

The Role of Piecework Compensation in Labor Exploitation in the Los Angeles Garment Industry

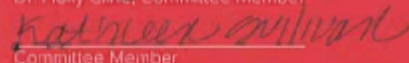
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Abstract

The fashion world has struggled for decades with substandard practices and questionable behaviors regarding the manufacturing process. Each year, several fashion corporations make headlines for inhumane practices, child labor, environmental damages, and horrific working conditions. With fast fashion on the rise, these problems have only escalated, and the world of fashion manufacturing is experiencing a crisis in execution and labor ethics.

The purpose of this research study was to explore the roles of the multiple stakeholders in the Los Angeles garment industry, including apparel producers, designers, workers, and consumers, and their perspective on ways to reduce the exploitation of labor due to the piecework system. In this research project, the fashion-manufacturing problem of labor exploitation related to piecework compensation in the Los Angeles garment industry is examined through design-thinking sessions with key players in the industry, providing crucial insight into causes, impacts, and solutions to redressing this latest example of industry malfeasance.

The research study gained specific insights into the role of piece-rate compensation and identifying contributing factors that continue to influence business practices to engage with piece-rate. Through the selected industry stakeholders as participants, this study provided a current update to the state of Los Angeles garment manufacturing and provides possible incentives to end piece-rate and move towards better, sustainable, and ethical practices.

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Introduction

It was a short vacation in Indonesia, and in front of me, was a bus with an open truck made of a metal cage gate. There must have been at least 30 people squeezed into the small space, standing crowded into the back of the vehicle. I asked the man next to me who they were. He stated, “They are workers coming from the Nike factory. The truck is taking them back now to their dorms.” Seeing these workers was a pivotal moment in my life, one that shaped my passion for the world of garment manufacturing.

At this time, I had been living overseas for nearly a decade. Living in Asia gave me the opportunity to visit and work in different factories around the world, including South Korea, India, Malaysia, Cambodia, Vietnam, and parts of Europe. This global exposure to the various garment manufacturers’ conditions, practices, and environment was essential to the development of my research problem thesis. After working with numerous factories overseas, I began to compile experiences of the varying degrees of horrific work conditions, abusive practices, unfair wages / salaries, and unethical industrial behaviors. To my surprise, I found the same conditions in garment manufacturing factories in New York and Los Angeles as I did in Asia.

The Los Angeles garment industry began in the 1920s, and is located in the heart of downtown, spanning over 100 blocks today. It is home to more than 2,000 garment makers employing more than 40,000 workers (Li & Kitroeff, 2016). The business of manufacturing is becoming obsolete in the United States as more companies choose overseas production to take advantage of cheaper labor and fewer regulations. Even though garment manufacturing in Los Angeles reflects this trend, the presence of a large amount of labor in the immigrant and undocumented workforce, mostly Latina, allows the local industry to find cheaper labor than manufacturers are able to find elsewhere in the native-born workforce. Moreover, industry practices of compensation, working conditions, and regulation contribute to lower labor costs, essentially creating a workplace

environment in Los Angeles that mirrors those of foreign countries with lax regulations (Li & Kitroeff, 2016). According to a sample survey, “Behind the Label: Inequality in the Los Angeles Apparel Industry,” conducted by the United States of Labor in January 1998,

61 percent of the garment firms in Los Angeles were found to be violating wage and hourly regulations. In a survey completed in 1997, 96 percent of the firms were found to be in violation, 54 percent with deficiencies that could lead to serious injuries or death. (Bonacich & Appelbaum, 2000, p. 1)

Media coverage in the past couple years alone has revealed widespread practices of labor exploitation by the Los Angeles garment industry against their workers. *California Apparel News* reported a raid of Los Angeles area garment factories that resulted in the California Labor Commissioner fining 18 manufacturers and contractors for a number of garment registration violations (Belgum, 2016). On the streets of Los Angeles, a rare instance of demonstration by workers against their employers accused them of failing to pay minimum wage and overtime hours (Roosevelt, 2016). A survey of garment workers by the Garment Worker Center “found an alarming number of health, safety, and wage violations” (El Nasser, 2015, p. 1). Despite Los Angeles’ recent decision to raise the minimum wage to \$15 per hour, an investigative piece by *The Nation* magazine found that the average wage for workers in the Los Angeles garment industry was only \$5 per hour, and most of the workers reported no overtime compensation and unsafe working conditions (Chen, 2015).

Media and worker-advocacy organizations point to a number of factors that contribute to what have been called sweatshop conditions in the Los Angeles garment industry. Most of these factors relate to the undocumented and immigrant nature of the workforce, which is difficult to unionize, lacks knowledge of its rights, is willing to accept cheaper compensation, and is willing to work in unsafe conditions. The study explored the contribution of piecework compensation in creating exploitative wage conditions for workers in the Los Angeles garment industry. Piecework compensation allows

manufacturers to skirt regulations, such as Los Angeles minimum wage law, by paying workers for each item of clothing they make. This compensation strategy allows manufacturers to control labor costs as they set compensation for each item made to deliver the desired profit margin. As a result, critics of the Los Angeles garment industry assert that the industry has “found here a sweet spot for optimizing labor exploitation” (Chen, 2015, p. 1). The common practice of piecework compensation in Los Angeles is paying factory operators by the seam. The value of each seams allows factories to offer competitive pricing. Figure 1 illustrates seams by cost with units to produce. The piecework compensation visual illustrates an 8-hour day compensating the garment operator at \$4 an hour.

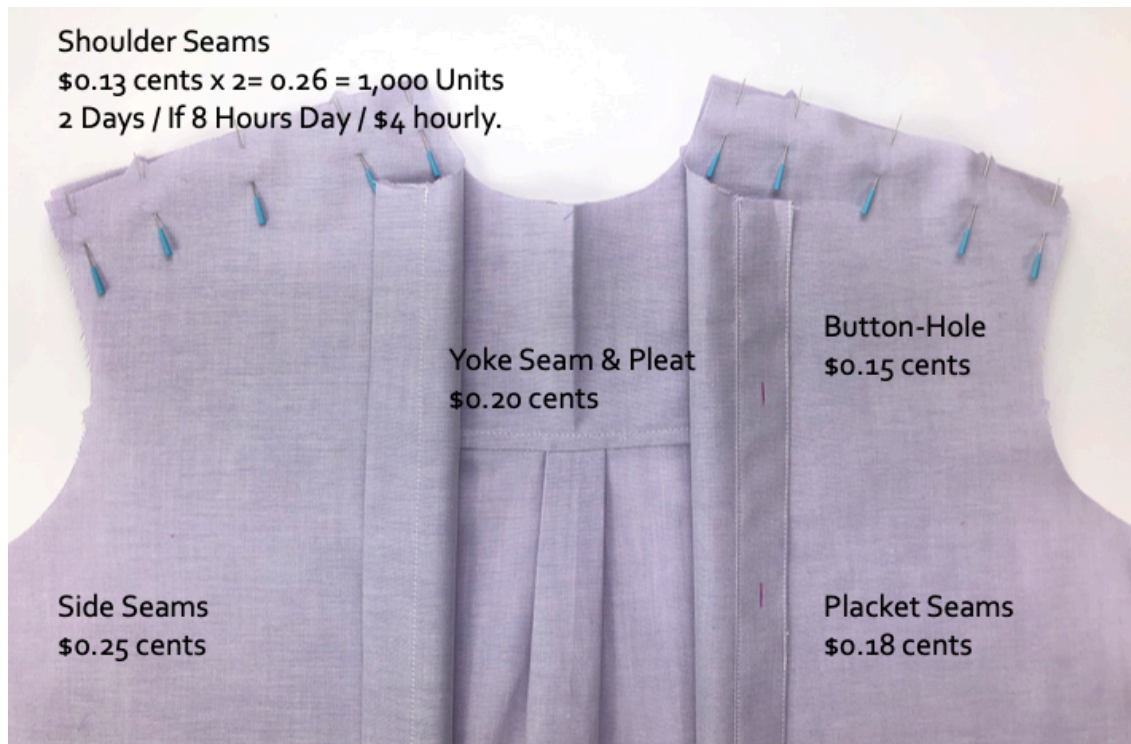


Figure 1. Piecework Compensation Visual

The study conducted design-thinking sessions with various stakeholders in the Los Angeles garment industry to gain insight into the industrial culture and practices of manufacturing, specifically focusing on the piecework compensation strategy. While legal,

piecework (also known as “industrial homework”) compensation is regulated by the U.S. Department of Labor and the California Department of Labor to protect against abuse (Department of Industrial Relations/State of California, 2017; U.S. Department of Labor, 2017). The findings of this project show that workforce factors of the Los Angeles garment industry relating to the migrant and undocumented workforce appear to present a higher risk for exploitation of piecework compensation. Ignorant of their rights and fearful of organizing, migrant and undocumented workers are more likely to tolerate piecework compensation practices that contribute to their labor exploitation. Moreover, the lax regulations of the industry allow for the entrenchment of a culture of exploitation. Demands from consumers for cheap clothing make it likely that, if subjected to greater regulations and higher labor costs, the existing manufacturers in the Los Angeles garment industry would close shop and move operations overseas. This dilemma of the competitions between ethics and economics is the focus of the current study in a hyper-competitive and cutthroat global apparel market where reforms are challenging.

Definition of Terms

This project utilizes terms related to methodology and garment industry practices. Piecework refers to the compensation practice whereby the worker is paid for each item manufactured or assembled. In most occasions where sweatshop operations are found, piecework compensation is not combined with base salary, though in the United States piecework is legally provided in addition to base-level pay in wages. A sweatshop is usually defined as a factory or home-based operation that engages in multiple violations of the law, typically the non-payment of minimum or overtime wage and various violations of health and safety regulations (Bonacich & Applebaum, 2000). The following list outlines key definitions and how they are used in this research study.

Piecework Compensation: any type of employment in which a worker is paid a fixed piece rate for each unit produced or action performed regardless of time.

Design-Thinking Strategy: a methodology used by designers to solve complex problems and find desirable solutions for clients.

Face-to-Face Interviews: a technique for gathering information through direct dialogue. This method helps gain information directly, challenges preconceptions, deepens empathy for others, and builds credibility with stakeholders (LUMA Institute, 2012).

