SLOW FASHION IN NEW YORK STATE: EXPLORING FARM-TO-FASHION INTERSECTIONS

A Dissertation
Presented to the Faculty of the Graduate School
of Cornell University
in Partial Fulfillment of the Requirements for the Degree of
Doctor of Philosophy

by
Helen Xiomara Trejo
May 2018

SLOW FASHION IN NEW YORK STATE:
EXPLORING FARM-TO-FASHION INTERSECTIONS

Helen Xiomara Trejo, Ph.D.

Cornell University 2018

Inspired by Fibershed and the Slow Fashion movement, this research explores the intersections of fashion and agriculture in New York. Although New York is not a leading wool state, a vibrant fiber community persists. There are over 470 fiber farms in New York with sheep, alpacas, and goats that produce a variety of fibers such as wool, alpaca, mohair, and even cashmere. Several fiber processing mills have emerged to transform raw fibers into finished products for clothing and textile design. This research uses Actor Network Theory as a framework based on the idea that all entities are equally important including people, animals, and objects for design practice. Three major case study themes include historical, contemporary, and practice-based approaches. Methods include archival, qualitative survey, interview, and observational approaches. Findings from historic and contemporary research reveal that fiber farming has always been economically difficult. Major challenges faced by farmers in both contexts include difficulty reaching a consistent market and rural geography. A difference today is that women predominantly own fiber farms. Like predecessor farmers, they develop innovative approaches to address key challenges that includes developing fiber mills and fiber festivals. Several New York artisan designers are interested in sourcing local fibers. While some consistently source fibers, others struggle to identify consistent sources. Inspired by the research process, this study includes three practice-based approaches. The first is collaboration in a Fiber Sorting, Grading, and Classing Apprenticeship to learn about fiber quality for scaled production. The second is the development of a New York Regional Yarn Sourcebook as a resource for

artisan designers to find farms. And the third involves the development of farm-to-fashion short films to expand awareness of fiber farms. Aligned with slow fashion, farmers hope that demand for local fibers increases to bring a local clothing and textiles economy into fruition. The development of an umbrella New York Fibershed and collaboration with Cornell Cooperative Extension may provide a centralized source of information about farms, fibers, and textiles for New York City designers interested in sourcing local fibers. This research provides a model for future research that explores the intersection of slow fashion and agriculture.

BIOGRAPHICAL SKETCH

Helen is a first generation Salvadoran-American. She was born in Los Angeles with her twin sister, Nidia, in 1990. Both grew up watching their *mamita* and *mami* sew clothes for them throughout their childhood. Her father's creativity and expert skill in setting tile throughout many homes in Los Angeles contributed to Helen's creativity. Her interest in fashion design developed when she was 10 and when she began to draw hundreds of fashion sketches. She learned how to sew when she attended Downtown Magnets High School, an open magnet school that offered fashion electives. Helen attended the University of California—Davis to earn her Bachelor of Arts degree in Fashion Design with minors in Textiles & Clothing, and Writing. At UC Davis, she gained first hand experience with sustainable design. During her junior year at UC Davis, she was accepted into the McNair Scholars program, a graduate preparatory program for underrepresented students. She learned how to conduct undergraduate research, and did research with U.S.-based designers who upcycle second-hand clothing. Helen's senior thesis combined sustainable design theory with practice in her collection *Constructed* that drew inspiration from the home her *papi* helped build for her family in 2003. While implementing zero-waste pattern making techniques, her *papi's* work influenced the color palette and shapes of the collection. In 2012, Helen pursued her Master's degree in Apparel Design at Cornell University and began to learn about the variety of natural fibers available at a local level. She visited several fiber farms in New York, and created zero-waste cashmere, wool, and alpaca sweaters for a consumer survey focused on local production. These experiences led her to continue to learn about New York fibers as a PhD candidate at Cornell University for her dissertation.

DEDICATION

I dedicate this work to my twin sister Nidia Trejo for being a continuous source of inspiration.

ACKNOWLEDGEMENTS

I would like to give a special thanks to Professor Tasha Lewis for her support and expert guidance to link academic research with real-world issues. I would also like to thank Professor Michael Thonney, Professor Lori Leonard, and Professor Huiju Park for their support and feedback throughout my research process.

I appreciate the support of David Arellanes, Nidia Trejo, Haley Smith, Victoria Hantout, and Dana Havas who provided motivation as I completed my dissertation research. I would also like to thank my apparel design cohort: Kristen Morris, Yingying Wu, Keith Fraley, Amanda Denham, and Kelsie Doty.

