting both agricultural sustainability and the growing demand for environmentally conscious fashion.

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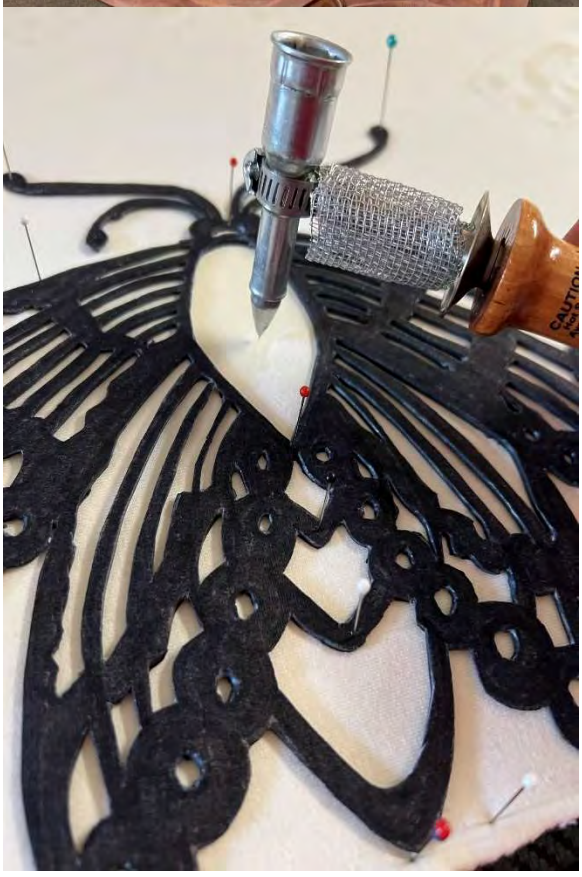

American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: The Death of the American Cowboy

Level: Student

Category: Apparel

Author or Authors:
Melissa Abner, University of Central Missouri

Abstract

Introduction to the design Concept: The death of the American cowboy symbolizes the fading of the original cowboy lifestyle. Today's 'cowboy' is often reduced to a stereotype—think Beyoncé in a white Stetson, iconic cowboy movie stars like John Wayne, or the Marlboro Man in traditional cowboy attire. As Schweiger (2024, para 11) notes, "The practical elements of what cowboys wore were adopted by the fashion industry and transformed into style symbols." The cowboy style has become a misinformed, fashion-driven, money-making trend that ignores the realities of agriculture and the cowboy lifestyle. The real cowboys are barely surviving as land is sold to build suburbs and they sink into debt to keep ranches afloat. Plus, cowboy livelihoods are at risk with the volatility of the cattle market (Irvine, 2024).

I grew up on a cow calf operating farm and have seen first hand how those in agriculture struggle. My designs are inspired by the traditional fashion worn by cowboys in my upbringing, with modern twists that reflect how society has reinterpreted the cowboy image. This design features jeans, a cowboy wardrobe staple, and belt bag made from upcycled Wranglers. My garments primarily feature black and red. Black represents the death of the American cowboy, while red symbolizes the blood, sweat, and tears that come with the cowboy lifestyle.

Method/Design Development Process: The jeans and bag were made using altered premade patterns. The original jeans pattern had a shorter, looser fit, so I extended the leg length and adjusted the sides for a tighter, flare-style fit. I made the belt loops larger to draw attention to the waist and used a hook and eye for a flat seam, but added a false button hole for detail. I used 99% cotton and 1% spandex denim and fasteners from Joann Fabrics, sewn with a home sewing machine, and serged the inner seams for a clean finish.

For the bag, I thrifted a pair of Wrangler jeans for the outer fabric and used leftover 100% cotton fabric for the lining. The pocket features a hand-embroidered cowboy roping design, traced from a cowboy outline and hand-stitched onto tear away stabilizer. The bag was assembled with a sewing machine. For the leather strap, I hand-tooled, painted, and tanned vegetable-tanned leather, then stitched it with hand-sewn

buckstitch using kangaroo leather. The tooled designs are my brand name, a horseshoe, and an Aztec inspired design that I drew on my Ipad and transferred to the leather using a sculpting tool.

Conclusion: The designs in this collection reflect the evolution of traditional western fashion—past, present, and future. The red and black detail on the bag correspond with the colors of the jeans, making the look cohesive. The jeans and belt bag are items worn by modern females, but the traditional tooling methods and designs keep them rooted in the western lifestyle. Recently cowboy fashion has become mainstream, so I wanted to highlight the enduring connection between cowboy culture and modern fashion.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: Old Soul, New Stitch: Quilted Comfort for the Modern Day
Level: Student
Category: Apparel

Author or Authors:
Melissa Abner, University of Central Missouri

Background and Inspiration

Inspiration for this design was found through Pinterest where I saw multiple posts with younger women wearing apparel that was either made from repurposed quilts or sewn in a quilted way. The recent social media micro-trend *Cottagecore* includes quilting and a *grandmother's house* aesthetic, but is popular for young people (WGSN Forecast Team, 2024). Further, a WGSN projected trend for 2025-2026 includes a theme called *future heirlooms* where quilting, crochet, and vintage elements are on apparel for younger consumers (Rechner, 2024).

An article in Parents Magazine, explained that younger people are starting to do "grandma" hobbies like crochet, needlepoint, and quilting. Some of them are inspired by social media to make things they see and it is easier to learn with video tutorials (Curran, 2025). These screen free and tactile hobbies can help with mental health and foster creativity and productivity (Curran, 2025). I had never quilted before this project, but my childhood babysitter was a very talented quilter. Growing up around someone who was always sewing and helped create an appreciation of the art for me. The average quilter identifies as female, is retired, and in her 60's (Glassenberg, 2025). While quilting is typically a hobby for older people, it is becoming a trend for younger people to wear quilted clothing; this inspired me to create a quilted jacket myself.