Contextual Inquiry: an approach to interviewing and observing people in their work environment. This method reveals what people actually do and say, deepens empathy for others, challenges assumptions, and builds credibility with stakeholders (LUMA Institute, 2012).

What's On Your Radar: an exercise in which people plot items according to the personal significance. This reveals what people are thinking, shows how people prioritize, challenges preconceptions, and yields documents that inform ensuing work (LUMA Institute, 2012).

Statement Starters: an approach to phrasing problem statements that invites broad exploration. This method challenges assumptions, gains insight to different perspectives, provides a direction for problem solving, and invites divergent thinking (LUMA Institute, 2012).

Stakeholder “Changemaker” Mapping: a way of diagramming the network of people who have a stake in a given system. This method focuses on people above other factors, guides plans for future research, documents research findings, and builds a shared understanding (LUMA Institute, 2012).

Affinity Clustering: the act of finding patterns to determine the prioritization that is essential in pursuing innovation. Affinity Clustering is a graphic technique for sorting items according to similarities and for prioritization (LUMA Institute, 2012).

Round Robin: a brainstorming technique in which ideas evolve as they are passed from person to person. Round Robin invites input from all team members, diminishes overbearing opinions, facilitates group authorship, and helps create new and unique ideas (LUMA Institute, 2012).

Concept Poster: a presentation format illustrating the main points of a new idea. This method promotes a vision of the future, helps build a business case, gains support from decision makers, and provides a roadmap for moving forward (LUMA Institute, 2012).

Literature Review

This literature review begins with a discussion of the regulatory environment in the state of California and the United States for apparel makers. Next, the review traces the use of piecework compensation in the garment industry from the early industrial period to contemporary practice. This section is followed by an examination of the piecework strategy from a supply-chain perspective. Next, the review focuses on the nexus of piecework, the presence of the migrant and undocumented labor force in Los Angeles, and the marketability of the Made in the USA label. Lastly, the literature review concludes with the importance of this research to finding ethical solutions to the delivery of a fair and living wage to American apparel workers without prompting manufacturers to relocate overseas.

State and Federal Regulatory Environment

The Garment Manufacturing Act of 1980 “requires that all industry employers register with the Labor Commissioner and demonstrate adequate character, competency and responsibility” (U.S. Department of Labor, 2017, p. 1). Moreover, the state of California’s Department of Industrial Relations places another level of regulatory requirements on apparel makers (Department of Industrial Relations/State of California, 2017). Both the U.S. Department of Labor and the California Department of Industrial Relations are responsible for regulating piecework compensation practices in the various industries that continue to use this compensation strategy. Under state and federal law, piecework compensation must ensure that workers receive compensation that is at or above minimum wage levels, compensates for overtime, and avoids safety issues. Safety issues are often common in piecework compensation, as workers are motivated to work at a faster rate than if they were paid an hourly wage (Department of Industrial Relations/State of California, 2017; U.S. Department of Labor, 2017). In order to avoid exploitative practices, state and federal law / policies demand numerous recordkeeping requirements from employers that want to use

piecework compensation. These recordkeeping requirements recognize the high potential for piecework compensation to result in exploitation as workers are compensated at rates lower than the minimum wage would provide (Hart, 2016). Thus, the violations found after the raid by the California authorities in 2016 focused on registration violations in the Los Angeles garment industry, not on specific cases of wage exploitation, which would be harder to determine (Belgum, 2016). In other words, the violations found were not related directly to specific instances of labor exploitation, but rather to the failure of these firms to keep records that would provide evidence of labor exploitation. The implication is that this failure to keep records was intended to eliminate a paper trail that could provide evidence of exploitation (Belgum, 2016; Hart, 2016).

Factories that abide by the regulatory requirements of piecework compensation can still contribute to inhumane conditions. This is often because piecework compensation is either inadequate or contributes to undesirable working conditions (Bonacich & Applebaum, 2000, p. 37). In 1990, according to the United States Census Bureau, annual income for the average garment worker in Los Angeles was \$7,200, less than 75% of the income required to stay above the poverty level. According to the Los Angeles district director of the U.S. Department of Labor, the “apparel industry is probably the hardest industry the United States Department of Labor has ever faced” in terms of regulatory efficacy (Bonacich & Applebaum, 2000, p. 37).

Historical Use of Piecework Compensation in the Apparel Industry

The history of the garment industry in Western civilization corresponds to the history of labor exploitation at the dawn of the Industrial Revolution (Ross & Morgan, 2015). Similar to other industries engaged in manufacturing, the apparel industry used piecework compensation to motivate the highest levels of presumed productivity by workers (Hart, 2016). Workers were believed to be more productive if they were paid for each item assembled. By contrast, workers paid an hourly wage were presumed to be less productive, as their level of production did not correlate to compensation (Alkhatib et al.,

2017). However, over time, manufacturers realized that piecework often contributed to burnout, safety problems, and a higher error rate as workers tried to maximize their compensation (Hart, 2016). Piecework has generally been dismissed by most industries in the mature industrial world (Western Europe, Japan, North America) due to the strong association with wage exploitation, harm to workers, and lower than desired productivity. In Los Angeles, piecework remains as a form of compensation due to the supply of low-cost labor from Latin America that is willing to work under this scheme (Alkhatib et al., 2017).

Supply Chain Factors Influencing Piecework Strategy

The supply chain in the apparel industry includes procurement of natural resources and equipment, manufacturing, marketing, distribution, and sales to the consumer (Solinger, 1961). Productivity is based on acceptable quality in the least expensive manner at the greatest output (quantity). Meanwhile, at the end-use of the supply chain, American consumers are highly price conscious as free-trade agreements have greatly lowered the prices of goods (Alkhatib et al., 2017). Clearly, the fashion industry is under pressure to produce inexpensive products that appeal to consumer demands for quality and price in a competitive global market. All of these factors in the supply chain influence the decision to engage in piecework compensation in the Los Angeles garment industry.

The Nexus of Factors Contributing to Exploitation

As a result of most apparel producers leaving New York, there is an influx of new production utilizing the manufacturing capabilities of Los Angeles (El Nasser, 2015). This manufacturing move has led to more awareness of the Made in the USA label, particularly since the label is associated with sustainable industry practices in comparison to overseas (Chen, 2015). This tag, while providing marketing benefits to producers, might actually come at the cost of wage exploitation through the piecework compensation practice (Chen, 2015; El Nasser, 2015; Roosevelt, 2016). The Made in the USA marketing message is only possible in part because of the presence of a migrant and undocumented

workforce in the Los Angeles garment industry, mostly Latinas from Mexico and Central America (Li & Kitroeff, 2016). These workers are less likely to organize due to the precarity of their legal status and more likely to be ignorant of regulations and minimum wage laws, making them particularly vulnerable to exploitation in piecework compensation practices (Chen, 2015; El Nasser, 2016; Roosevelt, 2016).

Significance of Research

Existing literature identifies the history of reforms in apparel industry practices as a result of the convergence of legal reforms, industry reforms, and social norms of intolerance for exploitation (Gertler, 2004). Incentives for ethical labor practices among all players in the supply chain, from producer to worker to consumer, could be key to building new industrial cultures. It helps to understand how proximity of players influences the workings of manufacturing locally and overseas. Factories with government mandating organizations could start new motivations to build better practices. The rise of awareness of sustainability practices in consumers and activism in sweatshop conditions overseas is due to public education through media and worker-rights organizations (Hart, 2016). The behavior of those exploiting workers begins to shift visibly once it begins to impact sales and profit margins.

The study offers an important contribution to the continued development of ethical and legal practices in the American apparel industry. The research is specifically important to developing better practices in the Los Angeles garment industry and others with a preponderance of immigrant and undocumented workers that utilize the piecework compensation system, a correlating set of factors that appears to maximize potential for wage exploitation. The Los Angeles garment industry seems to be engaged in an ironic combination of Made in the USA marketing that relies on wage exploitation through the piecework compensation practice. The findings supply insights as to precisely how manufacturers dodge state and federal policies, exposing the loopholes that contribute to unethical practices, abuse, and violations in apparel manufacturing.

Methods

Purpose

The purpose of this research study is to explore the roles and perspectives of the multiple stakeholders in the Los Angeles garment industry, including apparel producers, designers, workers, and consumers, and ways to reduce the exploitation of labor common in the piecework system. With the increase in awareness of humane practices, it examined potential solutions for the research problem.

