

# **From Farm to Fiber: Consumer and Producer Perceptions of Slow Fashion In the Hudson Valley**

**By Grace Sowyrda**



**Abstract**

Unbeknownst to many consumers, fast fashion is one of the biggest polluting industries in the world. In contrast, the slow fashion movement is an ethical approach to fashion which strives to decentralize the supply chain through strengthening local systems by building connections between producers such as farmers and artisans. The research in this report explores consumer and producer perceptions of the drawbacks and benefits of slow fashion or the local farm to fiber supply chain in the Hudson Valley in Upstate, NY. 13 semi-structured producer interviews with farmers, artisans and business owners were conducted in person and over zoom. 10 semi-structured consumer interviews were also conducted. 215 consumers were surveyed and one focus group was conducted with four consumers. To study the effect of education on consumer fashion choices, 52 consumers were surveyed before and after a movie showing on fashion waste. Half of the consumers surveyed and interviewed didn't previously consider the environmental impacts of clothing. Those with some awareness, found the biggest obstacles in buying slow fashion were cost, accessibility and lack of information. The main struggles of producers in the Hudson Valley were limited resources to process fiber, a disconnect between younger and older artisans and limited exposure to general consumers due to high price rates of hand. Producers in the region are currently working on more sustainable farming practices such as carbon farming which help carbon seep back into soil. This study is important in helping consumers understand the importance of handmade sustainable clothing and local fiber systems along with what to look for when shopping for sustainable clothing. This includes: types of material and their degree of sustainability, understanding the reasoning behind high costs of clothing and the goal of farmers and artisans in the local supply chain. This research can help support farmers and artisans interested in sustainable fashion as well as consumers.

## **1. Introduction**

### **1.1 Background on Fast Fashion**

The fashion industry is the second largest industry in the world and one of the biggest polluters (Paras & Curteza, 2018), producing about 10% of the global greenhouse gas (GHG) emissions (UN Environment Program, 2019). In addition to greenhouse gas emissions, impacts of the industry include textile waste, energy consumption, water usage, and toxic runoff from chemicals and dyes (Vehmas, Raudaskoski, Heikkilä, Harlin & Mensonen, 2018). The creation of textiles is currently responsible for 20% of freshwater pollution annually due to the dyeing, materials and treatment of textiles (Burgess, 2019). The apparel industry is currently dominated by fast-fashion which cuts down the production and distribution time and cost of clothing design (Choi, 2014). This means clothes are made faster and cheaper with fast-paced fashion trends, tempting consumers to over-consume and discard clothes at a higher rate. Each year over 1,000,000,000 kilo-grams of textiles end up in landfills. (Pookulangara & Shephard, 2013). Over 70% of the fibers we wear originate from fossil carbon along with dyes sourced from fossil carbon (Burgess, 2019). Not only do these clothes take years to break down, but they also

release microplastics when washed which flow into rivers, streams and oceans, putting marine life and ecosystems at risk (Burgess, 2019).

The current fast fashion model is dependent upon constant market growth only possible through the exploitation of workers, the environment, and consumers. While companies generate high profits, garment workers often work in unsafe conditions, earning low wages (Ertekin & Atik, 2014). Despite continued growth and success of corporations, society, workers, and the environment are suffering, especially in developing countries such as Bangladesh (Fletcher, 2015). In opposition to the current growth-based economic model, a slow fashion movement has emerged which focuses on the well-being of the environment and workers, as well as transparency in the relationships between producers and consumers (Ertekin & Atik, 2014).

## **1.2 Slow Fashion**

Slow fashion is emerging as a more environmentally ethical approach to fashion, placing value on environmental and social resources, transparency in production and sourcing, and creating quality products with longer life spans (Pookulangara & Shephard, 2013). This market involves bottom-up economics and strengthens local markets by creating relationships between farmers, producers/designers, and consumers. It encompasses slow production, fair wages, natural and/or recycled materials, and clothes with longer lifespans. This creates a transparent relationship between suppliers and consumers which encourages people to buy high-quality items which last. The slow fashion movement has a similar model to the now popular “slow food” movement which supports small scale local farmers through the promotion of local and seasonal produce grown with fewer harmful inputs (Pookulangara & Shephard, 2013). Unlike globalized and homogenized fast food and fast fashion culture, slow fashion creates a sustainability platform which reconnects people to their communities and blurs the lines between production and consumption (Fletcher, 2015). This movement has also revitalized old-fashioned trends while also encouraging new business models focused on sustainability (Ertekin & Atik, 2014). For the purposes of this research, slow fashion will include locally produced clothing, reused and vintage clothes, recycling, and traditional methods of garment and textile making. Although it is important to improve our centralized fashion systems by fighting for human and environmental rights, starting small and local is the first and most important step (Burgess, 2019).

## **1.3 Supply Chain**

### **1.31 Fast Fashion Supply Chain**

The current fashion supply chain of fast fashion involves Fast Evolving Industries (or FEIs) which include high product and service variety with low-product service life. This means the items must be replenished at a faster rate. If an industry has a faster change in pace then it provides a competitive advantage to other companies. This means companies continually aim to

make products faster, often foregoing quality and care for laborers (Sabet, Yazdani & Leeuw, 2017).

### **1.3.2 Sustainable Fashion Supply Chain**

Some of the aspects of the current fashion supply chain involve modern day slavery. For example, each year Americans purchase approximately 1 billion garments made in China. According to the U.S. National Labor Committee, some Chinese workers make as little as USD .12 – .18 cents per hour working in poor conditions (Claudio, 2007). Supply chain collaboration means multiple businesses share improved outcomes and benefits. In the current system, businesses receive monetary benefits, and other pieces of the system are often left behind. A more sustainable business paradigm would consider horizontal relationships and take into account the role of non-business actors in the system (Benstead, Hendry & Stevenson, 2018). This means that companies take into account environmental and social effects of textile production and work to reduce damages. B-corporation companies, for instance, have become models of horizontal collaboration and are paving the way for more sustainable business practices (Benstead.etal, 2018).

The current system is highly extractive and economic diversity is threatened. The goal of local farm to fiber fashion systems is to decentralize the economy using local materials and create a supply chain through connecting farmers and artisans. This includes regenerative farm practices, and focus on local resources and local jobs. The goal is to create clothing from the soil that can return to the soil or a closed loop system (NY Textile Lab, 2019).

### **1.4 Purpose Statement**

The purpose of this qualitative research was to explore and better understand the emerging market of slow fashion and the local farm to fiber fiber chain, specifically in the Hudson River Valley in Upstate New York. The goals included, having a better understanding of consumer purchasing habits, specifically in regards to sustainable fashion, including handmade and thrifted items. I specifically explored the costs and benefits of sustainable clothing in the eyes of the consumer and producer. The research incorporated the phenomenon of handmade clothing that utilize natural dyes, and its connection to local fiber and food farms, as well as the revitalization of recycled materials, and used and vintage clothing. Slow fashion is a relatively new market and this research explored the motivations and attitudes of producers, designers, retailers, and consumers within this burgeoning industry

The following literature review explores background on my research including: previous studies related to consumer purchasing and background on different sectors of sustainable clothing such as upcycling, B-corporations, thrifting, handmade and vintage clothing. I discuss consumer misconceptions and concerns about sustainable fashion, such as price and mistrust and brand loyalty. This includes consumers who care about the environment, but can't afford

sustainable clothing. I discuss B-corporations, specifically Patagonia as a front runner in sustainable clothing. Next I will narrow in on handmade, upcycled, thrifted and vintage clothing. This specifically focuses on the Hudson River Valley region where many small farmers and artisans are joining together to rebuild a farm to fashion system. This includes the communities of farmers, millers, weavers, designers, arts and shop owners. The goal of my research is to understand consumer and producer outlooks on sustainable clothing, specifically on a small scale. Upstate New York is a great setting to study fashion because it is full of communities that are striving to embrace sustainable initiatives, specifically local fiber (Scarce, 2015).

## **2. Literature Review**

### **2.1 Consumer Purchasing**

Consumer interest in recycling and sustainability has increased and is evident through the boom of used and vintage clothing markets, all of which currently affect fast fashion sales (Handley, 2019). Sustainability is now a marketing point for many items. The problem is consumers' environmental or ethical concerns do not always translate into purchasing behavior, which is evident in the fashion industry (Vehmas. et.al, 2018). This means there are many barriers to the adoption of wide scale sustainability initiatives in the fashion industry. Just as with CAFOs and industrial food production models, most consumers are unaware of the negative effects of fast fashion consumption due to the detachment between production and consumption. There also is a common desire in our market for economic growth, an expectation that will be difficult to change in the current market (Ertekin & Atik, 2014). Sustainable fashion is not seen as a priority for many consumers, even among those who proclaim to care about the environment (Ertekin & Atik, 2014). This is mostly due to lack of knowledge, concerns about high prices, and the convenience of fast fashion. Consumers generally perceive sustainably produced clothing as expensive and not in style. There is also a lack of consumer trust. For example, in a study on consumer attitudes towards circular fashion, participants said that transparency is a huge barrier to buying sustainably produced clothing. They felt that clothing brands could communicate far more extensively on the environmental and/or ethical aspects of their practices (Vehmas. et.al, 2018). If the manufacturing process and impact were properly articulated this would potentially increase consumer trust and likelihood to support companies dedicated to sustainability initiatives and business models (Vehmas. et.al, 2018). For consumers to change their behaviors, they need to understand the effect of their purchases, and as such, marketing and education can be a better driver of this change.

The biggest barrier to instigating the growth of slow fashion and the promotion of more environmentally sustainable production and consumption, is the price of clothes. In a consumer study by Pookulangara and Sherphard on slow fashion, most participants wanted to buy more ethically produced clothing, but were unable to do so due to high clothing prices (2013). Consumers are generally more inclined to choose more affordable mass produced fast fashion over local designers. With fast fashion, any consumer can find the newest fashions at the lowest

prices, either in a brick and mortar discount store, and/or online. Some consumers like to have trendy clothes because this can affect one's social status and how they are viewed, especially at a young age. So many young consumers are generally drawn to affordable trendy clothing. Also, some people live paycheck to paycheck and can't afford to spend extra money on sustainably produced clothing (Ertekin & Atik, 2014). Economic factors can also override ethical beliefs. In fact, even people who are educated on environmental effects often fail to act due to psychological barriers such as apathy, denial and avoiding painful emotions. They believe they can't make actual change and resort to habit. The sustainable clothing market overall is also generally geared towards wealthy and more educated consumers who can afford the high price of "sustainable" brands. These perceptions of slow fashion, and the economic barriers, limit its expansion towards a wider market. Better marketing and consumer education does not always result in the desired effect – more wide-scale purchasing of slow fashion items (Ertekin & Atik, 2014).

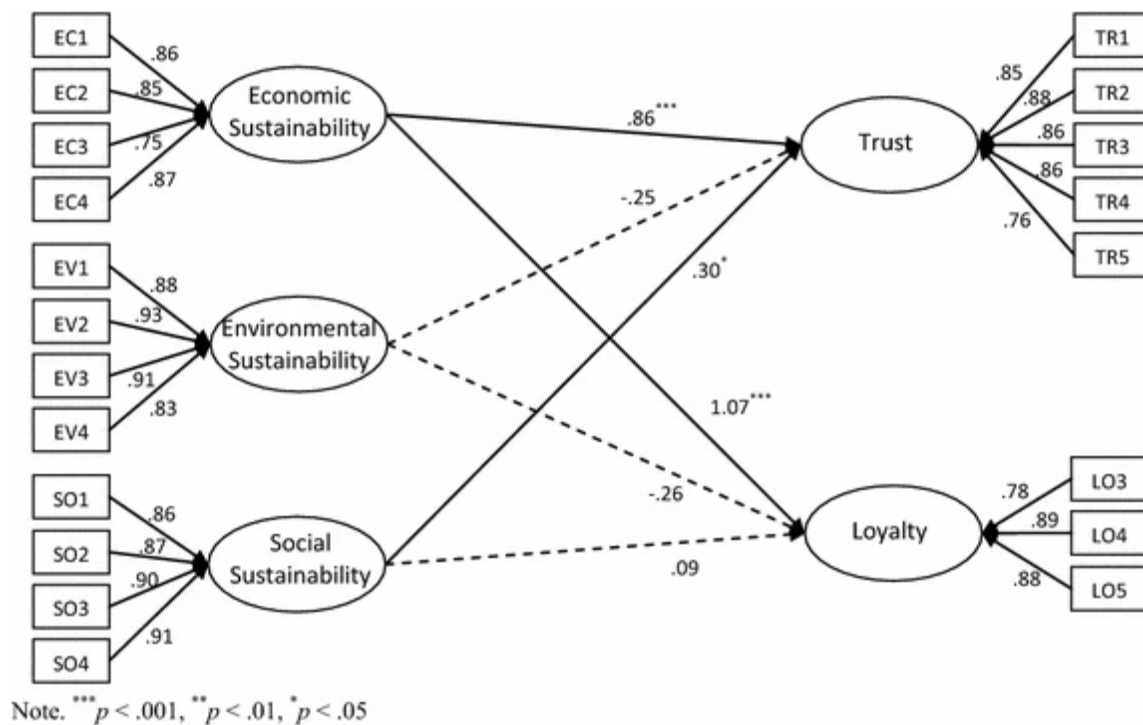
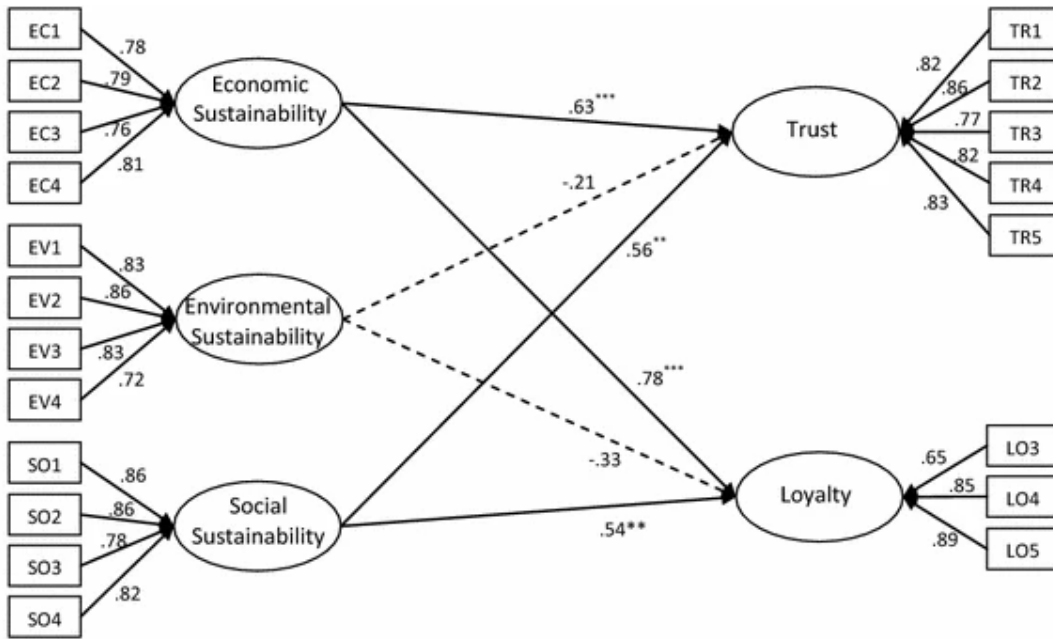


Figure 1: The impact of sustainability perceived by consumers on brand outcome for fast fashion brands



Note. \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$

Figure 2: The impact of sustainability perceived by consumers on brand outcome for sustainable fashion brands

Consumers commitment and trust in fast fashion brands and their uncertainty about the validity of many sustainable brands can deter people from shopping sustainability. Figure 1 and 2 depict the results of a study which uses a triple bottom line (TBL) model as a framework for consumers thoughts on sustainable vs fast fashion (Park & Kim, 2016). This model compares economic, environmental, and social sustainability. The first figure chart depicts consumers who shopped at fast fashion brands and the second figure consumers who shopped at sustainable fashion brands; There were at total so 732 respondents through an online survey. As shown by figure 1 and 2, the results indicated that both economic and social sustainability significantly affected brand trust and loyalty while environmental sustainability did not have any significant impact on either of the brand outcomes. In both charts, environmental is not a huge factor in decision making (Park & Kim, 2016). This study is a clear depiction of how difficult it can be for sustainable brands to reach consumers, many of who focus on price, brand and social acceptance over environmental concerns.

Despite these drawbacks, it is evident that sustainable fashion or the slow fashion market is on the rise. Consumers and producers alike are aware that resources are finite and our current fast fashion model will not withstand; one logical solution is turning to consumerism with sustainability in mind (Vehmas..etal, 2018). Millenials have already shown major interest in reusable markets, and online and in store thifting. This means that people are aware of environmental issues, but are not inspired by the current “sustainable” corporations due to distrust, a lack of information and high prices. Slow fashion will play an important role in the

years to come. This means we need to focus on localization and how this market can be mobilized to not only help the environment, but also create jobs, connect community members and encourage large corporations to adopt sustainability measures that have the potential to change the industry on a larger scale. Fast fashion will not lose funding all at once, but in the past few years there have been significant changes in how and where consumers shop. Online platforms have actually provided space for crafters to sell handmade clothes on sites such as Etsy and used and recycled clothing on sites such as Thread up, Depop and Poshmark (Luckman, 2015).

In a society like the US which strives for constant growth, advertising is endless. With the goal of most businesses being mainly profit, frequent style changes and constant advertising have consequently led to increased consumption (Cozer, 2018). The narrative, however, began to change when in 2013 after the collapse of the Rana Plaza building in Dhaka, Bangladesh, which had five garment factories. The collapse killed at least 1,132 people and injured more than 2,500 (Westerman, 2017). This tragic event caused public uproar and drew attention to horrific conditions of factory employees. This concerned consumers and forced clothing companies to act, calling for greater accountability and transparency. For instance, now the International Labor Rights Forum requires companies to disclose twice a year all the sites that manufacture their products. Some companies still refuse to sign transparency agreements (Westerman, 2017). This event began a conversation about human rights and the ethics of the global textile industry. Consumers now look for companies that are transparent and care about ethical production which is a stepping stone to a more sustainable clothing system.

## **2.2 Sustainability in the Supply Chain**

The current fashion market or supply chain is a clash between fast and slow fashion ethics. The fast evolving industries or FEIs focus on high product variety with low durability or longevity. They survive in the fast evolving markets because they are very responsive and can quickly adapt to market changes and trends (Sabet. etal, 2017). These markets are characterized by low price, low quality, and convenience, which pulls in a wide range of people. Slow fashion in contrast focuses on durability and quality in order to reduce textile waste. In 2011, Patagonia even launched a campaign urging consumers not to buy clothes (Kemp, 2013). Horizontal collaboration is used in large sustainable clothing businesses. This involves a focus on social and environmental responsibility in business as well as understanding all parts of the system. Creating successful horizontal collaborative relationships with non-business actors can be extremely helpful in creating change. They can provide knowledge and resources from inside a business that can help create new legislation within the company. Similar to the slow food movement, the slow fashion movement considers all facets of clothing production such as source and location (Benstead..etal, 2018). They strive to give people equal opportunities to speak and share opinions with non business actors who understand the problems within companies. Most



“sustainable” clothing brands are more expensive than traditional ones, but they are built to last longer (Benstead..etal, 2018).

## **2.21 B-corporations**

Brands adopting a sustainability ethic are becoming more popular, and more consumers are interested in eco friendly lifestyles which includes clothing (Vehmasetal, 2018). This means companies are now considering sustainability as a business factor. Since their creation in 2008, B-corporations have become a models for sustainable businesses. There are currently 3,132 companies that are B Corporations in 150 industries and in 71 countries (Certified B Corporation, 2019). These are businesses that meet the highest standards of social and environmental performance, transparency and legal accountability to balance profit and ethics. They work toward positive impacts towards employees, communities and the environment. This is a sector of eco-fashion which identifies the general environmental performance of a product based on its whole life-cycle. They also focus on workers rights and fair trade (Claudio, 2007). B-Corporations strive to create equal benefit for stakeholders and shareholders. These companies are working to redefine business and are instrumental in building a more sustainable economy in which each element of the triple bottom line is given equal power (Jones & Grotts, 2013). This model is far from perfect, but it is the start of a path forward. The problem is these companies are competing in the same market as fast fashion and the only way to truly change the system is to shift the paradigm, where extreme human and environmental costs are not just avoided but unacceptable (Sabet etal. 2017).

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Sustainable clothing companies are finding ways to use alternative materials and processing methods to decrease their carbon footprints pre and post production. Materials include organic cotton, hemp, bamboo, and other fiber crops that require less/no pesticides, irrigation, and other inputs (Claudio, 2007). Other companies use recycled materials and convert them into clothing to reduce waste. Patagonia, for example, has been selling fleece clothing made from postconsumer plastic soda bottles since 1993. Between 1993 and 2006 it saved 86 million soda bottles from ending up in the landfill (Claudio, 2007). Another sustainable source is plant based material such as corn and Patagonia Yulex wetsuits, and alternative to petroleum based neoprene (Yulex, 2019).

Patagonia clothing company has been a certified B- corporation since 2011 and was California’s first B- company. They are front runners in the “sustainable” fashion industry with a focus on function, repairability, and, foremost, durability. Their business model focuses on

environmental protection, minimalism and accountability. Patagonia tracks its supply chain back to the source to avoid labor issues. In 1996, Patagonia transitioned to using 100% organic cotton by speaking directly to farmers. They also aim to limit the transportation of goods to avoid carbon emissions. They also created a used goods market that allows Patagonia customers to trade back products to be recycled or sold as well as creating a repair center to repair Patagonia clothes. Patagonia is a great example of a sustainable clothing company that considers all factors of production and works towards making all sectors of the company sustainable. It was also an early sustainable brand which started in 1957 and started their first environmental campaign in 1988. Patagonia has also been selling fleece clothing made from postconsumer plastic soda bottles since 1993. Patagonia started making wetsuits in 2005 with the hopes of finding an alternative for neoprene which has an energy intensive and very environmentally damaging manufacturing process. They now produce their Yulex wetsuits with hevea rubber, the best performing alternative. It is sourced from trees instead of factories which reduces emissions and energy use. This material also comes from sources that are Forest Stewardship Council certified by the Rainforest Alliance. The dedication of Patagonia to find new creative innovations and progress the brand makes them an inspiration for many other brands (Yulex, 2019).

### **2.3 Recycled/ Reused Clothing**

Reuse and recycling can prevent waste in the current textile production system or supply chain. This includes buying durable textiles, lengthening the life of textiles by careful care, repairing or recycling materials if no longer usable. The ultimate goal is the creation of a closed loop system (Vehmas. Etal, 2018). At the core of sustainable design is a new innovation; often using objects normally discarded into something useful. (Young, 2004). This also includes creating products that are versatile for day to day life; clothing that is durable and comfortable. Textiles require a significant amount of natural resources. For example, in order to produce 1 kg of cotton, it takes between 7,000–29,000 liters of water and between 0.3 to 1 kg of oil. Instead of disposing of clothes, reuse and recycling can prolong the material life of a product and prevent more waste.( Ekstrom & Salomonson, 2014).

Currently, the reuse and recycling of clothing is done on a small scale where consumers have the choice whether to throw out or donate clothes without much forethought on the effect of waste. The only way to change the system is to view sustainable consumption as a political project by creating alliances with businesses, consumers and government in order to change cultural values of unlimited consumption. There needs to be a nationwide drive to decrease consumption and provide easy ways for consumers to recycle or donate clothes. Increasing consumer knowledge, providing easy access to collection bins, developing national systems for the collection of old clothes, and developing better technology for recycling as well as increasing the durability and longevity of clothes (Ekstrom & Salomonson, 2014). Overall, the focus should be transitioning away from a market of endless consumption, but recycling is the first step in connecting consumers to the effect of textile waste.

## **2.4 Vintage and Used Clothing**

Used clothing is now threatening the fast fashion market. The second hand apparel market was worth \$24 billion in the U.S. in 2018, versus \$35 billion for fast-fashion. Fast Fashion companies like H&M and Zara are continuing to lose profits due to used clothing markets which are said to potentially reach \$64 billion in the U.S by 2028 (Handly, 2019).

Vintage and reused clothing has actually been fashionable for over 40 years and is gaining popularity. Changes in the garment industry due to fast fashion produce more homogenized clothes which has led some American consumers to explore more “authentic” alternatives. Vintage and reused is distanced from mass production, possessing qualities associated with handcrafted material goods, viewed as authentic (Ficher, 2015). Wearing vintage clothing has now become acceptable or even fashionable due to the thrill of thrifting, appearance of such clothing on TV or in the cinema. Thifters also claim that the clothing is not only individual, but garments have superior quality to the current market (Fischer, 2015). Shopping for thrifted and vintage clothes is also generally low and price meaning they are attainable for most of the general population. Unfortunately, some consumers see used clothes as having questionable hygiene (Ficher, 2015).

There are many companies currently that process used clothes. FABSCAP for instance is non profit based in New York City and is a one stop textile reuse and recycle source. They pick up fabric scraps from large corporations and everyday people. Then they sort the material, identify the fabric. From there it will be recycled, made into thread, blankets, carpet etc or given to crafters and artists for their use. Some pieces are even sold online (FABSCRAP, 2019). They mostly deal with pre-consumer textile waste and work with large companies to pick up perfectly new materials that would otherwise be thrown out. They add 15 new brands to the service each month and work with them to consider more sustainable materials and ways of processing waste. Their goal is to prevent waste before it occurs and prevent perfectly new materials from ending up in landfills (Schreiber, 2019).

Lucy Beizer is a Skidmore College alumni who currently works at FAB SCRAP.] She uses materials from their warehouse along with thrifted and vintage materials to create handmade clothing with natural dyes. In small business Lucy Threads is made of fresh new designs utilizing natural and reused materials. It is a great example of how new innovations, along with traditional clothing production and craft can be made into something new and stylish (Beizer, 2019).

## **2.5 Handmade Clothing**

Handmade clothing practices and goods are now in global demand. Besides local markets, sites such as Etsy which specializes in handmade and vintage items, sells over a billion

dollars a year globally. The internet has provided a platform for crafters and knitters to connect with others not just on a local but on a global scale. Practices such as knitting and crochet have become fashionable again. This is due to a resurgence in small-scale localized production and public desire for authenticity in an inauthentic era of mass production (Luckman, 2015). Some even see knitting as a form of activism . Local craft markets are seeing new light because people are driven towards one of a kind or unique objects. Similar to slow food markets, local craft markets are seeing a boost in popularity which means local markets will only continue to grow in opposition to the global fast fashion market (Luckman, 2015).