Method

To create this jacket, 6 different prints of 100% cotton fabric were bought. A total of 187, 4 x 4 inch squares were cut and sewn together in 5 different panels. A panel for each sleeve, front left, front right, and back. A layer of 100% cotton batting and a fabric backing were added to each of the panels. The panels were then quilted on a sewing machine using the "stitch in the ditch" method around each quilt square. Jacket pattern pieces were created by using an existing jacket as a guideline and each of the quilted panels were cut to the correct size and shape. The pieces were assembled and the edges were hemmed to complete the quilted jacket.

To go with the jacket, I created jeans with a matching quilted inset. I used jeans from my closet and slit the outside seams. Then, I sewed more quilt panels to match the jacket and inserted the panel into the slit in the jeans to create a wider leg. Once the panel was inserted, I hemmed the pants to create a clean edge.

Conclusion

The final jacket includes neutral shades of beige and cream. There is no collar and a slit side seam for versatility. I paired it with a plain black shirt so the jacket is the main point of focus. The jeans with matching side panels tie the look together. Overall, the outfit is cohesive and unique; it fits the trend that inspired me. I plan to design more items with quilting and would like to incorporate crochet into future items also.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: Fantasia: Co-Designing Apparel with an Intellectually Disabled Individual
Level: Professional
Category: Apparel

Author or Authors:
Dawn Marie Michaelson,
Auburn University

Abstract

Introduction to the Design Concept: Designing inclusive apparel for people living with disabilities (PLWD) has gained traction in research, but co-designing for individuals with intellectual disabilities (ID) remains underexplored (Kosinski et al., 2018; McBee-Black et al., 2015). ID affects 2-3% of Americans and involves varying levels of intellectual and adaptive functioning, often compounded by comorbidities such as mobility issues or autoimmune disorders (Luna MD, 2024; Schalock et al., 2021). This project aimed to co-design a garment with an ID woman with comorbidities, emphasizing user-centered design principles.

Method/Design Development Process: The design process involved weekly meetings over six weeks between two designers and an ID woman. The woman had mild ID, short stature, an autoimmune condition affecting skin and hair, and two missing fingers. The designers used simple language, slower speech, and frequent pauses to accommodate her cognitive needs to ensure understanding.

The team discussed her clothing needs, preferences, and challenges in the initial meeting. This open dialogue helped build trust and identify design goals. Based on her input, a dress was the final decision. Measurements were taken in week two, and a torso sloper was drafted. While the woman preferred fittings over her existing clothes for modesty, this posed challenges in achieving an accurate fit. Gradually, she became more comfortable with the process and wore more form-fitting clothing, allowing for better-fitting sessions.

In week three, four colorized fashion sketches were developed based on prior conversations to visually communicate line, balance, silhouette, styles, and prints. The woman experienced some conceptual difficulties when the designers discussed how the sleeves, skirt lengths, and waistline styles could be interchanged to design the dress of her choice. Due to these conceptual difficulties, the team had to choose an initial design and reassured the woman that changes would be possible in the coming weeks.

At week four, unanticipated mobility issues arose when the designers realized she could not fully raise her arms. These insights prompted design adjustments, including relocating a side zipper to the front for easier donning and doffing. Additional changes, such as altering neckline depth and sleeve length and adding faux buttons for dexterity, were also incorporated.

Fabric selection was guided by narrowing down overwhelming options. Samples were draped on the woman to help her visualize the final look. She chose a floral border print on cotton voile with contrasting red accents. By week five, the final prototype fitting confirmed the designer's success, requiring no further adjustments. The final dress incorporated all her functional and aesthetic needs, allowing her to don it independently.

Conclusion: The project demonstrated the importance of adaptability, communication, and user-centered design in co-creating apparel for individuals with ID. Key takeaways included conducting range-of-motion tests, setting clear expectations for fittings, simplifying fabric selection, and using dress forms to aid visualization. The woman expressed joy and satisfaction with the experience, which empowered her through active participation in the design process. This project highlights how inclusive, collaborative design can improve the lives of individuals with disabilities while offering valuable insights for future endeavors.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: Fashion Activism and Wearable Art Apparel Design

Level: Professional

Category: Apparel Design

Author or Authors:
Sandra Starkey,
University of Nebraska-Lincoln

Abstract

Introduction: Educating community through fashion activism was a central goal of this project. Design activists set themselves apart from other activists by using their skills to encourage change (Thorpe, 2011). In this case, apparel designers created wearable art to communicate about the harmful effects of microplastics. Consumers need clear information to make informed sustainable choices (Bealby-Wright & Leurent, 2024). The project is vital because the inefficient disposal of single use plastics is a serious problem. Dating from the 1950s, more than 8 billion tons of plastic have ended up in landfills worldwide and the United States ranks second to China in total amounts of plastic waste produced (Environmental Coalition on Standards, 2023). Starting in the mid-1990s when synthetic textiles became increasingly popular, the wear and washing of garments became a major contributor to microplastic pollution. A second goal was to utilize a research through practice framework to answer the following question (Bye, 2010, Mäkelä, 2007). How can apparel designs engage, educate and incorporate interactive components encouraging investment in critical topics? The act of making and the resulting apparel outcome were vital parts of the research. Building on the research teams earlier fashion activism research, this project adds to the development of a methodological framework for fashion activism.

Method: The outcomes resulted from exploring the role of designer as activist and the belief that direct action is necessary to achieve change (Fletcher & Grose, 2012). The ensemble is intended to be displayed in exhibitions and at community events to serve as a *messenger*, a role that fashion plays (Tonchi, 2018). In this case the message is based on research and is intended to educate individuals about the harmful effects of microplastic fibers and particles through interactive experiences. A wearable art ensemble was developed to attract attention due it's unique one-of-a-kind nature. The silhouette was inspired by jellyfish images, specifically, the Sea Nettle species with long cascading oral arms and tentacles (Hutchins et al., 2003). The jellyfish was chosen as inspiration to visually engage participants of all ages. Additionally, in 2021, marine biologists identified jellyfish mucus as a viable means to trap micro plastics (Lengar, 2021). The ensemble was flat patterned and is comprised of a bubble top, skirt with fringe and a detachable cape. Leftover silk and natural fibers were sourced to promote fabrics that don't shed microplastics. The detachable fringe was constructed of fabric and plastic strips to enhance cohesiveness. Plastic bottles were cut, melted and combined with fabric strips and freshwater pearls to create coral reef like flowers for contrast. The back of the cape will house plastic elements that incorporate community pledges to use less plastic.

