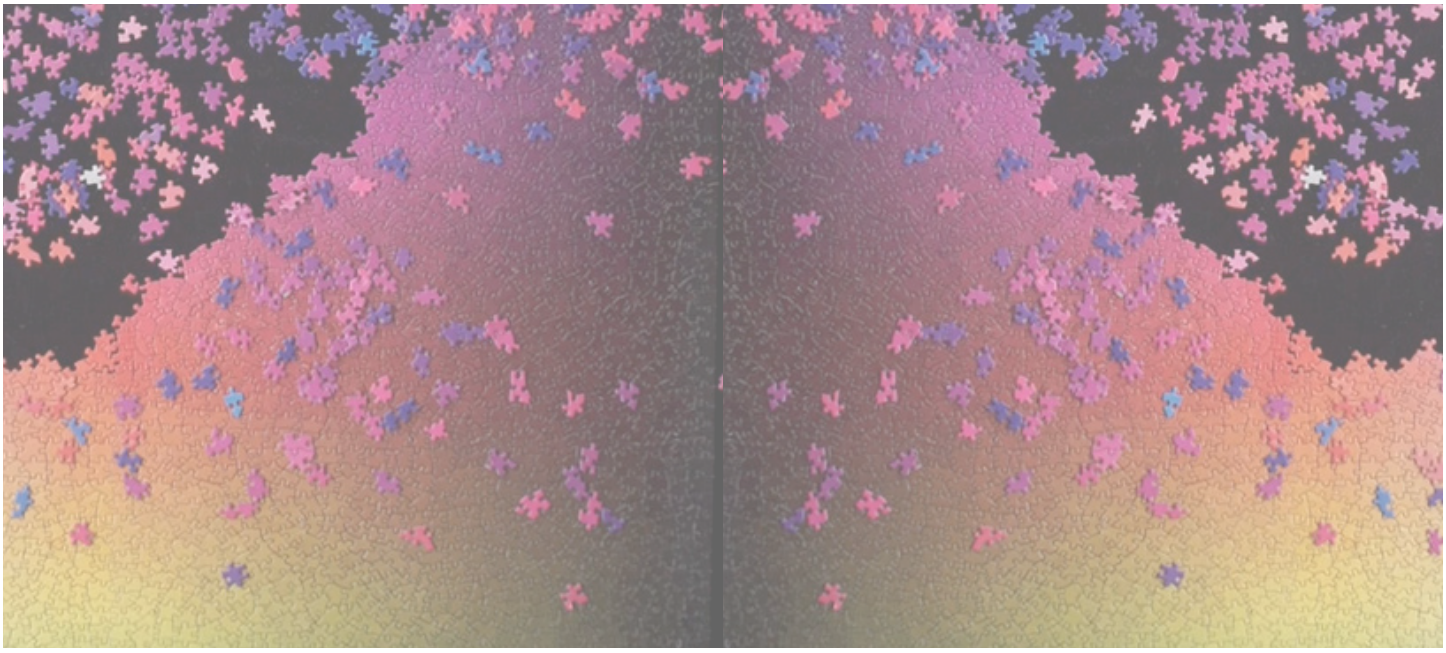
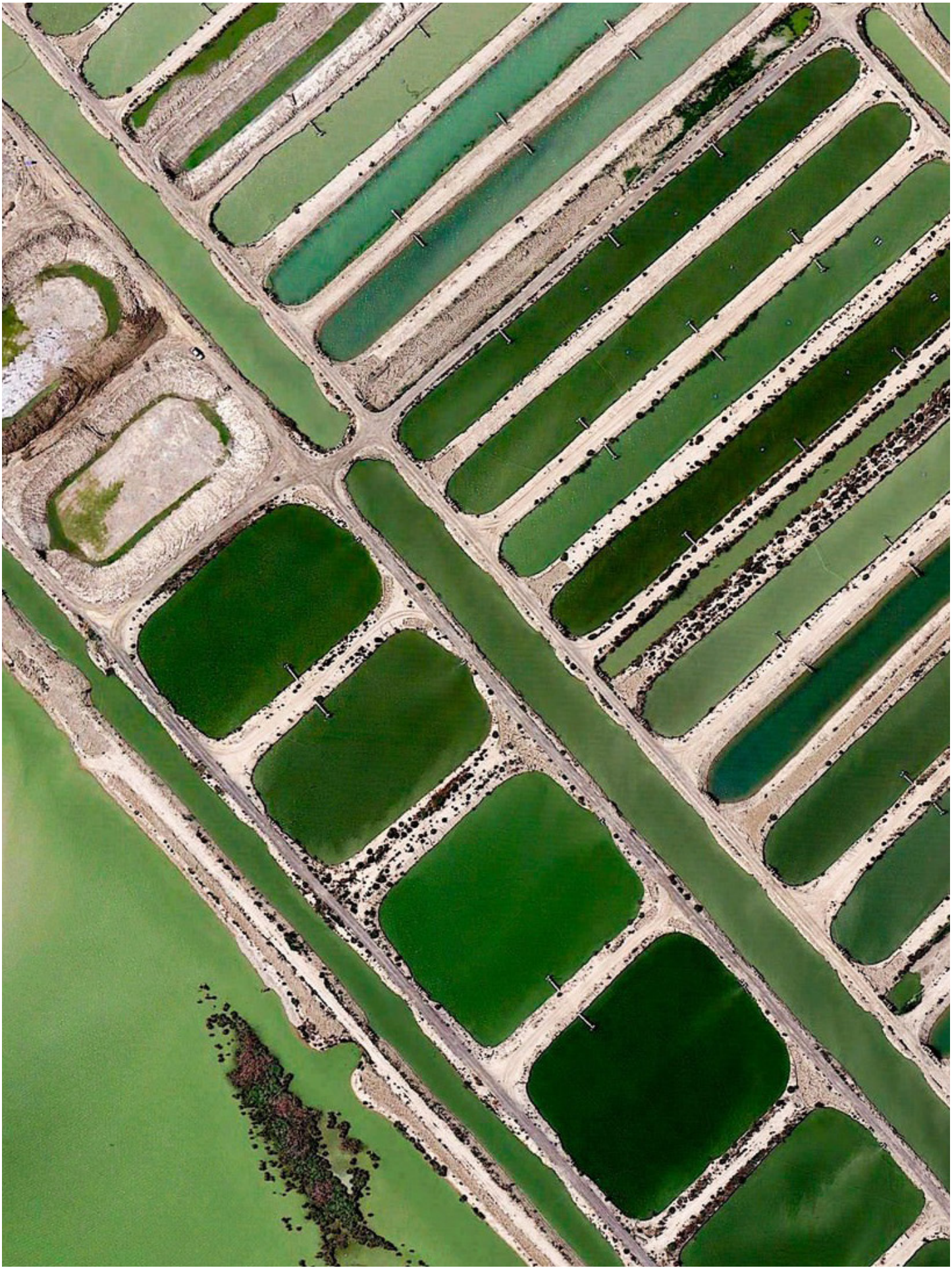
FROM P | I | E | C | E | S TO WHOLE

