An Analysis of the Fast Fashion Industry

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by
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Introduction

"Do I get a coffee? A snack? Or something to wear?" -Elizabeth L. Cline *Overdressed*

Clothes and trends have always been something I have taken a notice to. I am not sure how or why this came about but I am glad it did because it has intriguing connections to my other interest—the environment. These two interests, particularly, became an engrossment of mine when I started noticing that most of the tags in my clothes said, "Made in China", which led me to research the apparel industry and discover the concept that is fast fashion.

History has shown that having a garment industry can help a country gain the momentum it needs to become developed. This will partially be looked at in chapter one, when the origin of the ready-made garment is examined. Chapter one also looks at the role cotton played in Britain and United States' industrialization. Nearly every developed country has gown through a "T-shirt phase an economic period in which there are a significant number of farmers who, rather than toil on unproductive land, accept harsh work conditions and low wages in textile and apparel factories" (Davidson 2013). The garment industry has done well in developing countries because it is characterized with low entry barriers to market and does not need skilled workers. However, there is a strong evidence for a bias against manufacturing clothing in Africa (Brenton & Hoppe 2007; 30). The ready-made garment led to the fashion industry and eventually fast fashion. Chapter two identifies who the fast fashion consumer is and their behavior. The chapter also goes into the commodity and supply chains, which are quite complicated. This leads to the supply and demand that keeps consumers preferences wanting more fast fashion. The third chapter follows up the supply and demand with the environmental consequences or the downside of so much disposable clothing. The global market for clothing continues to change. Speed and flexibility have a large role in fast fashion and delivering these products to the market. It is possible that consumer preferences will lead to a change that no longer emphasize tight deadlines, flexibility and speed of response. Through a literature review on fast fashions supply chain, consumer behavior, and environmental consequences the industry can be fully understood. Only through a literature review that looks at all aspects of the industry does it become possible to address whether or fast fashion will continue.

Chapter 1: The History of the Apparel Industry & Emergence of Fast Fashion

"The empire of cotton was, from the beginning, a site of constant global struggle between slaves and planters, merchants and statesmen, farmers and merchants, workers and factory owners. In this as in so many other ways, the empire of cotton ushered in the modern world."- Sven Beckert *The Empire of Cotton*

In order to comprehend what exactly fast fashion is we have to first understand the garment industry's history and notably when the industry began. The sector of apparel that is fast fashion would not have been possible without developing countries to produce the products and the developed countries markets where the products are largely sold. The emergence of the apparel industry really begins with a brief history of Britain starting in the late seventeenth century. The introduction of the ready-made garment was made possible through Britain's enclosure movement and Industrial Revolution. During these periods a cultural evolution was also taking place where a consumer class emerged and a preference for buying ready-made clothing began. The role of slop shop stores and urbanization altered British consumer preferences, which resulted in them no longer wanting to make their own clothes. Additionally, industrialization and the start of wage labor acted as a catalyst for a demand for an apparel industry because people no longer had as much free time after the enclosures. The American South was able to capitalize on the cotton crop through slavery to supply Britain with raw cotton exports. This American export became easier to manufacture in European factories and mills as newer technology developed. Through an increase in supply of raw cotton and new technologies the price of cotton fell so that the lower economic class were able to purchase cheaper fabrics. The United States post industrialization through the end of twentieth century was able to have a strong garment industry. But eventually domestic manufacturing became too expensive so that companies began outsourcing their production to countries with cheaper labor. The connected history of the apparel industry in Britain and the United States demonstrates how the garment industry has become a critical sector for economic development. The garment industry has helped many countries gain enough momentum to go through industrialization and become a developed country. The fashion industry was once only for the wealthy elite. Demographic and socio-economic changes have led to greater apparel differentiation and a different type of consumer. The outsourcing of apparel production and a change in consumer preferences led to the fast fashion sector of the fashion industry. Through the emergence of fast fashion consumers are able to purchase high fashion content at a fraction of the price. Before fast fashion product variety was very limited. Fast fashion products are low quality and disposable since they last only a limited amount of washes. This chapter will tell the history of the apparel industry and how fast fashion came about.

Britain Industrialization & The Beginning of Ready-Made Clothing

The history of ready-made clothing is closely aligned with Britain's Industrial Revolution. The demand for ready-made garments or rather demand for mass production in Britain actually begins with the slop shop. Slop shop was the common name for second-hand clothing stores of the time growing in popularity in the late 1600s and 1700s. They acted in a similar way to modern thrift shops. Additionally, slop shops were located largely in urban areas, where there was a high concentration of working class people (Newman 1952; 249). Most of the shoppers were peasants and some middleclass, who did not have the time or incomes to produce their own clothes (Lemire 1984; 28). These shops providing an alternative, changed consumer preferences and created a demand for ready-made clothing. The timing of this change is extremely important in understanding the history of the apparel industry. The amount of slop shops in pre-

Industrial-Revolution Britain shows that the apparel industry started earlier than commonly perceived. Slop shops normalized buying pre-made clothing and made way for a ready-made garment industry by establishing demand. As a result, ready-made clothing began to be produced in tailor shops and soon items like ready-made petticoats became staples as early the late seventeenth century (Lemire 1984; 28). The establishment of the slop shop resulted in a consumer demand for ready-made clothing in Britain.

While the demand for ready-made garments increased the British textile industry began to take off. The early garment industry also began to develop with the invention of sewing machines. Ready-made clothing industry developed from handmade clothing that was bought and sold at slop shops into clothing that was fully produced with the sewing machine. The sewing machine was produced and used in Britain for the mass production of garments by the mid-1800s. There are a total of eight key inventions associated with the British cotton textile industry: the spinning jenny, the water frame, the spinning mule, the self-acting mule, the flying shuttle, the power loom, the American cotton gin and the sewing machine (Phelps 2015; 18). These changes and innovations in technology allowed the price of raw cotton imported into Britain to decrease and the output of finished garments to increase, which can be seen below in Figure 1.1.

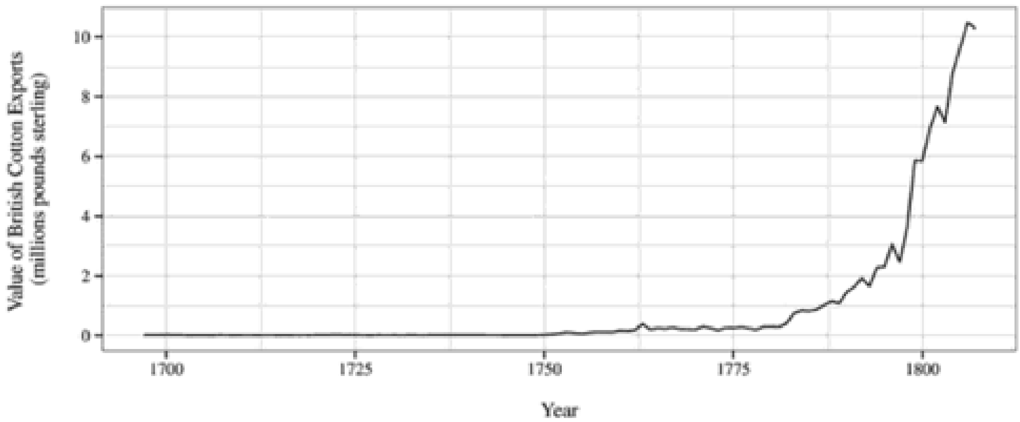

Figure 1.1: The growth of British cotton exports, 1697-1807. (Beckert 2014).

During the eighteenth and nineteenth centuries the enclosure movement took place. The enclosure movement was part of a transition from feudal to modern tenure of land. As writer Cliff Cobb puts it, the enclosure movement is “better understood as one element of a sustained pattern of economic pressure that was associated with agricultural improvement” and in many ways “is more like the ongoing market processes that continues to operate everywhere in the world today” (Cobb 2003). The enclosures left much of Britain’s population without land and an increase in agricultural productivity meant there were fewer jobs in the rural areas (Rivoli 2005; 76). The number of people unemployed had never been seen before. This ultimately led to urbanization, the rise of the factory system, and a new economic order.

The world’s first factories produced cotton textiles and yarn (Rivoli 2005; 77). It was a new concept for people to give up their regular daily lives and be organized around machine production (Beckert 2014; 179). Furthermore, people were skeptical about working in the manufacturing factories. Before the enclosures and industrialization most people were peasants living in the countryside, supplying their own needs from their farmland. Soon after the introduction of the factory, children, men, and women’s labor abilities were transitioned into human capital as factory workers meant turning them into wageworkers.