Conclusion: This research adds to the limited body of scholarship implementing fashion activism promoting interactive components (Hirsher, 2013). We explored ways to educate and encourage investment in the perils of microplastics via community outreach. Future research will continue to explore interactive fashion activism, sustainability and apparel design research practices.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: Beauty in Two Parts, Part One: Desire
Level: Professional
Category: Apparel

Author or Authors:
Micheal Rowley,
Illinois State University

Abstract (500 words maximum)

Introduction to the Design Concept:
In our current society we desire so many things in order to be accepted socially and to chase what we consider beautiful (The Wellcome Collection, 2023). Sometimes in the chase of this beauty we start to forget some of the pieces of ourselves that others consider to be beautiful. As Naomi Wolf (1991) notes, it is not the myth of beauty through aesthetics that harms women rather it is being stuck or forced between "freedom and compulsion." The purpose of this design is to demonstrate that plus-sized bodies can be highlighted in couture techniques and not just hidden in baggy clothing. This is further illustrated by keeping the design on the core of the body to be as that of the couture moulage created to fit one person to honor their body and femineity as conceptualized through Judith Butler (1988, 2011) and Simone de Beauvior (2009). This design embraces the simplistic lines to enhance the natural beauty of the wearer while letting us ask where we got lost in our perspective, as many would view plus-size outside of what we deem beautiful. The sleeves draw inspiration from Escher's *Relativity,* alluding to the journey that we take to discover our beauty.
Method/Design Development Process:
A basic flat pattern block was drafted based on measurements of the intended wearer. This was transferred to a muslin mock-up to create fit adjustments so that the finished garment would fit as desired. Fit adjustments were made through two fittings with the third fitting confirming the fit of the moulage. The sleeve pattern was created by starting with the sleeve block without seam allowances on dotted pattern paper. A compass was used to draw a circle at the bicep line for the desired opening, a French curve was then utilized to draw the curved seam lines to make nine pieces to the sleeve.
For construction of the garment, first the darts were sewn on all pieces before the skirt and bodice were attached at the waistline. Next, the shoulder and side seams were completed. All seams were a half-inch seam allowance and finished utilizing a three-thread overlock stitch. The sleeve pieces were sewn together by matching the convex and concave curves, and then grading the seams after sewing. The sleeve was mounted to the armscye after the gathering was adjusted to give the desired fullness. A lining was then sewn-in, and a hem added.
Conclusion:
This design brings in cultural references to social issues that are being actively discussed in various spaces. The overall design utilizes a mixture of methods not commonly seen together in one design. To highlight the beauty of the body the moulage was kept the same as the fitting garment, with the only design changes occurring in the sleeve. The neutral palette of the of the final core fabric allows us to focus on the beauty of the wearer's body with emphasis coming from the color and lines of the sleeves.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: Beauty in Two Parts, Part Two: Absence
Level: Professional
Category: Apparel

Author or Authors:
Micheal Rowley,
Illinois State University

Abstract (500 words maximum)

Introduction to the Design Concept:
In our current society we desire so many things to be accepted socially and to chase what we consider beautiful (The Wellcome Collection, 2023). Sometimes in the chase of this beauty we start to forget some of the pieces of ourselves that others consider to be beautiful. As Naomi Wolf (1991) notes, it is not the myth of beauty through aesthetics that harms women rather it is being stuck or forced between "freedom and compulsion." Sometimes these violent acts of altering our persons leaves behind traumatic scars. In the journey to fit in to be considered beautiful, do we instead lose ourselves to the void? This piece is altered from a moulage of a plus-sized garment that leans into the simplistic lines of the wearer's beauty. The purpose of this design is to illustrate the pieces that we have removed of ourselves to fit into the ideals of society can be seen on the cutting room floor as we move towards to what we think we want. This is further encapsulated in the control to the point of policing body and femineity as conceptualized through Judith Butler (1988, 2011) and Simone de Beauvior (2009). Suturing on the garment is based on sutures for large wounds in the dermis as noted by Bittner and Edwards (2019) and Giddings (2022), that was then modified if one was to complete the suture on themselves.
Method/Design Development Process:
The flat pattern for the moulage of a plus-size garment was modified to a smaller size through grading the pattern down. Then the seam lines and darts were moved around to adjust to princess seams. The curved seams on the front and back of the garment were adjusted to one-inch seam allowances.
Utilizing various dye mediums, a textile paint was mixed to color match human bloodstaining on a sample of the fabric. This was applied in thin layers utilizing a base color, a diluted base with 16% tap water, and a diluted shade of the base with 23% tap water. These layers were painted utilizing different brushes and brush strokes to simulate the spreading of a viscous liquid. Coloring based on venous or arterial blood was mapped out based on anatomical mapping.
The garment was then placed on a dress form so that the jute cording could be installed utilizing suturing techniques and a tapestry darning needle. Diluted paint base was dry-brushed and rubbed into the points of contact.
Conclusion:
This design brings in cultural references to social issues that are being actively discussed in various spaces. The overall visuals of the design highlight the violent acts that people commit over time in the name of the myth of beauty. The overall design utilizes a mixture of methods not commonly seen together in one design. The sleeves bring in curved seams with a statement sleeve that opens to the bicep of the wearer. The outer seams utilize a variety of surface design mediums to give emphasis to the design.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: *Exuding Confidence with the Mindfulness of Crochet*

Level: Professional

Category: Apparel

Author or Authors:
Shannon Marie North,
Belmont University

Abstract

Introduction to the Design Concept: Exuding Confidence with the Mindfulness of Crochet identifies eleven pressure points to explore the garment's relationship to the body. Research of anxiety relieving coping mechanisms including Traditional Chinese Medicine (TCM) acupressure, deep touch pressure (DTP), weighted blankets, and compression were combined with the learnings from the new field of fashion psychology to inform the formal design process and aesthetic decisions of the artifact. The therapeutic properties of handcraft, specifically crochet, were explored in the process. Linking TCM, fashion psychology, and the wellness of mindful manufacturing results in an aesthetically pleasing anxiety reducing garment.