### **2.51 Natural Dyes vs Synthetic Dyes**

Natural dyes are derived from natural sources such as plants, insects, animals and minerals. Despite a long history, they are currently experiencing a renewed interest in sustainability and “natural” products ( Kadolf, 2008). Some sellers use genuine wool from sheep or alpacas that is undyed, while others use natural dyes from plants. As consumers generally strive towards more natural lifestyles, natural dyes are highly desired, especially in the “green” market. Natural dyes are less predictable than convention dyes and much still must be learned about how to properly use them. However, they are imperative to creating a closed loop textile system because unlike conventional dyes they can return to the soil and not pollute clean water that is essential to human life.

Most conventional dyes are derived from fossil carbon. Two hundred tons of dyes and left unbound globally and end up in freshwater systems and can impact drinking water supply. These dyes persist in waterways and resist biodegradation (Burgess, 2020). So transitioning to natural dyes can prevent water contamination and effects of human health.

### **2.52 Natural Fibers and Diversity**

Natural fibers come from the soil and can return to the soil. They can be transformed into compost when their life cycle is over. Natural fiber includes Hemp, cotton, wool, alpacas, llama, cashmere, silk and flax. Composting fibers is not only good for the soil, but it also keeps clothing out of landfills and prevents waste in this country and abroad because much of our current trash is outsourced (Burgess, 2019). There is currently a lack of diversity in fiber in the market and there needs to be a greater focus in diversity and push away from synthetic fibers. Many farmers are planning for a new wave of hemp and linen.

Currently over 70 percent of the fiber we wear originates from fossil carbon. These are clothes made from synthetic fibers which release microplastics which disrupt and pollute aquatic ecosystems and our clean water supply. Currently, 80 percent of the cotton grown in the United States is genetically modified. Endocrine disruptors have been found in genetically engineered

cotton as well as conventional dyes. These chemicals can affect reproductive health in humans as well as increase the rate of cancers and other diseases (Burgess, 2019).

## **2.6 Slow Fashion Movements in the Hudson Valley**

### **2.61 Hudson Valley Textile Project**

The Hudson Valley Textile Project supports a sustainable model of regionally sourced, processed and manufactured fiber products. It is a communal action in the Hudson River Valley in upstate New York to support a farm to fashion fiber chain that supports local growers, processors, artisans, manufacturers and consumers. It is a regional network in the Hudson River Watershed so farmers, artisans and consumers can come together and share their knowledge and a shared concern for the environmental and community impacts of fast fashion. They create partnerships for sustainable local sourcing and create a farm to fabric supply chain. The community includes shop owners, farmers, artisans, engineers and creators that all make up different parts of the supply chain (Hudson Valley Textile Project, 2019).

### **2.62 NY Textile Lab**

Laura Sansone is a textile designer from New York who created the New York Textile Lab which links local apparel, products and interior designers with farmers, fiber mills, weavers and knitters to create products that are local, socially and environmentally friendly. Her goal is to decentralize the supply chain, foster economic diversity and regenerate and sustain ecosystems through regenerative textile systems (New York Textile Lab, 2019). She has additionally created a NYS Regional Yarn Sourcebook which is guiding farmers in implementing Carbon Farm Plans which support soil health through the sequestration of Carbon which helps to mitigate the harmful effects of Climate Change (Burgess, 2019).

### **2.63 Fibershed**

The Hudson Valley Textile project and The NY Textile Lab build off the ideas of the Fibershed movement. This is a decentralized non for profit founded by Rebecca Burgess. In 2010, she challenged herself to create a wardrobe with materials within 150 miles of her home. This started Fibershed which is now being practiced across the globe (Burgess, 2019). The main focus is on decentralizing the supply chain to support and give due credit to all players in the supply chain, specifically farmers. Slow Clothing is a similar grassroots movement to Slow Food because it is led by farmers, ranchers, artisans and textile manufacturers. Those in the fibershed movement focus on the source of raw materials and creating a closed loop system of clothing that comes from the soil and can return to the soil. The main goal is to create sustainable systems

that can last which start by bringing carbon back into the soil and create renewable textile systems (Burgess, 2019).

### **2.64 Carbon Farming**

One of the main ways fiber producers in the Hudson Valley are working towards a more sustainable fashion chain is through carbon farming. Laura Sansone is particularly pushing for farmers to transition to regenerative farming. Regular farming is extractive and depletes soil. According to *Fibershed* by Rebecca Burgess: industrial fiber and food systems count for 50 percent of global emissions, but with carbon farming, agricultural supply chains can move from being net producers to net reducers of greenhouse gasses through carbon sequestration in the soil (Burgess, 2019). The goal is to manage farms better and help seep carbon back into the soil. This can be achieved through composting protocols such as composting measures, rotational grazing, cover cropping, no till. Economic diversity is also threatened with large businesses. Carbon farming helps systems shift away from chemical use and focus on the production of natural and local fibers. The goal of creating a new textile economy starts with farmers. Profits are currently getting lifted away from farmers. Artisans like Laura Sansone are currently advocating for farmers to sell deep value fiber which is carbon farmed. This is the first step in changing the system and creating clothing that comes from the soil and returns to the soil (NY Textile Lab, 2019).

### **2.65 Downside to Handmade Clothing**

Not all local artisans or farmers or considered sustainable. Some get threads from other countries, still use acid dyes and other harmful practices. Natural dyes are still a relatively small market because many artisans feel they do not retain color well with time. Some farmers and in the Hudson valley area do not dye their materials while others use natural dyes. Overall, supporting local markets is better for the environment because there are less carbon emissions. Buying local also supports local economies and takes money away from big corporations like H&M and Forever 21.

### **2.66 Revigioration of Environmentalism in the Hudson Valley**

The Hudson River Valley is now experiencing a revigioration of environmentalism and push for a new sustainable market. People in the region are working to grow food, fight for environmental justice communities, focus on local fibers, rely on sustainable energy and most importantly bring communities back together (Scarce). This doesn't just mean creating more green space, but changing the landscape of connection between people and places where consumers can buy products from the region for regional benefit.

In both fast fashion and sustainable clothing markets on a large scale, consumers look for transparency in a company which is often hard to find. When a consumer buys used clothes, they know they are preventing textile waste. When someone buys something wholmade from the region they live in, they can ask about how it was created and not be shut down. Slow clothing systems challenge globalized mass production (Fletcher, 2015). Just as farmers markets have grown in popularity, clothing markets are on the rise because they are places consumers can get unique items from sources they trust. The Hudson Valley region is a great place to explore these markets because there are many businesses in support of a local farm to clothing fiber chain.

### **3. Methods**

#### **3.1 Research Overview**

The purpose of my study is to better understand the emerging market of slow fashion and local clothing markets, specifically in the Hudson River Valley in Upstate New York. The goals were to better understand what drives consumers to slow fashion (over fast fashion) along with an understanding of the benefits and drawbacks of slow or sustainable fashion systems, on a small scale. I utilized narrative case study methodology to guide my research methods. (Creswell, 2013) Although I implemented online Qualtrics surveys to gather data about a large group of consumers, I also found value in semi-structured interviews as another important data collection technique, specifically when interacting with respondents such as producers: farmers, artisans and small business owners in upstate New York. I additionally led a group discussion and surveyed consumers before and after a documentary on fashion waste to explore the effect of education on fashion choices. One Focus Group was also conducted, using Grounded Theory which focuses on commonalities between a number of individuals being studied which leads to an ultimate conclusion (Creswell, 2013). Further, I conducted participant observation and archival research which worked to triangulate both my methods and sources.

##### **3.11 Research Questions**

The research questions explored consumer behavior and the outlooks of producers and consumers in the slow fashion industry in Upstate New York. They also explored the conceptions and realities of the sustainable clothing market overall through the eyes of consumers as well as producers such as farmers, artisans, business owners and even a combination of all three.

1. What drives consumers to buy “sustainable” clothing, specifically reused and/ or handmade clothing?
2. What are the drawbacks and benefits of sustainable/ slow fashion in the eyes of consumers?
3. What are the drawbacks and benefits of sustainable/slow fashion in the eyes of producers such as farmers, designers, and small businesses and/ or retail shop owners?
4. What is the role of education in consumer fashion choices and views on fashion?
5. What are the biggest challenges in creating and selling sustainable clothing?

6. To what extent is the market expanding or contracting?
7. Where is the slow fashion market headed in the future and what are solutions to current problems in this industry?

When interviewing producers in the Hudson River Valley region, I explored factors such as types of raw material, origins of materials, processing techniques, types of dyes, and the cost of the materials and end products. Further, I explored how small businesses and artisans marketed their products, as well as the main consumers of these products and the extent to which these products can be connected to a wider consumer base?

Additionally, I explored clothing markets as a new “trend,” including physical and online clothing markets for sustainable, handmade and/ or local items. This included thrift stores, clothing shares, farmers markets and fiber markets. Part of the focus of this research also relates to small scale slow fashion specifically related to the mission of the Hudson Valley Textile Project, the NY Textile Project and Fibershed.

## **3.2 Research Setting and Respondents**

### **3.21 Background on Setting**

My research was centered in Upstate New York, particularly, The Hudson River Valley. This area was a starting point for the fashion industry in the US. In 1830’s it was part of a tourist route called the “Fashionable Tour.” It became a tourist destination due to a booming culture and beautiful landscape (Gassan, 2002). During this time, the Hudson Valley generally relied on agriculture production and farmers. By the end of the eighteenth century, the region relied on regional trade, linking farmers to the larger economic system (Gassan, 2002).

The Hudson Valley River Region in New York has one of the richest landscapes in the Northeast, due to natural areas like the Adirondack Mountains and historical areas like Sleepy Hollow and New York City’s concrete canyons. It is one of the most studied regions in the US and was home to the region's first European Colonists. It was once a farming region, but much land was lost through industrialization which has led to recent national backlash and the push for environmentalism. According to Rik Scarce, the current goal of the region is to reinvigorate rural villages and communities (Scarce, 2015). Farmers, community organizers, business owners, scientists and social advocates are working to strengthen local economies and create a more sustainable region. The Hudson region focuses on local farms, local fiber, community gardens, etc. The goal is to strengthen local food systems and create sustainable communities with an intimate tie between communities in place.

In 2012, Ajax Greene created an organization that promotes local businesses in the Hudson Valley as they shift towards sustainability. This was part of BALLE, the Business Alliance for Local Living Economies. This later became “ReThink Local,” a non profit collaborative of businesses, farmers, artists and independent workers working to co-create a better Hudson valley that is local, sustainable and committed to the triple bottom line. This means it does not just focus on environmental sustainability but also social, economic sustainability. Greene views local economies as something that can unify us. There are now 120



members of ReThink. Green believes the future of the economy is based on independent locally owned businesses (Scarce, 2015).

Shift towards localization is also present in the fiber and textile industry in the greater Hudson Valley areas. There are over 180 fiber producing farms in the Finger Lakes Region of NY. Most of these farms are small but house a wide variety of animals and breeds from sheep to goats and llama to rabbit. (<https://localfiber.org/farms/>). Many farmers sell their threads or produce clothing themselves. The most common animals are sheep, alpacas and goats.

The Hudson Valley is currently trying to revitalize a farm to fashion supply chain. Local clothing markets such as the Adirondack Wool and Arts Festival brings people in from across the region and country to the area. Many artisans from these festivals are involved in the Hudson Valley Textile Project. Their goal is to support independent local community members and businesses such as farmers, fiber processors, artisans, shop and business owners as well as consumers. They want to work together to strengthen local markets and work towards a more sustainable future. They also target consumers, challenging them to invest in at least one regionally sourced clothing item or home decor item every year.

### **3.22 Background on Respondents**

This research was conducted in Upstate New York in the Hudson River Valley. I focused mainly on millennial consumers because they define the current and upcoming consumer market. In a report by Jet Mbogai on millennial perspectives on ethical Fashion, he found that most consumers were aware of the problems within the fashion industry including social and environmental impacts. 70% of 18-34 year olds surveyed and interviewed shared that they would pay extra money for ethically sourced clothing. Additionally, 10% of participants shared that government fines should force the companies to make their production processes more ethical (Mbogai, 2017). Overall, I believe millennials are more aware of the current state of the environment and are more open than older consumers to discuss Climate Change. I also believe they are more likely to change their behaviors to support sustainable initiatives if properly educated on fashion. This was also the easiest group to target due to their connection to social media. Also, as a college student it was easier for me to network at Skidmore College and other campuses.

The respondents were limited to students at Skidmore College and the greater Saratoga area. This portion of the research focused on young adult populations such as college students along with an array of other participants between the ages of 18-80. Respondents indicated the school that they attended at the time of the study if applicable.

I was able to connect with the general public through posting my survey on Facebook groups in the greater Saratoga area, and Skidmore College. I also created a Facebook advertisement through Qualtrics to publicize my survey. This advertisement and Facebook page reached consumers within 50 miles of Saratoga Springs for a period of one month. I also put up posters around town: on peoples' cars, at restaurants and coffee shops. I set up a table at the Saratoga Springs Farmers' Market in the Wilton Mall where I gave out slips with my survey link and had some consumers use my computer to take the survey in person. I additionally gave out my survey slips in big events in town like Beer Fest. In total 215 consumers were surveyed. A majority of the respondents were between the ages of 18 and 30.

I also interviewed producers. I connected with a wide variety of producers, only a portion responded and agreed to meet. I conducted 12 producer interviews overall, 6 were in

person and 6 were over the phone. I contacted artisans who attended fiber festivals and local markets in the area such as the Adirondack Wool and Fiber Festival. I also connected to board members and general members of the Hudson Valley Textile Project along with others in the region. I emailed producers who I talked to at the Adirondack Wool and Fiber Festival and set up interviews either in person or over zoom or phone depending on the distance from Saratoga Springs. I tried to interview a wide variety of producers to analyze different aspects of the farm to fashion fiber chain. This included different specializations such as natural dyes, recycled or thrifted materials, local threads and more. Since many of the producers failed to respond, I also interviewed producers I was connected to through other producers.

### **3.3 Qualitative Instrumentation and Sampling Techniques**

#### **3.31 Qualtrics Online Surveys**

The main method I used to collect data about consumer behavior was through Qualtrics online surveys. I distributed my consumer survey to groups within Skidmore College and in the Saratoga Springs area. At Skidmore College, I posted my survey in my class Facebook group and club groups, including the Ultimate Frisbee Club, the Environmental Action Club, the Outing Club, Environmental Studies at Skidmore College Facebook Group and the Class of 2020 Facebook group. I advertised my survey via posters placed around the school with the link to the survey. Further, I hosted a table in various high traffic areas around campus. In the town of Saratoga Springs, I hosted a table at the Farmer's Market, distributed posters in community buildings and on car windshields and in shops. I reached a wider audience through my Qualtrics Facebook Advertisement and a Facebook page I created to publicize my survey. These were active for a period of a month and reached consumers of all ages within a 50 mile radius of Skidmore College.

I limited bias by titling my survey as a consumer fashion survey without explaining the main focus was on sustainable fashion. This way, all respondents weren't inherently environmentally conscious or already interested in sustainable fashion. In person, I rewarded participants with food if they took my survey as a way to spark interest in those that might not otherwise stop. My survey also included a raffle with the possibility of winning one of three sustainable prizes. These were local sustainable fashion items from producers I visited. This was another way to spark the interest of a general consumer to take my survey.

#### **3.32 Participant Observation**

I used participant observation when attending events, farms, workshops, shops and more. For example, I used participant observation at the Adirondack Wool and Fiber festival. I studied the people that attended the festival specifically in terms of age, gender and interests. Interests included types of clothing and materials bought, what booths were most popular and more. I utilized participant observation in this scenario through being a consumer at the fiber festival and observing factors such as price and materials at different shops. This means I fully immersed myself in the places I visited in order to observe and participate in events as a "consumer" (Creswell, 2013).

When visiting farms and shops, I also made notes of visual factors such as the size of the farm, types and numbers of animals, type of thread used etc. I observed the sustainable aspects and not as sustainable aspects of these locations. I also studied other visual information such as design, presentation and marketing techniques. This helped me understand from the perspective of a consumer what pulls me or pushes me away from a business.

I additionally used participant observation at the movie showing of RiverBlue led by Sustainable Saratoga and the Saratoga Film Forum. Besides surveying consumers, I watched the movie like a general audience member and observed the audience. This included: studying their age and reactions after the movie.

### **3.33 Semi-Structured Interviews**

I used semi structured interviews as my main form of qualitative research for producers. I conducted 12 producer interviews with a combination of farmers, artisans, activists, shop owners and small business owners. These interviews were 30 to 90 minutes in length. They were conducted either in person, over the phone or over zoon. I visited a few farms and artisans in the area and did the rest of the interviews on zoom or by phone. I mainly studied the process of textile production, producer experience with consumers and how sales and the general market for handmade and/ or sustainable clothing has grown overtime. I recorded these interviews with Quick Voice Pro and took notes along with the interviews. I brought questions to guide me but also let the interview speak freely, using follow up questions to create structure.

Besides surveys, I also conducted around 10 consumer interviews. These interviews were also 30 to 60 minutes. These built off the questions in my surveys, but created a space for open conversation and long responses. I tried to interview a variety of consumers from Skidmore Students to those in the greater Saratoga area and in the town of Saratoga Springs. At school, I interviewed consumers who weren't environmental majors or necessarily interested in fashion. The goal was to find general consumers perspectives, which included environmental conscious individuals and those who were not. I used Quick Voice Pro to record these interviews and also took notes during the interviews.

### **3.34 Content Analysis/ Background Research**

Throughout my research, I analyzed different studies on consumer perceptions on fashion. I also studied different types of B-corporations that I did not contact or interview. I focused on the local area of Saratoga and the Hudson River Valley and only interviewed producers and consumers within New York. Most were based in Upstate New York and a couple were based in New York City. After going to the Adirondack Wool and Arts festival, I studied the list of vendors online. I also similarly studied other fiber events in the area to see what vendors attended these events. I specifically logged materials used, original location of fiber, types of dyes and connection to sustainability.

### **3.35 Focus groups**

I conducted one focus group with 4 consumers, which was approximately 30 minutes in length. I used multiple questions to stir up a conversation and added follow ups when needed, giving people time to build off each other. I conducted this focus group at Skidmore College

because I wanted to explore college age consumer perspectives in greater depth. I recorded this focus groups with Quick Voice Pro and took notes.

### **3.4 Data Analysis**

I will analyze my research after all my surveys, focus groups and interviews through dividing the research into different categories to avoid bias. First I will put all the data together, creating tables and graphs to analyze it. With the use of specialized questions, I will divide groups by age, interest in sustainability, and/ or if they go to Skidmore or another college. This way I can get a random sampling of people from different communities, ages and areas of interest.

I tried to limit bias in my survey respondents and participants in interviews by connecting with groups on campus, not solely focused on environmental concerns or fashion such as Skidmore Ultimate Frisbee, the dining hall and public areas on campus. To determine the degree of bias in results, I include introductory questions in my survey discussing age, income, degree of environmental concern or care and whether or not they were currently attending college. Besides basic environmental behaviors, I had consumers answer whether they considered themselves to be environmentalists. This way I knew what percent of the consumers were environmentally aware. Income was also an important factor because this often determines the clothes consumers buy or how often they can afford to shop.

Interviews, focus groups and discussions were digitally recorded and transcribed in a word document and coded. I emphasized important quotes to include in my analysis along with basic information relating to background information and answers to my research questions. For consumer interviews, I also included important quotes. For all interviews I printed them out and highlighted important information physically as well as digitally. Some interviews I analyzed more in depth in my results. Overall, I analyzed the themes or commonalities between interviews. I made charts, specifically bar graphs to analyze data. I added up interview data by hand and also created a survey in Qualtrics to visually display this data for some of the questions asked.

For surveys, I once again extracted important quotes that were significant to my analysis. The rest of the information I divided into charts and graphs. I used the graphs produced from Qualtrics to analyse my results.

### **3.5 Limitations**

There were many limitations to this study and ideas can be further expanded on. I was limited to the greater Saratoga area. This means I had a limited consumer and producer base to study. Many producers I interviewed lived too far away for me to drive. This means I was not able to use participant observation to study these sites. Also in some cases I was not able to interview producers due to distance. Due to my location, I mostly focused on consumers at Skidmore College. As an environmental major, I am friendly with many people within the major or with similar interests as me. This means my research may be slightly biased towards environmentally friendly people. I distributed most of the additional surveys in Saratoga (around town and at events). This could also be biased because Saratoga Springs is an overall wealthy

town. So consumer answers within town may not be congruent with the general population in the Hudson Valley. More studies could expand on recycled materials, upcycling, thrifting or strictly handmade goods. A specific study on the reemergence of clothing markets would also be interesting.

Besides a limited consumer base, I was also limited in time. I conducted my research in 3-4 months in the Spring while taking 3 other classes. This means I was limited in the amount of people I could interview and survey. I also had limited time to research and write my paper. So I could not go as in depth as I wanted to on many of the sub topics in my study such as thrifting and upcycling.

**Table 1: Producer Interviews**

Name of person/ business	Type of producer/ specialization	About/ reason to interview	Location of Interview
Lucy Beizer	Business Owner  Specialization: upcycling, thrifed materials, natural dyes	Lucy is a Skidmore alumni who founded Lucy Threads, a small sustainable clothing line which uses existing clothing and textiles to create new clothing and reduce waste. She uses natural dyes from fruits and vegetables and uses thrifed and vintage materials from FABSCRAP and thrift stores. She is currently living in New York and working at FABSCRAP, a nonprofit which takes pre-consumer and post consumer textile waste from large companies, sell them and/ or converts them into usable materials to prevent textile waste. Additionally, 5 % of the profits from Lucy’s sales go to the Environmental Defense Fund (Beizer, 2019).	Case Center at Skidmore College
Mary Jeanne Packer from Battenkill Fiber Packer Mill	Mill Owner/ Founder of the Hudson Valley Textile Project	Packer has created a mill to process fibers from small local flocks. She takes the fiber, processes it and gives it in full back to farmers. This process supports the local textile processing industry with a strong regional market with a customer base of over 450. Mary Jean also has a store open on the premises. She has her own farm and a fiber line called “Battenkill Fibers” which is fiber 100 percent produced in New York.	Greenwich, NY at BattenKill fiber - in person

		Along with that she educates farmers on producing wool and organizes the Washington County Fiber Tour (Battenkill Fiber, 2019).	
Dakota Ridge Farm Katrina Capasso,	Farm: llamas,	Dakota Ridge farm is located in Ballston Spa and owned by Katrina and Gary Capasso, they are situated on 42 acres of woods with 38 llamas. They have a fiber shop and run farm tours (Dakota Ridge Farm, 2019)	Ballston Spa, NY -in person
Elaine Larson	Farmer, artisan	Elaine Larson is a Biology teacher at Skidmore College who works with natural dyes. She's raised sheep for 20 years and makes and weaves her own fiber. She is currently teaching a fiber arts class at Skidmore which discusses the history of fiber and focuses on sustainable solutions.	-Saratoga Springs, NY  In person interview
Natalie Stopka	Artisan/ activist/ teacher	Natalie Stopka is an artisan from Yonkers, NY, but spends time in Upstate NY foraging for natural dye plants. She creates textiles inspired from the natural world, using historical fiber techniques such as natural dye and pigment extraction with a focus on unique texture and patterning. She has a dye garden and studio.	Yonkers, NY  Interview by phone
Lily Marsh	Artisan/ Activist	Lily Marsh is on the board of the Hudson Valley Textile Project. She is a weaver and dyer with a studio at the Shirt Factory in Glens Falls, NY. She uses both plant and animal fiber in her natural dyes	Glens Falls, NY  In person interview
FABSCRAP- Lucy Beizer		FABSCAP is a non profit whose main goal is to reduce pre consumer textile waste by picking up fabric scraps from large corporations. Then they sort the material and then either recycle it, made into thread, blankets, carpet etc or give scraps to crafters and artists for their use.	Interview over the phone-

		(FABSCRAP, 2019). They add 15 new brands to the service each month. Their goal is to prevent waste before it occurs and prevent perfectly new materials from ending up in landfills	
Laura Sansone	Owner of NY Textile Lab: artisan/ activist	New York Textile Lab is a design and consulting company. They design yarns and textiles which connect designers to fiber producers and mills to help grow a textile supply chain in New York. This involves sustainable and locally sourced yarn Sansone's goal is to create a network of apparel, product and interior designers and farms, spinners, weavers etc.	Interviewed over zoom
Ashley Bridges	Sheep Farmer	Ashley Bridges is a sheep farmer who focuses on regenerative agriculture, local meat and fiber and solar grazing. She is passionate about creating carbon farmed fiber.	Cambridge, NY- in person interview
Cal Patch	Artisan/ teacher	Cal Patch handmakes clothing and teaches others how to hand make and repair clothing. She has an online shop and does commissioned work.	Interview by phone
Rik Scarce	Professor/ environmental activist	Rik is an environmental activist and professor at Skidmore College whi	Skidmore College in person
Ekologic-Kathleen Tesnakis	Small Business/ upcycled cashmere	Small business based in Troy, New York, which makes clothes from recycling post-consumer used cashmere sweaters	By zoom

## 4. Results/ Findings

To answer my research questions on consumers, I created a survey which was taken by 215 consumers. I additionally interviewed 10 consumers, led a focus group and surveyed 52 consumers before and after a movie on fashion waste. The goal was to understand consumer perspectives on the drawbacks and benefits of slow fashion which includes handmade and thrifted clothing, along with how many consumers consider the environmental and social impacts of fast fashion before buying clothing. Finally, what drives consumers to buy sustainable clothing and what attributes do they look for?

### 4.1 Consumers Qualtrics Online Survey Results

#### 4.11 Sample Size and Demographics of Consumers

My online consumer survey through Qualtrics had 215 respondents in Upstate New York. I advertised my survey by holding booths at Skidmore College in the main student center and outside the dining hall. I also held a booth at the Saratoga Farmers' Market. I additionally put up posters around Saratoga Springs and in the surrounding areas at coffee shops, on cars and in public places. To reach a wider audience, I created a Facebook page and advertisement through Qualtrics to reach consumers within 50 miles of Saratoga. This way I could reach varied age groups and demographics. I advertised my survey as a consumer survey and did not mention sustainable fashion to avoid bias and encourage people not interested in sustainability to take it.