Raw cotton's ability to be quickly and efficiently manufactured led to low prices never seen before, which allowed a consumer class to emerge and working class people access to better quality clothing. This change in consumption remains today and can be seen how clothing is consumed and why much of our clothing is still made with cotton. However, cotton's productivity would not have been possible without plantation slavery in the American South. During Britain's Industrial Revolution, global textile production was modernized and Britain became the top global producer of cotton. Cotton textile became "the first major industry in human history that lacked locally procured raw materials" (Beckert 2014; 85). In 1831, cotton textile manufacturing accounted for just a little over twenty-two percent of Britain's economy with one in six people working in the industry (Beckert 2014; 73). Clothing during the Industrial Revolution became more than a necessary good. The development of the sewing machine and the emergence of a consumer class granted for a modern garment industry in the British and world economy.

Britain was the first country to industrialize and the Industrial Revolution catalyzed consumer culture as it continues today. The enclosure movement led to a transformation in Britain and ultimately to a reorganization of labor that led to the factory. Soon technology enabled factories to produce goods at lower prices, which led to a demand of ready-made garments. Technology made the ready-made garment a commodity that people preferred over making their own garment. Britain's industrialization empowered a cultural evolution, which granted a cultural shift and a change in consumer preferences. The growing supply of mass produced clothing over time could have led to this cultural shift.

Britain's cotton textile industry had an enormous impact on British economic development. Raw cotton was easy to manufacture once the technology became available, which allowed for a large supply of cotton and an immediate increase of quantity demand after it was introduced to the market (Landes 1969; 83). Cotton production was easier and quicker to manufacture compared to linen or wool, which were produced at higher levels in pre-industrialized Britain (Beckert 2014; 85). Cotton textiles became a large factor in Britain's economy during the beginning of the Industrial Revolution. Britain's industrialization was made possible because of technological advancements, a newfound consumer demand, and government practices and policies like the enclosure movement.

King Cotton & the American South

In the 1780s Europeans imported raw cotton from the West Indies, Brazil, the Ottoman Empire, and India (Beckert 2014; 100). The Europeans were familiar with America's use of slave labor to grow tobacco, rice, indigo, and sugar, but did not know that American land could grow cotton. However, that soon changed, as American soil was well conditioned for the cotton crop. The slave-cotton paradigm invented in the West Indies spread to the United States. Soon the United State's cotton exports bypassed all other cotton producing countries; "Exports from South Carolina ballooned from less than 10,000 pounds in 1790 to 6.4 million pounds in 1800" (Beckert 2014; 102). This was largely a result of Eli Whitney's invention of a cotton gin that was able to rapidly remove seeds from upland cotton. Cotton became cheaper to produce expanding the industry and therefore there was a need for more laborers. The cotton crop resulted in a massive expansion in the slave trade route, doubling the numbers of slaves. The United States ability to bypass all other cotton growing nations was largely because of the American South's unlimited supplies of land, labor, capital, and political power. The explosion of American cotton grown can be seen in Figure 1.2. American cotton planter's exports dominated the British market by 1802 (Beckert 2014; 118). Additionally, more than half of all the United State's exports between 1815 and 1860 consisted of raw cotton. By 1830 one in thirteen Americans including slaves grew cotton (Beckert 2014; 109). Due to the increase in cotton supply and production in the European market, a demand for cheaper fabrics emerged from the lower class. A consumer revolution was taking place not just in Europe for ready-made cotton apparel but also in the United States and the supply was made possible by plantation slavery.

The United States' industrialization was led by basic manufacturing from spinning to weaving and then printing. Slavery in the south impacted the price of American raw cotton exports to Europe. European merchants were more than willing to invest capital not just into the south but also the north. This international investment capital transformed America's infrastructure, connecting slaves in the south to wageworkers in the north and manufacturers and consumers in Europe (Beckert 2014; 133). Cotton might be considered the world's first global commodity.

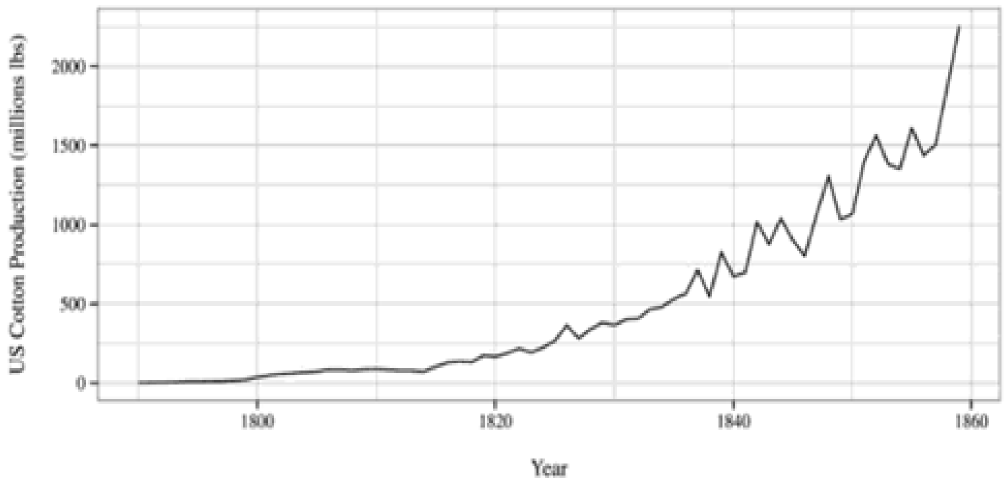

Figure 1.2. Cotton production in the United States in millions of pounds. (Beckert 2014).

Whole regions of Europe and the United States had come to depend on a predictable supply of cotton from the plantations. On the eve of the Civil War, raw cotton constituted 61 percent of the value of all U.S. products shipped abroad (Beckert 2014; 243). The Civil War was something most European investors knew was only a matter of time but they hoped slavery would continue so they could get the raw cotton for as little as possible. Beckert explains: "The outbreak of the Civil War severed in one stroke the relationships that had underpinned the worldwide web of cotton production and global capitalism since the 1780s" (Beckert 2014; 246). During the Civil War cotton exports fell dramatically resulting in many European manufacturers closing mills because the price of cotton had risen too high (Beckert 2014; 248). Eventually, Brazil, Egypt, and China were able to amply supply Europe's markets with raw cotton (Beckert 2014; 257).

Though the Civil War resulted in the elimination of slavery, it did not destroy the South's cotton economy. The union's victory at first resulted in a global panic to peasants, workers, manufacturers, and merchants in Europe because they feared cotton could never go back to the pre-Civil War low-cost and supply. This fear shows how cotton, as the first global commodity, closely intertwined developments all over the world. However, government policies were implemented to ensure that there would always be cheap laborers; such practices included sharecropping (Rivoli 2005; 20). Sharecropping worked to bind the tenant farmer to the property and the landowner, which assured the owner of labor much like slavery. Hundreds and thousands of workers found employment in textile mills; these supplies and outlets were crucial to securing the social stability of European and Northern American societies (Beckert 2014; 275).

There was not much change in the American South until about the 1920s, when Texas became the country’s largest cotton producer (Rivoli 2005; 23). The American Westward expansion onto the frontier, notably Oklahoma and Texas, resulted in a new form of labor structure—the company town. The concept of the company town was actually taken from the steel industry and other mineral extraction industries (Beckert 2014; 313). These cotton factories were set-up similarly to sharecropping. The company owned the workers homes and furthermore the company then owned the only store in the area (Rivoli 2005; 24). The plantations, sharecropping, and the company town all tightly controlled production systems ensuring efficiency and profitability. The control of workers has become a fundamental characteristic of capitalism in newly industrializing countries. The tight control of workers is a practice that continues and has become a growing concern in countries like China and Bangladesh, which is where majority of todays clothing is made.

Rise and Fall of the American Apparel Industry, Post Industrialization

Moving forward from the United State’s Industrialization to World War II (WWII) American apparel supply chains were relatively all the same (Doeringer & Crean

2005). This supply chain began after the end of the general store, which was replaced by forms of mass retailers. The general stores were independent stores across the U.S. where everyone in a town or city would do all of their shopping. Additionally the general store was a full-service wholesaler supply chain ending in the 1870s and 1880s followed by the rise of department stores, mail-order catalogues, and chain stores (Abernathy et al. 1995; 178). The new apparel industry order consisted of small craft shops, manufacturers, and contractors quickly and flexibly producing garments for mass retailers (Doeringer & Crean 2005). These retailers sold products for two or four retail seasons, which meant that new products were only put out on the store's floor up to four times a year. Retailers were not concerned with consumer demands but more concerned with placing their orders to the manufacturer on time to reduce production costs (Taplin 2014; 249). This supply chain came to a quick end during WWII when product variety hit an all time low.

