

Going green again: Fashion biosynthetic textile production

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Compare and contrast assignment paper

Contemporary Issues in the Fashion Industry BUF 4700 OL70[22826]

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For those reading to grasp a further understanding of what the fashion industry does to contribute to global warming, The apparel and footwear industries together accounted for more than 8 percent of global climate impacts -- the equivalent of 3,990 million metric tons of carbon dioxide in 2016; total greenhouse gas emissions related to textiles production are equal to 1.2 billion tons annually -- more than those of all international flights and maritime shipping trips combined, () with just that, companies globally strategically move towards a more sustainable business lifestyle, in light to decrease the percentage of global climate impact; sustainable & biosynthetic fiber-- one improving factor. Retail stores willing to take in old or unwanted clothes to prevent consumers tossing non-breakable non-biodegradable clothes in the garbage.

From the beginning of times man has tried to produce the demand for textiles in a shorter desirable timing; dating back to A.C , swallowing the days in process natural dying became too consuming for it wasn't until 1800's answers the calls of high demand of consumers, creating the man-made synthetic fiber epidemic. Fast fashion juxtapose to global climate changes are one and the same some say, over the course of time brands like Orange Fiber & Bolt Threads used sustainable material to better the world. In this essay the two brands previously mention will go a thorough compare and contrast what fiber sources is more sustainable than the other, which finishing product will survive the wear-and-tear required, which product is more affordable and lastly what are some of the challenges face when producing this fiber.

Orange Fiber is an Italian company founded in 2014 by Adriana Santanocito and Enrica Arena that creates sustainable textiles for the fashion industry from citrus juice byproduct (Luisazargani, 2017), now the two started out in the interest of textiles and research on suitability; One may ask how does an orange fiber company obtain even one citrus waste to create fabric, well the two has a connection with the Sicilian Territory which form as a location

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candidate to establish the production, Sicily has a massive production of citrus and consequently a production of waste materials from the industry (How to turn citrus waste into a sustainable fabric, 2016). Seeing that gave the women the opportunity to seize all the waste to create the fiber. Their Fabric are formed from a silk-like cellulose yarn that can blend with other materials. When used in its purest form, the resulting 100% citrus textile features a soft and silky hand-feel, lightweight, and can be opaque or shiny according to production needs (Fabric, 2020). In the year 2017, Orange Fiber collaborated with the fashion house Salvatore Ferragamo with their S/S capsule collection.

On the other hand, Bolt Thread is a “material solution” company, that produces new material that merges sustainability and luxury. Bolt Thread created several fabrics such as Mylo, made from mycelium (thread like cells made up of mushrooms), Microsilk, made up of spun of spider webs, B-Silk protein versatile materials of sugar water and yeast (Mike, 2020). The brand started in 2012 when introducing spider silk fibers by the year 2017 Bolt thread was introduced in High fashion when collaborating with Stella McCartney and MoMA. Although Orange Fiber founders were interested in the fashion industry. Bolt Thread founders are all bioengineers and scientist that believed their innovations could change the world.

First, both brands Orange Fiber and Bolt Thread produce natural resource fibers however the two are difference resources Orange Fiber is a plant base fiber and Bolt Thread is made either from animal or plants. One may believe that with just the sole resources Orange fiber uses isn't as much reliable as Bolt Thread who uses multiple outlets for resource purposes. On the other hand, one may contradict and worry it can be extremely hard to produce spider webs silk- if there ever was a catastrophic event that will limit the use of spun spiders produce. It's no question without a doubt the two brands use valuable reliable resources but which of the two can properly