##### 4.111 Consumer Age Range and Gender

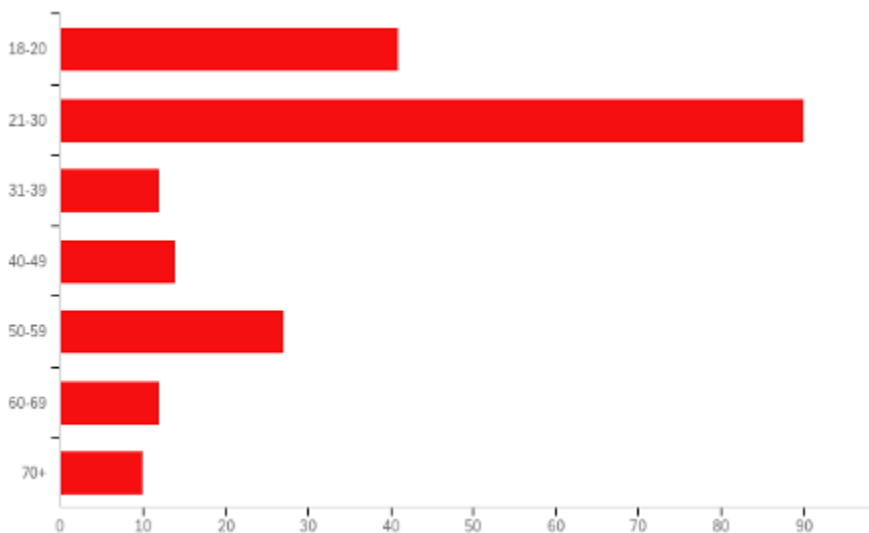


Figure 3: Ages of consumers surveyed



For my main consumer survey, out of the 215 respondents, 90 people or 43.7% of the respondents were between the ages of 21 and 30 as shown in Figure 3. 18-20 year olds made up 19.9% of the respondents. 50-59 year olds were the third biggest age group with 13% of respondents. Although their ages vary, the majority of those surveyed were between the ages of 18 and 30. These consumers fit into the Millennial and Generation Z categories. Overall this generation of consumers is interested in sustainability, specifically in reused clothing (Luckman, 2015). Out of these consumers, the majority or 75.6% were female, 23.9% were male and .5% were other. In general, female consumers shop more frequently, so the presence of a greater number of females in my results did not create bias because it properly represents the pollutions who shop the most.

#### 4.112 Location of Respondents

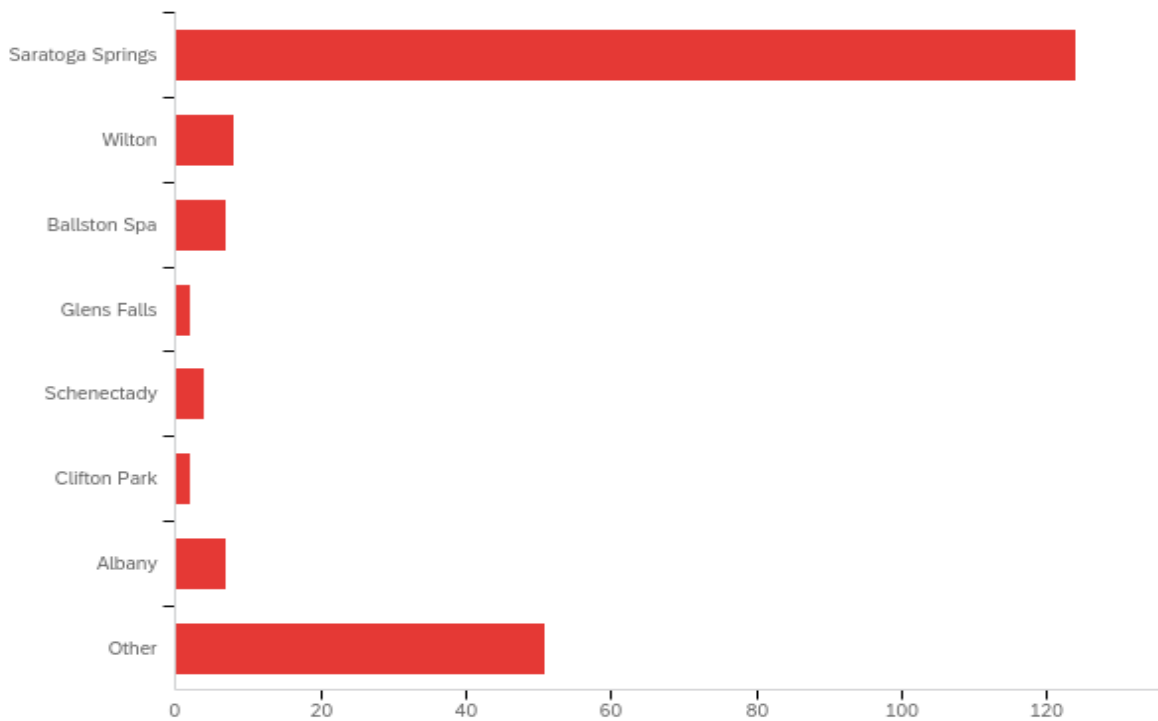


Figure 4: Where were the consumers from?

Despite varying ages, 60.5% of respondents were Saratoga residents (Figure 4). Other respondents were widespread throughout Upstate New York, specifically in Ballston Spa, Albany and Wilton. 25% of respondents responded other to location and over 50 locations in NY were written in. Some of these were Westchester, Schuylerville, Greenwich, Cambridge, Corinth, Pittsfield, Hadley and much more. 53.7% of respondents were college students, mainly from Skidmore College. The other colleges were Hudson Valley Community College, Buffalo State College, Suny Adirondack and Suny New Paltz.

Saratoga Springs is generally a high income area as opposed to other towns in the region and Skidmore College has a large population of students from high income families. This means a portion of the population surveyed may have had a more expendable income to buy clothing, along with a larger background in sustainability than the general consumer.

#### 4.113 Income

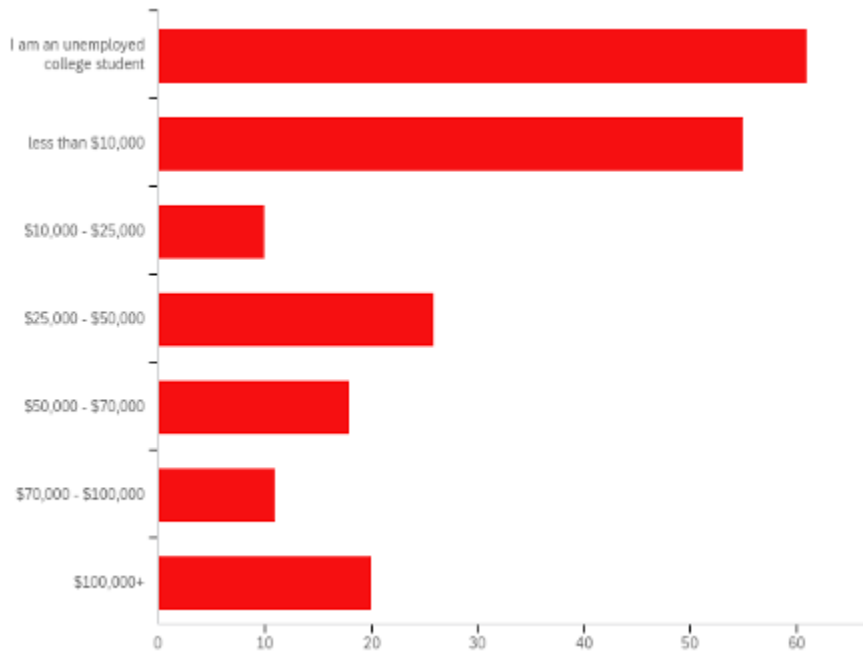


Figure 5: Income of Consumers

A majority of the people surveyed had low incomes, 30 % were unemployed college students and 27% made less than 10,000 dollars a year. 13% of respondents made 25-50 thousand dollars a year and 10% made over 100,000 (Figure 5). This is not surprising, considering many of the respondents were college aged students. However, this means these consumers don't have much of an expendable income to buy clothing.

#### 4.114 Environmental Behaviors

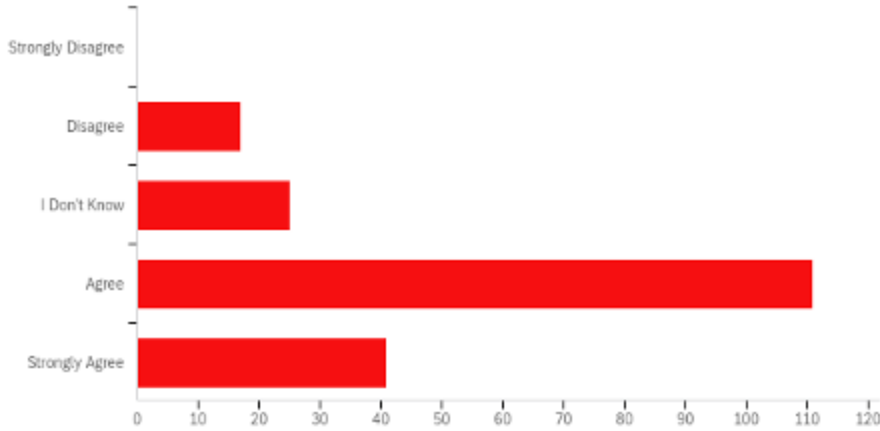


Figure 6: Response to the following: “I consider myself an environmentalist.”

The majority of those surveyed considered themselves to be environmentalists or environmentally conscious (Figure 6). 57.2 % agreed with the statement “I consider myself to be an environmentalist” and 21.1% strongly agreed. 22 % disagreed or responded with “I don’t know.” This means the results of this survey were slightly biased because the majority of those surveyed were already environmentally conscious and their responses might not reflect the ideas of “normal” consumers.

The most common pro environmental behaviors of those surveyed were recycling, turning off lights, using reusable shopping bags, water bottles and coffee mugs. 96 out of 215 consumers said they composted and another 96 said they regularly buy local food. This is 44.7% of the consumers surveyed. 188 consumers out of 215 or 87 % of the consumers surveyed said they regularly recycle, 171 or 80% had a reusable water bottle and 164 or 76% used reusable bags at the supermarket. 45 or 21% of consumers marked themselves as vegetarian or vegan, but many others in the other section said they tried to limit meat consumption or eat mostly plant based.

However, despite a majority of consumers claiming to be environmentalists, only 45 or 21% of the consumers said they buy sustainably produced clothing. These results infer that food and energy waste are top environmental concerns of consumers, and fashion waste is not a huge concern based on their behaviors.

## 4.12. Consumers Response to Environmental and Social Aspects of Clothing

### 4.121 Environmental Impact

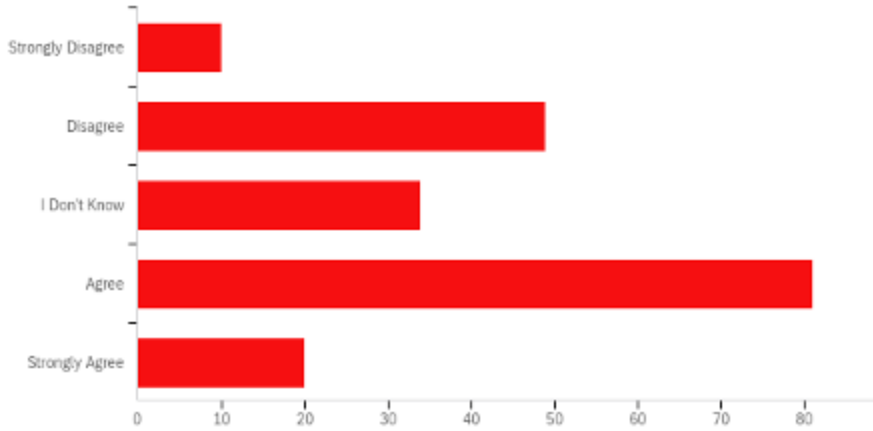


Figure 7: Consumers Responded to the following statement: When buying clothing, I consider the environmental impact of materials used

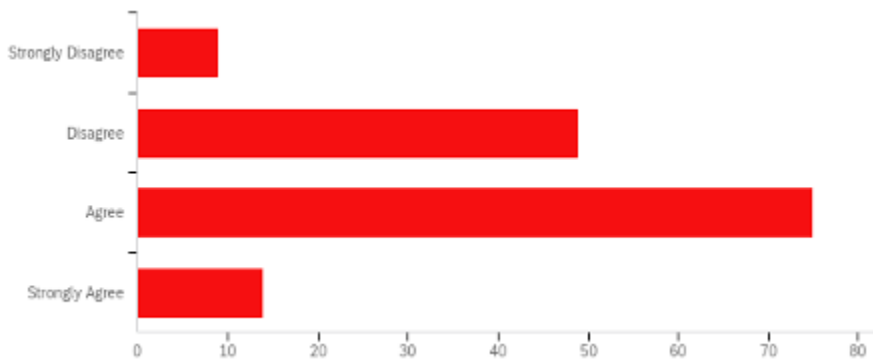


Figure 8: Consumers responded to the statement: When buying clothing, I consider the environmental impact of the manufacturing process

In the survey, consumers were asked if they considered the environmental impact of materials and manufacturing of clothing before buying an item. Agree and disagree were almost even. For both materials and manufacturing, “agree” was the highest category. 41.75% of people surveyed agreed that they consider the environmental impact of materials (Figure 7), and 51.02 % considered manufacturing (Figure 8). Overall, for materials, 52 % of respondents answered agree or strongly agree to if they consider the environmental impact of materials used in clothing. 30% disagreed and 18% answered “I don’t know” (Figure 7). So only slightly more than half of respondents considered materials used.

More consumers considered the environmental impacts of the manufacturing process. 60.5 % of respondents said they agreed or strongly agreed. 51% of those agreed (Figure 8). So it appears that more consumers are aware of the environmental effects of manufacturing and the use of carbon emissions and creating and transporting clothes. Yet many consumers are still ill informed or do not consider environmental repercussions when purchasing clothing.

#### 4.122 Social Impact

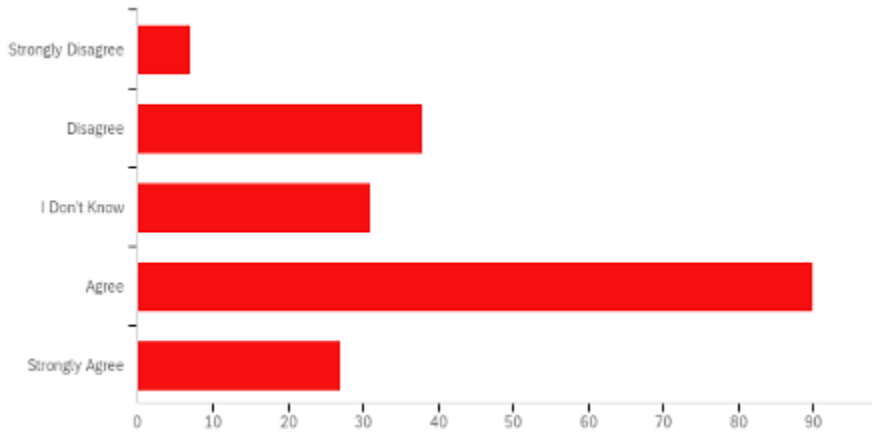


Figure 9: Consumers responded to the statement: *When buying clothing, I consider the working conditions and pay rate of garment workers.*

I additionally asked consumers to answer if they consider the working conditions and pay rate of garment workers when buying clothing. The results were pretty similar to environmental concerns, but slightly higher in agreement. 61% of consumers surveyed agreed or strongly agreed to considering social issues such as working conditions of workers, 47% out of these answers were “agree” (Figure 9). The answers were still very varied and almost half of consumers, many who consider themselves environmentalists, still did not consider social impacts. Overall, consumers are more aware and informed about the social aspects of fast fashion such as child labor and poor working conditions.

#### 4.13 Desirable Characteristics of Clothing

Surveyed consumers additionally responded to what the main characteristics they look for when purchasing clothing. The top traits were high quality and durability, price and affordability, style and fit as well as comfort. Some respondents mentioned sustainable aspects, but they were less important overall than the style, price and comfort. 55 out of 215 consumers said that they looked for sustainably produced materials and 59 favored products made in the USA compared to 157 people whose main concern in buying clothes was the cost. Out of the sustainability aspects, some people said they favored fair labor prices. However, only 44 people responded to this while 117 said they considered the working conditions of garment workers in the previous question. This signifies that although consumers are generally aware of human and environmental conditions, this does not always determine consumer decisions. In the end, a consumer will seek comfortable, cheap and stylish items. They do not often seek out sustainable features even if they are aware of environmental and social issues.

Some consumers said they value sustainable qualities, 73 said they looked for a company with a commitment to sustainability. However, only a small percentage of consumers mentioned

wanting specific characteristics. For example, only 18 people out of 215 said they looked for clothing made locally and only 25 people looked for recycled content in clothing. It appears that even people looking for sustainable clothing are unaware of what characteristics in clothing to look for and fail to value important characteristics such as natural fibers and natural dyes.

**4.131 Brand Recognition**

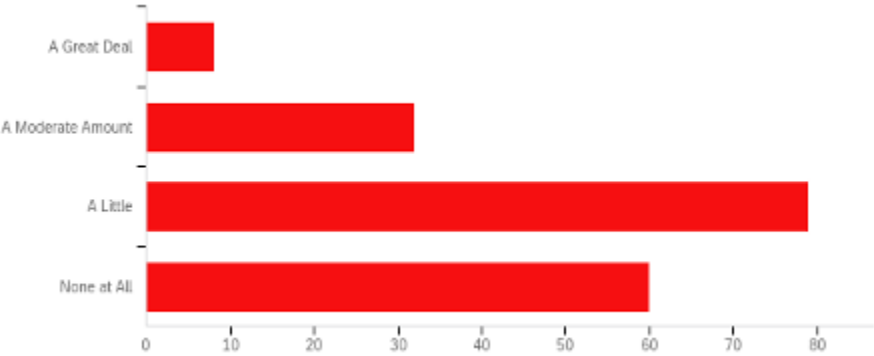


Figure 10: How much does brand recognition matter when buying clothes

Brand recognition and commitment to certain brands can be an obstacle for sustainable fashion. Many consumers continually buy from brands they trust. Consumers surveyed were questioned how much brand recognition mattered to them. The answers varied. 33.5% of consumers said not it all. The biggest group of consumers, 79 consumers or 44.1 % of those surveyed said brand recognition mattered a little to them (Figure 10). Consumers surveyed did not deeply value or feel attached to brands overall. Although they had some sway in a decision, a lack of a popular brand name would not drive the majority of these consumers away from a product.

**4.14 Consumer habits**

**4.141 Thrifting**

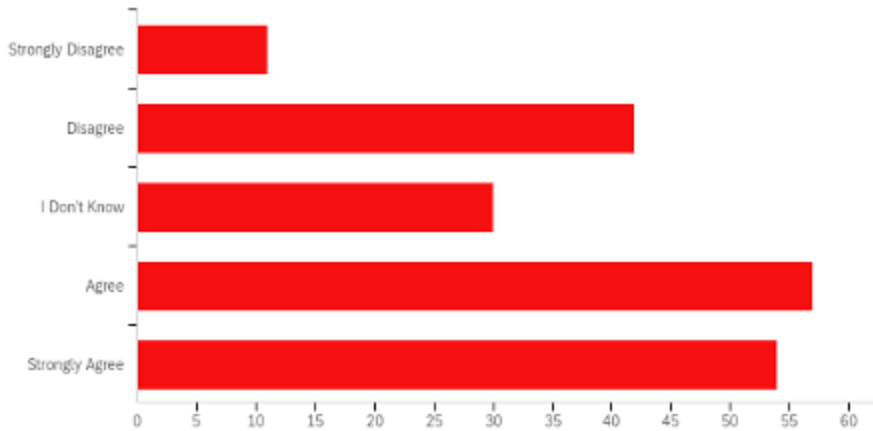


Figure 11: Consumers response to the following: I prefer to purchase clothing at second hand stores.

57.2% of respondents agreed or strongly agreed with the statement, “I prefer to purchase clothing at second hand stores (Figure 11). 42.8% disagreed or were unsure. 11 consumers strongly disagreed or would never purchase clothing at second hand stores. 54 consumers responded “strongly agree” and 57 responded “agree.” This shows many consumers, out of those surveyed, were more likely to shop at second hand stores than support fast fashion. However, this data is very polarized because almost half of the consumers don’t prefer to shop at second hand stores, some were even strongly opposed.

On average consumers bought 12.42 items from secondhand shops in the last year and shopped at second hand stores about 30% of the time. Consumers overall seemed interested in thrifting, over half of the consumers favoring it over fast fashion. Although the difference between agree and disagree were not statistically very different with a 7.7% difference, favoring thrifting; 22.6% more consumers strongly agreed than strongly disagreed. To put into perspective, 11 consumers strongly disagreed while 55 consumers strongly agreed. So consumers who thrift for clothing are generally more passionate about it than the non- thrifting alternatives. 30 consumers answered I don’t know, meaning they could be swayed in either direction (Figure 11). The differences between thrifting and supporting fast fashion are moral values. Consumers who thrift for environmental reasons are not only buying clothes for more than half the price, but they are also helping to prevent more clothes from ending up in landfills. Even if fast fashion items are cheap, unlike thrifting they are not a form of activism.

#### 4.1411 Online Thrift Stores

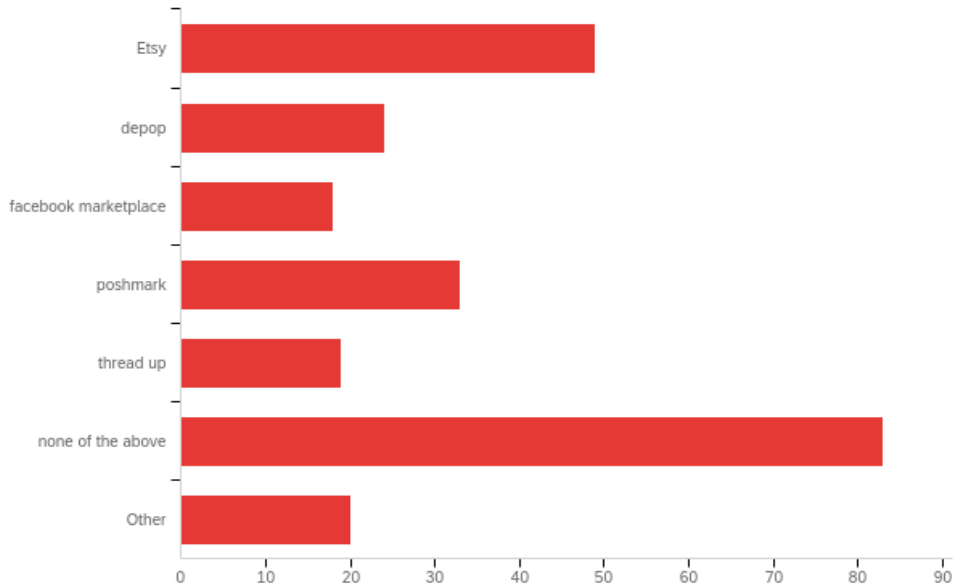


Figure 12: Which online thrift stores have you used to purchase clothing?

Although online thrift stores are increasing in popularity, most consumers don't use them regularly. This market is especially for younger consumers 33.74% of consumers never used any of the online sites listed above to buy clothing. Etsy was the most common online store for consumers to buy used and handmade clothing. 49 consumers or 20% of those surveyed had used etsy before, followed by Poshmark at 13% and Depop at 10% (Figure 12).

#### 4.142 Sustainable Fashion

In the qualtrics survey I asked consumers whether they buy sustainably produced clothing, how often and what are the obstacles preventing consumers from buying more sustainable clothing. Consumers responded that they buy sustainable clothing 31% of the time on average. In the last year, the average consumer surveyed bought 5 sustainable clothing items.

##### 4.1421 Drawbacks of Sustainable Fashion

Most consumers said they were aware of environmental and social issues, but still rarely bought sustainable clothing items. To understand drawbacks in sustainable fashion in the eyes of consumers, I asked those surveyed to list the main reason or reasons why they do not purchase a larger quantity of sustainable clothing. The most common answers were cost, lack of accessibility and lack of information on sustainable clothing and where to find it. The most common obstacle, mentioned by 46 consumers was cost. Accessibility was mentioned by 36 consumers. Many were interested in sustainable brands, but could not find them locally and were unsure where to find them in general. Many consumers felt sustainable clothing brands weren't as accessible as the brands they normally shopped for which they trusted already for fit, style and price. The general consensus was that looking for sustainable brands takes more effort and can be difficult to find in



stores. So it's inconvenient for a general consumer who is constantly on the go and relies on certain brands for proper fit and comfort.

A lack of information about sustainable clothing and where to find it was mentioned as an obstacle by 26 consumers. Consumers were unaware of where to find sustainable clothing. In most stores they frequented, consumers found that background information on clothes was not readily available. Finding this information was difficult and time consuming even for a consumer who is interested. Additionally most consumers said they didn't trust sources they were unfamiliar with and were more likely to continually buy from brands they trusted.

Another obstacle for some consumers was lack of sizes or lack clothing for unusual body types, big or small. This was mentioned by 11 consumers. One consumer commented, "I have an unusual body shape and finding clothing that fits me is difficult, so I prioritize fit over origin." Other consumers mentioned availability in plus sizes is limited, especially locally and it's difficult to buy things online because sizes vary in fit. So transitioning to sustainable clothing isn't always convenient. For consumers who already had trouble finding clothes, sustainable brands tended to have less options and were mostly sold online, meaning the consumers were unsure about fit.

Five consumers mentioned sustainable clothing was not fashionable or did not fit their style. One respondent mentioned they would love to buy sustainable clothing, but found it very basic. They didn't want to pay more money for an item they didn't love. Others had trouble finding clothes in their style in general and found sustainable clothing companies even more limiting.

15 consumers were not aware of the environmental concerns of fashion beforehand and had not searched for sustainable clothing. Another 17 consumers justified not buying sustainable clothing because they did not shop much or did not enjoy shopping. They felt their clothing choices had a limited impact and when they did shop, found it easier to buy cheap clothes. 10 consumers feared sustainable clothing brands were not transparent enough or found their information to be a form of greenwashing. So they preferred to stick to brands they'd trusted for years instead of branching out.