During WWII a more efficient mass production technique was introduced—progressive bundle system (PBS), which is based on extreme specialization. PBS along with an increase in mass retailing, shifted production toward large manufacturers because of their ability to supply large quantities of garments at lower prices than small independent manufacturers (Doeringer & Crean 2005). However, this did not last long, large domestic manufacturers lost market control to large retailers. By the mid-1970s large retailers had established their own house brands and product design to compete against the manufacturers' (Doeringer & Crean 2005). Furthermore, once retailers gained product control they began outsourcing the labor and production to make it cheaper than domestic manufacturers'. The mass retailers who managed to outsource their production to developing countries grew in size and gained market share. While retailers, who stayed with domestic manufacturers, started losing market share and profitability. Suddenly low-priced stores like Wal-Mart (first store opened in 1962) and specialty chains like Gap and The Limited entered the market. Increased liberalization of trade regimes allowed American retailers to use developing countries for manufacturing. The mid-1980s marked the starting point to the current supply chain—"the American system of mass production apparel manufacturing had largely moved offshore" (Doeringer & Crean 2005). Large retailers are now dependent on a supply chain model that relies on scale economies to market apparel that are produced in developing countries. This dependence has been augmented by consumer preferences that call for cheaper and cheaper prices for products. This change in consumer preference is similar to the demand for ready-made clothing in industrializing Britain. The production that has remained in the United States is mostly specialty items or niche markets where order sizes are too small for mass production (Cline 2012; 57). The garment industry has played an important role for developing countries to industrialize.

The Emergence of Fast Fashion

From the beginning the garment industry has always been a low-capital and labor-intensive industry. Furthermore, the industry has been characterized by low entry barriers and standardized production for a mass market (Taplin 2014; 248). Climatically, it should not have come as such a surprise that apparel companies shifted more and more production to developing countries, where there are ample amounts of low-skilled, low-cost laborers. The past twenty years has seen the rise of globalization, which came with the outsourcing of production to developing countries. The appeals of developing nations for apparel companies are cheap labor, vast tax breaks, and lenient laws and regulations

(Klein 1999). The fashion industry has one of the largest if not the largest chains of production and consumption. By todays estimates approximately one in six people work in some part of the global fashion industry making it the most labor dependent industry (Ross & Morgan 2015). Fast fashion was able to emerge because of apparel companies moving production overseas, which allowed for the cost of apparel to dramatically fall. Fast fashion is a sector of the apparel industry that was developed in Europe to meet the rapidly changing preferences of primarily young women who want to follow trends in fashion but at a fraction of the cost.

Before fast fashion, retailers had to place orders large enough to meet an entire season's demand, meaning large inventories that needed storage. This did not give enough time for consumer demand to be understood and often led to end-of-season markdowns and sales (Doeringer & Crean 2005). These issues gave way to a new supply chain model, which will be discussed further in the next chapter. The fast fashion sector of the apparel industry broke the mold of the fashion pyramid, which can be seen below in Figure 1.3.

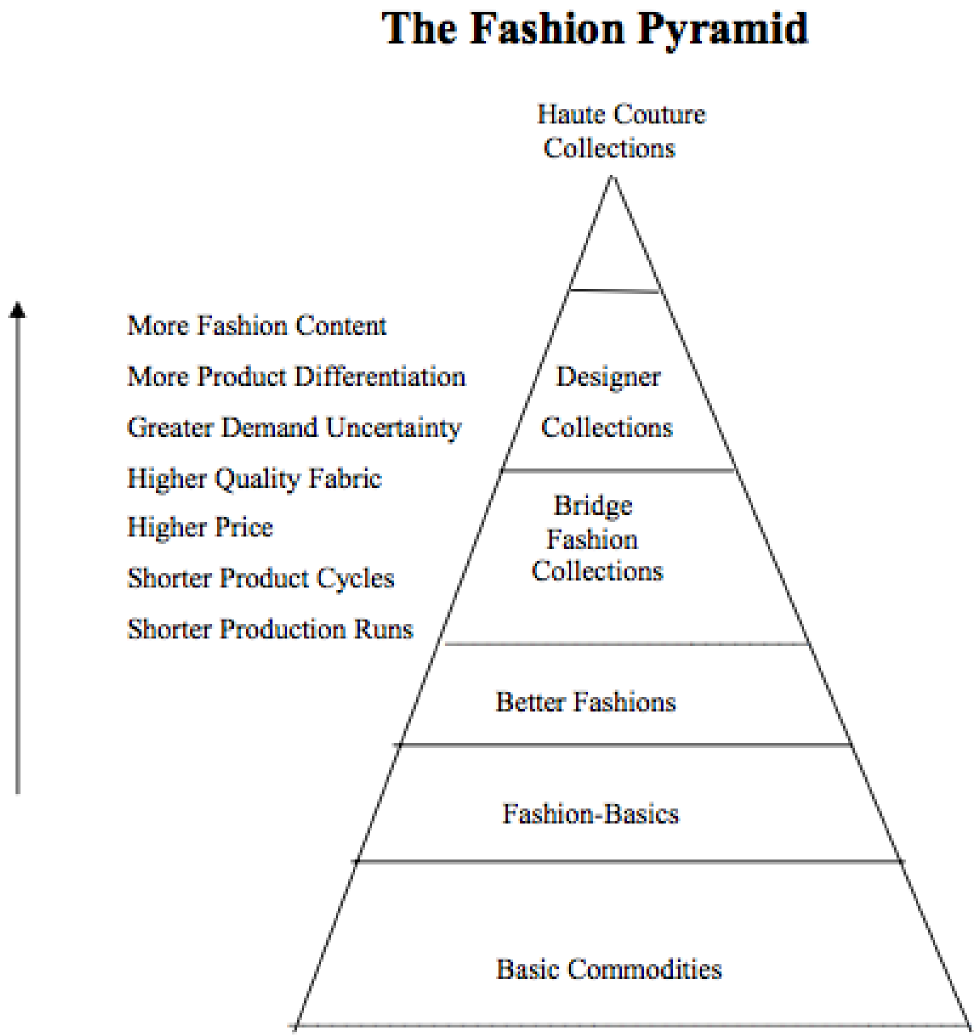

Figure 1.3. Fashion Pyramid. (Doeringer & Crean 2005).

Previously, you could only get high fashion content at a high cost. Today fashion trends are perpetually changing and fast fashion retailers like Forever 21, Gap, H&M, TopShop, and Zara are able to capitalize on these trends through their supply chains. The fast fashion model is a "streamlined system involving rapid design, production, distribution, and marketing" (Cohen 2011). In other words, fast fashion retailers are able to pull smaller quantities of greater product variety through the chain. Fast fashion companies disrupt the fashion pyramid (Figure 1.3) allowing the consumer to get more fashion content and product differentiation at a low price. Fast fashion products have also changed the notion of Veblen goods, which are products “we desire more the *higher* their prices go because we hope this will show other people our wealth and status” (Cline 2012; 77). Fast fashion products also ensure consumer demand, short product cycles, and production runs for the retailer.

The introduction and emergence of the fast fashion model has become so widespread that it is becoming the norm in the fashion industry much like the ready-made garment once did. The cheap abundance of cotton after technological innovations is the equivalents of today’s fast fashion apparel. Demographic and socio-economic changes have led to greater fashion differentiation and altered consumer behavior. The identity of the fast fashion consumer is something that will be explored in order to understand the fast fashion phenomenon. The next chapter of this paper will examine the identify of the consumer and their behavior. Chapter two will also investigate fast fashion’s supply chain as well as the supply and demand keeps fast fashion going.

Chapter 2: Understanding the Fast Fashion Industry

"Retailers like Zara, H&M and New Look have become well known for adopting a strategy of constantly renewing their product ranges with fashion-led styles that attract media attention and entice their (mostly) young female customers into the stores frequently." –Liz Barnes & Gaynor Lea-Greenwood

The defining feature of fast fashion is that it does not have a certain look; it feeds off existing trends and is thus endlessly changing. Fast fashion is a method of retailing that constantly puts out new inventory throughout the year and is priced much lower than other fashion industry sectors. The fast fashion market has a lot of competition not only amongst retailers but also within individual companies. Every retailer has networks within them that link parts of the company and the product. This is called the supply chain. The time it takes for a product to go through the whole chain including being purchased is referred to as lead-time. This term and concept surrounding time sensitivity is extremely crucial to fast fashion. Fast fashion retailers lead-times are sometimes made public; Zara can design, produce, and deliver a new garment in two weeks; Forever 21 six weeks, and H&M eight weeks (Cline 2012; 99). This chapter has four principle aims, the first is to identify who the fast fashion consumer is and look at their behavior. Next the chapter addresses fast fashion's supply chain and address it as a global commodity chain. Third the chapter examines the two biggest fast fashion retailers, Zara and H&M, in a comparative case study. Finally the chapter questions the supply and demand of fast fashion. Consumers continue to demand cheap trendy disposable products but there is always uncertainty in consumer demand in the fashion industry.