By
Lilly Lee





Introduction

Responding to the Call for a More Resilient World

Students in Jenifer Wightman's "Sustainable Systems" Class Spring 2017, decided to craft solutions to real design calls including:

- NYC L-train will be shutdown to repair damage from Superstorm Sandy. In 2012, superstorm Sandy's storm surge flooded the Canarsie Tunnel under the East River causing irreparable damage. In response, the MTA announced it would shut down the L-train between Manhattan and Brooklyn for 18 months beginning January 2019 to make critical repairs. Two design calls seek alternate transportation solutions for the 200,000 daily L-train commuters.
  TransAlt design brief, https://www.transalt.org/ltrain-designbrief
  Van Alen Charette, https://www.vanalen.org/projects/l-train-shutdown-charrette/

- Life Cycle challenges
  Healthy Materials Lab has partnered with the Making Center at Parsons to sponsor the Role Models Competition, an opportunity for New School students to take a closer look at the materials that make their models and challenge themselves to design with global health in mind. https://healthymaterialslab.org/events/rolemodelscontest
  Cradle to Cradle Design Challenge enables designers to learn and apply critical strategies for envisioning products for the circular economy.
  http://www.c2ccertified.org/connect/design-challenge

- Human Impacts Institute runs an annual series of events that showcase artists creating climate-inspired performances, installations, and exhibits; deploying the arts and creativity to share knowledge, broaden the climate conversation, educate, and incite action.
  Creative Climate Awards, http://www.humanimpactsinstitute.org/creative-climate-awards

We are from all over the world with different perspectives on what constitutes a resilient future using design to promote quality living given the challenges with increasing consumption by a growing population in the context of a changing climate. Our projects endeavor to make the systems of society more resilient and equitable for future generations.

My project explores how the fashion industry's fabric waste problem could be helped by repurposing the scraps into slow-fashion accessories like totebags.