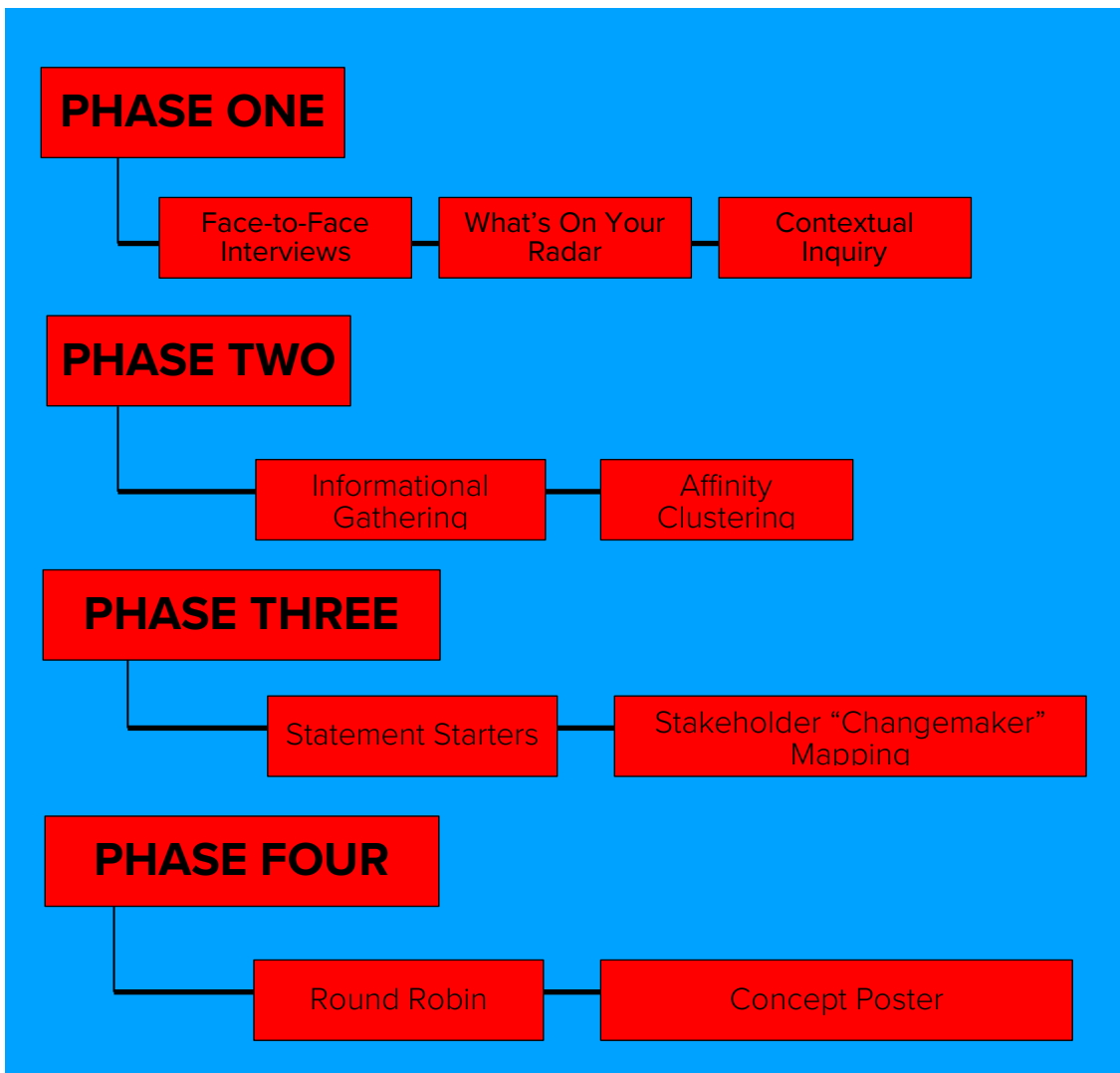


Figure 2. Map Illustrating Phases of the Research Study

DESIGN-THINKING STRATEGY: PHASE ONE, LOOKING & EXPLORING

Interview Questions, What's On Your Radar, Contextual Inquiry

Phase One: Design Thinking was to help better understand and empathize with the existing conditions of factory workers. Phase One's design-thinking strategies included ethnographic and participatory research. The strategies of research were Face-to-Face Interviews, What's on Your Radar, and Contextual Inquiry. The participatory research followed the What's on Your Radar approach to gain perspective on the personal yearnings and motivations of factory workers, managers, and owners. This phase distinguished priorities and benefits that could contribute to bettering the lives and motivations of factory workers. The participants for Phase One consisted of a factory operator, factory manager, and factory owners. Participation by three different positions of authority and responsibilities helped to understand relationships, tasks, and points of views.

The principal investigator provided a verbal explanation of the method and an introduction to the thesis. Prior to starting the interview, consent forms were explained and signed by each participant, including a printed copy of the Interview Questions (see Appendices A, Interview Questions, and B, Consent Form for Phase One). The researcher took notes during the interviews, and each interview session was audio recorded. The interviews were conducted privately with each participant in order to maintain their anonymity and confidentiality. All findings were gathered, analyzed, and treated as one data set. All data was kept without naming participants, identifying their place of work, or specifying any information that would make any participant or group of participants vulnerable to disclosure. Phase One took place in a garment manufacturing facility in Los Angeles, California. Each interview was conducted in person-to-person meetings following safety protocols for COVID-19 social distancing and mask wearing. Face-to-face interviews took 30 minutes to complete.

Once the face-to-face interviews were completed, each individual participated in the What's on Your Radar design-thinking strategy, which was explained to each participant after their individual interview. The principal investigator provided the participant a printed document (see Appendix C, What's On Your Radar). The objective of What's on Your Radar is to understand the personal yearnings and motivations of the factory workers. The slices represent the core essential needs to the definition of a rich and full life. This strategy looks into the priorities of the factory worker's life that may extend beyond monetary needs and desires. The participants were asked to think about each category in the most important order. The principal investigator provided an example such as work may include your daily tasks at the factory, but it may also include raising children, preparing dinner, and grocery shopping. Health might include exercising and eating healthy. It could also include visits to the doctor's office or taking vitamins. Love would include the people or animals in your life that you consider your greatest loves (e.g., your spouse, children, parents, etc.). The final example, play, includes all things that you find purely entertaining. This could include long walks in the park, listening to music, playing board games with your children, or taking dogs to the dog park. The participant filled out each category in the order of most important to least important in a list format. The session was audio recorded with accompanying notes. Data and documentation were collected. The What's on Your Radar strategy took approximately 15-20 minutes.

The last part of Phase One was Contextual Inquiry. The researcher contacted a factory owner for permission to observe a garment facility. The participant did not give permission to take photographs, but did permit the researcher to take notes and draw out a diagram of the facility. The investigator observed for 1 hour in the factory and focused on the layout and organization of space in relationship to work responsibilities. Contextual Inquiry was audio recorded with notes and diagrams to illustrate their observation.

DESIGN-THINKING STRATEGY: PHASE TWO, UNDERSTANDING

Information Gathering, Affinity Clustering

Phase Two involved asking what can be gained from analogous situations and history in other industries. This phase of the research examined comparable processes in furniture manufacturing and organic foods production. The goal was to analyze and better understand industries that have tackled difficult problems related to labor exploitation. Phase Two's design-thinking strategies included Information Gathering and Affinity Clustering.

After the principal investigator completed information gathering on the furniture manufacturing and organic food industries, the design-thinking strategy of Affinity Clustering was completed with the thesis M.F.A. committee from Radford University. This consisted of the principal investigator's Design Thinking Chair and one department professor. The principal investigator sent the summarized information gathering to the committee members 2 weeks before the Affinity Clustering activity began. This method helped identify issues and insights, thematic patterns, productive discussion, and a shared understanding (LUMA Institute, 2012).

The principal investigator scheduled a video conference meeting with the committee. The video conference started with an introduction to the method by sharing the findings, including articles and current events about piecework, factory conditions, and industry news. The principal investigator invited the participants to share their thoughts about the presented research. Clusters with similar ideas were labeled and identified. Affinity clustering with the three researchers helped to increase the validity and reliability of the themes developed. The meeting audio was recorded and accompanied by notes and a summary.

DESIGN-THINKING STRATEGY: PHASE THREE, UNDERSTANDING

Statement Starters, Stakeholder "Changemaker" Mapping, Round Robin

Phases Three and Four started with an email invitation to schedule three participants, which included a former fashion director of Los Angeles Fashion Week, fashion buyer and consultant, and fashion designer based in Los Angeles. The initial email contact was to schedule a Zoom video conference for one hour for Statement Starters, Stakeholder "Changemaker" Mapping, and a Round Robin. Each provided a verbal consent to be audio recorded for the entire workshop.

The Zoom conference began with an introduction of each participant and also a brief summary of the study. The researcher initiated the workshop with shared findings from Phase One. Statement Starters was a good icebreaker for both participants. The third participant, a fashion designer, cancelled and notified the researcher via email. The participants shared a bit of their experience with COVID-19. The participants were chosen because of their vocal support for better conditions and sustainable practices for the global fashion business.

The principal investigator explained the purpose of the Statement Starters by creating the first statement starter example of "How might we..." Each participant was told they had 2 minutes to complete the Statement Starters. The principal investigator encouraged participants to quickly finish each Statement Starter.

Next, the investigator asked the participants to share their responses for discussion with the group. The discussion did not stay within the allocated 3-4 minutes, as it seemed both participants had a lot to contribute. The discussion was audio recorded.

The principal investigator took notes during the video conference. After completing the Statement Starters, the participants voted on the best statement starter for each identified problem of piecework compensation. The benefits of Statement Starters are that they challenge assumptions, help develop a different perspective, provide a direction for problem solving, and invite divergent thinking.

DESIGN-THINKING STRATEGY: PHASE FOUR, MAKING

Round Robin, Concept Poster

Phase Four of the design-thinking methods generated ideas from the previous strategies and phases. This phase consisted of a Round Robin and finished with a Concept Poster. For the Round Robin, these methods invited participants from the previous phases. The ideal situation would have been for all participants to return to Phase Four, along with a change agent identified in Phase Three. The participants from Phase Three continued into the session for Phase Four.

Design Thinking Phase Four started with the solution phase. The methods in Phase Four helped envision future possibilities. Round Robin is a part of concept ideation and equation for innovation that is essential. The principal investigator introduced the thesis problem at the beginning of Phase Three, then verbally explained and showed the Round Robin worksheets to each participant in the Zoom video conference (see Appendix F, Round Robin).

In the top box, participants brainstormed on ideas/ solutions for piecework compensation without consideration of cost. They were encouraged to discuss, draw by description innovative ideas, and to think outside of the box for 5 to 10 minutes. Participants were also encouraged to inherit and build upon each other's ideas. After 5 to 10 minutes, participants shared their solution to the person on their right. The next individual spent the next 5 to 10 minutes verbally sharing for the second box as to why the idea would fail. In the last phase of Round Robin, the participant again passed the reasons for failing to the person on their right. This last individual analyzed the original idea, why it would fail, and suggested a final idea in a 5-to-10-minute timeframe (see Appendix G, Round Robin). The power of this method is that ideas emerge from collective input—everyone takes a turn. Even if the idea seems strange or impossible, it may contain the seed of a successful conceptual direction. The best result is a set of ideas that no single

person could have imagined on their own (LUMA Institute, 2012). Novel ideas need to be encouraged, as the worksheets are passed around to the different participants. Each participant should present and discuss the new ideas amongst the group.

Once the Round Robin (see Appendix F, Round Robin) strategy was completed, participants presented their ideas to the group, and the group voted on their favorite. This session was audio recorded alongside note-taking.

Conducting a Round Robin via Zoom conference presented some challenges. The researcher prepared a short outline to conduct the exercise by providing instructions on how the participants would be responding and the order of passing on the imaginary paper. The participants were told the order in which to respond, since there was no clear left in a Zoom video conference. The Round Robin was robust. The participants were hesitant to counter a negative argument, but eventually both participants realized the strategy was effective in understanding the challenges of the ideas presented. The researcher witnessed the benefits of the Round Robin strategy. If given more time, the participants could have explored deeper ideas, as the exercise was only beginning to produce some useful directions on where to look and understand better.