The Fast Fashion Consumer

The focus on analyzing fast fashions global commodity chains or supply chains leaves out the material culture that surrounds this industry's unique phenomenon of disposable clothing. Andrew Brooks, a geologist, argues that we have to look “beyond the fetishism of the thing and the market to understand how value is socially constructed” (Brooks 2015). A system of provision study can offer a more thorough viewpoint (Brooks 2015). This approach goes beyond the linear vertical economic chains to include horizontal factors, which can explain consumer preferences. These factors include social and cultural reasons that can help us understand the fast fashion phenomenon. Brooks further argues, “Consumer choice is historically determined and influenced by a broader – horizontal – social context, rather than being driven by consumer demand for a certain thing, or the presence of a single commodity chain or production network which stimulates consumer behavior” (Brooks 2015). Understanding the phenomenon of fast fashion through a system of provision approach means immersion with historical materialism.

The fast fashion industry has hooked young modern women of all different socio-economic backgrounds. It is likely that technology plays a role in fast fashion consumers’ behavior and loyalty to the retailers. Today technology allows consumers access to large amounts of information surrounding the latest trends or styles. Many fast fashion consumers take interest in celebrity culture and high fashion want to buy similar things. The difficulty lies in the fact that these consumers want what they see these public figures wearing or the trends that are emerging from high fashion runway shows right away but they cannot afford these items (Barnes & Lea-Greenwood 2006). The consumption of fast fashion reflects social aspirations through the identity people try to convey. One fast fashion consumer describes what she looks for when she goes to the store,

> I want to see new things and styles that help me create and recreate my wardrobe and who I am. But I don't want to look like someone else—so the limited edition satisfies this need to be unique. When I see it on the catwalks or in the magazines, I want it immediately. (Joy et al. 2010; 282)

It is important to understand that these consumers, specific to fast fashion, want the items immediately. As a result, fast fashion companies place pressure on the supply chain's lead-time. This consumer preference and demand for an immediate supply also results in a cheap product. A fast fashion product can be measured in the amounts of washes before it starts to fall apart (Cline 2012; 12). Many fast fashion companies openly say that products will last for about ten washes, after which the product will start to deteriorate due to poor-quality materials and manufacturing the later is something they do not say (Joy et al. 2010; 283). Furthermore this makes the products disposable because trends and styles are rapidly changing. Consumers shop at the store that gives them the product the quickest and cheapest.

There is little fast fashion literature that focuses on why the consumer continues to purchase cheap disposable trendy pieces of clothing. Karen Miller, a professor in consumer economics and marketing, finds that many fast fashion consumers seek pleasure and that hedonism influences them. She defines hedonism "as the ability to experience pleasure in life and is self-oriented and associated with the acquisition of experiences or products that involve fun, fantasy, and pleasure" (Miller 2013; 161). Her study uses 351 observations over an eight-month period that yielded 210 hedonic customer responses to fast fashion. A reoccurring theme discussed among participants in the study is the belief that time is brief and that there is a limited amount of time for them to get the product they want. These consumers like that there is a brief window to get a product because to them that means by the time they wear the product, someone who sees it and likes it will no longer be able to find it at the fast fashion retailer (Miller 2013; 166). One example of a participant demonstrating hedonic consumer response to fast fashion is Sarah; a 23-year-old who runs a blog where she uploads videos of herself showing off her latest purchases in a fashion show. Sarah says,

> I've had an awesome time putting together this show. I've had so much fun combining these outfits in distinctive ways. What makes it even more fun is that you can't copy these runway looks hahaha! I love that you can't find them and copy me, because by the time you get to H&M, the Gap, TopShop […] they will be gone. No one puts outfits together like me—enjoy. (Miller 2013; 167)

Sarah's video is not unique, they are known as shopping hauls and they are growing in popularity on YouTube. Some haulers even have a large enough following where fast fashion retailers will reach out to them giving them free products in return for those products to be in the haulers video (Cline 2012; 14). Miller recognizes that fashion brands and retailers can use the value of hedonistic motives by focusing on sensory pleasures in order to increase sales (Miller 2013). Clearly, fashion brands and retailers are already using these motives by reaching out to the popular haulers. Consumer psychology expert C. W. Park explains that there is no physiological or psychological limit to how much clothing people are willing to buy (Cline 2012; 100). Furthermore Park explains that fast fashion consumers continue to buy substandard products partially because they are amazed by how cheap they can the product for (Cline 2012; 117). What consumers' purchase is how quality is defined and how fast fashion has become the phenomenon that it is.

Global Commodity Chains & Supply Chains

It is important to understand certain terminology in order to comprehend apparel commodity chains and supply chains. Products can either be flexible or inflexible depending on the production techniques and the amount of time that it takes for the item to be produced. The total amount of time that it takes for the product to be produced is known as the lead-time. Flexibility provides the manufacturer with a competitive advantage, as a result of the externalities created by the physical presence of numerous suppliers and producers concentrated in geographically interdependent networks of small firms, factories, and specialized local labor markets (Porter 1990). Flexibility is crucial in the fast fashion sector of the garment industry in order to safeguard swift restock. Retailers must have the flexibility to quickly respond to changing consumer preferences and have them in the store before the preferences change or before a competing retailer has them on the sales floor (Barnes & Lea-Greenwood 2006). As a result, many fast fashion retailers use a contracting and subcontracting system to maximize flexibility and shift production anywhere at anytime (Appelbaum & Gereffi 1994; 57). Fast fashion companies that have flexible supply chain often require integration of internal functions and processes in order to accelerate decisions regarding sourcing, buying, merchandising, and design (Bruce & Daly 2006). Additionally, technology is often utilized to manage internal functions and make information transparent. These are all things that are part of the commodity chain and the supply chain.

A commodity chain may be defined as “a network of labor and production processes whose end result is a finished commodity” (Hopkin & Wallerstein 1986; 159). Gary Gereffi, a social scientist that specializes in globalization, expanded the term commodity chain to include the word global in front in order to fully represent “the entire spectrum of activities in the world economy” (Appelbaum & Gereffi 1994; 42). Richard Appelbaum and Gary Gereffi explain:

> Global commodity chains (GCCs) have three main dimensions: an input-output structure comprising a set of products and services linked in a sequence to value-added economic activities; a territoriality that identifies the geographical dispersion or concentration of raw materials, production, export, and marketing networks; and a governance structure of power and authority relationships that determines how financial, material, and human resources, as well as economic surplus, are allocated and flow within the chain. (Appelbaum & Gereffi 1994; 43)

The first part of the definition of a GCC, an input-output structure, seems to be explaining a supply chain. Fast fashion’s supply chain is notoriously complex. Apparel commodity chains have five sections: raw material supplies, the provision of components, production networks, the trade channels, and marketing networks (Appelbaum & Gereffi 1994; 44). None of the sections in the apparel commodity chain, which can be seen in Figure 2.1, can guarantee a successful business.