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survive the wear and tear process? Wear and tear is a loss, injury, or stress to which something is subjected by or in the course of use (Wear & Tear, 2020). Speculations rise when wearers feel man-made fibers are strong and more durable than natural resources. In figure 1, shows a better depiction of the high quality of Orange Fiber strengthen and durability for the fashion house Ferragamo capsule collection. One may be surprised at the thought orange peels can made such strong beautiful fiber, but it appears to may it can successfully survive the wear and tear regardless if orange pills are biodegradable. As for Figure 2, Myro, from Bolt Thread is *highly* stronger and more durable with a texture like leather gives consumer that strong assurance the fabric will not break down any time soon. On Bolt Thread website, they show the process in making Myro, made from mushroom cells ensuring consumer on the process which will be shown in Figure 3. In seeing figure 2& 3 can reinstate the possibility that the undertake of the full lifecycle of the material is more long lastly than figure 1, Orange Fiber. Now it's unlikely to put the theory to use seeing as both Orange fiber and Bolt Thread never produce large scale, commercial wise. Other than small capsule collections with fashion houses.

Secondly, Bolt product falabella prototype x Stella McCartney handbag accessory retail from the price range of \$800-\$2,000 (Mesh Falabella bag, 2020) as opposed to Salvatore Ferragamo x Orange Fiber apparel retail range from \$500-\$900 (Ferragamo White Orange,2020). Price point wise Orange Fiber is more affordable for consumers, however the production process for natural fibers makes any goods markup extremely high once reaching consumers. Making it very hard for consumers to save the world while remaining a patron in fashion. However, with this price range these goods are attracted by a certain type of target market. Women wears who appreciate high-end goods with a discretionary income, who can afford after paying rent, utilities food etc. who not only can afford these goods but also can

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afford to change their lifestyle around to become and maintain an eco-friendly lifestyle. One can believe someone who has a middle- or working-class income cannot afford to be eco-friendly yet along afford biodegradable garments, compared to the upper-class income. In introducing the prices and mark up to cover the cost of production of these natural garments it's safe to say mass production will be extremely difficult.

Thirdly, the companies gain publicity by becoming one of the many brands that can come up with innovative resources, if any when the brand uptick in sales one may the pendulum swing between fashion fabric and mass production can result in a shortage in natural resources and another problem solely will occur. The two companies do that similar to contain the demand of mass production is collaborate with fashion houses that can help finance production, as well as, control the quantity of the demand—with Fashion capsule collections. In Figure 1, shows the extensive print making technique on the fiber which makes the manufacturing processes are capable of handling large output, Furthermore, because of the machinery used to print make, in opposition of pure Mushroom cells who will have it extremely hard to produce. Growing, drying out the plant, waiting for the cell to grow to a specific interconnecting 3D network lastly tanning and dyeing, shown in Figure 3. Each brands collaboration is classified as luxury goods, these classifications are based on price point, production, and quality of material.

In the final analysis, the two brands material and technique are both sustainable and offer high-end prices to consumers who admire eco-friendly lifestyles. Although one brand product can also dovetail with other sustainability issues, such as natural dye processes like Bolt Thread, other than Orange Fiber & its print making finishing. Orange Fiber can only offer one source of natural source which can be troubling for many despite the accessibility to have over 700,000 ton

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per year of waste oranges (Marras, 2016) , Bolt Thread still can come up with more natural sources to produce and still catch up on high demand if wanted to.

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Figures:



Figure 1: Salvatore Ferragamo x Orange Fiber.

Shown in this image is natural source of Orange peel & Print making finish



Figure 2: Bolt Thread x Stella McCartney

Shown is a biodegradable leather life fiber made out of Mushroom plant cells

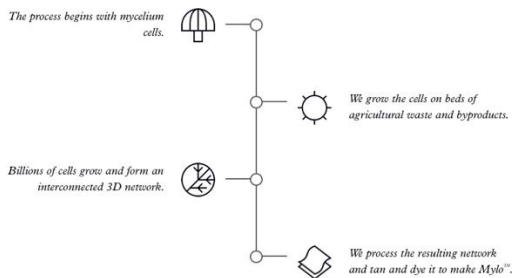


Figure 3: Bolt Thread Myro Fiber Process

Shown in this figure is a brief step by step process of Myro fiber