The final method with the group was to create a Concept Poster, a presentation format illustrating the main points of a new idea. This method involved the same group, except with a new addition of a volunteer graphic designer to create the visuals for the concept ideation. The group created a prototype with the principal investigator for potential solutions for piecework compensation problems. The session started with a discussion of thoughts, opinions, and industry-related experiences to the problem of piecework compensation. The first draft was drafted quickly, with the participants being encouraged to avoid overthinking the process. The participants were asked to engage with the graphic designer for the visual refinement (LUMA Institute, 2012).

The participants brainstormed a name and a tag line for the concept; verbally discussed a short summary of the big idea; included the key stakeholders, features, and

benefits; illustrated the concept with a large picture or diagram; added a timeline for developing the solution; drafted the layout; and drew the final poster. The principal investigator concluded the session with the possible concept poster illustrated and presented to the group to rally enthusiasm (LUMA Institute, 2012). This took approximately one hour.

To conclude Phase Four of the Concept Poster, the principal investigator proceeded into prototyping to initiate the campaign and call for change. The key ingredients for the prototyping were based on the results from the Round Robin phase. Depending on available budgets and funding, the principal investigator researched affordable costs and solutions to carry forward the project. The prototype of the Concept Poster would be used to campaign for awareness and change for better practices of piecework compensation in labor exploitation in the Los Angeles garment industry.

Results

DESIGN-THINKING STRATEGY: PHASE ONE, LOOKING & EXPLORING

Face-to-Face Interview Questions

The Interview Questions helped to reveal the experiences of each participant with piecework, as well as their work history in the garment industry. The first participant had over 40 years of experience and shared the changes that she witnessed throughout her career. There were several key responses in the interview that exposed the lack of auditory practices, sanctions of city, and state level regulations. The interview questions were designed to identify the issues of piecework and their effects on the participants. These insights helped the researcher to gain empathy by hearing real experiences shared by real industry employees. The three participants had different roles in the garment sector, but each one could speak on the subject of piece-rate and industry loopholes that contribute to the horrific conditions and practices that many garment workers are subjected to.

Questions & Interview Responses from Participant One:

1. General: Age, Ethnicity, Education Level, and Gender.

“I am 65 years old.”

“I am Hispanic.”

“I only completed High School. Then I went to Design and Apparel classes in my country.”

“I worked for 30 years in a garment factory.”

2. How long have you managed a factory in Los Angeles?

“I worked for 20 years as a factory manager.”

3. How did you become a factory manager?

“When I moved from my country to Los Angeles, I started to work in a garment factory.”

“I worked 6 years as an employee then I opened up my own factory, then sold my factory to become a manager.”

4. What are your requirements for hiring good skill workers?

“I look to see if they have sewing knowledge and if they want to learn.”

“I check if they can do what they say and if they are able to do what I tell them. I check if they can follow my instructions and if they interested in wanting to learn more.”

5. Do you provide training as a factory manager?

“As a factory manager, yes, I have to provide training all the time.”

6. How many pieces do you produce per month?

“My best month production is 4,000-5,000 units with 20 employees.”

7. What styles do you mainly work with?

“I mainly worked with womenswear, dresses and blouses.”

8. How do you feel about the piecework compensation?

“Before, piece work was fair because prices were good. Things were not that expensive back then but nowadays, it has to be time work. Situation have changed a lot.”

9. Do you feel you take care of your employees as a manager?

“Yes, I think I take good care of my team. I do my best. Sometimes it is hard.”

10. Do you feel you provide a healthy working environment?

“Yes, I think I make a healthy working environment.”

11. Do you like your work and would you do anything different if you could?

“I wish for people to make fair money for their skill that they have. And because they are very dedicated, they need to make more money.”

The first participant shared ideal working conditions and defining fair labor. The participant witnessed when piecework began in the industry. She experienced the benefits of piecework when minimum wage was \$3.00 / hour when she was younger and had the speed and strength. In the Interview Questions, participants revealed the difference between \$3.00 / hour to the current rising minimum wage of \$14.25 / hour in Los Angeles City. The factory manager participant compared the current cost of living today with the past, stating that the piecework rate was fair when minimum wage was \$3.00 an hour. During the reflection, she revealed that past piecework rate practices provided a livable wage for operators in Los Angeles, unlike with today's high cost of living. The interview questions provided insight into a former factory owner and now factory manager's definition of healthy working conditions and fair wages.

The second participant was a factory operator with 15 years of experience. The participant had not experienced piecework, but advocated strongly against piecework systems. The participants were aware of the industry's plague reputation but acknowledged that his choices deterred his career path away from these horrific companies that continue to heighten unethical practices. The participant's responses also illustrated the emotional and physical toll piecework can take on factory workers. The third participant was a factory owner who fights for fair wages, labor rights, and healthy working conditions, with 5 years of experience as a business owner.

Questions & Interview Responses from Participant Two:

1. General: Age, Ethnicity, Education Level, and Gender.
2. How long have you been a factory worker in Los Angeles?

3. Where did you learn your skills?

4. What do you dislike about your job?

“It started as a childhood hobby and then graduated itself towards experimental youth until I decided it was my path as a career.”

“I was 27 years old.”

“I would say that sometimes there could be miscommunication with projects, or not as much communication and sometimes the littlest thing can just kind of add up and just not knowing can always like ease the day.”

5. Describe a typical day at work.

6. How many pieces do you sew per day? Why? Are you required to sew a certain amount by the factor owner or manager? How does that make you feel?

7. What styles do you mainly work with?

“A typical day at work would be coming in. Greeting everyone in the morning. Touch base with the Operations Manager. We kind of get a good start on our day on what we have to do. And from there we progress and prepare for the daily goal accomplishing or if anything's being finished. And that just kind of goes throughout.”

“It's from my experience with being in this field for being in my field this this year. It's sound, it sounds like for other employees that it's something that's unjust. That's it's very, very intense work with so much pressure to eventually do your work and earning that much amount throughout the day. So it's it seems unjust, having to work so hard for such little pay.”

8. How do you feel about piecework compensation?

9. Do you shop even after knowing how to make clothes?

“No, I don’t shop as much if I don’t know where it is coming from now that I understand how clothes are made. Unless I know where it’s coming from. Yeah, I know my own size and bodies. So it’s easy for me to make stuff make pieces for myself. I did in school, I’m still wearing them. And as of this moment, I’m fixing a button of one of those.”

10. Do you feel you have a healthy working environment?

11. Do you like your work? Please explain your answer.

12. What do you like about your job?

“Yes, I do feel like I work in a healthy environment”.

“Yes, I like what I do. There’s this level of gratitude that happens towards when or this gratifying feeling that you get when either you know you turn into pieces that were made and you know how much work went into and then you see the reactions at the end, which either the designer or the team that picks up. And you know, they’re satisfied with what they got, you know, with what we need for them. And it was a full team effort to make this for them.”

Questions & Interview Responses from Participant Three:

1. General: Age, Ethnicity, Education Level, and Gender.

“I’m 46 years old.”

“No, I don’t think it’s very important to share my ethnicity.”

“I studied architecture on medieval architecture. I have a diploma. I also studied literature.”

2. How long have you owned a factory in Los Angeles?

“It’s been almost 4 years.”

3. Why did you decide to go into manufacturing?

“We have a fashion brand. And I realized that visiting different factories and working with different factories that I would prefer is the wrong term to start the factory to have better control with the production. And yes, and to be able to control or I pay my employees and to roll to a better condition of work and to have a better control on the on my production.

4. What are your requirements for hiring good skill workers?

5. Do you provide training for your employees?

“A good skilled worker understands how to sew different quality of garments. Skill is obviously once they start to sew a garment. But we provide training at our factory so that they improve and gain better skills and maximize their skill set.”

“It's an investment. We feel comfortable with one worker and we think he/ she can improve, we will train them.”

6. How many pieces do you produce per month?

“On average units 400 to 5000 pieces with 12 workers.

7. What styles do you mainly work with?

“We are working for womenswear and menswear and our best categories/ specialization and styles are men's button shirt, women's button shirt, we prefer to sew these woven single needle styles or just to contemporary designs.

8. What do you think about piecework compensation? Why do you use piecework compensation as a strategy for production? Do you think piecework compensation is fair?

Well, we don't work by piece. We never wanted to work with piece-rate. Piece-rate is unfair today when cost of living has increased.

9. Do you feel you take care of your employees?

Yes, of course.

10. Do you feel you provide a healthy working environment?

Yes.

11. Do you like your work and would you do anything different if you could?

I wrote my work and I will do nothing different. Well, there are like improvements all the time that you would see as for each case, perfect.

The responses collected were key points in identifying the causes and effects of piecework across the garment industry. They also contributed to the next part of Phase One.

What's On Your Radar

What's On Your Radar was integral in identifying the priorities of each participant. It connected back to the interview questions, and allowed participants to relate their experiences with ideal situations with work and home life. The strategy classified situations from the highest level of importance to the lowest. A common theme among all three participants was the desire to work in healthy conditions and to receive fair wages. The researcher determined simple needs of the participants to work in responsible, ethical, and accountable working environments.

Each of the design strategy conversations between the investigator and a participant were discrete. The method reveals what people actually do and say, deepens empathy for others, challenges assumptions, and builds credibility with stakeholders (LUMA Institute, 2012).