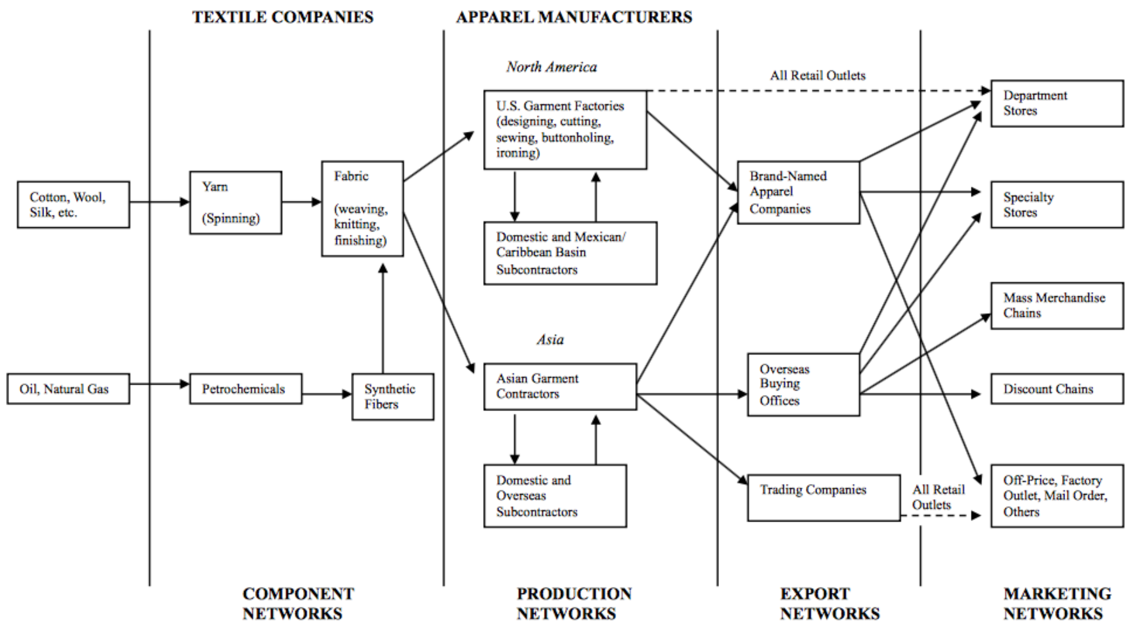

Figure 2.1. The apparel commodity chain. (Appelbaum & Gereffi 1994; 146).

The second dimension of the GCC definition is useful for understanding a specific fast fashion company such as Zara or H&M. Lastly, the fast fashion industry governance structure is considered buyer-driven because large retailers and trading companies have the power and authority to decentralize production networks (Appelbaum & Gereffi 1994; 44). Fast fashion production is usually in the global south. This is similar to the cotton plantation in the American South "The larger the farm, the better the planter was able to take advantage of the economies of scale inherent in slave-based cotton production" (Beckert 2014; 110). Buyer-driven firms are considered "marketeers" as opposed to manufactures because their role is usually design and market not making the apparel (Appelbaum & Gereffi 1994; 44). Large fast fashion firms like Forever21, H&M, TopShop, and Zara have the power to shape global production networks.

There is a large amount of literature on fast fashion and its supply chain. The literature on fast fashion often suggests that the business model has been based on vertical integration. The practice of collaboration, integrated information sharing, and trust between different levels in the supply chain is know as vertical integration (Bhardwaj & Fairhurst 2010; 170). Vertical specialization has been identified as "production arrangements in which a good is made via multiple stages located in multiple countries" (Hanson et al. 2002; 1). Though through conducting a literature review it has become clear that fast fashion is more complex than other supply chain management theories and cannot be labeled as just one type of supply chain management. Different scholarly literature on fast fashion, labels the supply chain as different things including: just in time, lean retailing, quick response, agile, and what is called a leagile approach. Through a close reading of the literature it becomes evident that fast fashion cannot be labeled as just one of these terms. Just-in-time supply chains aim to increase product variety in shorter product cycles by low initial orders (meaning lower inventories) followed by quick production of the products that consumers are buying (Doeringer & Crean 2006). Lean retailing is characterized by "a combination of restructured workplaces using team production concepts, smaller production and logistical innovations in material handling" (Taplin 2014; 247). Quick response systems are focused on low pre-season buyer ordering and using speed and flexibility during the seasons to place more orders similar to just-in-time (Barnes & Lea-Greenwood 2006). Agile supply chains are information driven by sharing data across all nodes of the supply chain so there is a transparency in what consumers are purchasing (Barnes & Lea-Greenwood 2006). The difference between agile and lean can be seen in Figure 2.2. The combination of agile and lean is known as a leagile approach (Bruce & Daly 2006).

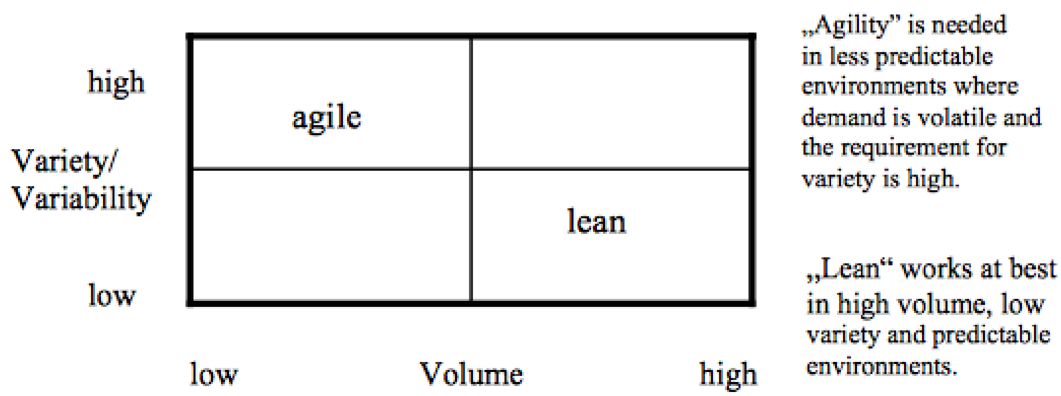

Figure 2.2. Lean or Agile. (Gustafson et al. 2004; 28).

Individually these terms sometimes make sense to explain a specific fast fashion company's supply chain. But ultimately the whole fast fashion industry cannot be characterized and labeled as all of these terms as they are conflicting. This notion led me to the realization that fast fashion is a complex concept and needs literature that explains fast fashion as its own concept (Barnes & Lea-Greenwood 2006). It is both buyer-driven and an information-driven chain. Beyond fast fashion being its own concept each retailer that I looked at had a different supply chain. That is why the next section is a comparison case study on Zara and H&M's supply chains.

Comparative Case Study: H&M versus Zara

All fast fashion companies appear to follow five principles: retailers continuously open new stores across the globe in order to gain market share; second invest in an integrated information infrastructure, one example of this can be seen below in Figure 2.3, connecting consumer demands with the other supply chain nodes; third short development cycles and quick prototyping that ensure consumer gratification; fourth a highly responsive supply chain; and finally they are increasingly under the pressure to perform well on the stock market as most of the retailers are publicly traded (Tokatli 2007; 23).

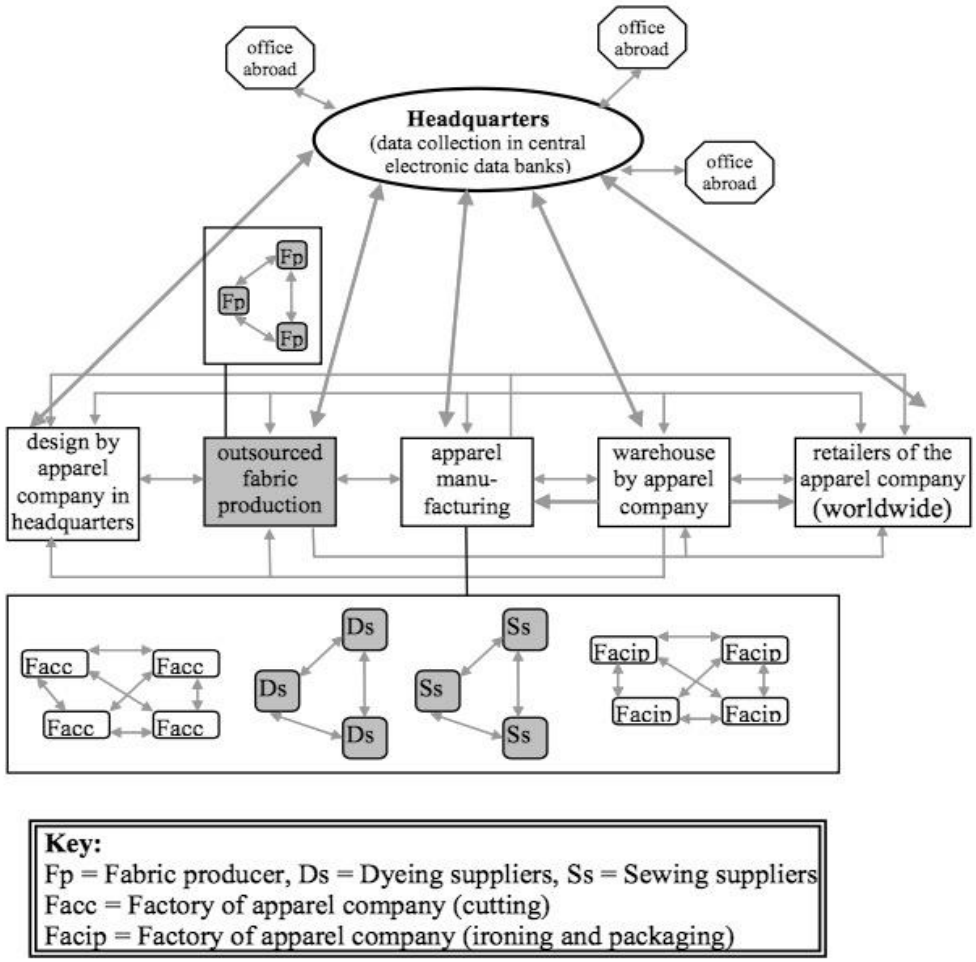

Figure 2.3. An integrated information infrastructure. (Gustafson et al. 2004; 64).