I would also like to extend a special thanks to New York farmers and community members who have supported my research and creative pursuits. Special thanks to New York farmers Lisa Ferguson, Carol Haff, Emmaline Long, Margaret Flowers, Linda Schwab, Karen Stern, Kathryn Wojciechowski, Teresa Fallon, Cecilia Tkaczyk, Lynn Mordas, Mary Pratt, Jerry Schwartz, Ethan Kennedy, Caraleigh Wilson, Pamela Haendle, Mark Gilbride, Robin Nistock, Michele Armour, Lubna Dabbagh, Ann Merriwether, and Ron LeCain. As well as fiber mill owners Mary Jeanne Packer and Chris Riley. I am also grateful to Laura Sansone, Suzanne Dvells, Celine Cannon, Mimi Prober, Alex Reynoso, Sarah Gotowka, Holly Henderson, and Krista Steinberg. Kiko Nobusawa, my knitting teacher who helped me make my first sweater in 2013. Teresa Porri who taught me how to spin my yarns in 2014. Lenore McGarry and José Buenaventura for their interest in my research. I would also like to thank Rebecca Burgess, Jess Daniels, and Krystal Moody for developing inspirational Fibershed research initiatives.

I received extensive technical assistance from Keith Jenkins, Erica Mehan Johns, Xia Zeng, Karen Steffy, and Michelle Draiss, and Camille Andrews. I am very grateful for their support.

I also received several grants to support my PhD research. This includes support from the Department of Fiber Science & Apparel Design, the Cornell Graduate School Provost Diversity Fellowship, a Cornell Engaged Graduate Research Grant, Human Ecology Alumni Association Grant, and a Travel Grant from the Center for Craft, Creativity, and Design, Inc.

Special thanks to the following organizations that provided platforms for me to share my research in progress including the Local Fiber Pop Up at Sew Green in Ithaca, Textile Society of America in Savannah Georgia, the Hudson Valley Textile Summit in Newburgh New York, American Culture Association in San Diego California, the Vista Fiber Arts Fiesta in Vista California, the "Fiber & Place" seminar during the International Textiles & Apparel Association Conference in Santa Fe New Mexico, and the Rochester Weaver's Guild.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

APPENDICES

CHAPTER 1

INTRODUCTION

This research comes at a time when most of our clothing is made of synthetic materials and the fast fashion model dominates the fashion system (Textile Exchange, 2016; Taplin, 2014). Fast fashion promotes rapid production, consumption, and disposal of clothing (Watson & Yan, 2013). Trendy, low cost clothes are produced in limited edition batches to attract immediate consumer interest until the next fashion trend is available (Gabrielli et al., 2013). Fast fashion brands include *Forever 21*, *H&M*, and *Zara*. The short-term use of clothing has led to greater post-consumer textile waste. In the United States, the Environmental Protection Agency (2016) reports that over 16 million tons of textiles were generated as municipal solid waste, and only 16% was reclaimed for recycling. Although a form of recycling is to donate clothing, vast amounts of used clothing exceeds consumer demand and enters the international second-hand clothing market. Several bales of used clothing are shipped to developing countries with a potential of becoming waste there (Brooks, 2013; Hansen, 2000). From production to the final disposal phase, the global fast fashion model has induced negative environmental and social impacts globally (You, Cheng, & Yan, 2009).

Towards Slow Fashion

The term "slow fashion" was introduced by Kate Fletcher in 2008 and parallels slow food by encouraging healthy localized value chains, quality, and consumer consciousness (Petrini, 2001; Fletcher, 2008). The importance of renewable, natural fibers in domestic and global fashion value chains is becoming increasingly apparent at the farm and consumer level (Fibershed, 2017). In his treatise for fashion sustainable thinking, Van Dyk Lewis (2015) indicates that, "..humans are unable to resist the advantages that basic fiber might provide. How

we use fiber and manipulate it directly affects human life" (p. 288). Fiber is intrinsically linked to our everyday lives, especially if we consider the two-fold meaning of "fiber" as a food nutrient and raw material for clothing production. Agriculture sustains local food and fiber with the availability of watersheds that support the growth of "fibers" throughout various landscapes. Drawing from the metaphor of watershed as a system that sustains life, the development of grassroots "fibersheds" suggests concerted efforts to develop and sustain local clothing and textile systems geared towards environmental longevity and community economic development.

