Plastic Soup

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Background and Inspiration.

Plastic pollution is one of the main environmental threats to the ocean with the amount of plastic in the ocean estimated to triple by 2050 without significant action (Foresight Future of the Sea, 2018). Each year eight million tons of plastic are discarded by humans into the ocean (Plastic Ocean, 2018), and sixty percent of the plastic is single-use disposable plastic items (Trash Travels, 2010). The floating plastic in the ocean is often referred to as plastic soup (Cho, 2011). These plastics strangle, suffocate, and injure approximately 100,000 marine animals a year (Parker, 2018). The majority of the plastic in the ocean is in tiny pieces less than one centimeter which has broken up due to exposure to UV rays and the ocean environment (Cho, 2011). This decomposition brings about additional issues as it releases harmful chemicals into the water harming marine life and humans (Parker, 2018). The ocean pollution problem has become so expansive that clean up of the existing problem is not feasible and the best course of action is to focus on preventing more plastics and other debris from entering the ocean (Plastic Ocean, 2018).

Purpose.

Plastic Soup is the second design in a series using discarded materials to explore human impact on the ocean. The purpose of this design activism (Fuad-Luke, 2009) work was to visually express the environmental impact of plastic on the ocean and spark conversation about the seriousness of the issue. The dress depicts the breakdown of plastic in the ocean and the plastic soup created by all the debris. This design aims to be a visual reminder of how our plastic consumption behaviors impact the environment and to provoke a discussion regarding how plastics non-degrading permanence threatens the vitality of the ocean and the marine animals that live there.

Framework.

The *waste equals food* tenet of the Cradle to Cradle design framework (McDonough & Braungart, 2002) serves as the design framework for Plastic Soup. This design was created using fabrics that were discarded as waste by the previous owners and would be in the landfill if they had not been incorporated into the design. The fabric or waste was the originating point of this design and framed what the end product would be based on its limited capabilities. Much of the

blue and green pieces had defects and needed to be cut into very small pieces to be usable. Evaluation of the limitations of the fabric resulted in the decision to use freeform embroidery techniques to visually depict the inspiration.

Technique.

This women's design activism piece was created using discarded textiles in various shades of blue and green. The top was constructed from both woven and knit textiles and is held together by a free-form embroidery collage technique. The stitching was done on a home sewing machine by dropping the dog feed to allow the fabric to be moved freely under the needle in all directions. Drawing from the processes and work of Haar (2004), this work used a freeform embroidery as a means to collage together a new textile. Unlike previous work, the stitching was not a key element in the design but a utilitarian means to connect the fabrics together; however, the process created a texture that became a design emphasis. Textile scraps in shades of blue and green were cut into smaller pieces using a rotary cutter. The pieces were then sandwiched between two layers of a dissolvable film stabilizer in a twelve inch round embroidery hoop. Each hooping was attached to the next in a horizontal manner connecting each embroidered textile to the previous in the frame, thus stitching them together. This continued until the desired width of textile was achieved. Three separate textile width sections were created. Each section decreased in width moving up from the hem of the garment. The upper portion of the garment was shaped to fit the neckline and underarm curves of the top by only filling in the part of the hoop referencing the pattern guide. The three sections were joined by slightly overlapping each section, pinning the dissolvable film to the top and the bottom of the sections, filling in the holes with extra fabric pieces, and stitching together. A pattern guide served as a reference for the top construction to ensure that the size of the top would properly fit the body. The number of hooping's needed was calculated using the height and width of the hoop and dividing that by the dimensions of the pattern guide. The top took a total of 29 free form embroidery hoopings to construct. Shades of green and blue remnant threads were alternatingly used for the upper thread stitching and one dark green thread was used for all the bobbin stitching. The underdress and straps were constructed from knit remnant fabrics and were attached after embroidery was completed. The dress was designed to have no visible seams. In order to achieve this, the lower section of the back of the dress was hand stitched closed with the sides of the dress overlapping on each other and snaps were used on the upper half of the seam.

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