#### **4.1422 Money**

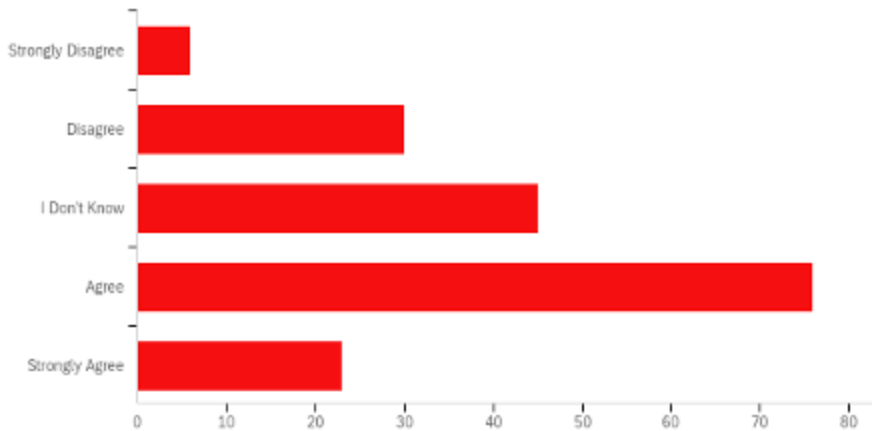


Figure 13: Respond to the following statement: I am willing to pay more money for sustainability produced clothing.

60 % of the consumers interviewed agreed or strongly agreed that they would pay more money if they knew a product was sustainable as shown in the graph. However, 15 % disagreed (Figure 13). The consumers that disagreed represent a lack of education on the true cost of clothing. They fail to understand that current prices are due to exploitation of cheap labor and lead to environmental destruction.

#### 4.143 Handmade Clothing

Consumers responded that they on average bought handmade/ artisanal clothing 10 % of the time. Out of the consumers that were surveyed, the average number of clothing items bought in the last year was 2.6. This was much lower than sustainable and thrifted items bought.

##### 4.1431 Disadvantages of handmade clothing

Similar to sustainable clothing, consumers said their biggest obstacle in buying more handmade clothing was the high cost of the clothes. 52 people responded with this as the main concern compared to 46 who mentioned cost as a barrier for sustainable clothing purchasing. Lack of accessibility was the second most common response. Many consumers said it was difficult to find handmade clothing in person where they lived. There is also a lack of marketing so consumers were generally not aware of where to buy and look at these items for sale. If consumers aren't exposed to these items then they won't buy them. If they are not readily available, then it can be more time consuming for consumers and they will likely look elsewhere. Eight consumers said they had a lack of knowledge of these products and wouldn't know where to buy them.

Style was again an obstacle. 15 consumers mentioned that handmade clothing did not fit their look or style. This was much higher than for sustainable clothing. Consumers said there was limited variation and the styles were often not mainstream. Lack of sizes and difficulty fitting

into handmade clothing was also mentioned by 11 consumers. One consumer said, “I am plus size and often artisanal clothing is not size inclusive.” A consumer who was a smaller size also mentioned handmade clothes didn’t generally fit her. Besides the clothes are handmade and take a long time to make, artisans are often limited in sizing and their clothing doesn’t fit all consumers. A few consumers said they combatted these issues by making their own clothing.

Similar to sustainable clothing nine consumers responded that they had never previously thought about buying handmade clothing due to lack of education and awareness on the subject. Eight consumers said they barely bought clothes and weren’t interested in handmade things. One consumer said they would consider buying handmade clothing if it was more normalized in our society and easy to access. There seems to be a lack of advertising and publication of handmade clothing outside small fiber communities. This means the general consumer is not very educated on handmade clothing and doesn’t find it accessible or attainable. This is a reason environmental activists and local fiber leaders need to come together to create a movement and revitalize the textile economy.

#### 4.1432. Cost of Handmade Clothing

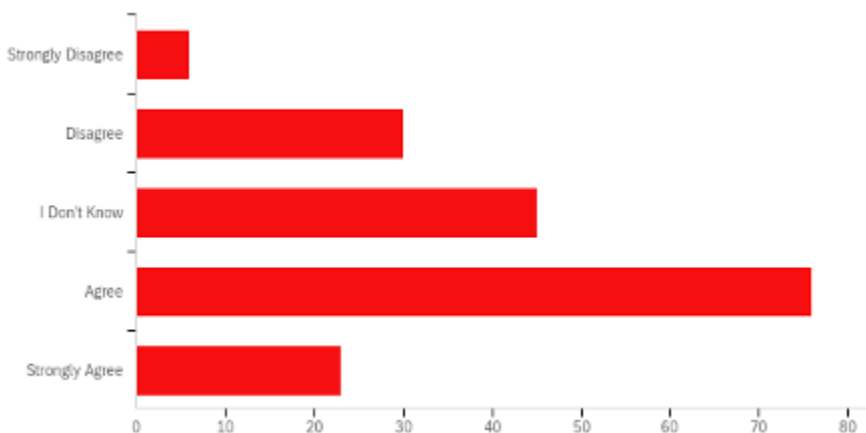


Figure 14: Consumer Survey response to: I am willing to pay more for handmade/ artisanal clothing

Cost one of the main reasons handmade clothing isn’t realistic for many consumers to buy ofte. However, The cost needs to be high to support an artist and to pay for the materials and labor. 55% of the consumers surveyed agreed or strongly agreed that they’d be willing to pay more money for handmade/ artisanal clothing (Figure 14). This graph is almost identical to the sustainable clothing graph. In both a little over half of consumers would be willing to pay more, but the other half disagreed or were uncertain. It’s concerning that 20% of consumers wouldn’t consider paying more money for something handmade. This demonstrates a major disconnect between consumers and the real cost of clothing, particularly what goes into handmade clothing

## 4.15 Clothing Markets

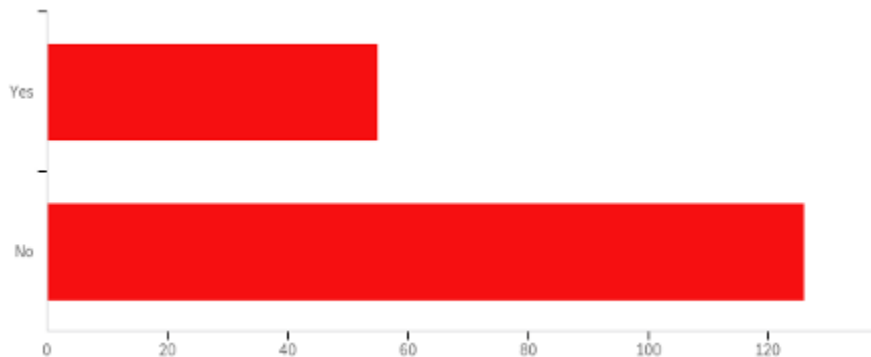
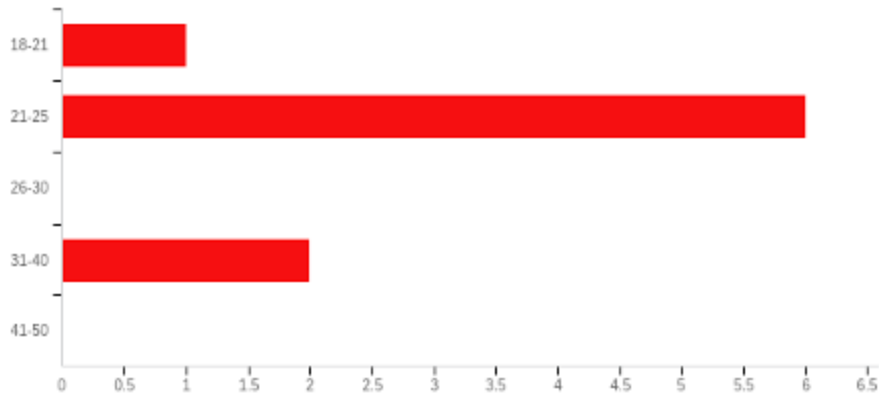


Figure: 15: Have you ever been to a local clothing, fiber market or fiber fair in New York State?

My research involved studying fiber markets as a possible venue to help bolster the local fiber movement in the Hudson Valley. I asked consumers if they attended a clothing/ fiber market in the region. 30.4 % of consumers said they did attend a local clothing market or fiber market (Figure 15). The most popular ones were the Washington County Fair, a fiber festival in Greenwich, The Adirondack Sheep and Wool festival, The NYS Wool and Craft Fair and the Hudson Valley Wool at Pruyn House. A majority of consumers had never visited a fiber fair. It still attracts a niche community and not the general population like farmers' markets. The amount of festivals mentioned by consumers in Upstate New York show many markets occur currently within a small area. 68% of consumers never heard of the term slow fashion and didn't have an understanding of the local fiber chain.

## 4.2 Semi- structured Interviews Data with Consumes



*Figure 16: Consumer Age Range for Semi-structured Interviews*

#### **4.21 Demographic of Consumers Interviewed**

I conducted 10 semi-structured interviews with consumers. I tried to interview people from varied backgrounds, interests and ages so my responses were as unbiased as possible. Seven of the consumers were male and three were female. The majority of those interviewed were in their early to mid 20's as shown by figure 16. Four out of the 10 consumers interviewed or 40% were current Skidmore students.

#### **4.212 Environmental Background of Consumers Interviewed**

I interviewed people I viewed as basic consumers and not those within environmental clubs or communities. Only 1 consumer out of the 10 interviewed, considered themselves an environmentalist. 8 out of the 10 consumers participated in at least basic environmental behaviors. The most common mentioned were recycling, thrift shopping, limiting energy use and avoiding single used plastic. 5 consumers mentioned they compost regularly and often buy local food. 2 out of 10 consumers mentioned they don't recycle or participate in other basic environmental behaviors.

#### **4.22 Perspectives of the Environmental and Social Impacts of Clothing**

##### **4.221 Environmental impact**

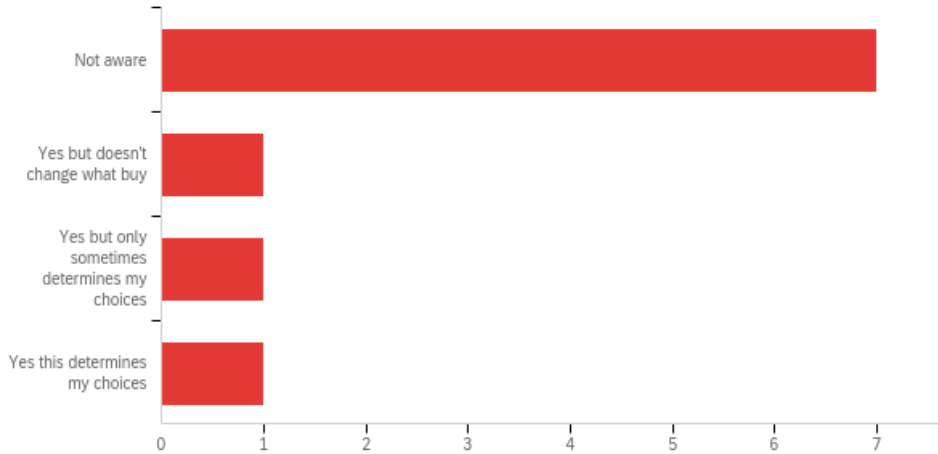


Figure 17: Consumer response to: When buying clothing I consider the environmental impact

I asked consumers if they were aware of the environmental impact of clothing and if this knowledge affected their clothing choices. Seven out of 10 consumers or 70% were unaware of the environmental impacts of the clothing industry as shown by Figure 17. Most said they never considered it. Only three consumers were aware of these issues and this knowledge only had a significant effect on one of these consumers. The consumer, Amy Milan, explained that she thinks about sustainability in all parts of her life, and can't shut out the negative effects of fashion. She combats this by shopping at secondhand stores, buying from B-corporations and supporting local businesses (A.Milan, personal communication, 2020). Another consumer was aware of the environmental issues, and has occasionally bought from environmentally friendly clothing companies over the years, but generally doesn't consider these factors when shopping (A. Yarinsky, personal communication, 2020). A third consumer was aware, but this did not change his shopping habits (R. Price, personal communication, 2020). From this small sampling it appears that the general consumer is not aware of the severity of the environmental effects of fashion. Almost all consumers considered cost and appearance over ethics.

#### 4.222 Social impact

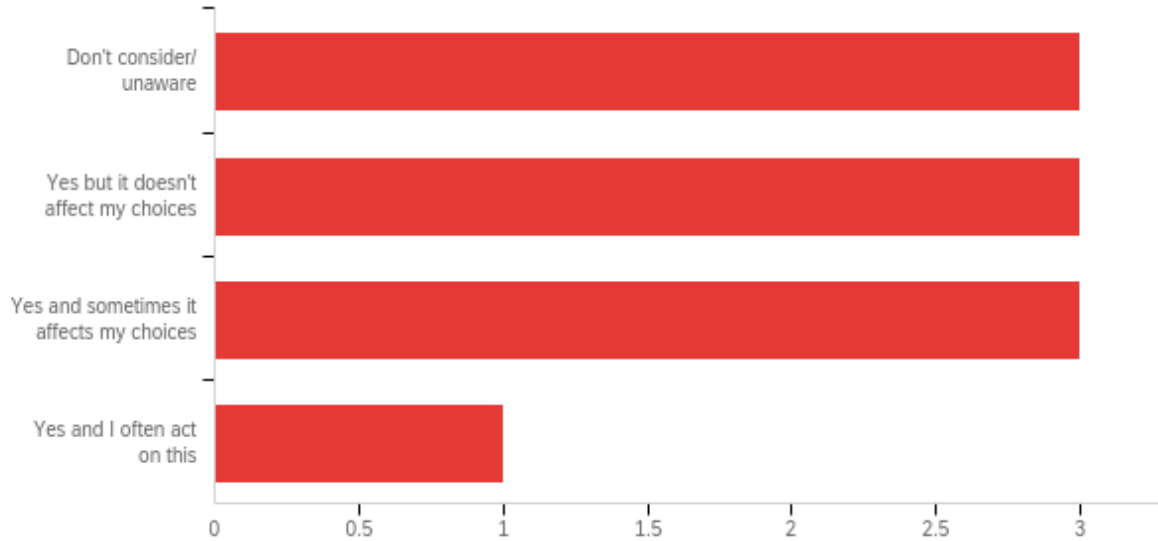


Figure 18: Consumer response to: when buying clothes I consider the working conditions and pay rate of garment workers

Unlike environmental issues, a majority of consumers were aware of the social impacts of clothing and the unfair working conditions and pay rate of garment workers who run the fast fashion industry. As Figure 18 depicts, 70% or seven out of 10 of the consumers interviewed stated that they were aware of social issues. However, this awareness was not always congruent with consumers making educated decisions. Three consumers said they were aware of the issues, but this did not affect their fashion choices. Price and lack of education were the biggest obstacles mentioned by consumers in regards to ethical fashion. Eric Ness, for example, mentioned he was aware of poor labor conditions and consequently reads all fashion labels before buying clothing. He avoids clothing from China, India, Bangladesh and Mexico because he believes the labor conditions are poor there. Yet he will ignore these ethics when buying work clothes and will resort to cheap clothes due to price (E. Ness, personal communication, 2020). This antidote emphasizes a major problem in the fashion industry which is lack of education and transparency. Even if consumers read fashion labels, there is limited information on the origin story of the clothing and most consumers don't know what to look for. This makes it easy for consumers to disregard problems within the industry. Although avoiding clothing from China can be beneficial, these consumers fail to see that many countries have unfair labor practices, even the US itself. Another consumer, Anthony Reppenhagen, commented that he feels bad every time he buys clothing, but still resorts to cheap clothing because this is all he can afford (A. Reppenhagen, personal communication, 2020).

Other consumers try to avoid certain brands that receive bad press. Isabel Anzani, for example said she refuses to buy from Nike, Adidas and Abercrombie and Fitch and overall avoids main brands that have a history of unfair labor practices for workers (I. Anzani, personal communication, 2020). Most consumers are aware that stores like Forever 21 are notorious for allowing child labor in their factories, but continue to buy from stores like the GAP and H&M, unaware that these companies participate in the same practices. Emma Morrow said she cared

about social issues and tried to avoid stores like Forever 21. However, she was not aware that H&M was an exploitative company and was still supporting fast fashion (E.Morrow, personal communication, 2020). So even if consumers are aware of social issues, they don't understand the severity of the problems or lack concern. The most striking factor of these responses is the number of people who are aware of social concerns versus those aware of environmental concerns. Yet even though consumers were aware of social issues overall, they still failed to act on them. However, almost all consumers said if they made a larger income or if sustainable clothing was accessible and cheap then they would buy it over conventional clothing.

#### **4.23 Thrifting**

60 percent of the consumers interviewed, responded yes to buying clothes at second-hand stores. However, only three out of 10 consumers were aware or considered that buying used clothing is environmentally friendly. Most consumers said they thrift to find unique clothing that is cheap. Thrifting has become a fashion trend so many consumers now thrift to find cool unique and fashionable clothing. Others have been thrifting for years for financial reasons.

Many consumers, especially younger populations have shifted to mainly buying used clothing for environmental reasons because it is more affordable than sustainable brands. So it is an easy way to transfer from fast fashion to shopping more consciously. Online thrift stores like Depop, Etsy and Poshmark have made this transition easy for online shoppers. Emma Morrow mentioned that she wanted to transition to thrifting but struggled with her body type to find clothing that fit right. She now uses Depop to buy used clothes which makes finding used clothes in her size accessible and affordable. Amy Milan also now almost exclusively shops on Depop and Etsy because it is easier for her to find clothes she likes and it is a way for her to support local businesses and people. Online thrift stores make used clothing shopping more accessible, but the clothes are often more expensive and require shipping costs. Most consumers I interviewed preferred to thrift in person and only four out of 10 consumers responded yes to buying used clothing online. Most of the consumers never heard of sites like Depop. One consumer even mentioned that used clothing online sounds gross and unsanitary (A. Yarinsky, personal communication, 2020).

#### **4.24 Consumer Clothing Preferences**

One of the questions I asked consumers was the main characteristics they look for when purchasing clothing. These were reasonable price, durability, comfort and style. Some consumers favored certain brands, and others just bought clothes based on aesthetics, comfort and fit. Price was mentioned as a concern for 100 percent of consumers interviewed. It was the main driving factor in purchasing clothing and the main obstacle in consumer perceptions of sustainable clothing.

Half of the consumers mentioned appearance as a main factor in clothing purchasing, secondary factors were comfort, fit and durability. Only four consumers mentioned durability as



a main factor, the others favored price and were willing to sacrifice quality for a cheap item. Emma Morrow mentioned she only considers quality in long term items like shoes and jackets (E.Morrow, personal communication, 2020). Amy Milan was the only consumer who mentioned sustainability as a main factor (A.Milan, personal communication, 2020). Iz Anzani favored local clothing because it supports local businesses (I. Anzani, personal communication, 2020). Overall even in consumers who consider social and environmental effects, sustainability is not the main attribute that consumers look for. Price and appearance are the driving factors and sustainability is a bonus, but not a requirement.

## **4.25 Perceptions of Sustainable Clothing and Obstacles**

### **4.251 Cost**

Only 30 percent of consumers interviewed buy sustainable clothing. This is three consumers out of 10. One of the main barriers for consumers in regards to sustainable clothing is price. So I asked all consumers if they would buy sustainable items if they were a similar price to regular clothing items. I also asked if they would be willing to spend more money if they knew an item was sustainable. Many of the consumers said they would buy a sustainable item if it was similarly priced or slightly more expensive, but others were still uncertain. Two consumers said they couldn't justify spending more money on clothing until their income increased even if clothes were sustainable. Two other consumers said they would consider sustainable items if they liked the way they looked even if they cost more than normal items. Another consumer said they would only buy sustainable clothing if they liked and trusted the brand (N.Ranieri, personal communication, 2020). Chris Downs, for example, has bought from the same brands for 10 years and depends on them because he gets an employee discount along with coupon points. He is afraid to branch out because he trusts the comfort and quality of the clothes from the brands he is a regular of (C. Downs, personal communication, 2020).

Although price is the main obstacle for consumers, appearance, cost trust in a company still play big roles in consumer decisions.

### **4.252 Inaccessibility**

Another obstacle many consumers discussed was inaccessibility. Eric Ness said his main qualm with sustainable clothing is it's difficult to find. He said, "If you need to search for it it's from a niche sight which is overly expensive" (E. Ness, personal communication, 2020). Nick Ranieri discussed accessibility and how being environmentally conscious is not always a choice that families can make financially as far as clothes. Some families do not have access to cars and can only easily access Walmart or Target. Even if sustainable clothing is an investment, consumers living paycheck to paycheck cannot always afford to invest in clothing or pay for high shipping costs for clothes they can't buy locally. Nick Ranieri, uses public transportation

and buys most of his clothing at Walmart. This makes it easy to buy food and clothes at the same time at a price he can afford and a location he can access (N.Ranieri, personal communication, 2020). Even consumers like Amy Milan do not often buy from sustainable clothing brands because they are very expensive and not always practical.

#### **4.253 Lack of Education**

The main obstacle consumers expressed to me in interviews is they don't fully understand what sustainable clothing is or where to find it. It is not easy to find sustainable clothing in stores and most sustainable companies online are very expensive and don't apply to a normal consumer (E. Ness, personal communication, 2020). Eric Ness was one of the older consumers I interviewed who mentioned the term "sustainable fashion" has existed for years and was specifically prevalent in the hippie movement in the 70's. The word has now become a catch phrase like "all natural" food which means nothing unless companies are honest and transparent. I asked the interviewees what they think of with the word sustainable fashion and the answers were similar. Most said it was eco-friendly, ethical, natural and overall used less resources to make. One consumer mentioned sustainable fashion is the opposite of "what's hot" and is generally not fashionable. Most consumers mentioned it was high quality and expensive while one consumer said sustainable clothing is low quality and inexpensive. These varied responses demonstrate that most consumers don't know what sustainable fashion really is or where to find it. Some worried they would have to sacrifice their style to buy sustainable clothing and others had no idea what to expect or look for. Sustainable clothing isn't always accessible to the general population and isn't often found in regular department stores. Even if researched they are difficult to find at a reasonable price.

#### **4.26 Handmade clothing**

Four out of the 10 consumers interviewed have bought handmade clothing. This is more people than for sustainable clothing and less than thrifted clothing. However, consumers who said they bought these items explained it was very occasional. They shopped at thrift stores much more often. Almost every person I interviewed mentioned they owned some kind of handmade clothing, but most were gifts or specialty items from a market. The main reasons consumers do not buy handmade clothing, highlighted by my interviewees, is price and lack of accessibility. Handmade clothing is unique, but is not generally mainstream or in style. One consumer, Emma Morrow is from New York City and frequently shops at local markets that generally attract a hipster crowd. She said, "I love handmade clothing more than fast fashion" (E.Morrow, personal communication, 2020). As an artist herself Emma appreciates the labor and time that goes into handmade work and is willing to pay more for it. Surprisingly consumers who hadn't bought handmade items were interested in buying some in the future and/ or attending fiber markets. Isabel Anzani, also enjoying buying handmade items. She appreciates the work that goes into the

pieces and loves supporting local businesses. The environmental and social aspects are not at the forefront of her choices (I. Anzani, personal communication, 2020). I was surprised by how many consumers were open to buying handmade clothing and interested in visiting festivals in the future.

Despite this, there seems to be a disconnect between handmade clothing and sustainability in the eyes of the consumer. This is due to a lack of education from not only school and society, but the actual artists selling the piece. Consumers are aware that handmade clothing is more ethical and love how they can see the story of a piece and support a local artist. However, most consumers don't consider the ethics of the environmental impact. Price is less of an obstacle for consumers when buying handmade goods because they understand how much work goes into making the clothing. With large companies, there is a lack of transparency and trust between consumer and producer so consumers are hesitant to spend money on an item.

Based on questions connected to price, it seems consumers don't understand the real cost of clothing overall. Consumers said they would be willing to buy sustainable clothing if it was the same or similar price to regular clothing, but most would not pay more. Consumers need to be more educated in sustainable fashion so they can understand why sustainable or handmade clothing is worth the money. Once discussed, most consumers were open to educating themselves on sustainable clothing. Many weren't previously aware that it existed. So even just discussing it, encouraged them to do research.

#### **4.27 Voting With Your Dollar.**

Seven out of the 10 consumers interviewed said they don't buy clothes often. This was their justification for buying fast fashion items. Reducing the clothes bought is one of the most important ways a consumer can limit waste and lower their carbon footprint. However, these consumers failed to see they were still supporting fast fashion systems. Consumers can say they don't care about fashion so they don't need to educate themselves on the subject. Nonetheless, everyone buys clothes at some point and occasionally buying clothes at a large corporation like H&M still supports fast fashion systems. They fail to understand the importance of voting with their dollar and how this affects the industry. If a million people buy two pieces of clothing from Forever 21 then that's 2 million clothes bought from Forever 21. Everyone's choices are important. When you choose to buy clothing, you are choosing to support a company.

### **4.3 RiverBlue Movie Showing**

#### **4.31 Consumer Survey**

### 4.311 Background

I was able to team up with Sustainable Saratoga and the Saratoga Film Forum because they were showing the movie, “RiverBlue.” This movie explores the pollution in rivers across the world due to fashion waste. It focuses on the impact of clothing manufacturing. I was able to lead a discussion on the first two nights of the movie following the movie. One of the biggest obstacles in normalizing the sustainable clothing market is educating consumers. Many consumers are not aware of environmental issues relating to fashion. This means they generally don’t consider these factors when buying clothing. To explore education I surveyed consumers before and after the film. I wanted to explore the shopping habits before the film and how consumers planned to change their habits after the film or not.