In this section I examine the differences and similarities between two of the leading fast fashion companies. They each have their own retail strategy but they both have earned high returns on investments (Taplin 2014; 255). First I will look at Zara and then I will look at H&M, which are the world's largest and second largest retailers respectively.

Zara is considered the pioneer of fast fashion. Amancio Ortega Gaona established Confecciones Goa in 1963 it vertically integrated apparel design and manufacturing in Galicia, Spain (Crofton & Dopico 2007; 45). Ortega sold the clothes to wholesalers and retailers before opening his own store in 1975 in La Curuna, Spain called Zara (Crofton & Dopico 2007; 45). From the beginning Ortega had a different strategy than other retailers at the time. Ortega implemented Zara's policies of "little advertising, holding minimal inventory, and seeking to 'democratize fashion' by making innovative designs accessible to most incomes" (Crofton & Dopico 2007; 45). Since he already owned the designs and manufacturing operations opening a store only added to his control and retail sales increased company revenue. This control only solidified Zara's vertical integration, which can be seen in Zara's supply chain in Figure 2.3. Early on Zara invested in an information infrastructure to keep the supply chain flexible and responsive (Tokatli 2007; 29). By 1985, Zara had forty-one stores and seven manufacturing subsidiaries. Zara was able to quickly scale-up because they had established a centralized distribution center. The center allowed Zara to rapidly respond to consumer demands and have flexible production because of close proximity to their stores. Zara's speed to market costs make up for the higher manufacturing costs (Taplin 2014; 255). Most producers view fashion as consumer durables, Zara views them as non-durables with expiration periods of four weeks. Zara reduces lead-time by producing closer to where their stores are located. Small deliveries twice a week prevent large inventories and the need for storage (Crofton & Dopico 2007). Zara produces more than 50 percent of its products in areas close to the core market unlike competing fast fashion retailers that have there products manufactured in periphery countries as in developing countries (Sull & Turconi 2008). Zara rarely restocks even their most popular items, in an attempt to lure consumers back into the store for 'fresh' products.

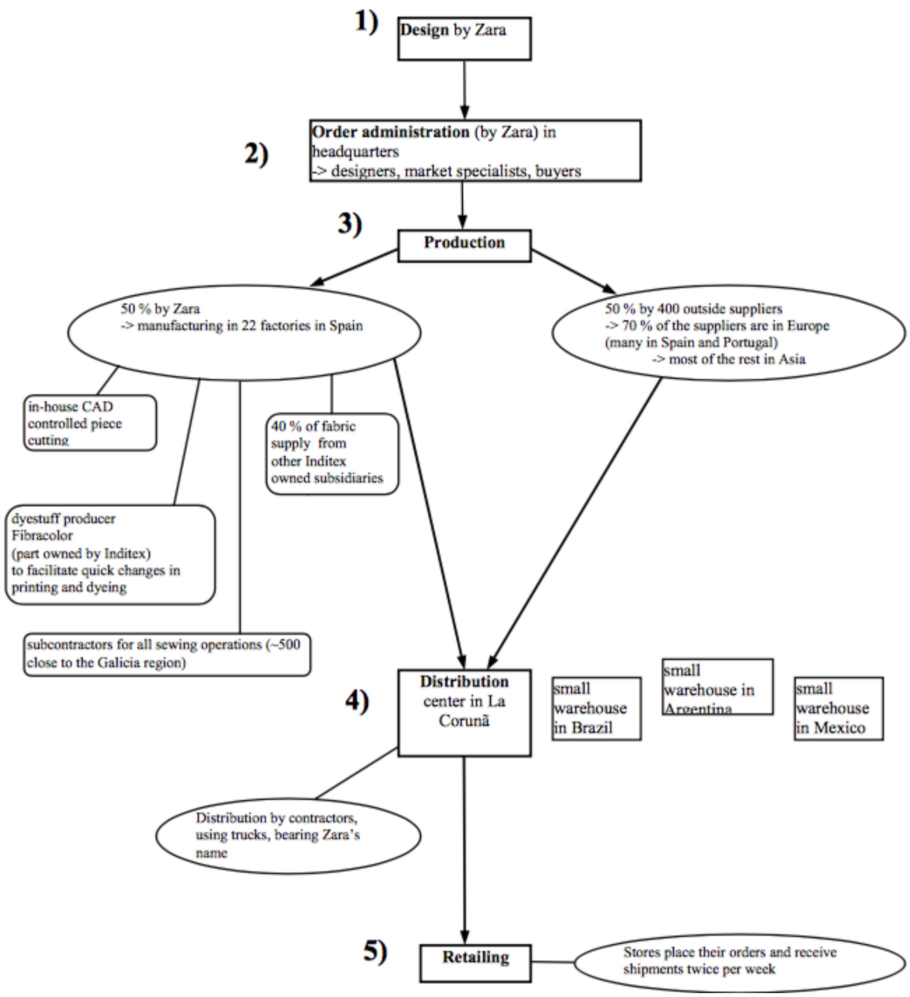

Figure 2.3. Zara's Supply Chain. (Gustafson et al. 2004; 33).

Swedish founded H&M has a strategy opposite of Zara. H&M became listed on the Stockholm Stock Exchange in 1974 and just two years later opened their first store outside Scandinavia in London. The company values price more than lead-time, "H&M does not own any factories but buys products from independent suppliers, 75 percent of whom are located in Asia" (Taplin 2014; 257). H&M uses a subcontracting system to keep prices low and so production can easily be switched to another manufacturer if price or quality becomes an issue. It has a longer supply chain than Zara, which means it cannot always flexibly produced the latest trend or style before a competitor (Taplin 2014; 257). This also means that H&M stores get new products less frequently than Zara.

The apparel in the stores are organized by trend, department, and color scheme. A lot of H&M's products are considered fashion basics and low in fashion content. Also unlike Zara, H&M spends a large amount of money on advertising, celebrity endorsements, and doing collaborations with well-known designers (Taplin 2014; 257). H&M has multiple regional distribution centers and high brand recognition. H&M's lack of vertical integration has resulted in limited fashion risk but in better opportunities to transfer price advantages to the consumer.

Supply & Demand

The low prices Americans and other fast fashion consumers expect to pay for clothing are built around the cost of production. Clothing is reversed engineered from the price consumers are willing to pay (Cline 2012; 88). For now consumers want more low cost trendy stylish clothes. The appeal of fast fashion is that offer consistently changing apparel that is updated with the latest trends (Doeringer & Crean 2005). These retailers all offer similar products, which one would think would oversaturate the market with numerous spins on the same look. But this would not be the case as we have discussed fast fashion consumers seek pleasure and gratification from shopping at these retailers. These consumers love the fact that what is in stores this week is no longer what will be there next week. As a result, fast fashion retailers have almost twice the average profit margin of their more traditional competitors like department stores (Cline 2012; 96). Furthermore, these retailers know that if they only deliver new products four times a year, consumers will only come to their stores four times a year. This realization is partially what led to the fast fashion industry. One fast fashion executive exclaimed, "Fast fashion for the young, modern woman is our highest potential business opportunity" (Cline 2012;

95). But ultimately these consumers are getting more than just "…hyper-trendy, low-cost items that move from runway to sale rack at breakneck speed" (Drennan 2015). They are putting a great demand on garment workers unknowingly or not and using up vast natural resources (Ross & Morgan 2015). The fast fashion industry has negatively impacted the environment as consumers consistently purchase clothing comprised of plastic fibers in attempts to don the latest trend (Luz 2007). Current trends in fast fashion reveal systemic issues. The rapid response, a characteristic of fast fashion supply chains, encourages disposability (Joy et al 2012; 275) The next chapter will look at the environmental consequences of the fast fashion industry. The chapter will also examine if it is possible to change the fast fashion supply chain without fully altering the industry.