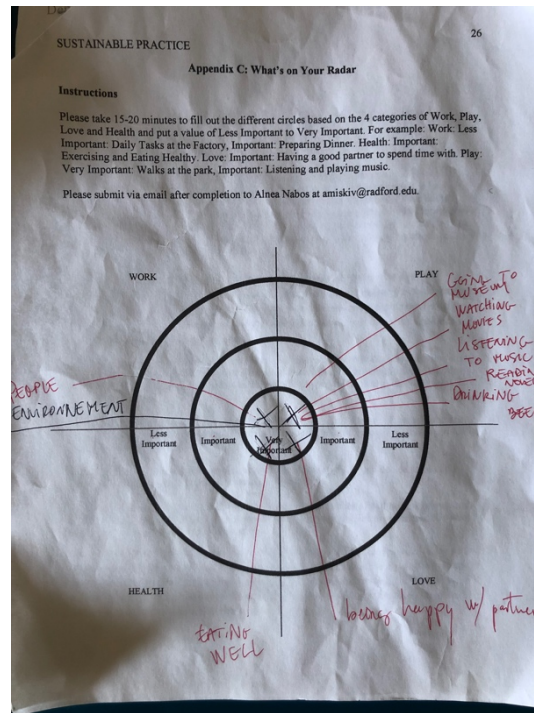
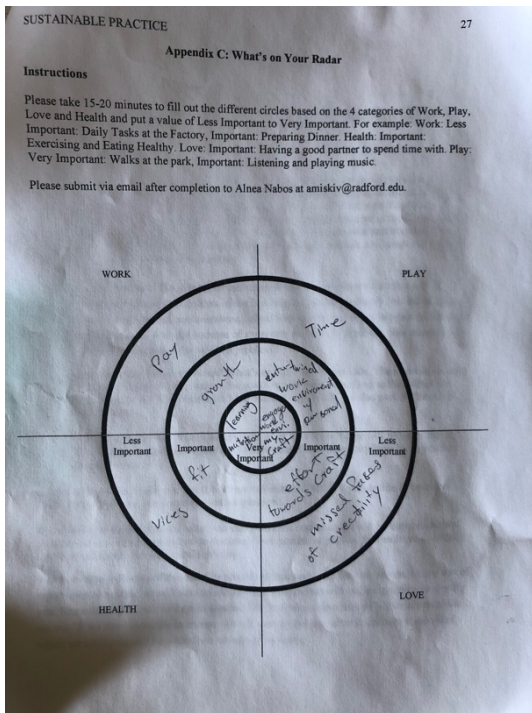


Figure 3. What's On Your Radar

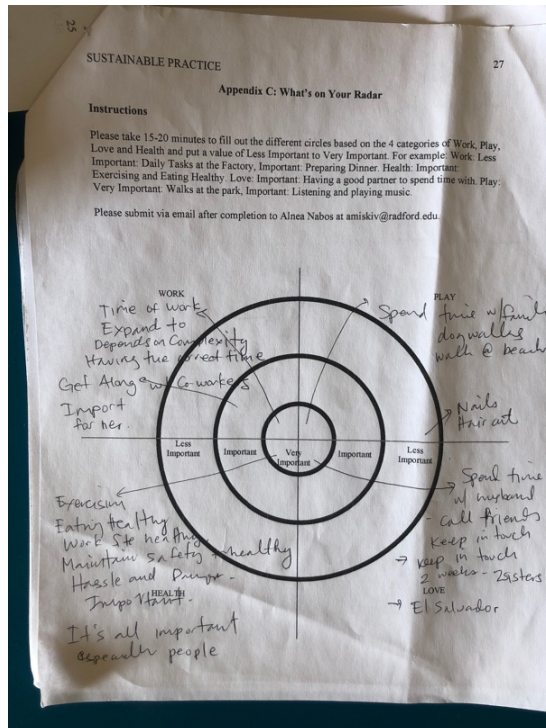


Figure 3A. What's On Your Radar

Contextual Inquiry

The Contextual Inquiry strategy provided visual insight for the researcher to connect the Interview Questions and What's On Your Radar to a factory work day. The visit illustrated a mildly oppressive environment where hard labor was displayed as well as physical demand placed on all factory workers, managers, and owners. Photography was not permitted by the factory owner. The principal investigator experienced the physical spacing, fiber dusts, and tensions in a tightly crowded space. Machines were closed together along with carts packed to the top with garment production. There were minimal walking spaces, as illustrated in Figure 4. The garment manufacturing industry has a reputation for and is distinguished by hard labor and oppressive practices.

Was not allowed to photograph but I took notes of the areas. Super dusty and no walking area. Fabrics everywhere, and was hard to navigate around the factory space without feeling like you had to squeeze in.

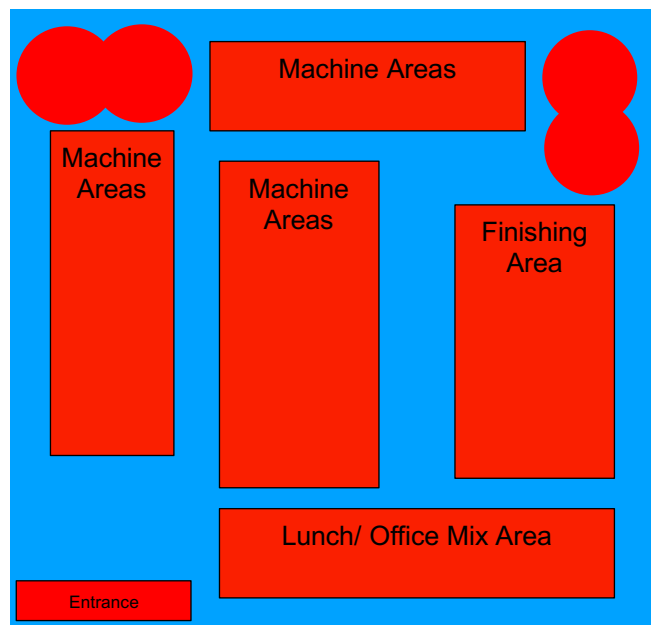


Figure 4. Contextual Inquiry

Super busy area with old machines, old parts/ items that look like junk/ super dusty.

The office and lunch was next to each other. Just a couch and table. Very messy.

DESIGN-THINKING STRATEGY: PHASE TWO, UNDERSTANDING

Information Gathering

For the Information Gathering, the researcher shared current events about piecework, industry news, and research on two comparable industries, farming, and furniture. Through sharing the research from Information Gathering, the participants were able to outline a direction for research efforts that would help contribute to identifying the depth of the issues leading to unique solutions. Below were major articles that contributed to the in-depth Affinity Clustering.

<https://link.springer.com/article/10.1007/s10460-019-09989-0>

How wage structure and crop size negatively impact farmworker livelihoods in monocrop organic production: Interviews with strawberry harvesters in California

<https://www.croptracker.com/blog/farm-labour-should-i-pay-my-employees-piece-rate.html>

Farm labor: Should I pay my employees piece rate?

<http://www.sjcl.edu/images/stories/sjalr/volumes/V27N1A3.pdf>

The Natural Farmer

BY ANNA CANNING, FAIR WORLD PROJECT

Published in Winter 2018-19 Issue

<https://thenaturalfarmer.org/article/the-role-of-fair-trade-and-fair-labor-labels-in-the-movement-for-food-justice/>

According to the Farm Bureau, “farmers and ranchers in the U.S. receive only 15 cents out of every dollar spent on food. The rest goes for costs beyond the farm gate: wages and materials for production, processing, transportation, distribution, and marketing.” That’s less than half of what it was in 1980. These are similar findings to the garment workers’ exploitation. Garment labor is calculating on average 5%-10% cost of the actual sale of the product. The rest of the price goes into non-related costs of goods sold.

Of course, imbalances of power are not a new element of our food system. In the U.S. and around the globe, there is a long history of land theft and displacement of indigenous people for farm land. Plantation owners around the globe have exploited workers, artificially reducing

production costs. The legacy of slavery in the U.S. farming system exists even today. Farmworkers in most states are exempt from many of the basic protections of labor law, exempted from minimum wage and overtime laws and excluded from the National Labor Relations Act (NLRA)'s guarantees of freedom to organize and join a union—all the results of New Deal Era compromises (for a more comprehensive history, see <https://thenaturalfarmer.org/article/brief-history-farmworker-wages-us-current-requirements/>). Thus, it's little wonder that so many of those who grow our food struggle to put food on their own tables.

Massive Science, Nicholas Karavolias

Plant Biology and Agricultural Science

UC Berkeley

May 9, 2019

<https://massivesci.com/articles/organic-farming-food-usda-pesticide-agricultural-labor/>

But there is a major deficit in research on work conditions on organic farms. Although they do not separate out statistics for organic farms, existing studies do highlight the common exploitation of farmworkers—insufficient compensation, poor housing conditions, and exposure to numerous workplace hazards. Harsh working conditions can lead to high rates of injuries, debilitating mental health issues, and overall low quality of life. Ironically, farm workers exhibit high rates of food insecurity: Studies have found up to 80 percent of farmworker households experience food insecurity. Adding to the problem is the fact that the majority of agricultural laborers are undocumented. Lacking legal status can reduce bargaining power for working conditions and wages, and keeps laborers from using federal assistance programs like food stamps or Medicaid.

Furniture Piecework

https://fraser.stlouisfed.org/files/docs/publications/bls/bls_0669_1940.pdf

Phase Two utilized Information Gathering to help identify common issues with other industries. This allowed the researcher to propose the solutions that farming and furniture industries implemented. Affinity Clustering provided new insights to non-fashion / garment industry leaders. The committee, as participants with a strong understanding of the strategy, produced helpful ideas and contributed to organizing similarities that led to better understanding.

The farming industry has similar abusive practices to the fashion industry, but during Phase Two, the researcher found that the farming industry has better policy and regulation mandates. The furniture industry, through information gathering, was incomparable in the end because there were fewer similarities in the findings. The differences between the garment industry and furniture industry helped to identify potential policies and regulations that could be integral in building solutions. The researcher could understand the furniture industry in order to brainstorm more ideal work conditions for the fashion industry. In the findings, the researcher identified that participants from all sectors of the fashion business are in support of eliminating piecework so that workers can have healthy work conditions.

Affinity Clustering

The session using Affinity Clustering with the committee identified five categories: Undocumented Workers, Essentials, Regulations, Wages, and Work Conditions.