Fibershed. "Fibershed" refers to the natural, social, and physical resources available in a geographic landscape for local clothing and textile development. It can include fiber farms, dye plants, mills, and local labor from artisans and designers. This research draws inspiration from the encouraging work of the Northern California Fibershed, which has stimulated global community-based action towards developing "local" clothing and textiles economies. Fibershed is a non-profit that developed in 2011 after the success of the 150-mile wardrobe project spearheaded by founder Rebecca Burgess. Her aim was to create a wardrobe with fibers, mills, and artisanal labor within 150-miles of her home. Fibershed's historical and contemporary research about California wool, and their development of the "Wool and Fine Fiber Book" in 2015 inaugurally showcased diverse fibers within the 150-mile radius. Fibershed's research and development collaborations have led to launches Climate Beneficial Wool in 2017 and *The North Face* "Backyard Hoodie" collection in 2015, which conveys how their research has direct implications for farms, fashion designers, a global apparel brand, and consumers (Sustainable Brands, 2014).

From a community-based consumer activism perspective, the Northern California Fibershed has inspired the development of over 30 Fibersheds throughout the world. In 2015, the

"One Year One Outfit" Fibershed was formed by Nikki Taylor in Australia. It is an innovative Fibershed model that spans beyond traditional geographic boundaries and welcomes global participation. It encourages the global community to look at the natural resources in their unique local vicinity for clothing and textile development.

During my process of identifying fiber farms throughout New York, I realized that Washington County has the highest amount of fiber farms with 27. I quickly learned that Washington County also hosts an annual fiber tour that allows community members to visit multiple farms during a spring open-farm weekend. Inspired by the vibrant fiber farms I discovered during the New York Washington County Fiber Tour in 2015, I developed a farm-to-fashion "fiberscape" dress to showcase the diversity of fibers for the "One Year One Outfit" Fibershed initiative. I hand-spun over 800 yards of wool, mohair, and alpaca fibers from five New York farms in eastern, central, and western New York—Quarry Ridge Alpacas in Salem, Crazy Legs Sheep Farm in Fort Edward, Ensign Brook Farm in Greenwich, Laughing Goat Fiber Farm in Ithaca, and Orchard View Farm in Bergen. I developed greater knowledge about fiber quality by hand-spinning yarns on a drop spindle. I shared the New York fiberscape dress and narrative during a "Fiber and Place" International Textiles & Apparel Association seminar in 2015, in a Sustainable Fashion exhibit at Cornell University during 2016, and the dress is now archived with the Southern Adirondack Fibershed in 2017. The experience of going through the farm-to-fashion process in 2015 laid the foundation for my continued dissertation research with New York fibers.

On a broader consumer level, several studies suggest consumer interest in products made with local and/or domestic animal fibers. Consumers range from fiber artisans who transform raw materials into finished products to everyday consumers who purchase ready-made clothing

and textile products. In a Northeast study with fiber artisans, fiber arts activities include spinning, knitting, dyeing, felting, crocheting, weaving, and rug hooking (Lowry, 2014). Approximately 69% of fiber artisans purchase fibers at festivals where farmers are typically vendors, and 28% buy directly from farmers on other occasions. A study by Stannard and Mullet (2017) also presents artisan's support of local fiber farms, and expands on their previous study regarding artisan's interest in the unique aspect of fiber products (Stannard & Mullet, 2015). Studies also present consumer interest for ready-made local fiber accessories such as scarves and socks (Cao et al., 2014; Bernard, Hustvedt, & Carroll, 2013).

Why New York? New York City is a major fashion capital of the world (Rantisi, 2004). It is considered the central point of New York based on the presence of fashion businesses, retail, and special events such as New York Fashion Week. However, fiber and/or fashion creation spans northern, eastern, central, western, and southern parts of the state in both urban and rural areas as shown in Figure 1. Specifically, over 470 fiber farms persist along the Hudson River north of the city, into the Adirondacks, throughout the Finger Lakes, and in the Western most tip towards Niagara Falls. Each place carries its own narrative beyond the natural landmarks that make them known in the broader landscape of New York as we will see through the case studies in this research. Appendix A presents a full list of New York fiber farms organized by county.