Chapter 3: Fast Fashion & the Future

"In our day (though not in earlier times) technical solutions are always welcome. Because of previous failures in prophecy, it takes courage to assert that a desired technical solution is not possible" –Garret Hardin "Tragedy of the Commons"

The level of pollution that is generated as a direct result of the textile and clothing industry presents a dilemma given the fact that many individuals value fashion over the protection of the environment. Industrialization has paved the route to the fast fashion industry. The increased generation of waste is of warranted environmental concern. The fast fashion industry has profoundly confounded the problematic issue of clothing production and pollution. More often than not landfills constitute the final destination for clothing. The fast fashion industry contributes towards significant depletion of natural resources. In fact, issues of resource depletion begin at the onset of textile production, throughout the lifecycle of the clothing, to the point in time at which the products are wasted or disposed of entirely, "When used apparel products are disposed of in a landfill, large quantities of valuable materials and resources are lost" (Gam *et al.* 2011; 83). First the chapter looks at fast fashion's environmental impact. Next the chapter addresses fast fashion to see if there is a way to intervene without completely changing the industry's mission that is to democratize fashion. Then the chapter explores possible solutions and discusses changes that are already taking place. The chapter concludes by addressing the future of the apparel industry.

Environmental Consequences

Fast fashion has a large carbon footprint that is not addressed enough in academic literature. There are many natural resources that go into fiber production each year, including 145 million tons of coal and approximately 2 trillion gallons of water (Siegle

2011). Many of the fabrics found in fast fashion products are man-made fibers. There are two types of man-made fibers—plastics and cellulosic. Cline explains that cellulosic fibers are "produced from chemically processed wood pulp or other naturally sourced by-products like cotton scraps and sawdust" these include rayon, viscose, Modal, and Tencel (Cline 2012; 83). However, fast fashion products are almost entirely plastic fibers, which include nylon and polyester. Plastic fibers are synthetic materials made using petroleum (Luz 2007). Plastic fibers account for more than half of apparel products and 40 percent of all fiber production across the globe (Cline 2012; 125, 84). The production of making plastic fibers into textiles is an energy intensive process. It requires large amounts of petroleum and releases damaging emissions such as volatile organic compounds, particulate matter, and acid gases like hydrogen chloride (Luz 2007). Volatile organic compounds include monomers, solvents, and other by-products that end up in the wastewater from manufacturing plants. The Environmental Protection Agency (EPA) considers many of these textile-manufacturing facilities to be hazardous, which is another reason why production has moved abroad to developing countries.

The countries that apparel manufacturing has moved to are largely developing countries that do not have regulatory institutions similar to the U.S.'s EPA or if they do they are not enforcing the laws or policies. China is a key player in fast fashion production and is responsible for 30 percent of world apparel exports (Luz 2007). Additionally, China manufactures over half the world's supply of polyester and ten percent of the world's textiles (Cline 2012; 84, 123). But China is also an environmental disaster that has become well known for its thick air pollution, water pollution, and land degradation. Elizabeth Economy, a senior fellow and director for Asia Studies at the

Council on Foreign Relations, found that just around ten percent of China's environmental laws and regulations are actually being enforced (Economy 2007). This finding is supported by the fact that local governments and factory owners have little incentive to enforce them and sometimes act out of self-interest and turn a blind eye (Economy 2007). China continues to pursue economic growth at the cost of environmental protection. While American and European fast fashion consumers appear to be living at the expense of the developing world's open-access resources and waste sinks.

China's economic interests come at the expense of important ecosystem services. Gretchen Daily (1997) writes: "*Ecosystem services* are the conditions and processes through which natural ecosystem, and the species that make them up, sustain and fulfill human life. They maintain the biodiversity and the production of ecosystem goods." These services are achieved through natural cycles. But in China these services are being disrupted. One example is in 2007 when 190 million Chinese became sick from drinking contaminated water (Economy 2007). 70 percent of China total drinking water comes from the ground water, which is being polluted by hazardous waste sites, pesticides, and fertilizers (Economy 2007). Purification of air and water is an important ecosystem service (Daily 2007). It has become evident that decision-making frameworks have not ensured environmental protection.

Cotton is also in a large amount of fast fashion products. While cotton is not a man-made fiber it is not an environmentally friendly process to manufacture. Pesticides deemed necessary for the growth of products such as cotton, present great health risks to the farmers. These carcinogens critically contaminate the water supply on which society and individuals collectively depend. The province of Punjab in India is the largest grower of cotton, the high demand for cotton and large increase in pesticide use have resulted in a dramatic increase in cancer, children born with birth defects, and autism (Ross & Morgan 2015). Another result in Punjab has been the largest recorded wave of suicides in history with one farmer committing suicide every 30 minutes for the last 16 years (Ross & Morgan 2015). This all comes at a cost to farmers both here in the U.S. and in places like China and Bangladesh. They have to keep up with the demand to grow cotton but they cannot afford the latest technology so they get into debt (Ross & Morgan 2015).

Waste generated from fast fashion is something that also has not been addressed enough in the literature. The fast fashion phenomenon is without question a human consumption problem. The EPA has found that on average Americans throw away 68 pounds of textiles per person a year (Cline 2012; 122). While another source estimates that Americans buy an average of 64 items of clothing a year (Cline 2012; 3). We live in a finite world and cannot continue to exploit earth’s resources. Garret Hardin’s “The Tragedy of the Commons” has the reader imagine a pasture open to all herdsmen with as many cattle as they want to showcase that “Freedom in a commons brings ruin to all” (Hardin 1968). Fast fashion is becoming an increasingly large problem; we are consuming more then we need or use. It seems as though the fast fashion industry should address the problems of a finite world. However, we live in a capitalistic society and the industry does not have to address the environment, as it is unlikely that the industry will change unless the consumers’ preferences change. The power lies with the consumer to demand what kind of products they want to purchase. The fast fashion industry is only a phenomenon because the consumer keeps buying more each week. While many

Americans avoid buying plastic water bottles because they are made from petroleum and not biodegradable. It has not occurred to the same group of people that most of the clothes in their closets are made from the same stuff and in a similar energy-intensive process. As consumers become increasingly aware of health and environmental concerns relevant to the production of clothing, it is entirely plausible to contend that they may adjust purchasing habits to demonstrate a greater level of environmental consciousness. There is no technical solution to the fast fashion product; the only solution is with the consumers themselves.

Intervening in a System

Donella Meadows, an environmental scientist, published the essay “Places to Intervene in a System” (1997). She describes what types of interventions in a system are most effective and which are the least. Meadows identifies these places of intervention as leverage points, which she defines: “These are places within a complex system where a small shift in one thing can produce big changes in everything” (Meadows 1997). She goes on to define ten places to intervene from highest to lowest:

9. Numbers (subsidies, taxes, standards)
8. Material stocks and flows
7. Regulating negative feedback loops
6. Driving positive feedback loops
5. Information flows
4. The rules of the system (incentives, punishment, constraints)
3. The power of self-organization
2. The goals of the system

1. The mindset of paradigm out of which goals, rules, feedback structure arise

0. The power to transcend paradigms

This type of analysis could be helpful in identifying if there is a way to make the fast fashion industry more environmentally friendly besides with the consumer. The places that make the most sense would be number one or zero; paradigms are the source of systems. The source of fast fashion, as we have previously discussed, is the consumers themselves. This idea of finding a place to intervene in a system just proves once again that the power lies with the consumers. Once fast fashion consumers change what they want or what they prefer the fast fashion industry will have to transform.

Some consumers are becoming aware of the way their fast fashion clothes are made and the environmental impact they have. A study looking at H&M consumers found that many consumers do seek to minimize negative environmental effects precipitated by the fast fashion industry (Shen 2014). Consumers demonstrated "Concern for the environmental impact of apparel manufacturing is important, as the Earth is not able to support the current level of production and disposal of apparel due to depletion of natural resources and quick filling of landfills" (Shen 2014; 6238). The retailer took notice to these changing consumer preferences and started marketing a sustainable line of clothing. A case study of the supply chain was conducted to reveal if H&M had actually made any changes in their practices. The use of organic fabrics, recycling, and biological agricultural systems are key components of this particular line of clothing. Moreover, H&M consumers are rewarded for their recycling efforts of returning their used clothing to the store by receiving a fifteen percent discount coupon on future purchases. This reward system succeeded in encouraging consumers who would not have necessarily been concerned with environmental impacts to participate in the act of recycling and it is now implemented in all H&M stores across 54 countries. H&M serves as a prime example of a fashion supply chain that successfully adopted the concept of low throughput.