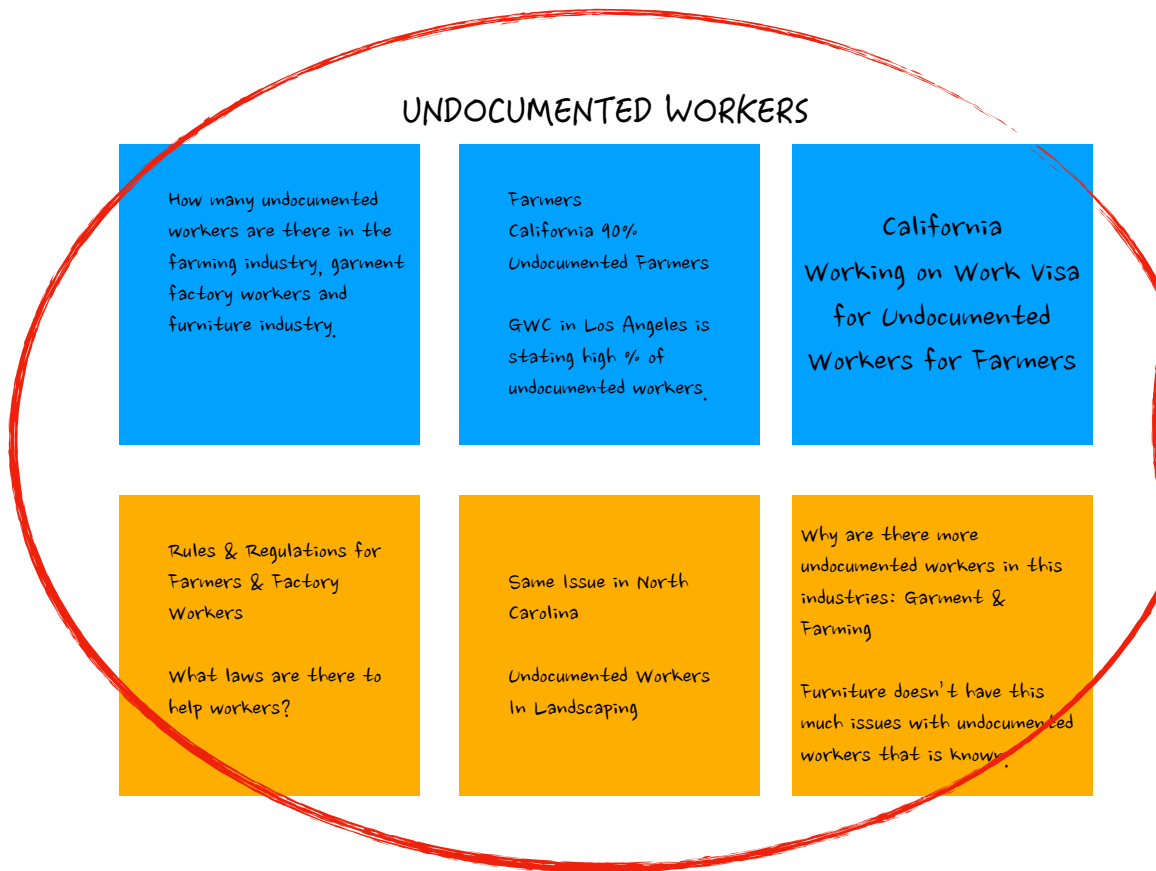


Figure 5. Affinity Clustering from Phase Two



Figure 5A. Affinity Clustering from Phase Two



Figure 5B. Affinity Clustering from Phase Two

DESIGN-THINKING STRATEGY: PHASE THREE, UNDERSTANDING

Statement Starters

Both participants contributed to describing the Stakeholder “Changemaker” Mapping with essential relevant work experiences and character building requirements for the ideal candidate that would lead to implementing change. The “Changemaker” would sanction for the potential solution for a clean, sustainable, responsible garment manufacturing industry.



Figure 6. Statement Starters

The Stakeholder “Changemaker” Mapping followed the Statement Starters. The principal investigator repeated the problem of piecework compensation in manufacturing and provided

the definition of Stakeholder “Changemaker” Mapping. The principal investigator explained the normal process using a blank poster that was pinned on the wall. Since this was a Zoom video conference, the principal investigator took notes and conducted the session verbally. The participants drew a verbal description of a person who has the potential to influence change. The participants actively discussed networks of “Changemakers.”

Participants verbally described speech-bubbles to summarize their mindset, contributed labels describing their role or title, verbally described connecting the “Changemakers,” labelled described relationships, and circled and labelled related groupings (LUMA Institute, 2012). This portion of the method took approximately 30 minutes and was audio recorded. Design Thinking Phase Three aimed to better understand and identify potential “Changemakers” and agents that push for change within the garment industry.

Stakeholder "Changemaker" Mapping

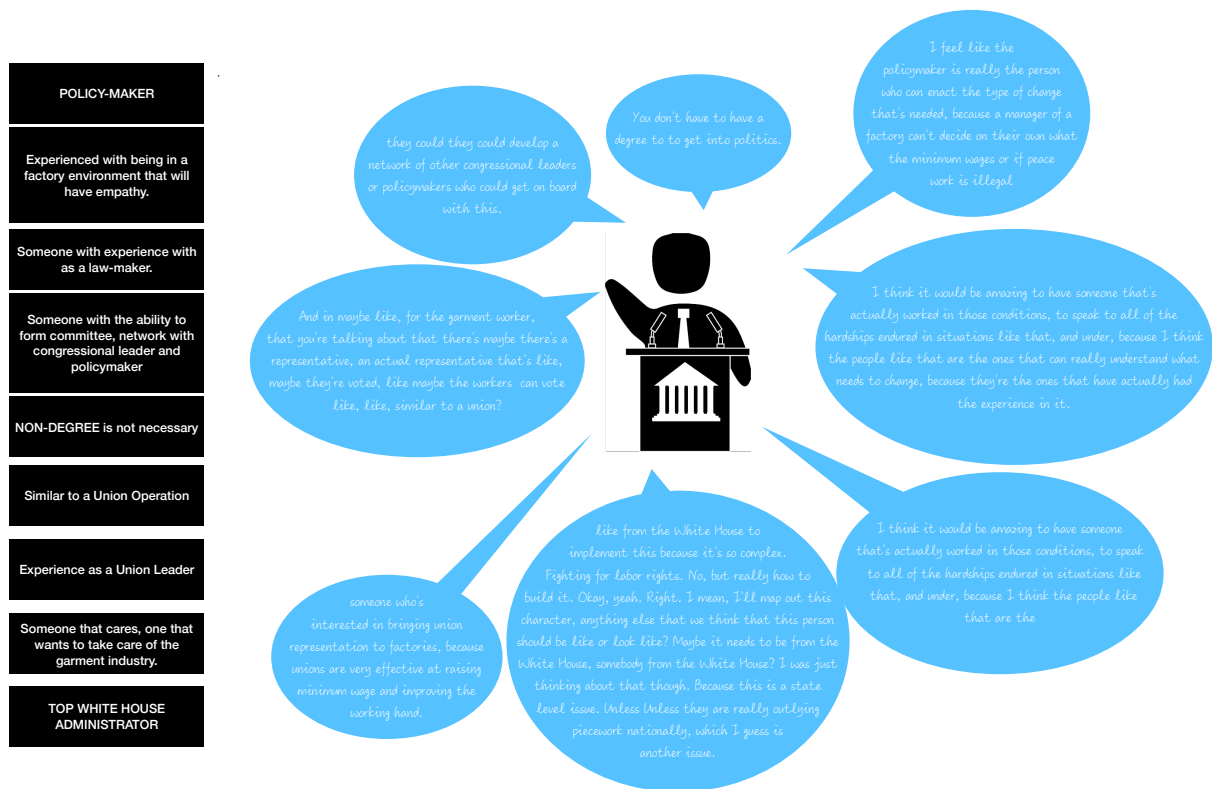


Figure 7. Stakeholder “Changemaker” Mapping

DESIGN-THINKING STRATEGY: PHASE FOUR, MAKING

Round Robin

ROUND ROBIN

Suggest to have a strike. there can be a strike, nobody will do any piece of work or any production. struggle. Great idea. Wow. I love this idea. Everybody hands together. If all the factory workers work together, they could just refuse to work. And then they could start a Go Fund Me. And people would donate and see and have more visibility into what's happening in the factories, you know, set up a GoFundMe is and then people that can help fund them while they strike.

when workers strike, they don't have they're not being paid, they can't, you do need a way to cause that. So my counter argument to that would be that the factory owners would not budge, and they would band together and create their own factory owners lobby and say, we're not, we're not caving in, and we're not going to, we're not going to pay and then just sort of wait it out. But that would cause huge problems. Everybody, like the brands would be pissed. The owners and then no one would benefit. No one would benefit and another factory would just take that production.

My solution? Well, it's kind of hard because I feel like okay, we talked about it being illegal. We talked about unions. Okay, this is hard to imagine, but solution factory owners banding together and rejecting work from brands that doesn't meet the minimum wage, the hourly minimum wage requirement.

But on the other hand, there are brands that want to manufacture in the US. Yeah, so that's like, part of their ethos. They they can't let's say they can't go overseas, because it's their mission. Yeah, it's for ethics. Yeah, totally. Then the counter, and I'm only countering because I have to counter to that would be are there enough brands with that mission? To have enough work to produce within United States? Yeah. Great question. Market big enough? Yeah, exactly. Because really, the the demand is very small compared to versus the mass production.

I also think at the end of the day, it's like the customers problem. Because they want everything cheaper. Mm hmm. Right. And I know even for me if like I'm posting a picture of like, only and I did this bucket had that was organic, and it was \$115, which I thought was really cheap. And on Instagram, all my comments, because it had like 6000 likes, and there was all these comments from random people who didn't follow us. And it was all these people saying \$115 for this, no thinks like, why is this so expensive? Like, I think, I think because we work in the industry, we understand the true cause. And we understand why things cost what they cause. But for the average person, which is like the majority of everybody else in the world, like my mom, or my sisters, or my cousins, they have no idea. Yeah, right. And so they just, it's the price part, I'm happy to pay more, because I know, you know, like, oh, this is hand beaded, and this probably took so many hours, but the average person does not think of that. Yeah, I mean, so I think at the end of the day, it's the customers the problem.

pay up campaigns and people calling out the fact that factories didn't pay workers last year and still haven't paid their workers because they have a direct dialogue with the factory workers in those locations. Yeah, it seems like American workers don't have that some kind of platform, I guess through the garment work center. But it's like, it's tough because, yeah. Yeah, I don't know. They just seem they seem disenfranchised. To be totally Frank Proctor workers here seem totally disenfranchised. I don't know if that's because sometimes they're not here legally. Sometimes they don't have any other option. Or they don't speak English very well. Yeah. We don't speak English. Well, yeah. Yeah, allowing them to unionize or just give them so much more leverage. Yeah. I mean, I think that, yeah, for all those reasons that you that convention, too.