Method/Design Development Process: The relationship of body to fiber is a critical factor of this work. Natural textiles have been shown to improve the body's response to triggers (Kang et. al., 50). Choosing tactile fibers engages the senses without disruption to the body's natural coping process (Dearborn, 24). The balance of two contrasting materials, leather and cotton-linen yarn, are symmetrically crocheted together over a body form, aligning identified acupressure points. Repeating medallions along the bottom portion allow the focal gaze to be drawn to the bodice front and back. Traditional crochet methods were informed by new technologies. Using 3D software, acupressure points were outlined on avatars, then weighted panels were aligned to those 3D avatars, and optimal placements for acupressure relief were defined. Scaled iterations of laser cut paper patterns were placed on a physical form marked with acupressure points. After iterative refinement, the paper materials were replaced by felt with similar properties to leather that, when cut appropriately, behaved similarly to crochet trim. The felt prototype was stitched to the form to further inform size of components, balance of materials, and negative space to be filled by chainwork. After determining the final metrics and calculations, footwear industry scrap leather was laser cut into multiple patterns, incorporating connection areas for crochet. An organic oval shape created the most aesthetic and feminine form to balance the masculine appearance of the leather. Focus placed on acupressure points LU1, CV20, GB21, GV14, and SI-15 provides anxiety relief and enhances aesthetics by framing the face and highlighting the shoulders (Au et.al., 353-9). Points CV19-21 and ST12-15 inspire the bodice collar design and create a tranquil feeling for the wearer. The mid-calf length aligns with pressure point ST36 and allows for full range of motion. After careful consideration to meet design aesthetics, cotton-linen yarn crocheted medallions intersect negative space with the human figure for optimal adornment and functionality. The hand stitched full zip back allows easy on and off. Machine knit undershorts provide modesty.

Conclusion: Collaboration with students, anxiety sufferers, and testing produced the final garment incorporating anxiety relief. Trials indicate the optimal weight of the artifact, the comfort of the chosen materials, and the arrangement of materials which guide the final garment design. Building on Chen's 2011 study measuring heart rate variability (HRV) as an indicator for anxiety relief, respondents' heart rates were measured before and after wearing the artifact (468). Overall, HRV lowered, indicating favorable results and validating the need for garments that ease anxiety for the wearer.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: *Framing Emotion with Tradition and Technology*

Level: Professional

Author or Authors:
Shannon Marie North,
Belmont University

Category: Apparel

Abstract

Introduction to the Design Concept: Framing Emotion with Tradition and Technology demonstrates the support clothing may have on the wearer's emotional wellbeing as it relates to anxiety and its triggers. Exploring the connection of apparel to the maker's and wearer's experience enables a new interconnection for apparel. The submitted artifact intends to share the process and results of concepts reducing anxiety in wearers through the exploration of acupressure used in Traditional Chinese Medicine (TCM) and learnings from the field of fashion psychology. The research culminates in the hypothesis that combining weighted crocheted textiles with acupressure points may improve anxiety relief for sufferers. Acupressure points LU1, SI-15, GV14, GB21 and CV20 are used in the work (Au, et al.).

Method/Design Development Process: This work builds on concepts that frame the body in comforting silhouettes to understand how the garments may ease anxiety through the tactile feel on the body and their alignment with defined acupressure points. For the coat, 100% linen yarn is precisely crocheted around upcycled laser cut leather for optimal alignment with acupressure points. The design creates volume and harmonious balance, allowing one freedom from body conscious styling. Edged in rayon thread, the silk ribbons are woven between crocheted frames made of recycled yarn that sculpt a dress. This rhythmic structure stretches to support the body, reducing the anxiety created by revealing too much of oneself. Natural colors offer calm for the wearer and interest to the onlooker (Dearborn, 35). The tangible nature of the materials, fiber combinations, and garment composition combine to enwrap the body in confidence. The process to create the garments bridges traditional skills with technology. Using 3D apparel simulation software technology, pressure maps align textile placement to acupressure points on avatars, which are translated to physical dress forms. Patterns created from the software are draped, prototyped, fitted, and refined to reach optimal anxiety relief on the body.

Conclusion: Collaboration with students and anxiety sufferers to test feasibility and heart rate variability (HRV) produced final garment iterations incorporating anxiety relief. Trials indicated optimally weighted, comforting materials and the deployment methodologies which guided the final garment design and concepts. Favorable HRV responses to garments were measured and recorded. Most participants noted the calm feeling generated by the garments. This work is not meant to replace smart textiles used in therapy and/or medical products; rather explores the softer, emotional response of materials and how they impact the senses, creating joy and comfort for the wearer. Being able to calm the mind and focus in the moment, as supported by products being worn, delivers invaluable strength. The interconnectedness of handcrafted object to wearer is beginning to be explored. Ongoing studies are understanding how handcraft may manage chronic pain, relieve depression and anxiety, and enable connection to alleviate loneliness (Corkhill, 39). This work goes further to align handwork and textiles to specific areas of the body to provide anxiety relief. The connection of the maker to the wearer and garment to body is a continuously evolving concept. Offering aesthetic apparel with functional solutions supports new possibilities for development.

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Hart, Trevor A., David B. Flora, Sarah A. Palyo, David M. Fresco, Christian Holle, and Richard G. Heimberg. (2008). "Development and Examination of the Social Appearance Anxiety Scale." Assessment, 15(1), 48–59. https://doi.org/10.1177/1073191107306673.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: *ModuGown*

Level: Professional

Category: Apparel

Author or Authors:
Kyung-Hee Choi and
Rachel Eike,
Hansung University and
Iowa State University

Abstract (500 words maximum)

Introduction to the Design Concept: Personal protective equipment (PPE) is essential for healthcare workers (HCWs) to prevent exposure to infectious microorganisms. Current isolation gowns, whether disposable or reusable, face significant limitations. Disposable gowns, while effective against liquid penetration, contribute substantially to textile waste, with U.S. hospitals generating 14,000 tons of waste daily (Jain & LaBeaud, 2022). Reusable gowns degrade over time and may provide inconsistent protection (Kilinc, 2015). Existing designs also lack adaptability for transitioning between varying risk levels in dynamic healthcare settings. This design challenge aimed to create a modular isolation gown, *ModuGown*, that is sustainable, versatile, and adaptable across all protection levels (FDA, 2022). Guided by a User-Centered Design (UCD) framework, the design incorporates HCW preferences to ensure safety, comfort, and mobility. This work builds on prior research highlighting the need for customizable PPE (Cho, 2006; Townsend et al., 2022) while addressing gaps in design opportunities to improve sustainability and functionality.