Google Earth

Deconstructing how the Fashion Industry Established Itself as the Second Most Polluting Industry in the World

Unbeknownst to many, the fashion industry generates the most waste and pollution after the oil industry. From the beginning of the process to growing and harvest cotton to producing synthetic materials to shipping and keeping up with trends, and throwing out used clothes, the fashion industry contribute much more waste than expected. In the United States, more than 15 million tons of used textiles are thrown out each year, and an average American throws away about 80 pounds of clothing every year. Of these 80 pounds, 84% of these clothes end up in a landfill or incinerator. Although the detrimental facts about the fashion industry is sometimes looked past and not paid attention to, the fashion industry is responsible for creating landfills of clothing because of fast fashion as well as overgrowth of pollution due to growing fashion labor factories in third-world countries that are not properly regulated and having to be exported to countries halfway around the world.

The first problem with the production of clothes is that the very fibers and process to creating wearable clothing has many flaws. Although it may not seem problematic because many of the clothes we produce are made from natural fibers, they cannot properly decompose in landfills because the treatments they go through. They are bleached, dyed, printed on, and many times gone through different chemical baths to create different looks (Scrap). So, even if the cotton, silk, and leather clothing seems to be a better idea to throw away into landfills, they are not much better than the synthetic fibers. Of course, the synthetic fibers are much worse because these fibers such as nylon and acrylic are made from a type of plastic made from petroleum, which will take hundreds or even a thousand years to biodegrade (Tan). There are options where people do produce 100% organic cotton so that the amount of pesticides used in the production significantly decreases around the world. The amount of pesticides and insecticides to produce cotton is 25% of all the pesticides and insecticides used in the world. This reveals how much farming is invested into producing these cotton products that almost is recycled into every part of our life. The cotton harvested become the clothes on our backs and the waste from these plantations such as the seeds and leaves go back into the soils that we plant our food or feed our animals. The pesticides come back into our system one way or another, even if we only try to wear 100% organic cotton or silk (Wicker). Also, when we throw away these clothes into landfills, the chemicals that have been piling up in these clothes go into the soil and into our groundwaters and into our systems.

Fast fashion is a very diverse problem that is globally impacting the world. Compared to the fashion companies that used to produce four seasonal wear a year: spring, summer, fall, and winter, many companies are cranking out 11-15 a year (LeBlanc). This not only puts a toll on the creative process of these fashion companies, but on the environment as well. When we create so many different "seasons" of clothing, we are producing so many different clothes than we need to and changing the mindset of the consumers that they need different trends very quickly. Also, because the mindsets are changing to producing and buying clothes at a faster rate to fit the trends, companies and factories have to resort to producing low-quality fabrics and textiles. These clothes are made to be thrown away and only worn for one season because these companies have to try and balance the constantly changing trends and the possibility of not selling all the clothes they produce for one season. So the solution to that is to mostly externalize the cost by setting up shop in third world countries where wage is very, very cheap and producing clothes that are made to be destructible. Now, when this trend continues, the amount of clothes that are being thrown out is enormous. There are people who donate these clothes to second-hand shops, but even then most do not get accepted because even these second-hand stores do not want to accept clothes that will soon go out of season and are made of not-very-good-quality materials. So in the end,

these products all end up filling the landfills and last the consumer about 3 months of wear time. While some of these clothes end up in landfills, some also are exported out of the country to different countries such as Africa, Asia, and Europe to be dumped or resold, but the problem is that even countries that would want to thrive with the reselling of clothing that have been popular in the western world, do not want to buy these clothes that have been produced by Zara, H&M because they also know how long they do not last (Scrap). If these cotton t-shirts or denim clothes do not resell, they can be cut up to be used for rags, but even then, they become part of landfills sooner or later after a couple of uses (FabScrap). It seems as if the design was designated to fail.

Another part of the fashion industry that creates much waste is the scraps in which our clothes are produced from. There is a lot of waste created from scraps because in order to produce clothes in the right grain, the patterns must be placed on the center grain which most of the time do not use all the fabric. These are thrown out most of the time because they are too small to amount to anything or even help make a pocket. These, when they are all added up, create a large amount of scraps. I will be trying to collect these scraps to create a new textile that can be long lasting and reusable.

In order to help relieve the stress of the fashion industry, there have been some innovations to try and divert the synthetic materials used so much. There is an artist by the name of Suzanne Lee from Biofabricate who used bacteria to create biodegradable clothing. She mixes in sugar dissolving bacteria with sugar, and green tea to create cellulose. When these bacteria digests the yeast, it produces cellulose, which come together to create a thick layer on top of the water. It looks like a thick vegetable layer that also looks like human skin, but it is made entirely by bacteria that did not use any polluting materials and will not release polluting substances when it is thrown away because this is a closed cycle that could be easily composed. This is an innovation that can help decrease the amount of pollution caused by the fashion industry by a large amount.