### 4.3112 Demographic of Consumers

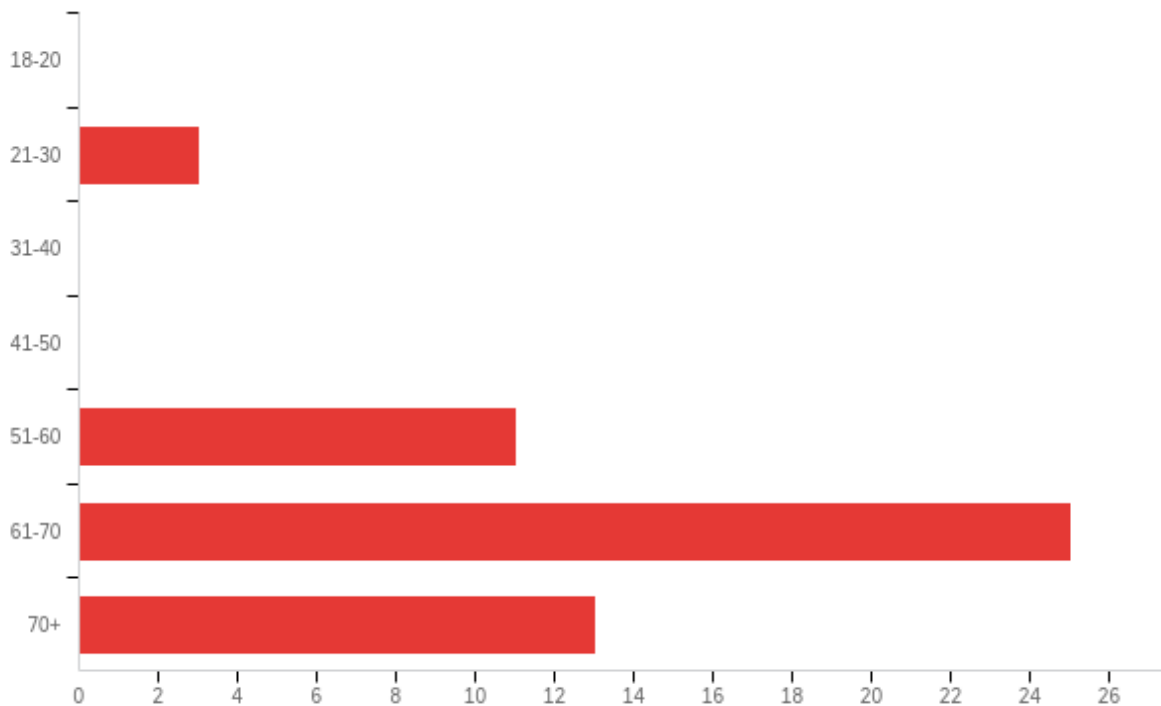


Figure 19: Age groups of consumers surveyed at the movie showing

52 consumers attended the movie showing over the course of the two nights. The consumers that attended the movie showing were generally in an older age group than those I previously surveyed. The average age group was between 61 and 70. This was 48% of the consumers surveyed as shown in Figure 19. The consumers were 73% female.

Many of the participants were based in Saratoga Springs, NY. 27 out of the 52 consumers were from Saratoga or 52% which is a little over half. The additional consumers traveled from 15 other locations in New York. The most common ones were Malta, Ballston Spa, Greenfield, Galway, Queenbury and Troy.

This group was slightly biased because most of the participants were older so there wasn't a variation in age range. The movie was also advertised as an environmental related film so participants were already interested in the topic and likely more knowledgeable than the general consumer. Also most participants left before the discussion started so I only was able to obtain 20 post film responses.

#### 4.312 Movie Responses Before the Film

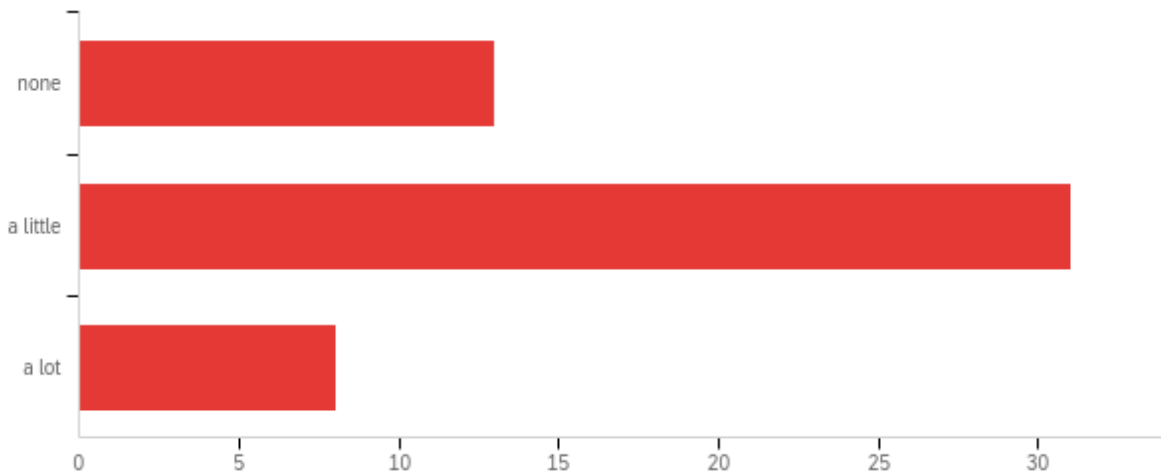


Figure 20: Consumer Response to: When buying clothing do you consider the environmental impact of the materials used and the manufacturing process?

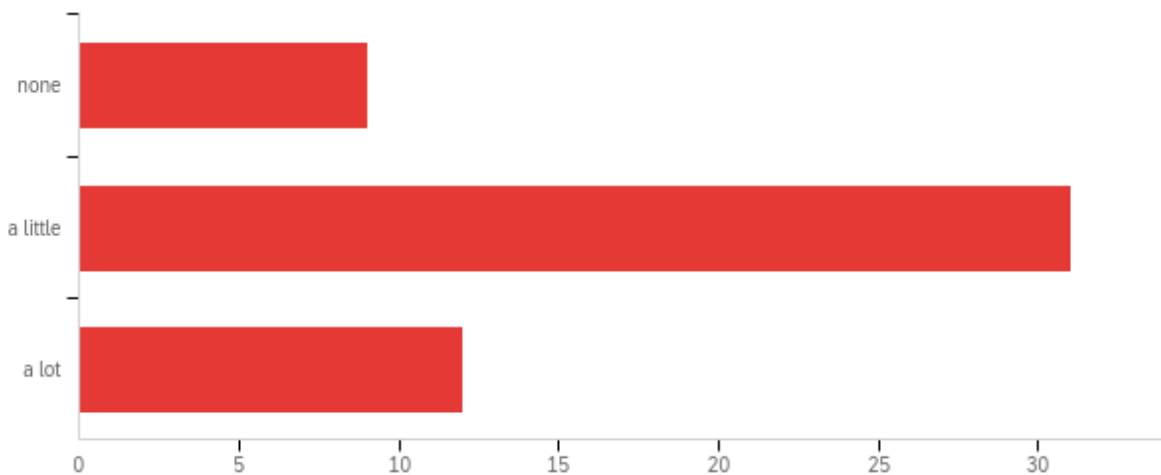


Figure 21: Consumer Response to: When buying clothing, do you consider the working conditions and pay rate of garment workers?

I asked consumers if they considered the environmental impacts of clothing when purchasing and 75% said yes by answering a little or a lot (Figure 20). 59% or 31 consumers out of 52 said they thought about environmental impacts a little before buying clothing. However, 25 % of the participants said not at all despite attending this film and showing an interest in sustainability.

Similar to my general survey and interviews more consumers were conscious of social impacts of clothing like working conditions and the pay rate of garment workers. As depicted in Figure 21, 82% of the consumers said they considered social issues a little or a lot when buying clothing. Four more people or 8% more answered “a lot” for social issues than environmental issues. These responses were still high and the majority of the consumers, even previous to the movie, considered environmental and social impacts in some way.

#### **4.3121 Sustainable clothing**

More than half of the consumers, 60.8% or 31 consumers answered yes to buying sustainable clothing before. On average, consumers surveyed before the movie bought sustainable clothing 28.4% of the time. This is out of the 34 people who responded to this question and a few answered zero. So overall 25 consumers respond not applicable or none. This is 48% of the consumers. For those that did answer, they bought sustainable clothing at least 5% of the time. The most common answer was 10 % which five people said. The highest was 99.9%.

I additionally asked consumers the main reason why they don't purchase more sustainable clothing. The most common answer was lack of availability or access. 16 consumers mentioned this as the main obstacle. Lack of knowledge and cost were the second most common responses. 14 consumers mentioned cost as their biggest obstacle and 12 mentioned lack of knowledge. Consumers were unsure where to find sustainable clothing or what to look for. They were unaware of sustainable brands. Consumers found researching or looking for clothes to be inconvenient and time consuming. Sustainable clothing can require research that consumers don't have time for. Additionally, similar to the previous survey, a few consumers said they never thought about sustainable fashion so they never looked for it in the past. Four consumers said they never shop so they don't need to worry about sustainable clothing. Two people found style and fit to be the main issue. One consumer expressed distrust of brands and feared even if they read labels, they may not be authentic.

#### **4.3122 Thrifted Clothing**

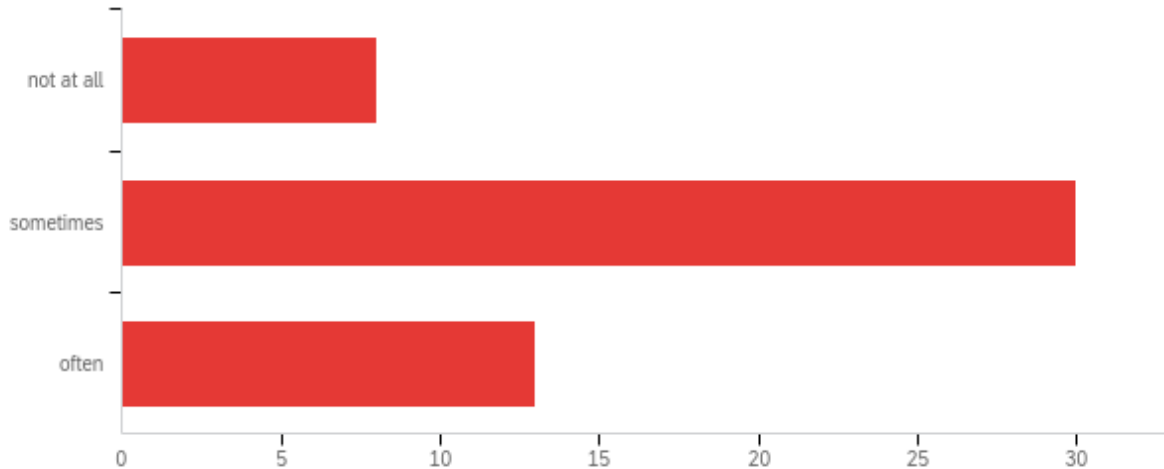


Figure 22: Consumer Response to:do you thrift for clothing?

I asked consumers if they thrifted for clothes or shopped at used clothing stores. The majority of the consumers said they sometimes thrifted as shown in Figure 22. 30 people answered sometimes or 58.8% of the consumers. 43 consumers said sometimes or often, and only 8 said never or not at all. These results express that even older populations shop at second hand stores regularly.

#### 4.3123 Handmade Clothing

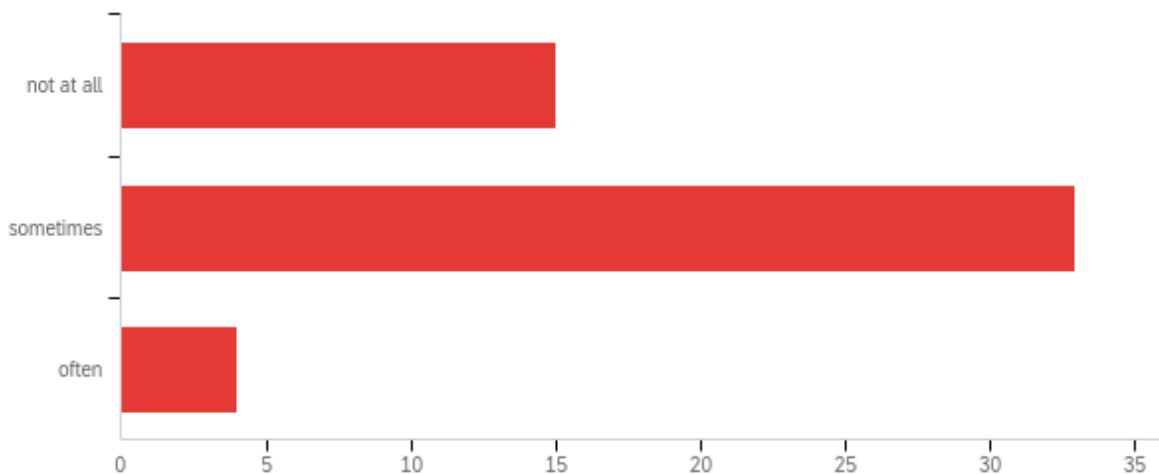


Figure 23: Do you buy handmade clothing?

This graph is similar to the thrift store graph, but five more people answered not at all to buying handmade clothing. 64.5% said sometimes and only 7.7% said often (Figure 23). Out of 52 people, only four consumers said they often buy handmade clothing. The majority of

consumers at least sometimes bought handmade clothing, but the results were still polarized. 15 consumers had never bought handmade clothing.

#### 4.313 Post RiverBlue Movie Survey: Effect of Education on Clothing Choices

I had consumers take a post movie survey with some of the same questions from the before the movie survey and a few long answers to reflect on their perceptions. The goal was to explore how exposure to education on the social and environmental effects of fast fashion visually, can make consumers rethink how they shop. Although a majority of the consumers considered the impacts a little before the movie, about a fifth of consumers didn't consider these factors at all. I wanted to know if lack of education or knowledge on this topic was a leading factor for this population and the majority that only sometimes considered these factors.

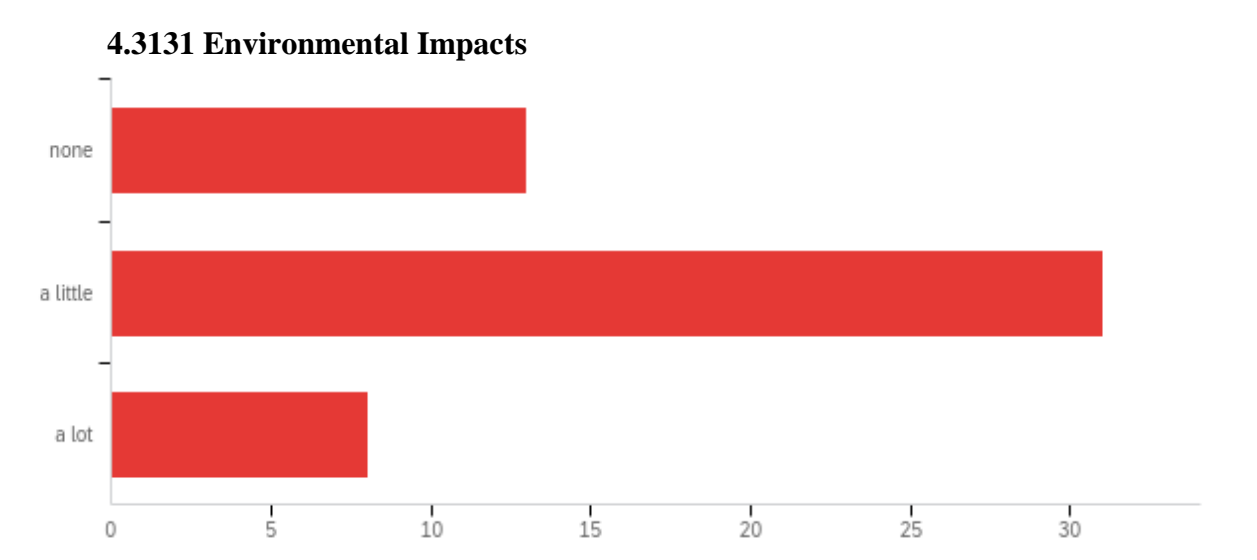


Figure 24: Consumer Response Before the Movie: When buying clothing do you consider the environmental impact of the materials used and the manufacturing process?



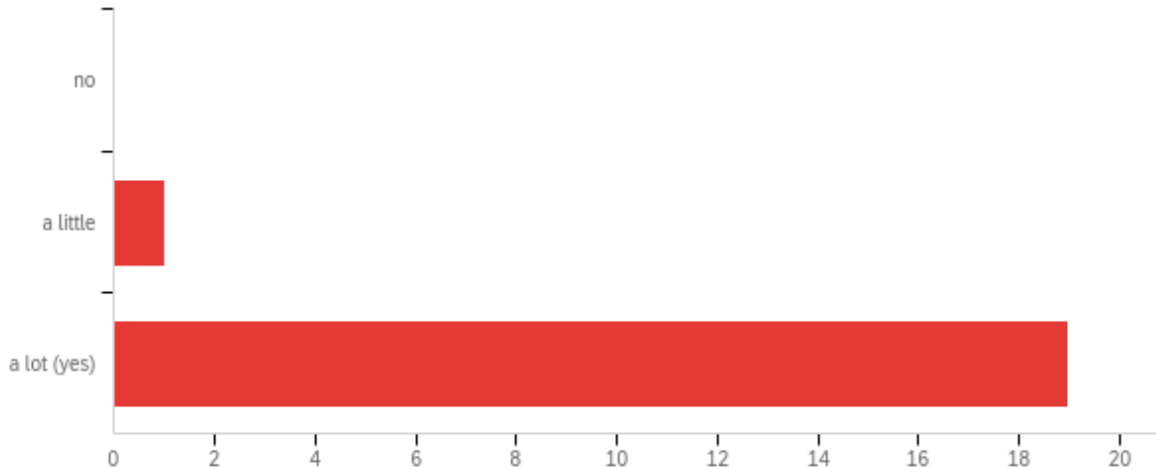


Figure 25: Consumer Response After the Movie : After watching the movie, are you more likely to consider the environmental impact of the materials and manufacturing when buying clothes?

The movie RiverBlue dramatically impacted consumer perception on the environmental destruction caused by the fashion industry. It depicted the runoff of harsh chemicals from factories polluting water systems communities depend on and extreme water and resource waste within the industry. Before watching the movie, 15.4 % of the consumers surveyed said they considered the environmental impact of materials and manufacturing a lot before purchasing clothing (Figure 24). After watching the movie, 95 % of consumers said they would consider the environmental impacts of clothing a lot in the future before buying textiles (Figure 25). This is a 79.6% difference. The difference between the graphs is significant. Before the movie, 25 % of consumers said they never considered the environmental impact of clothing. After the movie, zero percent of the consumers said they would not consider the environmental impacts and only five percent of consumers said they would only consider the impacts a little when buying. This is a great representation of the impact of education. Although some consumers were educated on fast fashion, many didn't know anything on the environmental impact. After they were presented with information, most consumers said they would take some kind of action or at least consider the consequences of their purchases.

#### 4.3132 Social Impacts

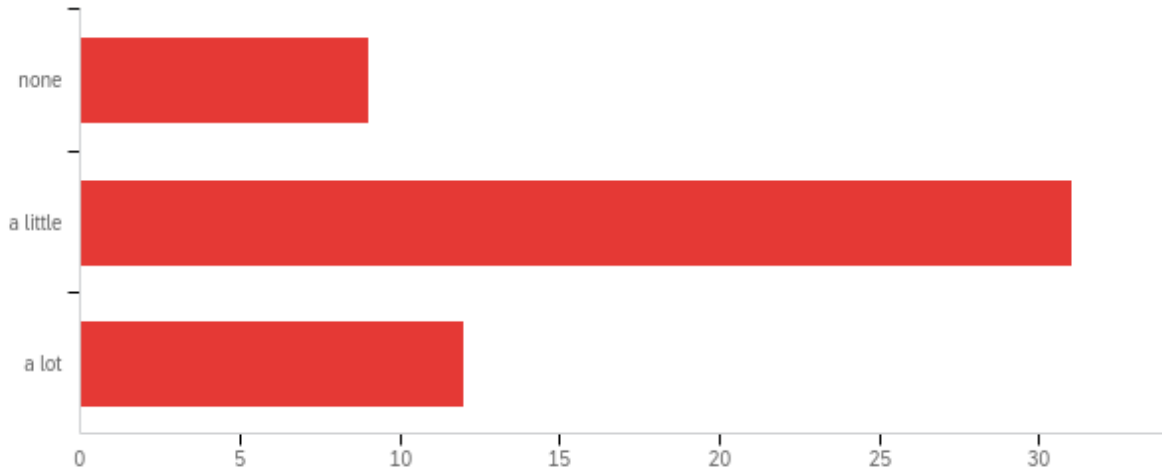


Figure 26: Consumer Response Before the Movie: When buying clothing, do you consider the working conditions and pay rate of garment workers?

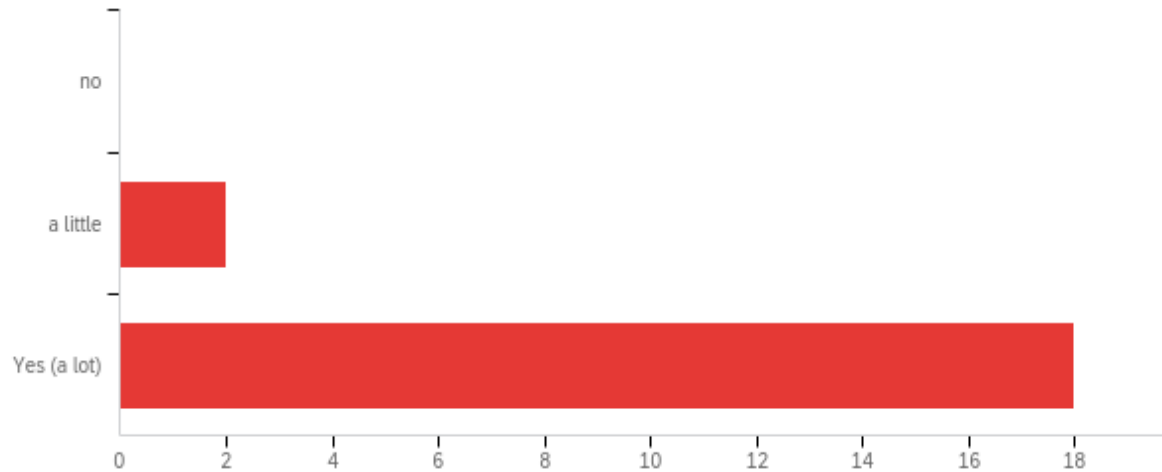


Figure 27: Consumer Response After the Movie : Will you consider the working conditions and pay rate of the garment workers before buying clothes.

Similar to environmental impacts, the movie also increased consumer awareness on the social impacts of the fashion industry. The movie explored different factories in India, China, Bangladesh and Indonesia. Many of these involved child labor and harsh working conditions leading to deformities, intense pollution and cancer. Before the movie, 23% of the consumers said they thought a lot about the social impacts of fashion before buying clothing. 17 % of the consumers said they never considered these impacts (Figure 26). After the movie, 90 % of consumers said they would think a lot about social impacts before buying clothing. This is almost 100 % of the consumers surveyed. The other 10 % said they would think a little about these impacts when making fashion decisions (Figure 27). None of the consumers would not consider the social impact at all in the future. Education, specifically seeing visuals in the movie, had a significant impact on consumers and how they viewed fashion.

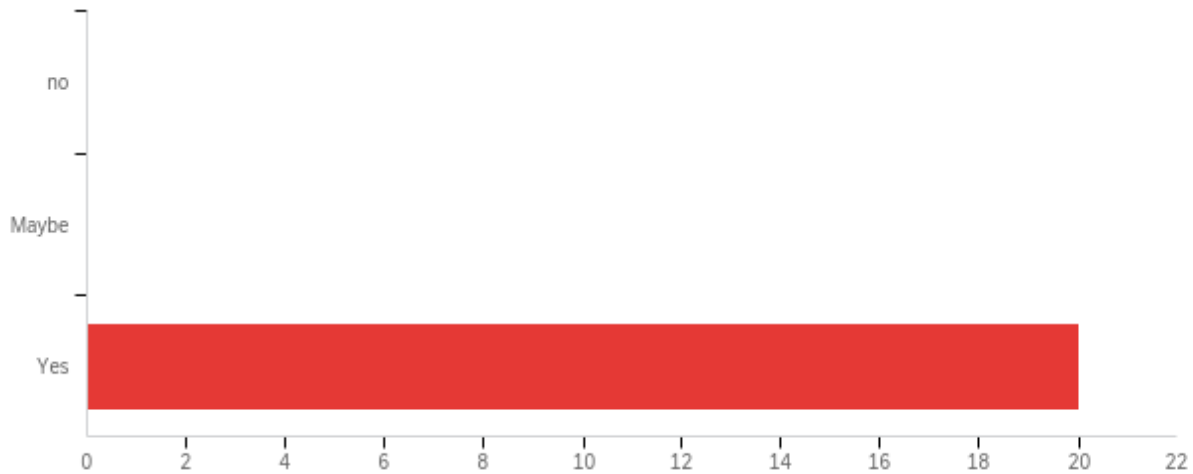


Figure 28: Consumer Response After the Movie :Will you consider buying clothing from sustainable brands in the future?

In the survey before the movie, 39.2 % of consumers said they did not buy sustainable fashion at all. After the movie, 100 % of consumers said they would consider buying from sustainable fashion brands in the future (Figure 28). Additionally, 90% of consumers said they would pay more money for sustainable brands.

#### 4.3133 Post-movie Outlooks and Changes Going Forward

Post movie, I asked consumers if the movie changed their outlook on fashion. All consumers said yes. Some knew about the problems before watching the movie, but were moved by seeing the physical pollution on screen. One consumer, for example, was aware of the pollution caused by denim, but was surprised by the pollution caused by the tanneries. She was also previously unaware of new technologies to make fabric sustainably. Another consumer said she was previously unaware of the negative environmental impact of clothing manufacturing. She now feels informed and inspired to buy sustainable clothing. A third consumer explained they now want to invest money into supporting positive political change and stop supporting fast fashion.

The second short answer question I asked the consumers was: will you shop differently after watching this movie? All the answers were yes. Most consumers said they planned to buy less and be more vigilant about avoiding cheap poorly made clothing. One of the biggest takeaways from consumers was the inspiration to do research on certain brands and find sustainable brands they trust. Two consumers said they were interested in buying more used clothing in the future. Overall consumers planned to do research, avoid certain brands not committed to sustainability and buy more quality clothing. Consumers planned to avoid cheap

fast fashion and stop shopping at stores like the GAP and Banana Republic which they previously shopped at.

#### **4.32 Participant Observation**

I attended the movie showing the first two nights. Besides handing out my surveys and leading discussions in the end with the audience and the speaker, I was a normal audience member. Saratoga Film Forum holds many shows and lets Sustainable Saratoga lead a movie showings that is environmentally related once a month. They always lead a discussion after the movie which the whole audience usually attends. Both nights, most of the audience fled immediately after the movie, leaving the leaders confused and concerned. This was not normal behavior for an audience. This led to a discussion with the event coordinators and the audience about why people were so quick to flee.