Method/Design Development Process: The development of ModuGown followed an iterative process grounded in the User-Centered Design (UCD) framework. Insights were gathered from a focus group interview with 14 nursing students, whose feedback was analyzed using NVivo software to prioritize key themes: protection, ease of donning and doffing, comfort, and mobility. These themes directly informed material selection, design features, and prototyping. A cotton-polyester blend was selected for durability and breathability, with mesh inserts incorporated for additional ventilation in the back and cuffs. For high-risk zones, disposable Tyvek® modules were used to ensure lightweight, water/liquid protection. The gown was designed to adapt to varying risk levels, with single-panel designs for low-risk (levels 1–2), double-panel configurations with reusable modules for medium-risk (level 3), and additional Tyvek® components for high-risk (level 4). Adjustable closures, magnetic snaps, and Velcro® ensured easy assembly and secure fit, while gussets, elastic shirring, and thumbhole cuffs enhanced mobility and comfort. Prototyping was conducted using CLO3D software, enabling precise virtual modeling and adjustments for fit and functionality. Visual elements, including digital renderings and a fabricated physical prototype, were integral to refining the design. These visual artifacts allowed HCWs to assess the gown's adaptability and modularity, strengthening the connection between the concept and execution.

Conclusion: ModuGown integrates content, concepts, visuals, and techniques to achieve its purpose: enhancing HCW safety and operational use while reducing textile waste. The modular

design allows for seamless adaptation to varying risk levels, offering a practical solution in dynamic healthcare environments. Feedback from healthcare professionals emphasized its innovation in combining modularity, comfort, function and ease of use, and sustainability. The inclusion of visual prototypes not only illustrated the use of design principles but also enhanced stakeholder understanding, ensuring that the final product aligned with user needs. This design contributes new ideas to PPE development, addressing critical gaps in adaptability and environmental impact. Future applications include wear trials with HCWs, refining the design for manufacturing, and collaborating with PPE producers to advance sustainable practices. *ModuGown* sets a benchmark for user-centered, modular PPE design, inspiring further research and innovation in the field.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: Radios and Honeycombs

Level: Professional

Category: Apparel

Author or Authors:
Melissa Clark, Utah State University

Abstract

Texture and hand embellishment techniques have played a significant role in apparel design throughout history, often serving both aesthetic and functional purposes. In fashion today, it is suggested that texture not "be randomly applied due to the functional requirements of the garment," but that it be used to "express a designer's aesthetic perspective and design concept" (Gong and Shin 2013). One textural embellishment technique, smocking, has had a place in apparel since the Middle Ages in Europe and can still be seen in fashions today (Gupta 2021). Smocking remains relevant in fashion for its aesthetic appeal with its "artistic means of controlling a garment's fullness" and its function of providing a "close fit while maintaining a certain degree of stretch" (Ren, Segall and Sorkine-Honung, 2024).

This dress was designed as the fourth piece in a collection titled *Radios and Honeycombs*. This smocked dress is meant to explore the textures and lines found in early 20th century radios – invoking the lines, forms, and most importantly the textures of the crosshatching on the radio speakers. The smocking allows for areas of the dress to be more fitted, then allowing the fabric to release into fullness and flow freely in the skirt.

The history of smocking and the smock frock informed the choice of materials and the anachronistic cottagecore aesthetic of the design, reflecting a nostalgic, simple, and rural life. The fabric, a hemp and cotton blend plain weave, was also selected for its softness, drape, and

ability to absorb dyes effectively. The slopers for the pattern were hand drafted from body measurements. The smocking intake and fullness were calculated and applied to key areas such as the neck, shoulders, waist, and wrists during the flat patternmaking process. Each section of the dress was marked, gathered and then smocked. The tight gathers were left in while the fabric was dyed, creating a resist to the full penetration of the dyes. To further accent the texture of the smocking, the back side of each smocked area was discharge dyed using bleach. Between the resist and the discharge, the back of the smocking has a variegated appearance which highlights the texture and the dark eggplant color of the smocking ridges. By blending texture, color, form, and movement, this dress reflects a harmonious balance of tradition and innovation, underlining the timeless relevance of smocking in fashion.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: Shifting Plates

Level: Professional Entry

Category: Apparel

Author or Authors:
Laura McAndrews,
Kent State University

Abstract

Introduction to the Design Concept:
Genderless clothing has emerged as a trend and even new standard in fashion (Segalov, 2020). The term "genderless" can also refer to "agender," "gender fluidity," or "gender neutral," which refers to the state of being without a clear gender identity (Robinson, 2019) and allows the wearer to use products to create styles according to individual personality and taste from a neutral perspective (Kim, Cho, & Park, 2022). As detailed by Huun and Kaiser (2001), from 1896-1962, the decline of the infant and toddler white dresses gave way to gender coded clothing, specifically a flight of femininity for more masculine clothing for boys, which is still highly emphasized in mass marketed children's clothing brands today. However, Millennial and Gen Z value individuality and practicality rather than gender (Kim et al, 2022), opening a market and demand for genderless clothing in children's wear. Therefore, the design objective was to create a children's garment with gender ambiguity.

Method/Design Development Process:
The Denver Art Museum in November 2022 had an exhibit featuring the work of Italian interior designer Gio Ponti, specifically the decorative plates collection for Ceramica Franco Pozzi 1960-1969. The plates' decorative shapes and vibrant colors inspired this design project. The recreation of Ponti's plates was first done in Procreate and then edited for design repeat and colorways in Kaledo Print software. The print was sublimated on a 100% polyester satin fabric. After several sketches, final patterns were created in Browzwear VStitcher, printed, and prototyped. After a fitting on a live model accessing fit and gaining feedback from the child about fabric hand feel and colors, the final garment was constructed. Fabrics were selected based on the child's feedback from the fit session – the pants were made from brushed flannel and polar fleece for pockets and side panel stripe; the top was made from knit French terry. I wanted to juxtapose handwork with the digital surface design, leading to the hand embroidery knee patches and back applique. At the forefront of this design project was to play with multiple colors and textures that could circumvent traditional gender norms.