Fashion and clothing have and always play a large part in our society to show individualism and represent identities. The fact that we as a society is allowing such detrimental environmental disasters to take place because we are allowing people who do not value true design to lead our market should be reconsidered. There must be constant innovation to improve the society because fashion is such an important aspect is people's lives everywhere.

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"FabScrap." FABSCRAP. Accessed April 26, 2017. http://fabscrap.org/.

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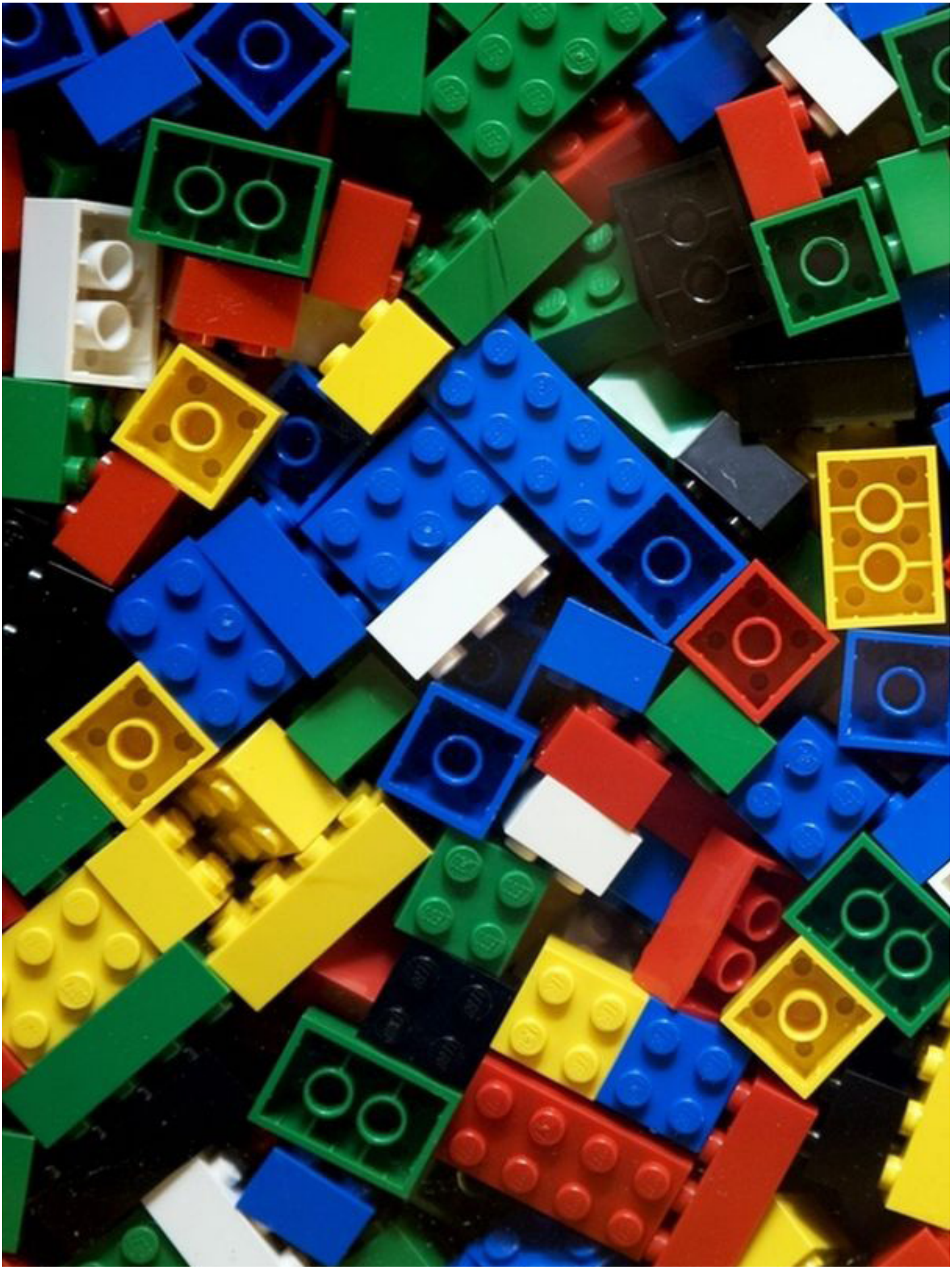
Tan, Zhai Yun. "What Happens When Fashion Becomes Fast, Disposable And Cheap?" NPR. April 10, 2016. Accessed April 26, 2017. http://www.npr.org/2016/04/08/473513620/what-happens-when-fashion-becomes-fast-disposable-and-cheap.