A New Global [Commodity] Value Chain

Fast fashion has been compared to fast food for obvious reasons. But a better comparison would be to the technology industry. Each season that Apple or Samsung come out with a new phone, people line up to get it even though most of them have the last version, which probably came out a year ago. The fast fashion consumers' behavior is similar to the latest IPhone coming out (Joy et al 2012; 276). They have to have new clothes even though they often have closets full of apparel. Both industries embrace obsolescence and instant consumer gratification after the purchase. Fast fashion for all intents and purposes is unsustainable; "Sustainability has many definitions, with the three most common being an activity that can be continued indefinitely without causing harm; doing unto others as you would have them do unto you; and meeting a current generation's needs without compromising those of future generations" (Joy et al. 2012; 274). There is a growing amount of literature exploring the idea of slow fashion. This idea has been "framed as opportunity to begin to engage with systems-level questions in the fashion sector in order to build deeper and longer-lasting change towards sustainability" (Fletcher 2010; 260). Slow fashion would be ethical fashion, which would represent everything that fast fashion is not. Consumers have been trained to separate sustainability from clothing. The focus for the consumer would have to shift from seeing fashion as an aspirational image to the materiality of fashion (Joy et al. 2010; 291). This shift would be quite dramatic; it is unclear how it is possible to teach consumers to think differently about their consumption patterns. Though it seems possible considering many fast fashion consumers recycle, conserve electricity, and use water attentively (Joy et al. 2010; 285). It appears a new consumer may emerge that considers more than just short term and disposability when shopping for new clothes.

Conclusion

In academic study, fast fashion has been researched from the perspective of a business model focusing on the supply chain management. Literature on fast fashion reflects the pressure put on lead-time reduction and coordination with various players in the supply chain known as the integrated information infrastructure (Bhardwaj & Fairhurst 2009). The literature does not examine the consumer side of fast fashion enough since it is the consumers who have the power to control the markets. Additionally, the literature tries to address the environmental impact of fast fashion but this can always be examined more. It appears that some consumer preferences are starting to change as we saw with the H&M sustainable line. However, environmentally friendly products are not considered in style. One study writes “There are five barriers to being green: lack of awareness, negative perceptions, distrust, high prices, and low availability” (Joy et al. 2010; 289). Once fast fashion consumers learn more about their clothes production it may result in them no longer wanting so many clothes particularly made out of plastics. We have seen that many of these consumers are conscious of recycling and not drinking from plastic water bottles. If fast fashion consumers were to shift their preferences it appears as though fast fashion retailers would shift their production as H&M has already started to do.

References:

Abernathy, F. H., Dunlop, J. T., Hammond, J. H., Weil, D., Bresnahan, T. F., & Pashigian, B. P. (1995). The information-integrated channel: A study of the US apparel industry in transition. Brookings Papers on Economic Activity. Microeconomics, 1995, 175-246.

Appelbaum, R. P., & Gereffi, G. (1994). Power and profits in the apparel commodity chain. Global production: The apparel industry in the Pacific Rim, 42-62.

Barnes, L., & Lea-Greenwood, G. (2006). Fast fashioning the supply chain: shaping the research agenda. Journal of Fashion Marketing and Management: An International Journal, 10(3), 259-271.

Beckert, S. (2014). Empire of cotton: A global history. Vintage.

Bhardwaj, V., & Fairhurst, A. (2010). Fast fashion: response to changes in the fashion industry. The International Review of Retail, Distribution and Consumer Research, 20(1), 165-173.

Brooks, A. (2015). Systems of provision: Fast fashion and jeans. *Geoforum*, *63*, 36-39.

Bruce, M., & Daly, L. (2006). Buyer behaviour for fast fashion. Journal of Fashion Marketing and Management: An International Journal, 10(3), 329-344.

Cline, E. L. (2012). Overdressed: The shockingly high cost of cheap fashion. Penguin.

Cobb, C. (2003). A Brief History of Enclosures. Cooperative Individualism. Progress. Web. 26 Sept. 2016.

Cohen, A. M. (2011). Fast fashion: Tale of two markets. The Futurist, 45(5), 12

Crofton, S. O., & Dopico, L. G. (2012). Zara-Inditex and the growth of fast fashion. Essays in Economic & Business History, 25.

Daily, G. (1997). *Nature's services: societal dependence on natural ecosystems*. Island Press.

Davidson, A. (2013, May). Economic Recovery, Made in Bangladesh? *The New York Times Magazine*.

Doeringer, P., & Crean, S. (2006). Can fast fashion save the US apparel industry?. Socio-Economic Review, 4(3), 353-377.

Drennan, K. (2015). Picking up the threads: fast fashion led to the Rana Plaza tragedy in Bangladesh. We can do better. Alternatives Journal, 41(3), 20-24.

Economy, E. C. (2007). The great leap backward? The costs of China's environmental crisis. *Foreign Affairs*, 38-59.

Fletcher, K. (2010). Slow fashion: An invitation for systems change. *Fashion Practice*, *2*(2), 259-265.

Gam, H.J., Cao, Hl, Bennett, J., Helmkamp, C., & Farr, C. (2011). Application of design for disassembly in men's jacket. *International Journal of Clothing Science and Technology*, 22(2), 83-94.

Gereffi, G. (1996). Global commodity chains: new forms of coordination and control among nations and firms in international industries. Competition & Change, 1(4), 427-439.

Gustafson, A., Ng, S. L. P., & von Schmiesing-Korff, A. (2005). A Time Efficient Supply Chain Model for an Apparel Company.

Hanson, G. H., Mataloni, R. J., & Slaughter, M. J. (2002). Vertical specialization in multinational firms. *University of California, San Diego, manuscript*.

Hardin, G. (2009). The Tragedy of the Commons∗. *Journal of Natural Resources Policy Research, 1*(3), 243-253.

Hopkins, T. K., & Wallerstein, I. (1986). Commodity chains in the world-economy prior to 1800. Review (Fernand Braudel Center), 10(1), 157-170.

Hoppe, M., & Brenton, P. (2007). Clothing and export diversification: Still a route to growth for low-income countries?. *World Bank Policy Research Working Paper*, (4343).

Joy, A., Sherry Jr, J. F., Venkatesh, A., Wang, J., & Chan, R. (2012). Fast fashion, sustainability, and the ethical appeal of luxury brands. Fashion Theory, 16(3), 273-295.

Klein, N. (1999). No Logo. Random House of Canada.

Landes, D. S. (1969). ”The Industrial Revolution in Britain.” In The unbound Prometheus: technological change and industrial development in Western Europe from 1750 to the present. Cambridge University Press.

Lemire, B. (1984). Developing consumerism and the ready-made clothing trade in Britain, 1750–1800. Textile history, 15(1), 21-44.

Luz, C. (2007). Waste couture: Environmental impact of the clothing industry. Environmental Health Perspectives, 115(9), A448.

Meadows, D. (1997). Places to Intervene in a System. *Whole Earth*, *91*, 78-84.

Miller, K. (2013). Hedonic customer responses to fast fashion and replicas. Journal of Fashion Marketing and Management: An International Journal, 17(2), 160-174.

Newman, P. K. (1952). The Early London Clothing Trades. Oxford Economic Papers, 4(3), 243-251.

Phelps, A. M. (2015). Common reads: The Economic History of Garment and Textile Manufacturing and Relevance to Modern Economic Development. Bard College Bard Digital Commons.

Porter, M. E. (1990). The Competitive Advantage of Nations. New York: Free Press.

Rivoli, P. (2005). The Travels of a T-shirt in the Global Economy: An Economist Examines the Markets, Power and Politics of World Trade. Hoboken, N.J.: John Wiley & Sons.

Ross, M. (Producer), & Morgan, A. (Director). (2015). True Cost [Motion Picture]. United States: Untold Creative.

Shen, B. (2014). Sustainable fashion supply chain: Lessons from H&M. Sustainability, 6(9), 6236-6249.

Siegle, L. (2011). To die for: is fashion wearing out the world?. HarperCollins UK.

Sull, D., & Turconi, S. (2008). Fast fashion lessons. Business Strategy Review, 19(2), 4-11.

Taplin, I. M. (2014). Global Commodity Chains and Fast Fashion: How the apparel industry continues to re-invent itself. Competition & Change, 18(3), 246-264.

Tokatli, N. (2008). Global sourcing: insights from the global clothing industry—the case of Zara, a fast fashion retailer. Journal of Economic Geography, 8(1), 21-38.