The general response of audience members was those that fled were overwhelmed and unsure how to tackle such a huge issue. With issues revolving around food, the solutions are not very complicated for consumers to understand. They can attend farmers' markets and buy food seasonally and food that's made in the US. Clothes, although, not very different, appear more daunting. The movie visually presented the worldwide effect of fashion waste and pollution, depicting black water from India that bubbles on contact and could light on fire. These visuals definitely affected consumers, but the problems appeared insurmountable when depicted on a large scale.

#### **4.33 Group Discussion:**

The discussions didn't go as planned because most of the audience members left the first night and they only had time to present the speakers that were present. On the second night, Cecilia and Richard Lockwood from Textile Artists Textile Studio and I led a discussion with the remaining audience. The audience discussed the lack of accessibility to inexpensive sustainable clothing or sustainable clothing in general. One woman mentioned trying to buy solely sustainable clothing for christmas as gifts. She found the process was tedious and time consuming because it required a lot of research and she still couldn't find everything she was looking for. Overall the consensus was that consumers need to rethink the clothes they buy and focus on purchasing good quality items. More reasonably priced sustainable brands also need to be more accessible to the general consumer.

#### **4.34 Focus Group**

I led one focus group with four individuals from my class. These results may have been slightly biased because the consumers who participated considered themselves to be environmentally conscious more than a general consumer. Those that participated were Sabrina Dabakarov, Maddie Collins, Anna Tiajloff and Maia Taylor. They were all seniors at Skidmore College, between the ages of 21 and 22. All participants were female.

#### 4.341 Sustainable Clothing

All four consumers in the focus group mentioned owning at least one sustainable clothing item, but not regularly buying or looking to buy sustainable clothing. Sabrina said, “I don’t buy from environmentally conscious brands, but if I was presented the opportunity and it was a similar price, I wouldn’t be opposed to it” (S.Dabakarov, personal communication, 2020). All consumers said they didn’t buy clothes much and weren’t looking at sustainable brands for general clothing. Maia said she buys all her athletic wear from sustainable brands because they are at a similar price point to regular athletic clothes, so the expense is not a problem (M. Taylor, personal communication, 2020) Anna said she tries to only buy clothes when she needs them, so roughly every six months. She is cognisant of social issues in fashion, specifically the mistreatment of women and children, so she tries to buy good quality clothing that will last (A.Tiajoff, personal communication, 2020). Overall consumers were willing to buy sustainable clothing if they were at a similar price point or slightly higher than the conventional alternative. Although all consumers were cognisant of environmental and ethical concerns, unlike a general consumer, most did not act on this. Sabrina said sustainability is a bonus, but if she likes a pair of shoes she will buy them. This is the mentality of the general consumer; fashion and cost come before the origin of an item.

All participants mentioned price as the number one obstacle to buying sustainable clothing. Sabrina additionally discussed the lack of advertising for most sustainable brands or slow fashion businesses. She said, “local sustainable fashion does not get air time because the companies or artisans can’t afford to market to a wide audience” (S.Dabakarov, personal communication, 2020). This means most consumers don’t know it exists, so the general public will not buy these clothes. There’s also a lack of education on this topic and most consumers don’t realize the negative impact of the clothing they buy because they were never taught to question it (S.Dabakarov, personal communication, 2020). Fast fashion is normalized in our society because it is cheap and convenient. Most consumers don’t realize there are other options or can’t afford them.

Just as consumers distrust fast fashion, large “sustainable” clothing businesses can also lack transparency or use the term sustainable without proper evidence to back it up. Many sustainable brands greenwash consumers to pay more for a clothing item, that may be imported and overall unsustainable. Another consumer, Maia Taylor mentioned she bought from a large sustainable clothing company and their mission statement was on their website. Maia thought the slogan was a greenwashing tactic and it didn’t make her trust the company more. She mentioned Patagonia and L.L.Bean as examples of sustainable clothing companies that she trusts, because they have a long history of sustainable practice (M. Taylor, personal communication, 2020). Patagonia is also a certified B-Corporation. Overall, however, Maia has a general mistrust of large sustainable fashion brands that are reminiscent of fast fashion with heavy marketing. Sabina also mentioned buying from a sustainable store when she was abroad. She felt good about

buying the clothing at the time, but would not do it again because it was overpriced and not worth the money (S.Dabakarov, personal communication, 2020). Maddie also struggled with the idea of investing in an expensive sustainable clothing item when fashion changes so quickly (M.Collins, personal communication, 2020). This is a reason why some consumers don't invest in quality clothing because within a year it will be out of style. This is the mentality of fast fashion.

#### **4.342 Handmade Items**

None of the consumers in the focus group were particularly interested in buying handmade clothing. Many appreciated the value in it, but didn't go out of their way to find it. Maia said if she was interested in handmade clothing she wouldn't know where to find it and didn't think it was accessible to the general public (M. Taylor, personal communication, 2020). Anna also mentioned handmade clothing isn't always environmentally conscious. Even if something is handmade, it can use imported materials and conventional dyes etc (A.Tiajolloff, personal communication, 2020) Maia discussed the importance of local clothing and understanding where clothing comes from. She was gifted boots handmade in Argentina six years ago and they are still in perfect shape. Maia said, "the quality of artisan things is unprecedented even if they are more expensive" (M. Taylor, personal communication, 2020). Consumers like Maia are willing to pay more for handmade clothing because they understand its value and quality. Unfortunately, the other consumers didn't seem interested in handmade clothing or see it as a sustainable market that is upcoming. The main reason for this is the lack of marketing and the lack of representation in stores.

#### **4.343 Thrift Stores**

All consumers in the focus group were regular thrifters and saw the value in thrifting as far as sustainability. Sabrina said she thrifts often and views it as a way to save an item of clothing from becoming trash (S.Dabakarov, personal communication, 2020). Maddie generally shops online and uses Threadup which is an online thrift store which carries big brands like Prada for major discounts because they are used (M.Collins, personal communication, 2020). Anna said she views thrifting as a trend, specifically with younger consumers. Older consumers often don't see thrifting as environmentally friendly. It is more common with younger consumers and is normal for many families who struggle financially.

### **4.4 Semi-Structured Interviews with Producers**

#### **4.41 Background**

I conducted 13 producer interviews for my research which included farmers, artisans, small business, activists and a combination of the above. I asked them to discuss the background on their businesses and describe the benefits and drawbacks of materials used. We also discussed their experience with consumers and how the slow fashion market has expanded overtime. A main factor in this was exploring ways that slow fashion can be attainable to the general consumer. I also explored fiber markets as a possible venue to instigate change or a venue which limits the expansion of slow fashion to general consumers. Through these interviews, I was able to gain a greater understanding of the local fiber systems in the Hudson River Valley. There are multiple fiber movements driving the local farm to fiber supply chain in the Hudson Valley. These include the Hudson Valley Textile Project, the NY Textile Lab, the Green Market and the Fibershed movement. They all focus on revitalizing the local textile economy using resources within the region. This centers around cultivating interdependencies between all players in the market including designers, farmers, mills and manufacturers (L.Sansone, personal communication, 2020).

The Hudson Valley Textile Project is working to create a strong supply chain in the Hudson Valley which centers around Sustainability. They are featuring farmers as the basis for fiber production. At the center of local operations is the Battenkill Fiber Mill in Greenwich which is run by Mary Jeanne Packer and has high tech spinners and some scouring. She processes the fiber for most of the region. Gail Parrinello from Cornwall Yarn Shop and Mary Jeanne Packer founded the Hudson Valley Textile Project 4 years ago when they realized a need for a farm-to-fabric supply chain. The Hudson Valley Textile Project is a community of farmers, dyers, millers, designers, makers, distributors, and retailers who are coming together to share knowledge and create sustainable locally sourced clothing (M. Packer, personal communication, 2020). The organization meets once a year for a summit meeting. The discussion began with the problems involving the keystone markup. The price of yarn would double from the farmer to the producer to the artisan to the consumer. This means local yarn was often too expensive for shop owners like Gail to sell often. So they decided to invite producers and consumers to the first convention in 2017. They had room for 40 people and 65 wanted to come. The interest has continued to increase and the summit held 75 people in 2019 (M. Packer, personal communication , 2020). Besides summit meetings, they also have educational components including funding high school and college classes that focus on local fiber (L. Marsh, personal communication, 2020). Gail has additionally launched a podcast to share information and interview people on the summit. This is a way to reach a younger crowd (M.Packer, personal communication, 2020 ).

The Hudson Valley is currently in an awakening period. The future is strengthening local markets and creating a new local textile economy which supports local players and centers around healing soil. Artisans and farmers are working towards this goal through better farming practices which regenerate soil through carbon sequestration and foster diversity in agriculture and fiber production. They also focus on local jobs and bring economic and environmental stability. The goal is to create systems which sustain and don't rely on extraction but continually

regenerative to heal soil. This means creating a system which creates social and environmental profit, not just economic profit (L. Sansone, personal communication, 2020).

#### **4.42 Benefits and Drawbacks of Materials used in the Local Fiber Supply Chain in New York**

##### **4.421 Recycled/ Thifted Materials**

Upcycling and using thrifted clothing to create new clothing products is very common with artisans and small clothing designers. Waste is one of the main problems in fast fashion with widespread low quality garments made from fossil-fuel sourced synthetic fibers. One of the solutions to reducing waste is wearing clothes longer, mending clothes, donating and shopping at used clothing stores and supporting companies like Patagonia who buy back used clothes. Even if clothes are donated, they are not always reused or recycled. Repurposing textiles is important because it helps keep things in the hands of consumers and not in landfills, where currently 85% of clothes end up (L. Sansone, personal communication, 2020). It additionally decreases dependence on water and chemicals for new products and transforms a discarded product into something beautiful, giving it a second lifetime (K. Tesnakis, personal communication, 2020). Lucy Beizer is a small clothing business owner who I interviewed. She is passionate about upcycling, supporting a closed loop fashion system and creating sustainable clothing that is affordable to consumers. She is a Skidmore Alumni and intern at a nonprofit called FABSCRAP in New York City which recycles and resells pre-consumer waste from large clothing companies. Her mainly online business, Luce Threads, uses upcycled clothing from post or pre-consumer waste which are redyed with natural dyes to create new clothing. She was inspired by sustainable brands but realized they charged a lot of money for their products, so she started her business with the goal of creating clothing that is attainable to the general public. She also uses clothes that already exist which prevents them from ending up in a landfill. The clothes are inexpensive to buy so she can make her prices affordable. Younger consumers are interested in her work because it's new, ethically made, and it allows consumers to participate in a new trend without spending hundreds of dollars (L. Beizer, personal communication, September 19, 2019).

Kathleen Tesnakis is another textile designer and artist who works with upcycled materials in her clothing line. Her business in Troy, NY, named `Ekologic, recycles and reinvents post-consumer cashmere products (K. Tesnakis, personal communication, 2020). All her items are hand cut and made locally with natural fibers which will break down when eventually landfilled or recycled. She uses every scrap of cloth and nothing goes to waste. In the last 18 years `Ekologic has rescued and transformed seven tons of used clothing that would have previously been landfilled. Since everything is made locally, this helps Kathleen create jobs



locally (K. Tesnakis, personal communication, 2020). The downside of her clothing line is the clothes are very expensive because they are all handmade. These clothes, however, are extremely durable and will last many years.

Most artisans and farmers I talked to, mentioned the importance of upcycling as a way to create a closed loop system. This included Laura Sansone, Cal Patch and Lily Marsh. Emaly Leak is a llama and alpaca farmer who works with local fibers from her farm to create products. She and her mom also use recycled materials in their work. All of the rugs they sell are made from recycled cotton. They often repurpose things they already have such as curtains and tablecloths. Emaly also repurposes old wool sweaters. She puts them in the washing machine which shrinks them to make a dense material that can be used for making bags or mittens. This gives these items a new purpose and prevents them from ending up in a landfill. Consumers are particularly interested in the recycled rugs. They love the idea that the items are recycled, particularly younger consumers (E. Leak, personal communication, March 22, 2020).

The downside of working with recycled or thrifted materials is the outcome can be unpredictable, especially with selling clothes because you can't always find the right items. This means it's difficult to use reused items on a mass scale. Also natural dyes cannot be used on synthetic fiber which is commonly found in many clothing items (L. Beizer, pers comm, 2019). Though thrifting is common, some consumers are still grossed out by the idea of used clothing. In Budapest, Lucy Beizer worked with a woman who sold vintage clothing and some people would not buy an item they liked, just because it was vintage or used. Another problem is most items currently found at thrift stores are products of fast fashion. This means the items aren't always durable and cannot always be repurposed. Lucy Beizer, for instance, only works with natural fibers, so she avoids materials that are polyester. Synthetic fibers can be found in most fast fashion items and most will end up in landfills and continue to release microplastic and harsh chemicals as they slowly break down. So even if they are recycled, they can continue to pollute the ecosystem. Cal Patch is a designer who mostly makes handmade items, but sometimes upcycles clothing. Her problem with thrift stores is they are products of fast fashion. This begs the question: should we make new clothing or use old clothing that already exists, but might not last as long? There are downsides to both avenues (C. Patch, personal communication, March 3, 2020). We need to change the way we make clothes, but also accept the growing problem of textile waste which we can no longer hide by shipping it overseas.

Preconsumer and post consumer fashion waste continues to be a huge issue. FABSCRAP is a non-profit that takes pre-consumer waste from over 500 brands which are new clothes that were never sold. Volunteers and workers sort through the bags. Some of the material is shredded and recycled and some is resold. This is a great resource for students, weavers and small businesses. It also addresses a huge problem in the industry that many don't consider. The problem with FABSCRAP is they are feeding off of fast fashion. They generally take waste from designer and high end brands that don't focus on sustainability. They also only tackle the problem of pre-consumer waste and not post consumer waste (L. Beizer, pers. comm, January 27,

2020). Although thrift stores are one solution, many stores throw away things that aren't sold and do not accept damaged items. This means many clothes end up in the landfill. Rik Scarce is a professor at Skidmore College and the author of, *Creating Sustainable Communities: Lessons from the Hudson River Region*, which focuses on sustainability in New York. Rik discussed with me in our interview that one of the biggest problems in the fashion industry are clothes that already exist that consumers don't know what to do with. Rik discussed that some communities are running clothing swaps or clothing drives where families can get free used clothes. The Pass it on Sale in Glens Falls which is held twice a year, provides the community used children's clothing (R. Scarce, personal communication, February 6, 2020). The Green Market in New York City was also mentioned by Rik Scarce and Laura Sansone is also dealing with clothing waste. They accept used clothing at the market and hold used clothing drives.

Overall, finding ways to utilize used clothing is imperative to keep clothing out of landfills. This will also lower the demand to make new clothing when so much material already exists. Thifting and using used material also lowers the costs of making and buying clothing items. So used products are attainable to general consumers, not just the 1%.

#### **4.4212 Mending**

Mending clothes is important to keep clothing in the hands of consumers and out of landfills. Currently 13 million tons of textiles are thrown out in the US each year (L.Sansone, personal communication, 2020). Many artisans such as Cal Patch, Laura Sansone and Natalie Stopka teach classes on how to mend, dye and make clothing. A piece of clothing can be reinvented through mending and re-dyeing or even taking cotton from t-shirts and spinning them into new yarn (C. Patch, personal communication, 2020). Cal Patch used to run a small clothing shop in New York City with handmade clothing. She began teaching classes on making and mending clothes because many consumers were interested in the clothing, but couldn't afford the high price. Many older women are mending and making clothes because they can't find clothes in the stores that fit them well or have high quality and durability. So mending clothes can be a cheaper option and can give people the freedom to make something they want and wear something unique. If people learn to mend their own clothing they will need to buy less clothes as well as throw out less clothes.



#### **4.422 Wool/ Sheep farming**

Wool is one of the main fibers produced in the Hudson Valley. Most people raise Romney Sheep because other more common types of sheep like Merinos which have finer wool do not do well in this climate (L.Sansone, personal communication, 2020). There are limitations to how fine the wool can be made here because the fiber is rough and there is not much infrastructure left here to process this wool. The US in general has gotten rid of most of their textile equipment and sold it to china. Very little fabric is being produced in the US. (C. Patch, personal communication, 2020). This is difficult for an artisan like Laura Sansone who uses only local fibers, 50% which is carbon farmed. She often mixes the wool with alpaca or llama fiber to make softer products. She works with the local mills, whatever infrastructure is left in the region (L.Sansone, personal communication, 2020).

Battenkill Fiber Mill in Greenwich, run by Mary Jean Packer is one of the only mills left in the region. It has high tech spinners and she does small amounts of scouring but it is very water intensive. There are also machine knitters in Schenectady, NY. There used to be 13 mills in Greenwich alone, but most infrastructure has been shifted abroad (M. Packer, personal communication, 2020). One main issue, brought up by Lily Marsh, Mary Jean Packer and Laura Sansone and Ashaley Bridge is the lack of scouring facilities in the region. Lily Marsh said there is only one scouring plant in the country in South Carolina called Chargeurs. All of the wool in the country goes there. Though Mary Jean does a bit of scouring, she can't wash a large number of threads. So even if it's raised here locally, it must be shipped elsewhere which includes fossil

fuels due to transportation. Either this or another option is buying finer fiber from the west. A better solution is lowering societal expectations for fiber. Consumers demand soft, very fine wool, but this comes with a cost (M. Packer, personal communication, 2020). Consumers need to understand that the product is local and have different expectations. Another option is building a scouring plant in the region. Artisans and farmers in the region are currently fighting for state support to open up a scouring plant (L.Marsh, personal communication, 2020). The facilities for this already exist, someone just needs to take this on and update machinery to something more sustainable.

Despite these difficulties, romney wool does pose benefits. It is more affordable than other fiber, so artisans can lower their price points (L.Sansone, personal communication, 2020). For example, Laura Sansone tries to keep her prices under 100 so her clothing isn't only accessible to 1% of the population. This is possible because the wool is not the finest and this is something consumers need to understand and accept. Currently designers use what they can get more consistently and 85% of fiber production is made up of cotton and polyester. So designers will use these materials instead of locally sourced wool which is more expensive and harder to find consistently. Currently, people are only shearing a few times a year, so artisans need to work around this schedule. In the future, they plan on stockpiling in advance as wool production continues to grow (L.Sansone, personal communication, 2020).

Ashley Bridge is a sheep farmer who I interviewed/ She is based in Cambridge, NY and focuses on carbon farming and solar grazing. She mostly focuses on soil health through animal rotation and natural composting with animal poop. Her sheep are multipurpose hill sheep. Due to the region, their wool is not super high quality. She processes the fiber at Battenkill Fiber, but refuses to scour them in South Carolina to avoid the impact of super washing which involves plastic. So she mostly fills pillows and makes wool blankets. She also sells fiber to artisans. Even though the fiber is carbon farmed, it is difficult to produce high quality fiber in the region (A. Bridge, personal communication, February 8, 2020).

Ashley Bridge loves wool and thinks it will continue to expand in production in the region. Wool is an amazing material due to its softness and durability. Ashley Bridge commented, "Wool blankets will last you your whole life. They are super higher quality. I have wool blankets from my great great grandfather that I still use" (A.Bridge, personal communication, 2020). Wool has so many uses and such a long life. When it's life is finally over, however, you can put it in a compost pile. Fiber that is usable, can also be made into fertilizer. For instance, dirty wool, that is not desirable for the industry can be compressed into pellets that you can fertilize your garden with (A.Bridge, personal communication, 2020).

Wool can have multiple uses. Emaly Leak, for example, puts old wool sweaters in the washing machine which creates a dense material that can be used to make mittens and handmade bags (E.Leak, personal communication, 2020). Wool can be dyed using natural fibers and unlike

synthetic fibers, wool does not emit microplastic when washed. So with a new wave of artisans, wool is increasing in production, the facilities just need to increase with them so the fiber can stay within the region.



#### **4.423 Alpaca/ Llama Wool**

I talked with two Llama Farmers, Katrina Capasso from Dakota Ridge Farm in Ballston Spa who has 35 llamas and Emaly Leak from Autumn Hill Llamas & Fiber in Duanesburg, NY who has 10 llamas and 2 alpacas. Leak focuses on fiber and hand makes wearable knit items with her mom, while Capasso does farm tours, but also has a shop where she sells handmade items. Capasso explained to me that llama fur is very versatile because it is hypoallergenic which means lanolin does not need to be washed out. It does not require the kind of scouring process that sheep's wool does. The main problem with sheep wool in the Hudson Valley is that they do not have the proper scouring facilities in the state, meaning the fiber often needs to be shipped to South Carolina to be scoured. This takes high carbon emissions which can be reduced by using llama or alpaca fur. Some llamas have guard hair which is rougher, this is used in rugs due to coarseness. The fur beneath is used in clothing and is very soft, extremely warm and durable (K.

Capasso, personal communication, February 16, 2020). Much sheep wool in the region is on the rougher side due to the climate, so many artisans, such as Laura Sansone, make clothing with a combination of sheep wool as well as llama or alpaca fur. This makes the end product softer (L.Sansone, personal communication , 2020).

By properly managing pastures, fiber animals like llamas improve soil without the use of harsh chemicals. Emaly Leak rotates where the animals graze and gives them space to roam which helps in soil regeneration and overall soil health. Additionally, llamas do not have hooves like horses, cattle, sheep or goats. Their feet have a unique structure which causes minimal damage to the environment. So they do not wear down the grass as much or damage soil. They also require less food than other farm animals (E.Leak, personal communication, 2020). So they are naturally better for soil health. Their fiber is also natural and can be composted back into soil.

Emaly Leak discussed the power of in person sales at markets. Consumers, specifically in younger generations like how the products are farm grown and not mass produced. She sometimes brings her llamas or alpacas to events because it is the best way to attract and educate consumers. If consumers pet the animals and feel the hats she made, they have a direct physical connection to the product and how it was processed. With or without the animal, telling a story is a powerful way to move consumers. This will help consumers build trust with the seller which makes them more likely to come back or recommend the seller to others (E. Leak, personal communication, 2020). Katrina also finds that bringing the animals to the local markets is powerful. Her booth often attracts kids and families who may end up buying products (K.Capasso, personal communication,2020).

Many farmers and artisans sell at weekly farmer's markets. Emaly Leak sells at the farmers' market every week. Since, her products are mostly hats, mittens and scarves, she has trouble selling them in the summer. In recent years, she has been teaming up with her friend who makes goat milk soap. She makes wraps for the soap with fiber and sells them at the farmers' markets. These kinds of items can be sold year round, are inexpensive and are great gifts. This also helps Emaly grow a customer base. People can afford small items like soap and if they've bought from her before, these same consumers may invest in something more expensive in the future (E. Leak, personal communication, 2020).

#### **4.423 Hemp and Linen**

Most artisans I spoke to said the future of sustainable clothing is in hemp and linen production. Hemp is not currently used in NY, but it is an upcoming sustainable industry. It will be a new wave once it's legalized. Hemp is a great material for textiles because it's a natural fiber and it grows well in NY. It is also very sustainable, because it isn't water intensive, doesn't need pesticides and enhances soil health. Hemp fiber is additionally very durable and grows fast,

making it great for textile use. The problem is there is still limited information on hemp and can't currently be grown commercially on a mass scale. Right now, producers need to study how to use these materials hemp as well as linen. (L.Sansone, personal communication, 2020).

Mary Jean Packer's next goal is producing linen and hemp on a small scale industrial level. Hemp is currently being authorized for growing in New York State and she believes providing a facility for yarn making from plant stalks will encourage farmers to grow hemp (M.Packer, personal communication, 2020).

#### **4.424 Drawbacks of Synthetic Fibers**

The problem with synthetic fibers is they can't be recycled and prevalence of non recyclable synthetic fibers such as polyester, spandex, nylon, fleece, contribute to micro plastic pollution and water pollution (N. Stopka, personal communication, January 27, 2020). This is one of the main problems with the runoff of waste from fast fashion (L.Beizer, pers. comm, 2020).

At FABSCRAP, synthetic fibers such as spandex can be used as pillow fillers and house insulation but it cannot be shredded or resold like other materials. This is the best case scenario because most of our clothes end up in a landfill. Most of the cheap clothing people buy uses synthetic materials so it can't be properly recycled or composted. Also the clothes don't last long yet they can take hundreds of years to break down in the environment (L.Beizer, personal communication, 2020). Synthetic fibers also cannot be naturally dyed. So even after they are worn, these clothes can lead to the runoff of harsh chemicals (N.Stopka, personal communication, 2020).

The goal of sustainable fashion is to create a closed loop system. When fiber is made from natural sources, it originates from the soil and can be then composted back into the soil. Currently, however, 70 percent of the fiber we wear originate from fossil carbon and the US is producing 13 million tons of textile waste each year, most of which is outsourced (L.Sanson, personal communication, 2020).

Even long time designers such as Cal Patch, aren't always aware of the cost of polyester thread. Cal had been using polyester thread for years in classes and in her personal work. She now has transitioned to using cotton instead as well as local wool and linen (C.Patch, personal communication, 2020).

The biggest solution to this problem is educating consumers and producers. We need to look at fiber in the same way we do food. The first step is understanding where clothes come from and what materials they are made up of (L. Sansone, personal communication, 2020). Synthetic Fibers should be avoided when possible.

#### **4.425 Natural Dyes**

Mainstream fiber artists generally don't work with natural dyes. When I attended the Adirondack Wool and Arts Festival in September, there were only a few artists such as Dye by Nature in Saratoga, that worked primarily with natural dyes. Many artists had products with natural dyes, but their main products were made with acid dyes which are conventional chemical dyes. Even artisans like Lily Marsh, who is one of the founders of the Hudson Valley Textile Project, are concerned about the reliability of natural dyes and tend to use weak acid dyes or natural colors with limited dyeing. In my interview with Marsh, she explained that one of the challenges of the Slow Fashion movement is the disconnect between younger and older generations. Young designers are often driven by revolting against corporate fashion, while traditional crafters are less focused on sustainability. More traditional artisans have the goal of reaching the high quality level of the ACC which is highly finished, glossy products with bright colors. This is the high end aspirational market of many artisans. Natural dyes are not always consistent and often create more muted products so traditional artists tend to stray away from using them (L.Marsh, personal communication, 2020).

I interviewed Natalie Stopka who is a fiber artist and educator who specialized in natural dyes. Stopka loves natural dyes because they have personal meaning to her geographically. They are made from plants grown in the area and they help her engage with the natural world and create work that is more sustainable and has a deeper meaning (N.Stopka, personal communication, 2020). They aren't made of harsh chemicals and can be composted at the end of their lives. Additionally, they have historic and sustainable value (N.Stopka, personal communication, 2020).