Wicker, Alden. "The earth is covered in the waste of your old clothes." Newsweek. March 16, 2017. Accessed April 26, 2017. http://www.newsweek.com/2016/09/09/old-clothes-fashion-waste-crisis-494824.html.



From Pieces to Whole

repurposing scraps of textile waste in response to fashion industry's negligence of waste

by
Lilly Lee

ABSTRACT

The fashion industry created 15.1 million tons of textile waste in 2013, which 12.8 million tons were put into landfills and incinerators. There are no established solutions that are strongly regulated to make sure that the amount of textile waste is up to a certain standard or limit. Because the fashion industry is the second most polluting industry after the oil industry, it is imperative to act. Not only is the growing of natural fibers like cotton harfmul to the environment, but synthetic fibers take hundreds or even a thousand years to fully decompose. Fast fashion is also taking a toll on the environment and people because in order to satisfy the idea of producing 15 different trends of clothes every year, compared to the usual four, products are forced to be made faster and of lower quality. Because of this, more and more cheaply made clothes are being thrown out faster and faster. Also, when patterns are cut from yards of fabric, much of the scraps are gone to waste because they are smaller pieces that people cannot add to their garments, and because patterns must be laid in certain formats to satisfy the grain line. Because of all the waste we are producing, I propose collecting all of the scraps produced and repurposing them into a textile, which could be designed into other products, like totebags. Giving meaning to the scraps that cannot be used again by creating a new textile will significantly increase its useable lifespan, which can help decrease the amount of waste created from the textile industry.

FINAL PRESENTATION

FINAL PRESENTATION

EXECUTIVE SUMMARY

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THE SITUATION: The Parsons School of Design is home to the most innovative and forward thinking fashion designers in America. There are hundreds of students studying fashion design in the school every year, and the fashion design studio rooms are constantly occupied with senior-year students trying to complete their thesis or every other grade below them trying to learn and complete their fashion designs. The amount of fabric and waste created from these classrooms is enormous. Although there are recycling bins for muslin, pattern paper, and scraps of fabric, most of the time, these scraps of fabric are too small to be used for any garments or are usually thrown on the ground because they are forgotten. The From Pieces to Whole proposal collects the leftover fabric scraps that have been neglected into usable textiles that can be repurposed into totebags. This will give another life to these scraps that will be longer lasting and meaningful.

- CLEANING UP THE WASTE: When you walk around the fashion design studio classrooms, you will first be in awe of the creativity and craftmanship of the students, but you will also come into reality with how much pieces of fabric scraps lie around the entire classroom. The bins used for recycing also flow out with scraps because they are not well upkept. This repurposing approach will clean up the scraps in a more efficient way.

- RECYCLING: The amount of scraps of fabric produced from all the students that take fashion design courses for four years is astounding. There are rarely some projects where the students will be taught to create zero-waste designs where they will use all of the fabric to create an outfit, but most of the time, these students are not. They are taking account the grain line, which most of the time takes into account how your fabric is made and how the pattern should be laid and cut. Because of this 'grain line', there are many parts of the fabric that go into waste because you cannot cut all the pattern pieces right along side each other. Also, when you create different patterns, the shapes do not all match up, which is another reason for excess scrap waste. From Pieces to Whole acknowledges the problems and seeks to embrace the creative process by repurposing old scraps into new textiles.

- REPURPOSING THE WASTE: Most of the time, the scraps that go into the bins for recycling are not used for recycling. They might act like scraps where people test the sewing machines to see if they work, but then they go straight into the trash because they have been sewed on a couple times for machine-checking. From Pieces to Whole gives meaning to the scraps, any scraps, even if they have been sewed on or drawn on, because we realize that every fabric scrap is indivisualistic and purposeful. So we will still use these "already used" scraps to create unique textile pieces.

From Pieces to Whole is an innovative approach to give function to objects that seem to have already lost its purpose. This initiative will help drastically decrease the amount of scraps thrown away by transforming them into larger pieces of textile that can be made into totebags. From Pieces to Whole will also take into consideration that all scraps are unique and purposeful and use them to each own's advantage to create indiviualistic items that will help forward the ideas of innovation and sustainability.

Bio

Lilly Lee is a freshman at Parsons School of Design studying fashion design. She is from New Jersey, and she started seriously taking art classes at the end of her sophomore year in high school. She enjoyed painting and drawing so much that she did not want to become a biomedical engineerer and instead become a fashion designer.