Conclusion:
Children's clothing needs and wants are still an under researched area and children's brands develop based on perceived needs and preferences (Brun &Petersen, 2021). Moreover, there is movement to create products and apparel void of hyper gendered societal constructs (Kim, Cho, & Park, 2022). Therefore, *Shifting Plates* adds to the existing design research of both children's wear and genderless clothing along with utilizing digital software throughout the creative design process.

This design is original and innovative at (a) identifying the need for genderless clothing, (b) utilizing digital software for the development of the surface design (Procreate, Lectra's Kaledo Print) garment patterns (Browzwear's VStitcher) along with sublimation printing, and (c) integrating consumer feedback from potential end users. *Shifting Plates* is a call for more exploration into underserved target markets in the fashion industry.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: A Touch of Orange - Adaptive Drawstring-waist Chambray Dress

Level: Professional

Category: Apparel

Author or Authors:
Melanie Carrico,
University of North Carolina Greensboro

Abstract (500 words maximum)

Introduction to the Design Concept: The U.S. population of female adults over 65 years of age is more than 30 million (U.S. Census Bureau, 2022) and projected to increase 47% by 2050 (Mather & Scommegna, 2024). Fashion brands should cater to aging female consumers by addressing their needs and desires. Nam et al. (2007) identified four elements of comfort needed in older women's apparel: "(1) good fit with adequate ease; (2) soft, non-abrasive materials; (3) adequate insulation or ventilation (depending upon the season); and (4) garment lengths and fullness that facilitate free, uninhibited movements" (Nam et al., 2007, p. 107). Chung et al. (2024) also found that thermoregulation can be a problem in older adults. Ease of dressing must also be addressed as some female consumers find getting dressed to be troubling as they age due to conditions like arthritis (Singh, 2019). The adaptive apparel market can increase market share in the U.S. by addressing the clothing needs of older adults. The **purpose** of this design was to create a sustainable dress for a mature, independent woman undergoing chemotherapy treatments. The resulting garment is easy to don and doff with several adaptive features.

Method/Design Development Process: For sustainability, deadstock chambray lyocell fabric was selected in part due to its thermoregulatory properties. Lyocell is known to feel cool on the body and have good moisture-wicking properties (Ozdemir, 2017). The classic look of the dark blue chambray also met the needs of the target consumer. The pattern was developed using VStitcher, a 3D visualization program.

The waist is shaped by a drawstring and the partial kimono-style sleeve and underarm gusset facilitate movement. The front opening uses adaptive magnetic snap tape in lieu of buttons or traditional snaps. The magnets are easier to use for individuals who struggle with dexterity and hand weakness. The chest pockets close with invisible zippers. Inside, the back of each pocket bag splits allowing discreet access to chest ports.

Conclusion: This dress offers consumers needing chest port access a different styling option from the casual t-shirt style tops that dominate this category of apparel with port access points. The orange topstitching throughout the shirt-dress coordinates with the orange magnetic tape and orange pocket zippers. The orange trim and stitching details add just enough contrast to make the dress feel elevated beyond a basic garment.

The chambray dress is a classic style that will serve the mature female consumer well. Nam et al. (2007) found that the older woman may still be interested in fashion but does not follow the trends. The longevity that a timeless shirtdress provides contributes to its sustainability.

Adaptive, discreet features within the dress can be appreciated by women with or without disabilities. The thermoregulatory lyocell and magnetic snaps have broad appeal while the chest port access can be useful for a smaller market segment.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: The Future of Fashion Lies in the Past: Weaving Rainbow

Level: Professional

Category: Apparel

Author or Authors:
Erin Irick, University of Wyoming

Abstract (500 words maximum)

Introduction to the Design Concept:
This design is part of a six-piece collaborative collection contributing to existing research on apparel sustainability, incorporating the concept of slow fashion into an existing apparel repurposing model and providing visual examples of these concepts via traditional textile techniques. Six categories of techniques were identified resulting in three phases of research; 1) researching the six traditional textile crafts to understand their historical usage and associated meanings, 2) identifying and individually interviewing collaborators with expertise in each of the techniques regarding their experiences with the technique, 3) collaborating with the participants to design and construct six garments paying homage to each of the techniques while also incorporating repurposing, in this case, weaving.

The apparel and textile industry ranks as the fourth highest in environmental impact behind the energy, agriculture and transportation industries (Omondi, 2022). The underlying issue that makes the production of fashion products particularly problematic is the frenetic pace of change that it undergoes and encourages. This phenomenon is called fast fashion; characterized by large volume, low cost, low quality, rapidly produced clothing often utilizing exploitative labor practices (Fletcher, 2015). Fast fashion satisfies the consumers need for instant gratification, enticing them to constantly want more while simultaneously encouraging disposal of still functional, yet "out of style" clothing.

In opposition to fast fashion, is the concept of slow fashion. Paralleling the slow food movement, the term slow fashion was first coined by Fletcher (2007). Slow fashion incorporates sustainable production including repurposing, and ideas about quality materials, local markets, taking pleasure in the act of making, cultural diversity and traditional textile crafts. The latter was selected as proof of concept for this project. Understanding the historical importance of such techniques and how they inform the construct of slow fashion will allow us to connect with generations past and promote a more sustainable future. Irick (2013) developed a model for repurposed apparel, identifying three levels of repurposing and was amended by Irick et al (2020) to include a fourth level. The purpose of these studies was to understand the design process for repurposing apparel and textiles to efficiently use the copious amounts of second-hand clothing available, preventing it from becoming waste. Lapolla and Sanders (2015) suggested that combining co-creation and repurposing may be one way to add longevity to fashion products.