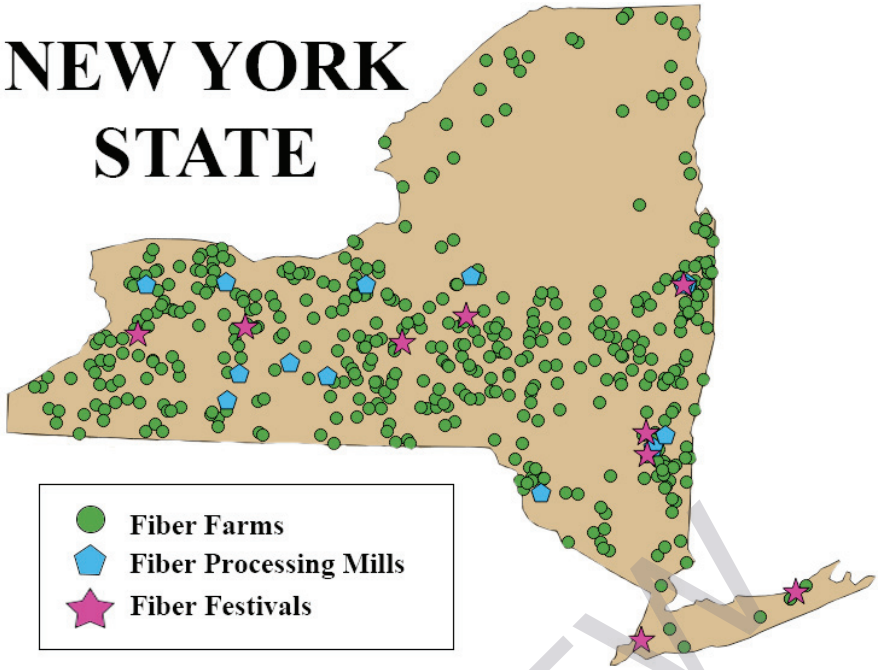

Figure 1: Map of Farms, Fiber Mills, and Festivals

Although fibers are not a major agricultural commodity of New York, the state has a rich history of wool production, which makes it a critical place of inquiry with the emergence of small-to-medium sized fiber farms in the 21st century (Donahue, 2017; New York Farm Bureau, 2015). New York was one of the first states to import Merino sheep in the early 19th century and several fiber processing mills developed to support small scale and commercial production (Wright, 1910; Jarvis, 1842). At its peak in the mid-19th century, New York housed over 6 million sheep and produced 13.8 million pounds of wool in 1845 (Peters, 1851a). The Northeastern sheep and wool industry began to dwindle in the latter half of the 19th century as wool market prices were low, and farmers shifted to other cash crops (Peters, 1854a). Additionally, imported wool, recycled wool, and wool/ cotton blends became alternative resources (Wright, 1910; Stevens, 1854; Peters, 1851b). The sheep and wool industry also began to shift westward based on land availability and lower costs to raise sheep (Peters, 1851c).

Although the supply of wool in New York became scant, fiber manufacturing excelled in the latter 19th century with the advent of the industrial revolution and demands for mass production.

There is currently a resurgence of small fiber producing farms in the Northeast and it coincides with the vibrant culture of fiber artisanship, and fiber festivals (Lowry, 2014). However, findings from my Master's research revealed major challenges that several New York farmers face including difficulty finding their target market and low economic profits from selling fiber products (Trejo, 2014). It was critical to continue research about the diverse New York fiber farms to discover how farmers are addressing these challenges, and explore intersections between farmers, mill owners, and artisan designers.

Overarching Theoretical Framework

Actor Network Theory was founded in science and technology studies, and is increasingly being applied in cultural studies, social geography, and design research (Storni et al., 2015; Law & Hassard, 1999). This research applies Actor Network Theory to Slow Fashion farm-to-fashion design research. It extends previous fiber farm research that used Actor Network Theory as a framework to explain fiber farmer's use of social media (Trejo & Lewis, 2017).

Actor Network Theory (ANT) focuses on the "materiality" and "performativity" of entities, and their relational links (Law & Hassard, 1999). Entities include human and non-human actors as an inclusive, critical thinking approach. All entities are critical based on their position in the network and the links they create. Philosopher Bruno Latour highlights that "[t]o become an actor is just as much a local achievement as obtaining a 'total' structure (p. 18)." This suggests that there is significance at both micro- and macro- levels. Actor Network Theory questions what is "out there" in nature, "in there" in psychology, "down there" in politics, and "up there" in theology (p. 22). This open-endedness coincides with Actor Network Theory

providing a "*summing* up of interactions" among circulating entities (Law & Hassard, 1999, p.17). It functions at varying scales to explain what is happening. Based on a theoretical understanding of Actor Network Theory, it is inclusive of entities such as people, animals, and objects such as fibers, clothing, and textiles. All entities are considered equally important in the network, and the ideology parallels the complex global apparel supply chain where all stakeholders are important contributors.