But that's the struggle that grammar WorkCenter goes keep having is that when they got they can't even get into the brand. They can't even get into the brand. The brand just shuts them down and doesn't even allow them to come in. Yeah. And they always feel threatened. That's the problem, I think is like, you know, the fact that when you feel threatened right away, and even for me as a factory owner, like anytime someone's you know, I feel attacked right away, you know, like, gosh, you know, what, why, why are you saying this?

I think that they definitely customers definitely deserve more transparency into the process of making clothes and how much things actually cost. I agree that they have no idea. And then they just go for what they can afford, or what they think that they can afford. Or the cheapest or what. Yeah, exactly. Yeah. You know. And I think it's hard, though, because I don't I don't think that, you know, there's people who price things fairly like both of you. And then there's people who take advantage and still price things incredibly high. So just because it's it's expensive, doesn't mean that the workers were paid well, either. So kind of hard, because if you don't have total transparency from all brands, it can seem like there's huge disparities, and then the customer doesn't trust brands, you know, or they don't trust the model or they

I mean, I think that, you know, I'd have to kind of go into this because of the different sweatshops that I've seen here in Los Angeles. And it's hard because I've seen so many brands a part of that, and you're really surprised that I don't know if the owners know actually that they are getting made in sweatshops. And even for me, you know, sometimes, like, when I look at my pricing, and I, you know, I, you know, when I like cut this and invoices, I'm like, this is crazy that it cost this much money, but then, like, what do I do? Do I, you know, like, tell the team like, Hey, you guys got to speed this up. And I do already, you know, but like to, I think it's fair for what, you know, I'm paying them and for what's expected and what's fair, and but I have that kind of like, you know, kind of alarm. But most emulating, that's when abuses start to happen when you don't have that kind of cue or that light. Switch on and be like, this is a little too much like 5000 units per day with five people for masks. It's tiny little thing but it's it really is a lot too. Expect to do that.

Figure 8. Round Robin

Concept Poster

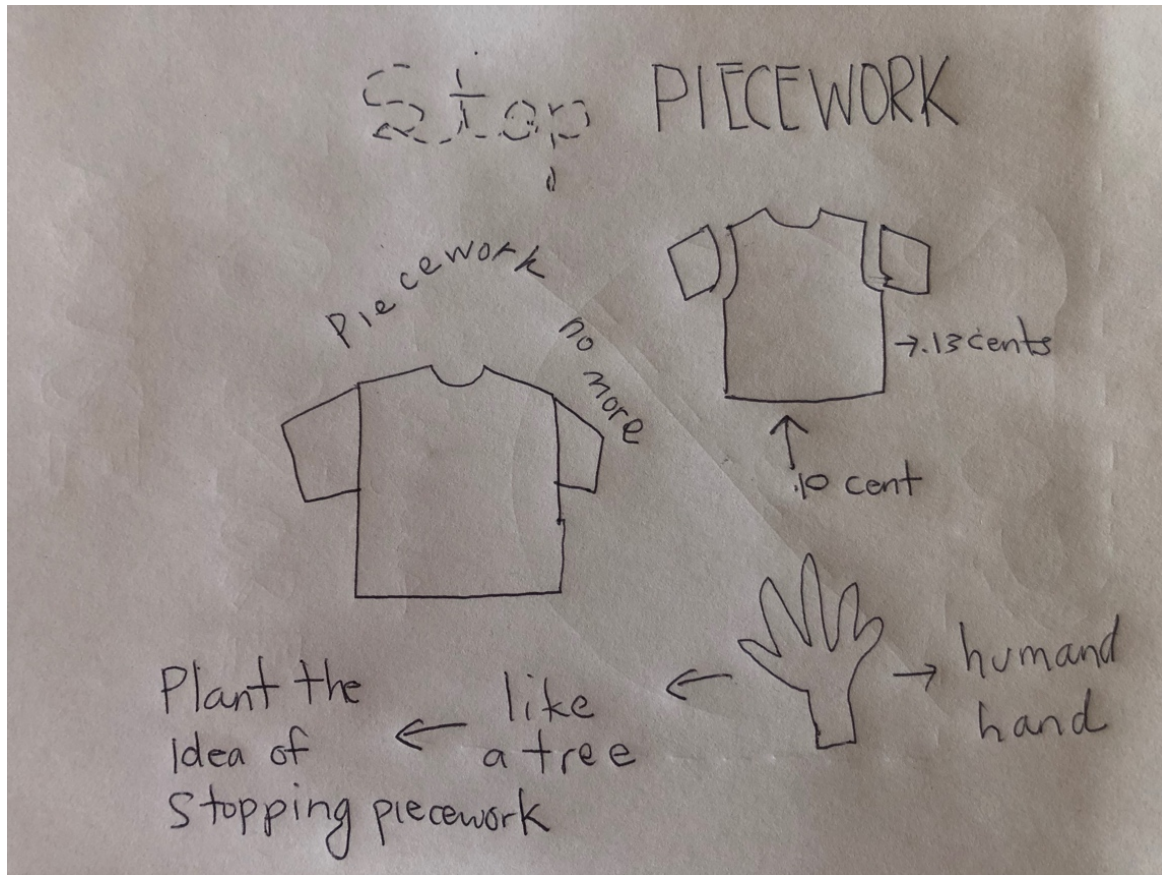


Figure 9. Concept Poster / Quick Sketches Solutions

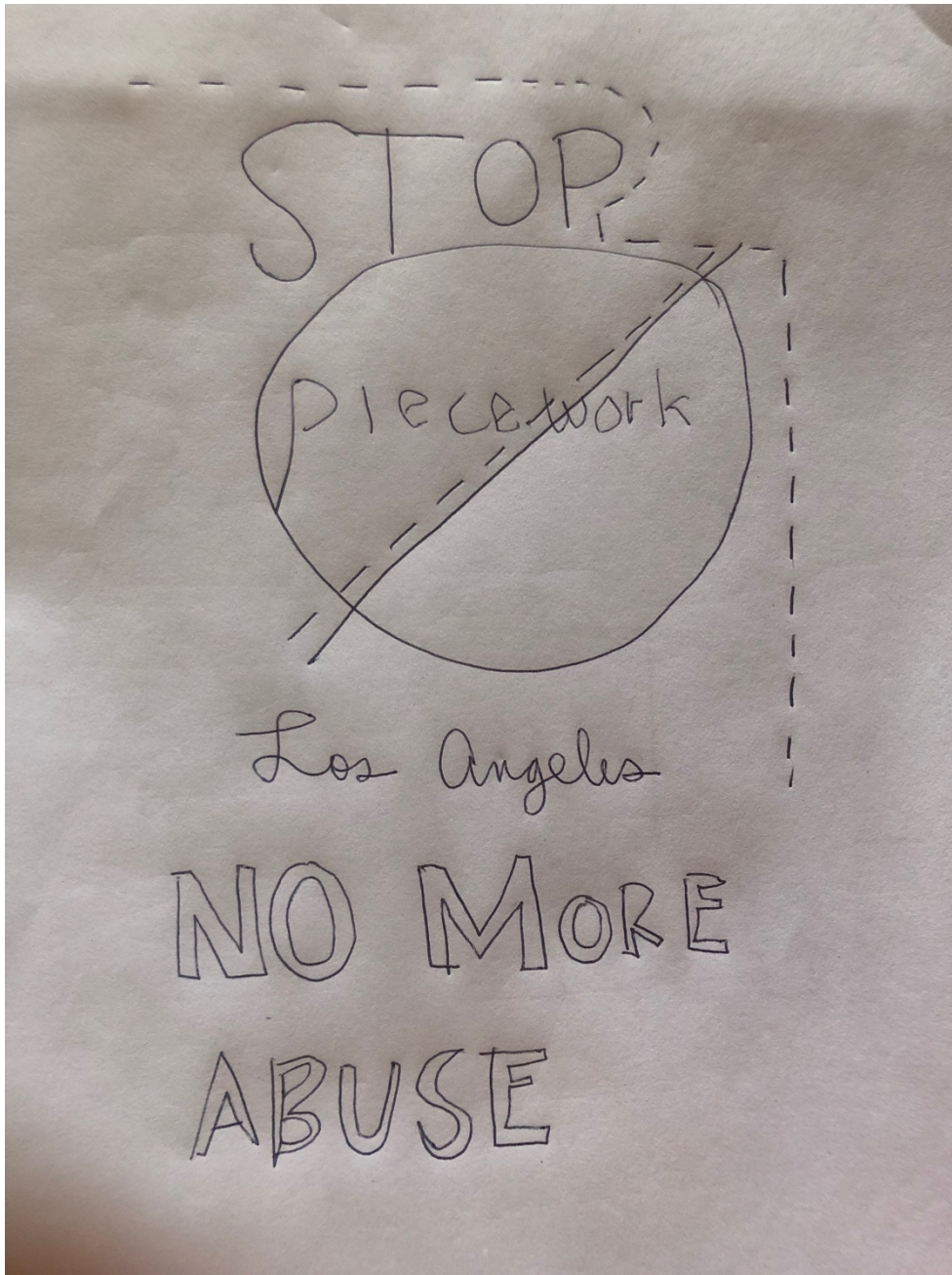


Figure 9A. Quick Sketches Solutions



Figure 10. Concept Poster

Discussion

Today, Los Angeles City's minimum wage requirement is \$15.00 per hour, yet we continue to hear that garment workers are earning \$3.00 hourly according to the Garment Worker Center. Piecework rates continue to be used in many garment manufacturing sectors. Younger operators have an advantage in this system compared to aged, skilled operators. As garment operators continue to struggle with low wages and high cost of living, manufacturers are forced to change practices. Workers are demanding fair wages and looking for better options available to them.

The common denominator with all participants is that they were all motivated to be in a healthy working environment. The garment industry is plagued with abuse, from labor practices to undocumented workers, non-compliances, lack of regulations, and laws that allow these horrific practices to continue. Yet, the industry has not implemented the changes necessary to improve conditions.