Therefore, the purpose of this project was to understand how the concepts of slow fashion inform and overlap with apparel and textile repurposing. Secondarily, this project provided visual examples that tell the stories of the participants.

Method/Design Development Process:
After the interview with the collaborator, the main designer created a series of sketches inspired by the interests and preferences of the collaborator and the history of the weaving technique. The sketches were discussed and edited to arrive at the final design. Both garments were draped on a dress form to create the patterns. The collaborator was inspired by the colors of nature and created the rainbow woven yardage that was then cut into the top and bottom sections of the chevron for the vest. The center portion of the vest was repurposed from a women's skirt and the jumpsuit underneath from a bedsheet. The top band of the jumpsuit was pieced together from scrap material from another design in the collection.

Conclusion:
Rooted in research and collaborative design, this design is innovative in how it successfully combines slow fashion and repurposing. This design also successfully tells the story of the collaborator while delivering a visually impactful design through the use of color, balance and movement.

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American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: Comfortable Reality

Level: Student

Category: Textile-Based Designs or Accessories

Author or Authors:
Kathrine Blythe Fjellman, Iowa State University

Abstract (500 words maximum)

Introduction to the Design Concept:
'Comfortable Reality' is a woven textile collection for A/W 25/26, designed for Anthropologie, that connects textiles with consumers emotionally. Inspired by WGSN's "Kintentional" trend, it blends dramatic colors, soft textures, and ornate metallics, evoking nostalgia and fantasy while ensuring tactile comfort (Samba, 2024). Inspired by Hunziker's (2020) design scholarship on alpaca wool and twill weaving, 'Comfortable Reality' balances luxury and durability. The collection merges historical opulence with lived-in ease, enhancing sensory appeal. Rooted in WGSN's foresight, it aligns with Anthropologie's aesthetic and commitment to quality, responding to evolving consumer desires for meaningful, comforting textiles enriched with storytelling (Anthropologie).

Method/Design Development Process:
The textile collection, 'Comfortable Reality', consists of three textile large-swatch samples, titled Opulent Embrace, Baroque Dreamscape, and Royal Reverie. The collection design process started by searching for inspirational and trend-focused fabrication designs online and then building digital weave files using Adobe Photoshop. For the first sample, *Opulent Embrace,* the pencil tool within Photoshop was used to create the woven design, which established a pixel-based digital file to inform the loom headers when to raise and lower in order to have longer float sections in targeted areas of the textile. *Opulent Embrace* was weaved on a TC2 Loom using two shuttles with different yarns, consisting of 50% Wool/50% Acrylic and 100% Rayon from Bamboo to create the bubble-like texture. For the second sample, *Baroque Dreamscape*, a 4x4 box weave pattern was applied to the entire surface of the textile design. While weaving *Baroque Dreamscape* on the TC2 Loom, a random assignment of yarn usage in the weft/filling direction was employed to achieve the desired finished textured textile output. A more standardized approach could be taken to improve cost effectiveness in future production, and still achieve the randomized appearance. Multi-colored yarns (one including a metallic finish) made up of 50% Wool/50% Acrylic, 100% Rayon from Bamboo, 100% Mercerized Cotton, 100% Cotton, Polyester (?) Ribbon, and Wool Roving were used to fabricate *Baroque Dreamscape*. For the third sample, *Royal Reverie,* the design process started with using a Generative Artificial Intelligence (GAI) feature in Adobe to initially create a floral design. The GAI process was modified multiple times to produce the end petal-like shape, then colors were simplified, and

weaves were assigned to the design. *Royal Reverie* was produced in three different weave configurations: nine-yarn satin, diamond twill, and 6-yarn twill weave combinations using a single-shuttle weaving process with a dark taupe 100% Rayon from bamboo yarn.

Conclusion:
'Comfortable Reality' successfully integrates historical opulence with contemporary comfort, creating a cohesive collection that resonates with Anthropologie's clientele. Innovation is at the core of this design, as applications in digital weaving are explored to create a similar effect to Hunziker's (2020) hand-woven designs. Future textile design scholarship has the ability to use this application in digital textile design to create new methods for manufacturing authentic and tactile fabrics and simulating that hand-crafted, luxurious feel.

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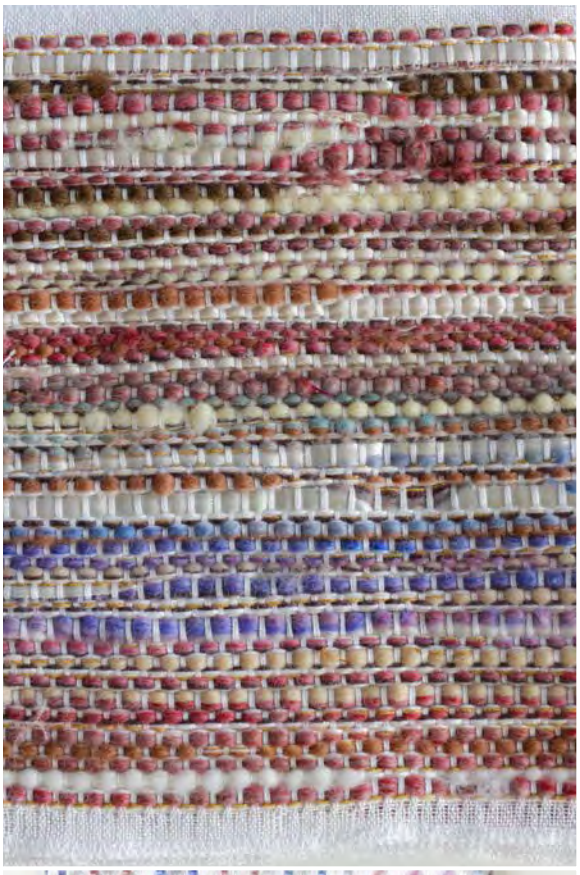

American Association of Family and Consumer Sciences
Apparel, Textiles & Design Community (ATD)
2025 Juried Design Showcase Submission

Design Title: *Dual-Y Nexus*: Enhancing Upper-Limb Prosthetic Wearability

Level: Professional

Category: Textile-Based Designs or Accessories

Author or Authors:
Rachel Eike,
Iowa State University

Abstract

Introduction to the Design Concept:
2.1 million people in the USA live with limb loss, a number expected to double by 2050 (Ziegler-Graham et al., 2018). Upper limb loss impacts daily activities, as hands and arms are crucial for mobility and functionality (Østlie et al., 2012). Body-powered prostheses, requiring harness anchoring to activate the terminal device, are the most used prostheses for upper-limb amputation (Gudfinnsdottir, 2013). Despite innovations in harness design since the 1990s (LaTour, 2012; Altobelli et al., 2014), professionals still recommend traditional harnesses, which users have reportd discomfort, pain, and dissatisfaction (Huinink et al., 2016). This design aimed to develop a new anchoring system that enhances comfort and usability, informed by users.