Actor Network Theory was chosen based on several commonalities with Slow Fashion. Like Actor Network Theory, Slow Fashion is strongly based on "materiality" including raw fibers, clothing, textiles; and "performativity" that is based on links, or social bonds that can form between people, animals, and the natural landscape. Considering the rhetoric, "Actor Network" is a paradox; "actor" suggests being centered, and network "decentered" based on relational deviations from a central point (Law & Hassard, 1999). "Slow Fashion" is also a paradox (Clark, 2008). "Fashion" is defined by speed and agility to provide a supply to meet a market demand and maximize profits. Pairing "slow" with "fashion" questions the status quo. It leads us to stop and take time to ask where our clothing is coming from, how it is being produced, and what we can do to support localized fashion resources to improve environmental, social, and economic development (Fletcher, 2008). Slow Fashion is an alternative to Fast Fashion, and the dichotomy forces us to consider spaces in between (Zarley Watson & Yan, 2013). Similarly, Actor Network Theory questions persisting dichotomies of subject and object, nature and society, and even spatial longitude and latitude (Latour, 1993). These dichotomies are questioned to create an "unusual freedom of movement" in thought to discover new ideas in the space between (p. 87). Actor Network Theory provides an open platform to think about the following objective: "How to *talk about* complexity, to *appreciate* complexity, and to *practice*

complexity" (Law & Hassard, 1999, p. 10). Slow Fashion is complex concept that is continually defined by scholars based on research and creative practices (Langdown, 2014; Jung & Jin, 2014; Fletcher, 2008). This research extends these approaches in a localized farm-to-fashion context.

Spatial relationships of entities are also critical to both Actor Network Theory and Slow Fashion based on significance of relationships in the defined space (Law & Hassard, 1999; Latour, 1993). Space is defined as a heterogeneous plurality that is co-formed with multiple possibilities; there is an openness that allows for "becoming" (Massey, 2005, p. 21). Space is a representation of entities in a network with their "stories so far," or relational links that can continue to develop; and place is a "collection of stories," also relational links that can inform future linkages. Both space and place offer a "sphere of co-existence of multiple trajectories" to explain the "here and now" (p. 130). Local place is a "throwntogetherness" of actors in a landscape. Allen (2011) uses Actor Network theory as a framework to explore landscape and scale, concluding that "everything is networked." Allen further asserts that Actor Network Theory provides a framework to study "*anything* in the landscape, because it folds the nature-society dialectic (and space-time) into one concept" that links back to questioning dichotomies (p. 274).

This research evaluates slow fashion and agriculture in a micro-level local context with circulating entities, or actors that contribute to the presence of farm-to-fashion in New York. This coincides with Latour's claim that "there is never an interaction that is not framed," and the local contributes to the broader macro-level perspective as a "summing up" (Law & Hassard, 1999, p. 19). Although the local context of New York farm-to-fashion is distinct, interacting actors may provide glimpses into other farm-to-fashion relationships in other local places,

throughout space and time. This research draws attention to nuanced entities in farm-to-fashion that previously may have fallen into an "empty space 'in between' the networks" (p. 19).

New York Farm-to-Fashion Research

This research uses an exploratory case study approach that contributes to academic applications of Actor Network Theory in slow fashion research. There are three major case study themes that explore the intersection of slow fashion and agriculture in New York. This includes historical, contemporary, and practice-based research. The historical and contemporary research suggests the significance of New York farms, mills, and fashion. It considers the history of New York wool since events in history contribute to social understandings of the contemporary context (Latour, 1993). The contemporary research provides an opportunity to understand the current social, economic, and political context that are integral to contributing to Actor Network Theory (Law & Hassard, 1999). And practice-based case studies present efforts to strengthen farm-to-fashion links in the network.

Case Study 1. The first case study explores New York's wool legacy of farmers, sheep, and mills during the early to mid-19th century. It aims to answer two primary questions: 1) How did New York become a leading wool producing state in the early 19th century? 2) Why did New York wool production decline by the mid-19th century? New York was one of the first states to import Merino sheep and encouraged a culture of communication among members of the wool community through farmer-centered agricultural publications. New York was a leader in developing a wool depot system as a solution to address farmer's low economic profits from their wool. A wool depot was a central location for farmers to collectively sell their wool based on quality, and parallels today's wool pool system. This historical research conveys challenges