Natural dyes have been used for generations. Synthetic dyes were created during the Industrial Revolution and since natural dyes lost popularity, many of their secrets were lost. More research needs to be done in how to properly use many natural dyes. Scientists and archaeologists are looking at how these processes work chemically and how they were done long ago (N.Stopka, personal communication, 2020). So despite its current popularity, many people are still uninformed about the dyeing process. Natural dyeing is more complicated than conventional dyeing and colors don't always come out consistent. It is a multistep process without a quick turn around. There is often variability in the outcome and colors can fade faster. The natural dyeing process also takes up space and can be time consuming because a large amount of shirts can't be dyed at once (L. Beizer, personal communication, 2020). Emaly Leak, for example, does not dye her own clothes because she does not have a big enough space to do it.

One of the biggest concerns mentioned by most of the producers I interviewed about natural dyes was the use of arable land and water that could otherwise be used for agriculture (E. Larsen, personal communication, November 13, 2019). Laura Sansone, an activist for carbon farming and founder of the NY Textile Lab, is combating this issue by using invasive plant species as dyes which limits land use. She's been working with Woodlym Pantry. They are



currently removing invasive species from unutilized areas of farms and wooded areas and are donating the plants to Laura to use in natural dyeing (L.Sansone, personal communication, 2020). Lucy Beizer, the creator of Luce Threads, solely uses natural dyes in her upcycled creations. But instead of using plants, she uses kitchen waste such as onion skins and avocado pits which she often gets from restaurants (L.Beizer, personal communication, 2020). This is food waste that would otherwise be thrown out. Ashley Bridges also uses food waste for dyeing along with weeds and invasive plants like GoldenRod. These are ways natural dyes can be made with limited land use.

Natural Dyes also can't be dyed on synthetic fiber and can easily react negatively with chemicals. Lucy Beizer, who uses thrifted clothing needs to find clothes made of only natural fibers which can be difficult. The natural dyes can also react with deodorant residue on sleeves of shirts and discolor it due to the presence of residue. This can be a time consuming and frustrating process so Lucy tends to buy sleeveless things or be careful to buy new or undamaged clothes (l. Beizer, personal communication, 2020). So many synthetic materials exist and need to be repurposed which can be an issue for transitioning to natural dyeing and upcycling. However, cutting out synthetic materials like nylon, fleece, polyester and spandex is essential because they contribute to microplastic waste and water pollution. They also can't be recycled or composted at the end of their lives (N.Stopka, personal communication, 2020) So the popularity of natural dyes can encourage consumers and producers to transition to natural fibers.

The solution to transition to natural dyes is education of the consumer and the producer. Producers need to educate consumers on the value of clothes that are naturally dyed so they realize it's worth the money to invest in a naturally dyed garment (N.Stopka, personal communication, 2020). If people understand the value, they will understand it's worth variations and imperfections in the product (E.Leak, personal communication, 2020). Sansone also believes producers need to normalize variability in clothing and help consumers understand how to properly launder clothing because natural dyes are more sensitive than chemical dyes. Sansone explained that we live in a culture of mindlessly throwing clothes in the washer and the dryer. As a result, we are polluting our water systems because most of fast fashion consists of synthetic fibers which release microfiber and micro plastic when washed. By handwashing or laying out clothes to dry, we can avoid color loss with natural colors and avoid buying clothes with conventional dyes (L.Sansone, personal communication, 2020). According to Rebecca Burgess, the founder of Fibershed, synthetic dyes are derived from fossil carbon sources and can expose clean water sources to harsh chemicals as well as humans themselves. 70% percent of dyes are azo dyes which contain known carcinogens and endocrine disruptors and resist biodegradation which means they stay in water systems (Burgess, 2019). In contrast, natural dyes are made from natural sources which can become the soil they came from.

In the last few years there's been an increase in publications on natural dyes in books, magazines and even DVD's. There is a sustained interest in designers and artists on the topic of natural dyes. Designers are beginning to educate consumers which has led to more sustained interest. Now we need scientists and researchers to step up and research the effects of the fashion industry and create new solutions and technologies to create sustainable clothing which includes natural dyes on a larger scale (N. Stopka, personal communication, 2020).

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#### **4.426 Natural Colors**

A lot of artisans are embracing natural colors as a way to reduce use of dyes and chemicals. Lily Marsh generally uses weak acid dyes but she also works a lot with natural colors and undyed thread. In the past, they would breed out colors of sheep such as black sheep because they could not be dyed. They started bringing these colors back in the 70's and embracing the diversity of colors. Marsh uses as little dye as possible to avoid use of chemicals (L.Marsh,personal communication, 2020). Emaly Leak who has a farm with llamas and alpacas, has little room in her house to make dyes. So she uses the natural colors that her animals produce. There is a lot of diversity in the colors and even on her small farm; there are 6 different color variations. From these colors, she can blend them together to create new colors. For example, she mixes black and white fiber to make gray. Although the dyed yarn sells better, consumers are interested in unique natural colors (E.Leak,personal communication,, 2020). Marsh thinks that consumers need to become accustomed to seeing these products to normalize them. If people are educated about the meaning and purpose behind natural colors, they will become more interested. Though the natural colors don't sell as fast, the benefit is they speed up the process because dying, specifically natural dying can be labor intensive and time consuming. This is also the most environmentally friendly and non-toxic option.

#### **4.43 Background on Consumer and Producer Interest in Handmade Clothing**

The interest in fiber waxes and wanes. It was bigger in the 70's and 80's, slowed down in the 90's and is now gaining more interest from consumers (L.Marsh,personal communication, 2020). Cal Patch described in our interview that the reasoning behind making and mending clothes has changed over the years. In the past, consumers made their own clothing because it was the more affordable option. Then due to outsourcing, since the late 90's, clothing has decreased in price. So people have had no financial reason to make their own clothing overall. Also with the feminist movement growing, women now and in the past have acknowledged the stigmas around women handmaking clothing. So many are drawn away from it and techniques, such as sewing, are now rarely taught in public school. The current resurgence in making clothing by hand is by choice and not due to financial strains. Although upcycling can be cheap,

people generally spend more money making clothing than buying cheap clothing (C.Patch, personal communication, 2020). So the choice to make one's own clothing is generally driven by environmental and social concerns.

Older consumers are specifically making their own clothing. This is because they are more aware of ethical concerns and the low quality of clothing. With new styles, older women can't often find clothing they want to wear. This is another reason consumers make their own clothing. People overall are thinking more progressively and ethically. In the past, people had less clothes and they were more durable. Now the main goal is about "being in fashion" (C. Patch, personal communication, 2020). So older people see these changes more drastically, while younger populations grew up with cheap clothing so it has been normalized for them.

Many artists, such as Ashley Bridge believe we are in an awakening period. The reality of the situation is "Climate Change is going to remake the world in the next 20 years. We need to focus on sustainability or we're dead" (L. Marsh, personal communication, 2020). So consumers need to open their eyes. Handmade goods and supporting local systems is the way forward. Since the Green Market started, people have become more aware. Laura Sansone believes textiles are following the same trajectory as food and the only way to shift big economic systems is by starting small. In my interviews with Laura Sansone and Rik Scarce, they emphasized the importance of the Green Market In NYC in creating connections between farmers and consumers (personal communication, 2020).

This market is a visual representation of the interdependencies between farmers providing the food for the city and the economic importance of the city to keep the farmers thriving. Clothing can also fit into this system. Every week there are used clothing pick ups at the markets. Besides this, farmers provide everything artisans need. They sell the meat at markets as well as providing the fiber to make clothes and plants that can be used in natural dyes (L. Sansone, personal communication, 2020). The most important part of revitalizing the supply chain is understanding the importance of farmers. The Green Market represents the model of slow food and how these marketplaces are a connection point between consumer and producers. The goal of Slow Fashion is helping consumers understand clothing in the same way they do food.

Farm to table restaurants are a great example of where Food and Fiber meet. Lily Marsh is an artisan from Glens Falls on the board of the Hudson Valley Textile who makes commissioned blankets for Farm to Table Restaurants. These restaurants work with local farmers to provide local food in their restaurants. Now they are providing consumers with local wool blankets to wrap themselves in. So the business is supporting not only the local food but also the local fiber supply chain (L. Marsh, personal communication, 2020).

## **4.44 Consumers and Producer Age Groups**

### **4.441 Consumer Age Groups**

Overall all producers I interviewed agreed there is a wide range of consumers of sustainable local clothing from 20's to 80's. Handmade clothing is not limited to one age group. Younger consumers are generally interested in handmade clothing due to its uniqueness and sustainability aspects. Older consumers appreciate the handmade work and want to find unique, durable items which fit their body types. There is currently a new wave of sustainable clothing. Knitting and hand making clothes has made a comeback (E.Leak, personal communication, 2020). In general consumers want to say that their clothes are ethical and more consumers are becoming aware of the social and environmental effects of fast fashion (L.Beizer, personal communication, 2020).

### **4.442. Age Group of Online Sales**

Most producers I interviewed have online shops and also sell at markets. The benefits of online sales is more people can be reached and it is less time consuming for sellers. Cal Patch mainly does commissioned work and online sales. The main age group of her customers is between their 30's and 50's (personal communication, 2020). Laura Sansone also sells online and her consumer base is made up of people in younger generations. Online sales are often more common for younger consumers. The downside of online sales is consumers are less educated. In person sales can be more moving. You can build a personal connection with a producer which cannot be replicated online. So online sales are best for repeat customers who already trust a seller and continue to support them (E. Leak, personal communication, 2020). Lucy Beizer runs Luce Threads mostly online and consumers from every demographic buy her clothing. Though younger consumers are more interested in her t-shirts due to styles. Overall all ages are involved in online sales, but younger consumers are more likely than older consumers to shop online.

### **4.443 Age Groups in Fiber Classes**

People from all different age groups are learning how to make clothes. Cal Patch teaches sewing, crotoceque, and embroidery and more. Most of the participants are women because she teaches workshops on making leggings, skirts and dresses. Her participants come from a wide range of age groups, from 20's to 70's. Most of the students are in their 30's or 40's. Women in their 60's are retiring and have more free time and some take classes. So 60 and above is also a common age group. These women are often unhappy with clothing in stores and are looking to make clothing that is unique, durable and fits their body types (C. Patch, personal communication, 2020).

Laura Sansone finds that the younger generation is interested in learning about local textiles. For this reason, she tries to keep her prices low to her classes, memberships and her NY Regional source book so this information is accessible to all (L. Sansone, personal communication, 2020). College students are studying sustainability and are especially interested in recycling and sustainability (L.Beizer, personal communication, 2020). Organizations such as FABSCRAP bring in students and young upcoming fiber artists by providing cheap fiber and education on fiber waste. Also students in art and fashion schools are learning about sustainability. They are being taught that sustainability is the future of fashion. For instance, Lucy Beizer said she stumbled on a fashion show in Amsterdam where every single item focused on sustainability. (Personal communication, 2020).

When Mary Jeanne Packer began processing fiber for the Hudson Valley region a few years ago, she wasn't aware of the prevalence of Indie dyers. Now a third of the producers she works with and processes fiber for are Indie dyers. These are young freelance artisans who work independently from large companies. The dramatic increase every year in young artisans who are showing interest in the local supply chain is promising (M. Packer, personal communication, 2020 ).

#### **4.444 Age Group in Fiber Markets**

Overall there are a wide variety of age groups who attend fiber markets. Mostly women attend fiber markets such as mothers and daughters, older women, younger women and everything in between (L. Marsh, personal communication, 2020 ). The youngest consumers are generally in their 20's or 30's The younger generation is interested in the sustainable and local aspects of the clothing (c. Patch, personal communication, 2020 ). Older demographics have money and they appreciate great work; so they don't mind spending it on something well made. They are more interested in high end and high glossed items (L. Marsh, personal communication, 2020 ). Sellers fit into both these categories.

There is a difference in consumer bases for hipster craft fairs like Renegade and more traditional Craft fairs like the Adirondack Wool and Arts Festival. Ashley Bride sells out of her products every year at once at hipster high end markets which are mostly dominated by younger populations (Personal communication, 2020 ). These markets center around new unique styles, while more traditional markets sell more fiber and traditional products that generally draw in older crowds. (C. Patch, personal communication, 2020 ). The presence of animals can draw a more family friendly crowd with parents and kids. Katrina Capasso explained, when she brings her llamas to a market and children love them (personal communication, 2020 ). The presence of animals can also draw in different people to a booth.

Many artisans also sell at farmers' markets which bring consumers of all ages and demographics. Consumers at farmers markets are generally more aware of environmental

problems and seek more sustainable products. This can be people of all ages, but younger populations are specifically interested in the sustainable and local aspects of the clothing (E.Leak, personal communication, 2020 ). Overall, farmers markets have a more general and varied consumer base than specifically fiber markets.

#### **4.45 Fiber Markets and Farmers Markets**

Most of the producers I interviewed sell their products at Fiber Markets, Farmers' Markets or both. Since slow fashion is generally based on the model of slow food, in person sales can be a great way to spread awareness and create a platform for local fiber. However, in general sales are pretty low at these markets, specifically Farmers' Markets. Fiber Markets interest more niche consumers who are already interested in fiber. So they generally don't reach the general public. Farmers markets bring in a more general audience, but their main focus is food. Although consumers may look at the fiber products, they are less likely to regularly buy them. The local fiber movement is growing in the Hudson Valley, but they still need a platform and fiber markets aren't groundbreaking enough (L. Sansone, personal communication, 2020 ).

Farmers Markets are a platform where local food and fiber systems can meet. Emaly Leak from Autumn Hill Llamas & Fiber currently sells mostly at farmers' markets. She finds it time consuming, draining and not very lucrative. In the summer, it is specifically hard to sell her products which are mostly hats, scarves, mittens and sweaters. Farmers' Markets specifically bring in a younger crowd which isn't as common at Fiber Markets. Although the consumers are generally interested in the products, it's difficult to sell things, especially lower income areas (E. Leak, personal communication, 2020 ). The general public can't afford luxury handmade items, but it is a great platform to raise awareness and educate consumers. It can also help artists build up a following and repeat customers. However, freelance artists online seem to be selling out faster than in person sales. So many artisans like Emaly are transitioning to online sales and straying away from the farmers' market model.

At Farmers' Markets consumers are generally looking for finished items they can buy as gifts while craft markets tailor to crafters themselves so many of the items sold are yarn and fiber instead of finished projects (E.Leak, personal communication, 2020 ). These are great places for networking and exposure , particularly to meet other artists. It is a great platform to meet other artisans. Lucy Beizer from Luce Threads views markets as a risk because they require a fee and the sales aren't generally lucrative. Creating more sustainable clothing stores and introducing this to the market might be the way forward (L. Beizer, personal communication, 2020 ). Markets in the country still don't occur often so they are not normalized, while they occur so often in the city that, according to Cal Patch, consumers have become accustomed to these markets and they aren't special. So in some ways they are less successful than they used to be (C. Patch, personal communication, 2020 ). Lucy Beizer doesn't quite fit into traditional fiber

markets because her clothes are upcycled and not traditional. Most of the artisans I interviewed still attend markets, but are slowly transitioning away from them. Cal Patch, for example, used to attend 10-12 markets a year and not only attends 1 or 2. Laura Sansone doesn't even sell at markets. Lily Marsh sells at festivals a year, but gets her income from commissioned work. So she generally sells online and does not have much success at these markets. Overall producers agree markets, although useful for awareness and educational purposes, aren't revitalizing the textile economy and aren't the progressive platform that the slow fashion movement needs.

#### **4.46 Difficulties with Slow Fashion in the Hudson Valley and How To Combat Them**

##### **4.461 Lack of Facilities/ Resources in the Region for Making and Disposing of Clothing.**

As previously discussed one of the current limitations of local fiber production in the Hudson Valley is lack of resources. The US has moved most textile equipment overseas leaving mills and scouring plants abandoned (C.Patch, personal communication, 2020). The whole textile economy has shifted abroad. Mary Jeanne Packer runs one of the only textile mills in the region and she currently needs to outsource most of her scouring to South Carolina which is home to the only high tech scouring plant in the country. In order to increase the production of local fiber, there need to be more processing plants and mills (M.Packer, personal communication, 2020). The Hudson Valley has the land and the farms to provide the fiber, but they currently lack the facilities needed to process this fiber. So it is often easier and cheaper for artisans to outsource material.

There is also currently a lack of facilities to recycle and process used clothing. This is why 85% of used clothing ends up in landfills (K.Tesnakis, personal communication, 2020). FABSCRAP is currently tackling pre-consumer waste, but does not accept worn clothes. Most consumers donate to used clothing stores, but most of the clothes are landfilled that are damaged and not sold. The region needs more companies like FABSCRAP that deal with recycling and reusing post consumer fashion waste (L.Beizer, personal communication, 2020). More clothing companies also need to provide recycling options for their consumers or the "buy back" of used clothes like Patagonia and LL. Bean currently do (R. Scarce, personal communication, 2020). The goal in the future should be to focus on natural fibers, but so much clothing already exists which is leading to mass pollution. So there needs to be companies that tackle this issue on a larger scale than thrift stores, clothing swaps and clothing drives.

There are still limitations to growing hemp and flax in the region and cotton cannot be grown in New York. So these other materials must be outsourced. There is also a lack of information on how to properly grow and process these materials. So the region in itself has limitations on what can be grown and how to process what is locally grown (M.Packer, personal communication, 2020).

#### 4.462 Price

The biggest obstacle to making sustainable textiles more mainstream and desirable to consumers is price. Many producers try to keep their prices low, specifically to classes but it is very difficult to lower the price of handmade clothing because of the work that goes into making them. The younger generations were taught not to see the real cost of clothes so they need to adjust their thinking to understand the high prices are the real cost of clothes (C.Patch, personal communication, 2020). The cost of labor is not always seen in promotional items. You can't lower the cost of handmade items because the price is based on the labor and artisans need to make a living (L.Marsh, personal communication, 2020).

Consumers need to readjust their mindsets and understand that handmade clothing will last years. If you have good quality items you don't need to constantly buy cheap clothing (C. Patch, personal communication, 2020). Education is the most powerful thing, especially in person. Artisans can tell you the story of the clothing item from start to finish. This is information you'd never find on a shirt at Walmart. Currently consumers fail to see handmade items as an investment and fear the initial price.

Overall the handmade clothing industry is for people who have money (L.Marsh, personal communication, 2020). Most people can't afford expensive handmade items even if they do understand the value of them. They can't justify spending money. People who are living paycheck to paycheck cannot generally invest in an expensive item even if it will last (E.Leak, personal communication, 2020). Cost is a huge worry for people. Culturally we make choices based on appearance and price point. Ethics can affect clothing choices, but generally consumers are unsure about investing in an item from a seller they don't know. Certifications are powerful because they make deep values visible and have research to back up the words of a seller (L.Sansone, personal communication, 2020).

Producers do their best to keep costs low. Laura Sansone, for example, keeps her prices affordable, generally under 100 dollars because she works with Romney wool which is not high quality and keeps everything local so this lowers shipping costs. One of Lucy Beizers main goals is to keep her prices low so her clothes are accessible to all consumers. Many of her t-shirts are 20 dollars and her sweatshirts 30-60 dollars. She can keep these price points though because the clothing is upcycled. Other artisans don't have this luxury. Cal Patch discussed with me the difficulty of using local fiber and keeping her prices reasonable. The goal of her business is to eventually only buy fabric that has been produced in the Hudson Valley. That dream is becoming a reality with the Hudson valley Textile Project and she recently bought wool locally from Mary Jean Packer. The main problem she is facing is the expense. All of her clothing is handmade and labor intensive and she usually sells dresses for 160 dollars. Using local fiber would raise the price and it's tough for consumers to understand the reason for cost increase (personal communication, 2020). So many artisans feel that solely using local fiber is unattainable and would affect their sales.



#### **4.463 Lack of Education**

Overall consumers are poorly educated on the environmental effects of the clothing industry. They are used to cheap clothing and don't understand the value of purchasing sustainable clothing. Consumers are disconnected from the origin of the clothing. They see the corporate entity as the originator of a piece of clothing or the person wearing it (L.Marsh, personal communication, 2020). Many consumers, especially males will say they aren't concerned with fashion but will shop at the GAP or H&M. They fail to see the power of voting with their dollar or realize their habits support fast fashion systems (L. Marsh, personal communication, 2020). The difficulty is reaching these consumers. Even if they are reached, many feel overwhelmed and fail to act because they don't see the best way forward. Solutions are not straightforward.

#### **4.47 Benefits of the Local Fiber Supply Chain**

##### **4.471 Supporting Local Jobs**

Local fiber systems support the local economy by creating jobs within a region instead of outsourcing these jobs. For instance, Kathleen Tesnakis' sustainable clothing company, Eko logic, is based in Troy and uses materials all within 150 miles of her in the region. This allows Kathleen to hire people locally and create jobs locally (K. Tesnakis, personal communication, 2020). The Hudson Valley Textile connects farmers, mill workers, artisans and more. By connecting all players in the region, this provides economic growth within the state and brings jobs to the state. Mary Jeanne Packer from Battenkill Fiber plays a crucial role in keeping these systems running by providing a mill to manufacture local fiber and lower costs within a system. Their goal as an organization, besides connecting pieces of the supply chain, is to lower costs to expand the market and provide local fiber that is accessible to consumers and producers. They were previously dealing with the keystone market, meaning the price of the fiber would double from the farmer to the producer to the artisan to the seller. This system was creating clothing unattainable to most consumers and it wasn't supporting farmers. Through creating a local supply chain, all pieces within the chain have equal value. This means they can afford to hire others and create more jobs. This cycle continues (M. Packer, personal communication, 2020).

##### **4.472 Deep Values/ Trust**

Artisans can create a system of trust with a consumer that cannot be found with large companies. Large corporations are not transparent about where and how their products are made. Slow fashion, however, makes visible deep values. The handmade items have a story and an in person interaction with a consumer can strengthen trust between a seller and a consumer. These relations create repeated consumers and educate consumers in the industry. Certifications such a

B-corporation also helps consumers understand deep values. (L.Sansone,Personal communication, 2020). Overall deep values can create a sustainable business through creating relationships between consumers and producers. If you take good care of customers, they will keep coming back and tell other people about the business. Mary Jean Packer for example, has built her business all based on referrals (Personal communication, 2020).

#### **4.473 Durability**

Sustainable clothing is very durable, specifically handmade clothing. Despite high prices, a good quality wool sweater can last a lifetime. This keeps clothes out of landfills. However, if the clothing is finally worn out it can be composted if made with natural fibers and natural dyes (A. Bridge, personal communication, 2020).

#### **4.474 Communities Connecting and Coming Together**

The local fiber chain helps communities come together. Representation from so many consumers and producers at Hudson Valley Textile Project summit represents the growing interest in local fiber in the region. The goal of slow fashion isn't to compete but to give equal opportunity and equal representation to all players in the system. Currently profits are being lifted from farmers, who are the backbones of the system. Laura Sansone is currently fighting for farmers who focus on carbon farming. She wants to convey the value of deep value fiber. The goal is to encourage designers to buy local fiber by making it more accessible within the system (L. Sansone, personal communication, 2020).

Most designers also teach classes to consumers on how to make and mend clothing. They keep their prices low so the classes can be accessible to the general consumer. Local fiber does not only embrace the diversity of resources within the region, but it also supports those within the region.

One example of a community coming together was the story of Battenkill Fiber Mill in Greenwich. Mary Jean Packer started this mill to fill a gap in the supply chain for good quality local fiber. However, in 2010, not long after it got off the ground, the building burned down in a fire. All seemed hopeless until a group of producers in the region chipped in and decided to invest in the company. Now, almost ten years later, they are still going strong due to the generosity and support of the community. Mary Jean does not make a profit off the mill. She devotes her time into this project for the good of the community. This is so rare in business and shows the heart of the hand making community versus big business which will risk social and environmental destruction for any profits. Battenkill also doesn't just provide fiber, but they are also investing in education, specifically for high school and college students (M. Packer, personal communication, 2020).

## **5. Discussion:**

### **5.1. Consumer Awareness of Social vs Environmental Impacts of Clothing**

Overall consumers were more aware of social issues within the clothing industry than environmental issues. My semi-structured interviews were especially striking because six out of 10 consumers said they were unaware of the environmental impact of clothes and only two consumers out of 10 put the environment into account when buying clothes. This is extremely striking considering fashion is one of the most polluting industries in the world. For social impacts, only three consumers interviewed were unaware of the impact and four consumers took this into account when buying clothing. In the online survey, 52 % of respondents said they considered the environmental impacts of materials used when buying clothing and 61% of consumers surveyed agreed or strongly agreed to consider social issues such as working conditions of workers. These results may be biased because the group surveyed was overall environmentally focused. However, in both cases consumers were more aware and more likely to act on social issues than environmental issues. This is likely because social issues within fast fashion like child labor have been more widely broadcasted. One consumer, Iz Adzani said she refused to buy from main brands like Nike and Adidas after hearing they used child labor. However, she never considers environmental impacts when buying clothes. Another consumer, Anthony Reppenhagen, is aware of social issues, and goes through a process of remorse before buying cheap clothes. However, he never considered environmental factors. This means a little less than half the population or more is completely unaware of the environmental effects of clothes. So when they buy clothes they don't determine what they buy based on these concerns. This is due to a lack of education from the general public along with fashion companies in general who lack transparency.

Even if more consumers were aware of environmental concerns they may not act, but they are more likely to if they are aware of the consequences. Besides education, humans tend to connect more to struggling kids and bad working conditions than the environment. So consumers are overall more moved to change their behaviors when learning of harsh working conditions. Social challenges often go hand in hand with environmental struggles. Countries with unhealthy work conditions like Bangladesh also don't have environmental restrictions and laws preventing pollution. So avoiding socially unjust companies often means avoiding environmentally unjust organizations also.

### **5.2 Disconnect Between Generations**

Many artisans discussed concerns of a generational disconnect between younger and older artisans as well as younger and older consumers interested in handmade clothing. Lily Marsh, for instance, views that younger artisans care most about the sustainability aspect of local

clothing and the fact that the clothes aren't mass produced (Personal Communication, 2020). They want to support local businesses and bring money away from large corporations. Older artisans care more about how products look and the work that goes into them. They are put into separate categories even though both groups are doing the same things. Lily Marsh is a member of the Hudson Valley's Weavers Guild and this is a traditional guild with mostly upper middle class women. There are not many younger members even though this area has many young designers. The guild is not interested in sustainability or it's not something they discuss. Young designers are all about revolting against corporate fashion and waste that denies agency to the individual artisan or consumer. This often drives the clothes they create. Traditional weavers focus more on the appearance of a project over the sustainability aspects so they stay away from more sustainable options like natural dyes to get a more finished look. (L. Marsh, Personal Communication, 2020 ) They need to come together as a community if they want to change the system. Even if older artisans are generally making sustainable products, by not labeling it as sustainable or discussing environmental effects they are ostracizing younger producers and consumers. Younger consumers should be learning from older artisans and sharing information. They need to work together to create a stronger movement or revolution.