Method/Design Development Process:
By employing user-centered research, semi-structured interviews with three figure-of-9 harness users identified key issues: friction-induced discomfort, non-replaceable components, and aesthetic concerns. Participants reported pressure points, restricted movement, and skin irritation caused by prolonged wear. They also expressed frustration with the lack of (fit) customization, as standard harnesses often fail to accommodate individual body shapes, resulting in improper fit and reduced efficiency. Users emphasized the need for a body-balanced, adjustable alternative.

To address these concerns, a 3D-printed PETG bracket was designed to eliminate metal components, reducing friction and enhancing comfort. PETG offers durability, flexibility, and resistance to wear (Fernandes, 2014), making it suitable for daily prosthetic use. The bracket is washable and integrates with fabric-based attachments, providing a tailored and user-friendly experience, secured at the center back of the harness with rivets. Inspired by the Monar Jonban (see figure 1), a historical Iranian monument symbolizing interconnected motion, the design ensures coordinated movement, reducing strain. The renewed harness, *Dual-Y Nexus,* accommodates left and right amputations and is fabricated from a layer of lightweight cotton shirting (against the body), a layer of synthetic knitted spacer-mesh fabric to increase breathability and wicking, and a top-layer of cotton canvas for strength and durability from clothing and prosthetic device components (e.g. cable), enhancing fit and function to increase user confidence.

Figure 1. Monar Jonban, Esfahan, Iran

Dual-Y Nexus was tested against the figure-of-9 harness using the Box and Blocks Test (BBT) and the Nine-Hole Peg Test (NHPT). Results showed 95% of participants performed better in the BBT, with an 85% improvement in NHPT total time. Participants reported increased comfort, better range of motion, and improved control over the prosthetic device. They also noted reduced pressure on the residual limb and enhanced ease of movement during tasks requiring shoulder engagement. The adjustable tension and fit were well-received, allowing for better personalization and reducing fatigue.

Conclusion:
Dual-Y Nexus represents a significant advancement in prosthetic harness design, addressing key limitations of outdated systems. By replacing rigid metal components with 3D-printed PETG brackets, the design reduces discomfort, pressure points, and skin irritation while improving functionality. User testing demonstrated enhanced performance, comfort, and adaptability, with participants reporting greater ease of movement and control. This innovation offers a promising solution to improve the daily lives of upper-limb prosthesis users, making prosthetic use more comfortable, efficient, and user-centered.

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American Association of Family and Consumer Sciences

Apparel, Textiles & Design Community (ATD)

2025 Juried Design Showcase Submission

Design Title: *Threaded Fusion: Cross-Stitching Technology and Tradition*

Level: Professional

Category: Interiors

Author or Authors:
Anna Gatlin, Auburn University

Introduction

Handcraft traditions, like cross-stitching, have long been associated with intricate artistry and cultural storytelling (Pye, 1968). Historically, stitched works have long been a part of the legacy of interior decoration (Pile & Gura, 2014). In today's design landscape, emerging technologies offer opportunities to reimagine these crafts without eroding their authenticity (Buechley & Perner-Wilson, 2012; Dormer, 1997). *Threaded Fusion* is a creative exploration that integrates 3D printing, laser cutting, and cross-stitching to produce an innovative wall panel. This project bridges the temporal gap between past and future, celebrating craftsmanship while embracing technological advancement. By leveraging additive manufacturing to create a stitchable substrate, this work seeks to preserve the tactile quality of cross-stitching while advancing its application within interior design.

Method/Design Development Process

The design process involved extensive prototyping to achieve the appropriate substrate. A 3D-printed panel made from recyclable Polylactic Acid (PLA) was carefully iterated and designed with evenly spaced perforations, similar to traditional Aida cloth. Initial iterations were either too fragile for stitching or too rigid to accommodate the craft. Multiple adjustments were made to hole size, spacing, and panel thickness, resulting in a substrate with dimensions of 2" x 4" sized rectangle made of 4 layers of PLA, with a 1/16" hole size, spaced 1/16" apart. Once finalized, six substrates were 3D printed and were individually cross-stitched with designs inspired by hand-painted and hand-stamped leather wallcoverings found in a Bernini-designed palace in central Italy. Each cross-stitched piece represents a wallcovering in one room; the colors of the wallcovering are represented proportionally in the cross-stitching, and the pattern is abstracted and representational, not a literal reproduction of the inspiration. Each of the six panels are inset into a piece of wood that has been laser-cut to fit each of the six stitched pieces precisely. A silhouette of the small Italian town where Bernini's palace is located is laser cut into the lower portion of wood. This work blends the structured precision of technology with the organic texture of handcraft and natural materials, juxtaposing this cutting-edge final product with the antique nature of the inspiration.

Challenges included ensuring the material balance for pliability and durability, refining the design for ease of stitching, and maintaining visual harmony between traditional patterns and the contemporary 3D-printed base. The final product is a modular panel that can be scaled and replicated to serve various applications, from decorative accents to functional design elements.

Conclusion

Threaded Fusion demonstrates how traditional craftsmanship can coexist with and benefit from modern technology, which may be vital to ensuring that handicraft traditions are not lost completely (Shah & Patel, 2017). This work enhances the relevance of cross-stitching in contemporary design while offering new possibilities for material innovation. By marrying tradition with innovation, this project not only preserves the craft's integrity but also pushes its boundaries into uncharted territories, providing inspiration for future explorations in hybrid design practices.

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