Hudson Valley Textile Projects is a representation of this union. At summit meetings, all demographics are coming together for a common goal of sustainability (M.Packer, Personal Communication, 2020). Artisans like Lily Marsh and Mary Jeanne Packer do traditional fiber work, but they are also environmental activists on the forefront of the local fiber supply chain in the Hudson Valley. They are working to patch the generational disconnect, but many artisans are still in the dark on these matters. When I attended the Adirondack Wool and Arts Festival, only a few vendors mainly worked with natural dyes and many did not use local fiber. Overall there were mixed messages on sustainability. Most producers' goals are to win in big fashion shows which don't focus on sustainability so they care more about how the product looks than environmental factors (L. Marsh, Personal Communication, 2020 ). The work of artisans who work with recycled materials doesn't always interest older consumers. While younger consumers don't always like traditional handmade clothes. In order to create a new textile economy, there needs to be a unified message which seems to be lacking.

### **5.3 Disconnection between Handmade Clothing and Sustainable clothing in the Eyes of Consumers**

Younger consumers are interested in sustainability, but often don't see handmade clothes as sustainable or are uninterested in the handmade market. On average consumers surveyed only bought handmade clothing 10 % of the time only 2 pieces of handmade clothing a year. Out of consumers interviewed, only four out of 10 of consumers interviewed bought handmade clothing and only one consumer bought handmade clothing for environmental reasons. The others appreciated the art that went into making the work. This was reminiscent of the Adirondack Wool and Fiber festival where the language of sustainability wasn't prevalent. Most producers imported fiber and even those that bought or made it locally, generally didn't use

natural dyes. If I was a consumer attending this festival, I would likely be unaware of the sustainable aspects of the fiber there.

Most consumers surveyed said they were unaware of the handmade market because it was not widely advertised or attainable in their local area. Price, lack of accessibility and lack of information were the biggest obstacles for consumers. If handmade clothes weren't readily available, consumers generally would not go out of their way to look for them. The look of handmade clothing also isn't for everyone. Even with the popularity of farmers' markets and fiber markets, the handmade clothing market still hasn't reached the general consumer. This is mainly due to lack of advertising and disconnection within the community. If artisans want to remodel the textile economy and fight big businesses, they need to come together with a common message. These clothes need to be advertised as "sustainable" in order to gauge consumer interest in this market. There also needs to be more variations in sizes because 15 consumers surveyed mentioned that handmade clothing did not fit their look or style. This was mainly due to the lack of sizes and variability, particularly for plus sized women.

#### **5.4 Benefits and Drawbacks of Slow Fashion in the Eyes of Producers**

Out of consumers surveyed, on average they bought sustainable fashion items 30 % of the time and about 5 clothing items a year. Out of those interviewed, four of 10 consumers bought sustainable clothing. Although consumers were overall buying sustainable clothing, it was only a small portion of what they buy on average. Half of consumers don't buy sustainable at all. The most common answers were cost, lack of accessibility and lack of information on sustainable clothing and where to find it. Cost and accessibility were mentioned as concerns for both consumers and producers

##### **5.41 Deep Values**

Artisans are powerful because, unlike large corporations, they have deep values. More and more consumers are beginning to question fast fashion. In fact, 52% of the consumers I interviewed considered the environmental impact before buying clothing and 61% considered the social impact. Most consumers are at least aware of social issues within fast fashion systems and generally distrust big corporations. However, most feel sustainable fashion is unattainable to them. With lack of transparency being one of the main concerns of consumers, handmade sustainable clothing counters this through complete transparency. Local artisans, especially those with fiber animals can explain the system of creating a product from start to finish. Specifically with in person sales, telling one's story is the best way to educate a consumer and maybe get present or future customers.

##### **5.42 Education**

Due to the fact that half of consumers never consider the environmental impact of clothing, the biggest obstacle in buying sustainable clothing besides price and inaccessibility is

lack of knowledge or education on the topic.

I surveyed consumers in a movie showing called RiverBlue on pollution in the fashion industry. My main goal was to study the effects of education on consumer shopping habits so I surveyed consumers before and after the movie. I was shocked to see that 95% of consumers surveyed after the movie planned to think a lot about the environmental impacts before buying clothes in the future, compared to 15% before the movie. These results were striking to me because they revealed how much consumer perspectives could change after a short film. This is how powerful and necessary education on fashion is. All consumers said they planned to shop differently after seeing the film. One even mentioned she was previously unaware of the negative environmental impact of clothing manufacturing and now felt informed and inspired to buy sustainable clothing. So education, specifically educating consumers at a young age about the true facts of fashion can help consumers make more informed decisions. Consumers are currently so detached from the fashion industry that they often see the origin of a piece of clothing to be from the consumer or at most the company they bought it from. They no longer see the true cost of clothing. They fail to understand that buying clothes at fast fashion items means they are supporting these brands and funding them to continue unethical practices (C. Patch, personal communication, 2020).

Mary Jeanne Packer is working on initiatives with the Hudson Valley textile Project to educate younger consumers and reach a larger audience. Gail Parrinello and Mary launched a podcast last year called “Thread Counts” along with an instagram page. On the Podcast, they interview people on the summit about their farms and businesses. They are additionally working with High School students, educating them on farm to fiber through lessons and field trips to farms, mills and weaving studios. In the past year, the students created clothes using locally sourced yarns from the region.

It is the job of designers to educate consumers on their products and why they matter. If consumers understand where products come from then they will be more likely to buy them or support the artisan. Accessibility was one of the main concerns that consumers discussed in regards to sustainable and/ or handmade clothing. Many older artisans mostly attend fiber festivals and write articles within weaver communities. Many have social media, but they are failing to reach a larger audience. One way to reach a larger audience would be pushing to bring sustainable and handmade options into stores. The current problem is that consumers don’t know where to find sustainable or handmade clothing because they are not present in stores or popular online sites so “normal” consumers aren’t exposed to these clothes.

#### **5.43 Lack of Transparency/ inaccessibility**

Overall there is general distrust in large sustainable brands. Consumers, even those aware of social or environmental impacts, are more drawn to thrifting than buying from sustainable brands. Most consumers buy from brands they trust for quality, fit and style. A consumer, Eric Ness, for example found sustainable brands to be inaccessible in person. Yet online he found

only overly expensive niche sites which relied on greenwashing tactics to advertise their brands (Personal communication, 2020). Lucy Beizer was pushed away from sustainability in the start of her fiber journey because she found sustainable brands were unattainable to the general public. Sustainability has become a new trend which has created an overly priced “sustainable” market which feeds off greenwashing consumers (L. Beizer, personal communication, 2020). When consumers think of sustainable fashion they often think of turning water bottles into cloth. These systems exist, but they often take a lot of energy, are expensive and aren’t specifically sustainable because the end product continues to create microplastics (L. Beizer, personal communication, 2020). The goal of creating “sustainable” clothing, similar to food is to focus on creating clothes as local as possible. This is similar to food systems. Consumers often buy organic food, believing they are making an environmentally friendly choice, but fail to consider the environmental impacts of imported food as even more detrimental.

#### **5.44 Price of Slow/ Sustainable Clothing**

Cost was the biggest obstacle mentioned by all consumers as the main reason they don’t buy or don’t buy much sustainable or handmade clothing. Producers also mentioned this as an obstacle for reaching a wider audience with their products. The problem is the younger generation and most general consumers no longer see the true cost of clothing. They fail to understand that clothing that is handmade or sustainable will last a long time. Consumers need to adjust their thinking to understand the real cost of clothing (C. Patch, personal communication, 2020). It is difficult to lower the cost of handmade local clothing because of the effort and time that goes into making these clothes (M. Packer, personal communication, 2020 ). People will still buy these clothes, but the price is not attainable for all consumers, especially those living paycheck to paycheck. This is why sustainable clothing, specifically handmade clothing is currently such a niche market. Only 60 % of consumers surveyed said they would pay more money for sustainable clothing when surveyed. Some consumers interviewed said they would only buy sustainable clothing if they liked the style and trusted the brand. Many consumers were unsure if they wanted to invest more money in sustainable clothing, reinforcing how disconnected consumers are from the real cost of clothing

Producers can combat price issues by lowering costs as much as they can, especially for classes. Lucy Beizer upcycles clothing so she is able to keep costs under 60 dollars (personal communication, 2020). Laura Sansone doesn't outsource her wool and uses Romney wool which is more affordable so her prices are under 100 dollars. Overall prices are high because of quality and labor and not much can be done about this. Despite this, consumers can do their best to support local farmers and artisans by shopping at farmers markets and buying small items. For example, Emaly Leak is now making fiber wraps on goat milk soap which she sells at farmers markets (personal communication, 2020). This is a small item a consumer could buy. Just as consumers make a statement by supporting fast fashion, they also make a statement by supporting local artisans no matter how small the purchase.

Since handmade clothing is unattainable to many younger consumers, artisans are currently teaching classes on mending and making clothing. Artisans like Laura Sansone and Cal Patch keep prices for their classes low so younger consumers can learn important skills. Designers said the most important thing for consumers to learn is how to mend clothing to keep clothing in the hands of the consumer as long as possible. Laura Sansone also developed a New York state Regional Yarn source book to help educate farmers and designers on creating a decentralized supply chain. It contains information about yarn and textile production, information on farms and fiber being produced in the region, a glossary of terms, information on pricing and much more (L. Sansone, personal communication, 2020). This is an awesome guidebook for producers interested in entering the industry. Providing books like these that are cheap and easy to access, help consumers and producers learn more about how to make clothes and support the local fiber chain. Laura hopes to see technology expand and eventually create apps to support young designers.

Although handcrafters are important to the industry, jobs most needed in the fashion industry right now are educators and scientists. Sewing and fiber in general are taught in school



less and less so it is important for older artisans to teach the next generation these important skills (N. Stopka, personal communication, 2020).

#### **5.45 Style and Uniqueness**

Consumers interviewed and surveyed mentioned that sustainable clothing didn't fit into their style or fit their body type. Handmade clothing can be particularly difficult with varied body types and options are limited in styles. One consumer surveyed said she would love to buy sustainable clothing, but found the clothes to be very basic and not appealing. Others described the clothes as hippie or old fashioned. Currently there are limited options for sustainable clothing. So if women have trouble finding clothes that fit them regularly, this can be an issue.

With fast fashion, fashion has become homogenized. Humans have become accustomed to cheap clothing made from polyester or cotton. Many younger consumers are driven to thrift stores to find more vintage and unique items while older women have trouble finding clothes they like and are high quality. Even over the course of my life, I have seen the quality of clothing continue to fall. Now the goal of the industry is to make clothing as cheap as possible so consumers will continue to buy more. The solution to this is buying less and buying quality. If consumers decide to invest in high quality items they will need to buy less clothes and less often.

#### **5.5 Thrifting**

60% of consumers interviewed regularly bought from thrift stores and 57% of consumers surveyed said they preferred to buy clothes at second hand stores. These numbers were higher than handmade clothing or sustainable fashion. Only three out of 10 of these consumers were aware that thrifting was environmentally conscious. Most consumers thrift because it is cheap and you can find unique and vintage styles. It is also a way for consumers with limited financial means to support the sustainable supply chain. Lucy Beizer upcycled clothing as part of the clothing line. This way the prices are affordable for general consumers, but also sustainable. Consumers like her clothes because they are attainable and a way for general consumers to participate in sustainable clothing without breaking the bank. Consumers shopping more frequently at thrift stores, brings money away from fast fashion systems. However, used clothing stores often feed off fast fashion. So supporting artisans and small businesses that are creating clothes with natural fibers also need to be supported. Otherwise the cycle continues leading to more and more waste.

Upcycling and mending clothes is a way to reduce fashion waste. The clothes also take less energy to "create" because the materials already exist. Lucy Beizer makes clothing from Pre and post consumer waste and redyes them using natural dyes. She can sell clothes for cheap

because they are not completely handmade, so her clothing is more attainable to general consumers. She also gets materials locally which reduces the carbon emissions of the process.

## **5.6 The Future of Fashion**

When I asked Lily Marsh where she sees the future of fashion, she told a story of a group of Quakers. Prior to the civil war, Quakers started to refuse to wear dyed cloth because they were involved in the slave trade. They started wearing hand spun undyed clothes instead. Everyone thought they were weirdos, but because of their unique attire people started paying attention to them. They started a movement. Americas are at a similar turning point. As consumers begin to educate themselves on fashion, they realize that buying fast fashion isn't just a pastime, but it is supporting companies that are exploiting their work force and destroying the environment with them. When a consumer buys a shirt from a fast fashion company they are justifying these actions and allowing them to continue. Unlike food, clothes last. If you wear something unique, people pay attention. Younger consumers are more aware than ever that fashion is unethical and they want to support ethical brands. However, currently they seem out of reach.

The slow fashion movement is on the same trajectory as slow food. Fiber Markets began as a progressive platform and now are failing to reach a larger audience. Artisans are beginning to sell online more and more. Yet the main issue is they lack financial ability to advertise their products widely. There is something powerful about in person sales that interests consumers. Being able to physically talk to a producer break through worries of transparency like mission statements on website that have no evidence to back up their claims

Cal Patch believes excitement over markets has died down as they have become more and more popular in cities. These markets generally attracted younger consumers. Traditional fiber markets in the country are less common, but are mostly attended by artisans and not normal consumers (personal communication, 2020). Slow fashion needs a progressive platform and this is not currently being met. This could be more popularity online or representation in stores or in advertisements.

## **5.7 Producers Benefits and Drawbacks**

The producers I interviewed worked with llama wool, sheep wool and recycled materials. The downside of natural fibers in the New York Region is they are not high quality, but this means consumers can lower costs for clothes. This means carbon farmed high quality wool clothes can be attainable to general consumers. For example, Laura Sansone keeps her clothes under 100 dollars. These fibers are amazing because they create high quality durable clothing that can be composted to become fertilizer at the end of its life. Right now there are limited

materials that can be grown in New York. Hemp and linen will be in the next wave of sustainable fiber because it grows well in the region and they require less water.

Currently many artisans in the region aren't buying local fiber because it is more expensive and less reliable. There are currently limited resources in the region to process fiber. Battenkill Fiber Mill is one of the only mills left in the region which processes fiber. Wool is not grown on a mass scale because farmers only shear their animals a few times a year. In the future, Laura Sansone is pushing for farmers to stockpile in advance so more fiber can be processed and sold at once. This way it can be more attainable to producers.

The price, however, still creates problems for producers. If clothes are handmade they already come with a high price tag and the prices must be increased if the fiber is local. This makes the products harder to sell and most consumers are not focused on supply chain economics or fail to see the real value of local fiber.

## **5.71 Revitalizing the Local Textile Supply Chain**

### **5.711 Technology and Science**

The current consensus among producers is the future of fiber needs to focus on sustainable local systems or there is no future. Like any other industry, producers need to create sustainable solutions in all parts of the supply chain. One of the main ways to do this is by utilizing science and technology. When I asked Natalie Stopka about the future of fiber she said, "Being a designer is not what is needed. We need scientists and researchers" (personal communication, 2020). There is so much information that has been lost overtime, especially in regards to natural dyes and natural materials like hemp and linen. Hemp can thrive in the NY region, but so much is still unknown on how to properly process this material. Scientists need to be on the forefront of this research and educate others on its importance.

### **5.112 Creating a Horizontal Collaborative Supply Chain**

Laura Sanone also thinks technology is the path forward. She thinks we need to consider the flaws within the current supply chain and focus on growing the economy in a decentralized way, laterally rather than vertically (personal communication, 2020). As explained in my introduction, the slow fashion model focuses on bottom up economics and horizontal collaborative relationships which recognize all players within a system. The Hudson Valley Textile Project and NY Textile Lab are working with these systems, by connecting and giving equal equity to all parts of the supply chain. Laura Sansone is working on growing the market in a fractal way, similar to roots and branches of trees. She specifically wants to make sure profits aren't lifted from farmers. All producers mentioned the importance of working with natural systems to heal the earth and create change. The current system focuses on economic growth

over social and environmental concerns. This has led consumers to distrust large companies. However, these companies are not properly penalized for their behaviors and consumers as well as producers aren't often aware of the problems within the industry.

### **5.113 Technological Tools**

Technology needs to be the way forward to educate consumers and work on breaking down a current centralized supply chain which feeds off waste and environmental and social harm. Business players need to create consumer trust through deficiencies of scale. Laura Sansone thinks the future of fashion will rely on distributed network technology through computational trust. Levi's, for example, is using blockchain to track factory workers' health, treatment and pay rate. This is a way companies can be held accountable for their behaviors and work towards changing them. The goal is to empower employees and help consumers make informed decisions about factories, products, and brands (L. Sansone, personal communication, 2020). If companies are forced to be more transparent then they will be more likely to transition to more ethical practices.

Working with natural systems and ancient knowledge, but utilizing new environmental technologies is also important to revitalize the supply chain and connect environmental and crafting communities. An example of this is Ashley Bridge's work with solar grazing. Ashley is a sheep farmer who is currently working with solar companies to use sheep as natural lawn mowers to eat grass under the solar panels. This is a way to lower carbon emissions in solar yards. Although this doesn't directly relate to clothing, it shows how fiber animals are being used not just as a resource for fiber, but also to heal soil and lower carbon emissions within systems. (A. Bridge, personal communication, 2020).

## **5. Supporting Local Systems**

### **5.121 Creating a Closed Loop System**

The goal of slow fashion is to create a closed loop system of soil to fiber and back to soil. Producers should only make clothing from natural sources so even if clothes end up in landfills they can break down easily. Synthetic fibers that already exist should be reused or repurposed as new clothes or insulation in houses. If we let these clothes end up in landfills they could pollute drinking water and put aquatic life at risk.

### **5.12 Environmentally Friendly: Clothes Can Heal the Soil**

Currently the fast fashion industry is one of the highest polluting industries in the world and one of the main causes of carbon emissions. However, carbon farmed natural fibers can actually heal the soil and lower carbon emissions. Fiber animals like sheep can be used as natural compost; farm animals can be used to fertilize soil and naturally cut grass along with providing fiber. Any dirty wool that is not desired in the system can then be made into pellets to fertilize gardens or composted back into the soil. Managing farms with fiber animals helps to seep carbon back into the soil and fight climate change (Bridge). Natural fibers can now be made from invasive species. This is a way to clear disruptive plants and give them a new life (Sansone). Natural colors can also foster connections between people and places (Stopka).

Understanding where fiber comes from can also educate consumers to think more deeply on what clothes they buy. Currently, consumers are very disconnected from where clothing comes from. Yet local producers can explain this whole process from start to finish (Leak)

### **Local**

Although using new technology is important, the overall message from producers is local fiber and traditional practices is the way forward. The more local the fiber and the places to process this fiber, the less carbon emissions are involved in the creation of the clothing. The goal of creating “sustainable” clothing, similar to food is to focus on creating clothes as local as possible. This is similar to food systems. Consumers often buy organic food, believing they are making an environmentally friendly choice, but fail to consider the environmental impacts of imported food as even more detrimental.

Handmade clothing from natural and local fiber sources made up the bulk of my resources. The local fiber movement focuses on reintroducing farming practices from before the industrial revolution. This includes working with natural dyes, farming naturally without pesticides and hand making clothes from local fiber. Just like our economic system, we need to change the fiber system from the bottom up. This starts with healing soil that is currently depleted. Soil should take up carbon through photosynthesis, but current farming practices are leading to carbon emission. (L. Sanson, personal communication, 2020). Healing our soil through composting, rotational grazing and using natural systems rather than pesticides is one of the most powerful ways to fight climate change and also change our fiber systems. This is how science fits into the fiber supply chain and why scientists and environmental activists need to be leading players in fashion and join forces with organizations like the Hudson valley Textile project and the NY Textile Lab.

Outsourcing materials has led to a lack of diversity in the system. Polyester and cotton monopolize the clothing and textile industry, accounting for 85% of world fiber production (L.Sansone, personal communication, 2020 ). Artisans generally buy materials which they can get consistently so mostly rely on polyester and cotton. Even in NY, which is abundant in fiber farms, local fiber is very expensive and not always consistent. Currently there are a lack of resources to process fiber in the state. If this changes the price of fiber will be more abundant and attainable (C. Patch, personal communication, 2020 ).

## **Conclusion:**

The main takeaway from this research is to think locally when facing global problems. By focusing on small things on a scale that can be managed, we can slowly tackle larger systems overtime. Problems in the fashion industry seem momentous and insurmountable when studied on a mass scale. One of the most striking moments of my entire research project was attending the movie the RiverBlue and watching almost all the consumers stand up and leave as soon as the film ended. The movie educated consumers on global issues within the industry, but failed to discuss local solutions. So consumers felt helpless and overwhelmed because a polluted lake or an entire industry which is built of exploitation cannot be fixed by one person. It needs to start small

The interviews I had with consumers and producers gave me hope. I visited farmers like Ashley Bridge who are using fiber animals to fertilize and heal soil. I talked to Mary Jeanne Packer who runs one of the only mills in the region. This is a woman who moved to New York 15 years ago and realized there was a gap in the supply chain. This was a lack of high quality local fiber. So she took it upon herself to fill this gap. She now processes and spins fiber for 100's of farmers and artisans without taking a cent for herself. She is additionally a founder of the Hudson Valley Textile project, whose first summit meeting ran out of space to let people in. This represents how many people in the Hudson Valley are currently interested in local and sustainable fiber. Additionally, Mary expressed hope in the future because she continues to come in contact with young artisans who are creating their own sustainable brands and show interest in local fiber.

Most consumers I talked to were not aware or educated on sustainable fashion systems. However, merely taking a survey or participating in one interview changed their entire perspective on clothing. Many individuals who took my survey mentioned to me how it moved them. Consumers are so uneducated on the environmental effects of fashion. At least half of consumers aren't even aware that these problems exist. So increasing their awareness, helped consumers question their actions when shopping. Surprisingly many consumers had bought a sustainable clothing item at least once and were genuinely interested in learning more about the industry.

The reactions I received from consumers and the effect of the fashion movie on consumers made me realize how powerful education can be. If consumers are unaware of the consequences of their actions when shopping they will continue their old habits. This is why education is so needed. Environmentally friendly clothes also need to be more widely available in stores and at more reasonable prices. Classes for consumers on how to make and mend clothes

also need to be more widely available. This way consumers can keep clothes out of landfills and learn how to reinvent items without spending money on something new, even if it's sustainable.

The only way forward is to create a new textile economy where social and environment protection are just as important as economic success. It will treasure diversity rather than depend on monopolies. This includes focus on natural fiber and local fiber systems. This includes all parts of the supply chain, joining forces for equal equity. Local communities need to rise above competition and say no to fast fashion. Another important factor, especially globally, is the fair treatment of women and recognizing their importance in the industry.

Currently the sustainable clothing industry is divided into corporate companies with overpriced "sustainable" clothing, handmade clothing that may or may not be sustainable, slow fashion businesses and artists who are upcycling clothing, thrifted clothing and local sustainable handmade clothing that is inaccessible to most consumers. The slow fashion movement is made up of some artists who focus on the quality of the clothes they make rather than the sustainability and those that are creating clothing items that are as sustainable and local as possible. If these parties stay divided, the movement won't move forward in a way that is sustainable.

Currently much "sustainable" clothing is comparable to "all natural" and/or organic food without certifications. Many companies are outsourcing materials, but calling it sustainable because it's organic cotton. Local food is the most environmentally friendly option because it requires less carbon emissions to transport and fiber systems work in the same way. This is why I focused my study on local fiber and local artisans who are working to make the farm to fiber chain sustainable. Resources within the region are sufficient, farmers just need more local mills and scouring plants to process their fiber. Other pieces of the supply chain, including consumers also need to value carbon farmed fiber. It is imperative for designers to share information about fiber processes so consumers can understand the work that goes into clothing that is made locally and sustainably. It all begins with good quality soil.

As a consumer who cares about sustainability, it is important to be educated on the products you buy. The most important thing a consumer can do is buy less clothing and keep clothing for as long as possible to avoid landfill waste. When one needs to buy clothing, buy good quality clothing that will last long and not end up in landfills. Pay attention to what dyes and materials are used and try to buy clothes only made in the US. Durable items can be reinvented through mending and re dyeing so they can last for years to come. These clothes should preferably be made from natural fibers such as cotton, wool or silk. This is because synthetic fiber releases microplastics when washed. Natural fibers can instead be composted back into you garden to help plants grow. Clothing swaps are also a great way to get new clothes if one is bored of their wardrobe. Thrifting is also a cheaper and more environmentally friendly way to buy clothing. The goal of producers and consumers is to create a closed loop system where material is circulated and isn't thrown out.

The job of producers is to publicize their products and educate consumers. Teaching classes on textiles is a great way to pass information onto the new generation. Right now the market is not unified and fiber markets are not unifying the consumer and producer base. Slow Fashion needs a new platform. Some producers are finding this solution in online markets or more representation in department stores. The fiber markets alone aren't enough to reach a general consumer. Instead, producers need to come together on a mass scale and create a movement like fibershed which works from the bottom up to create a textile system which creates jobs, rebuilds soil and helps rebuild local economies.

Local fiber does not just help the environment or prevent social exploitation, it also helps the economy in a way that large corporations don't. Currently most fiber jobs are outsourced to other countries, leaving mills and processing centers abandoned. Local Fiber is taking back the land and the businesses and bringing wealth to the middle class, not just the heads of large corporations. The textile system will not change overnight and local fiber still needs a platform to prosper. But changes start small. It begins with soil that has long been depleted. It begins with farmers who are the backbones of the food and fiber movement. It starts with educating producers and consumers to transition to natural fiber and natural colors. In this way clothes can give back to the soil instead of taking from it.

### **Limitations of the Study and Possible Future Studies**

This study was concluded in the span of a few months. It was also limited to the area of New York, particularly the Hudson Valley in Upstate New York. Much more research could be conducted on slow fashion systems throughout the US. Fibershed is now a worldwide movement, so its effect on certain states in the US could also be studied. Studying Fiber Market and consumers more in depth would also be interesting. More research must be done on consumer perceptions of slow fashion as well as education because my survey only tackled a small population in New York and a limited age range. It would be interesting to compare outcomes in a future study, if this study was redone in a different region.

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