Phase One helped to identify participants relevant to the study that could provide insight into the problem through their experiences. The interview questions allowed initial qualifications for validity. The participants had years of field experience to contribute, and were integral in looking and observing. The findings from Phase One contributed to the proposed solution in Phase Four. The lack of regulations and policing of piece-rate wage theft continues to plague the industry. Phase One supported the issues highlighted in the literature review, where participants experienced low piece rates with long working hours. The strategy provided insight into the reputation of piecework amongst the stakeholders, which also examined the lack of audit and enforcement of the Garment Manufacturer Act of 1980.

Contextual Inquiry collected physical evidence of the experiences shared by the participants in Phase One Interview Questions and Who's On Your Radar. According to *Behind the Label: Inequality in the Los Angeles Apparel Industry*, the results in Phase One provided an honest perspective of the inadequacy and unhealthy working conditions caused by piece-rate labor. As stated, "factories that abide by the regulatory requirements of piecework compensation

can still contribute to inhumane conditions” (Bonacich & Appelbaum, 2000). The findings in the contextual inquiry demonstrated the inhumane conditions that piece-rate contributes to. The understanding phase of the study related back to the 1990 U.S. Census that a garment worker was earning \$7,200. Based on current findings from the Garment Worker Center in 2021, the earnings have not increased from 1990. This agreeable finding found in the literature review demonstrates the urgency for state and federal organizations to examine the loopholes causing these business practices.

Going back to the literature review, according to *Behind the Label*, “piecework compensation is either inadequate or this form of compensation contributes to undesirable working conditions” (Bonacich & Appelbaum, 2000). The walk through of the facility demonstrated the undesirability of work in garment manufacturing.

The Los Angeles Garment Worker Center has been fighting for garment workers to earn a living wage and end piece-rate compensation. The design-thinking strategy was basic but essential in confirming that these practices were being experienced by garment workers from management all the way down to garment operators. The results proved even further the toll piece-rate has on garment factories in an evolved economy.

In Phase Three, the participants’ roles focused on more creative aspects. Both participants shared support in eliminating abuse in the industry and moving forward with better practices. The participants in Phases Three and Four demonstrated awareness of the existing issues and identified how piece-rate influenced the supply chain. The participants connected back to Solinger’s (1961) theory of “productivity is based on acceptable quality in the least expensive manner at the greatest output (quantity).” The strategy encompassed the reputation of piece-rate in today’s economy, the consumer’s need for lower prices that fuels the core of Alkhatib et al.’s (2017) finding of “end-use of the supply chain, American consumers are highly price conscious as free-trade agreements have greatly lowered the prices of goods.” Ultimately, the strategy identified that pressure of the fashion industry places on the supply chain to produce inexpensive prices, which influences business to continue to engage in “piece-rate” compensation.

The participants were passionate in the discussions with the Round Robin exercise, identifying the ideal “Changemaker” and helping to create a prototype solution. All participants contributed great ideas and calls to action. The participants’ industry experiences were relevant in the envisioning of future possibilities. The research shared findings that allowed the participants in Phases Three and Four to have tools to help them engage in creating imaginative and visually proposed solutions. New ideas could provide a direction for Gertler’s (2004) research identifying the history of reforms in apparel industry practices as a result of the convergence of legal reforms, industry reforms, and social norms of intolerance for exploitation.”

Phase Four, Round Robin, was the start of an understanding that transitioned into making. This was a productive exercise, as the participants were now at ease and required to counter each other. This exercise provided a deeper insight into the encounters of each participant. This was also the best lead into making, as the Round Robin helped edit the direction for the Concept Poster. Phase Three and Phase Four worked together in creating a “Changemaker” and after the Round Robin, the researcher could imagine the beginning of prototyping. The identification of a “Changemaker” connects back to public education through media and worker’s rights organization. The “changemaker” could give rise to the awareness of ethical and better practices. It would be essential for the making to be effective in building new cultures as Hart suggested. The findings in the strategies provided agreeable evidences of piece-rate’s contribution to the exploitations in Los Angeles garment manufacturing that are stated in the literature review.

The design-thinking workshop presented essential methods in approaching a problem with new strategies. It provided opportunities and lenses that most organizations might not have explored. To improve upon these findings, the small-scale study should be scaled up. With more participants, the study could be used by various organizations looking to prototype solutions for the garment industry in Los Angeles.

Through the industry’s struggle to implement better practices and enforce changes for people and the planet, the use of Design-Thinking human-centered strategy can be key in actualizing alternative solutions that might not have yet been explored. The data collection for the

four phases of design-thinking strategies was conducted over 5 months. Each phase allowed the researcher to find a deeper understanding of the issues facing the role of piecework in the Los Angeles garment industry. The Design-Thinking workshop, designed in phases, created a breakdown and dissection of the issues through the various lenses of the participants. The strategies created new opportunities for observing and understanding the relevant field industry experiences.

Internal Validity / Limitations

LIMITATIONS

The research occurred during the COVID-19 pandemic, and therefore several limitations were imposed on the study. The original plan of meeting all participants in person and holding workshops became a challenge. Zoom video conferences became a crucial tool, substituting in-person workshops. The researcher was limited in setting up the workshops to give participants easy access to materials conducive to the strategies, such as post-it notes, pens, and boards, and to promote focused, in-person group meetings for other participants to have in-person interaction. Each strategy was also extended beyond its original duration as video Zoom calls did not contribute to confidence in holding the workshop. There was much more explanation required, and the researcher had to prepare ahead of each Zoom video conference and set up their background to be useful for demonstrations.

There were also time limitations and schedule conflicts. The time allowed for each phase was just enough to get started, but not enough to continue with the momentum as participants were clearly beginning to find comfort in sharing their experiences through the various methods. If the design-thinking workshops were doubled in time, participants might have had time to ease into the exercises, which could have resulted in deeper revelations and identification of problems.

The size of the group also presented limitations. If the researcher could have compared part A of Phase One, Interview Questions, with multiple participants in the same role, this could contribute to a wider range of findings.

The proposed solution was to create a Concept Poster. Creating a visual to encompass the proposed solution presents a limit in reaching a wider audience and the possibilities of alternative visuals could be a viable solution.

Piecework is a human-centered problem and using design thinking is also human centered. The solution proposed in the study was made by fashion industry leaders that have

pertinent platforms. It could be a good start in testing out a prototype and identifying additional useful tools.

Conclusion

Piecework in the garment industry has become a common practice, which has led to unhealthy working conditions, unfair wages, and abuse of labor rights. Industry loopholes allow piecework to be legal, but there are no accountability measures and no audits that mandate that areas using piecework uphold good practices.

The research and data collection took an extended period due to the researcher's professional commitments and the COVID-19 pandemic. The timing of the global pandemic heightened awareness of the issues caused by piecework labor. The pandemic amplified the need to create a platform of solutions for industry labor abuses, unhealthy working conditions, wage thefts, and lack of regulations. The pandemic illuminated the harsh conditions common in such industries, and demonstrated why the garment industry needs to work faster and harder at mandating industry standards. As garment manufacturing businesses struggled through COVID-19, Los Angeles specifically had several outbreaks in larger garment manufacturing sectors that highlighted key issues of the social class standings, harsh conditions, unfair wages, and labor abuse. The pandemic reminded the industry the flaws faced in today's challenging economic state, foremost piece-rate and unfair wages below minimum wage.

The use of design-thinking methodologies explored deeper into pre-existing issues related to the role of piecework through varying industry stakeholders' experiences, which illustrated the ongoing crisis. This study can serve as a convincing example to persuade state and federal organizations, consumers, and businesses to end piece-rate compensation. There is a crisis and an urgent need to stop the exploitations of labor rights, wages, and people. The results in the study revealed the ongoing pressures of businesses and consumers that push further into exploitations. This study calls for emergency actions to build, incentivize, and for new industry cultures, and for state and federal agencies to create new policies, bills, and regulations that move the Los Angeles garment manufacturing industry towards better practices once and for all.

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Appendixes

Appendix A: Interview Questions

Interview Questions for Factory Operator / Worker

Please take about two minutes to share your opinions about piecework compensation in the Los Angeles area.

1. General: Age, Ethnicity, Education level and Gender.
2. How long have you been a factory worker in Los Angeles?
3. Where did you learn your skills?
4. What do you dislike about your job?
5. Describe a typical day at work.
6. How many pieces do you sew per day? Why? Are you required to sew a certain amount by the factor owner or manager? How does that make you feel?
7. What styles do you mainly work with?
8. How do you feel about piecework compensation?
9. Do you shop even after knowing how to make clothes?
10. Do you feel you have a healthy working environment?
11. Do you like your work? Please explain your answer.
12. What do you like about your job?

Interview Questions for Factory Owner

1. General: Age, Ethnicity, Education level and Gender.
2. How long have you owned a factory in Los Angeles?
3. Why did you decide to go into manufacturing?
4. What are your requirements for hiring good skill workers?
5. Do you provide training for your employees?
6. How many pieces do you produce per month?
7. What styles do you mainly work with?

8. What do you think about piecework compensation? Why do you use piecework compensation as a strategy for production? Do you think piecework compensation is fair?
9. Do you feel you take care of your employees?
10. Do you feel you provide a healthy working environment?
11. Do you like your work and would you do anything different if you could?

Interview Questions for Factory Manager

1. General: Age, Ethnicity, Education level and Gender.
2. How long have you managed a factory in Los Angeles?
3. How did you become a factory manager?
4. What are your requirements for hiring good skill workers?
5. Do you provide training as a factory manager?
6. How many pieces do you produce per month?
7. What styles do you mainly work with?
8. How do you feel about the piecework compensation?
9. Do you feel you take care of your employees as a manager?
10. Do you feel you provide a healthy working environment?
11. Do you like your work and would you do anything different if you could?

Appendix B: Consent Form Phase One

Department of Design



Consent Form for Phase One

Title of Research: The Role of Piecework Compensation in Labor Exploitation in the Los Angeles Garment Industry

P.O. Box 6967
Radford, VA 24142

(540) 831-5386
(540) 831-5719 FAX

Researchers: John Jacob, Associate Professor and Alnea Nabos, MFA in Design Thinking Student Researcher

www.radford.edu

We are requesting your participation in a research study intended to use design-thinking strategies to examine the role of piecework compensation in labor exploitation in the Los Angeles Garment Industry. For this phase of the study, we are asking participants to participate in a face-to-face interview and a design-thinking strategy termed, What's on Your Radar. This study is being conducted by Alnea Nabos, a graduate student in the Department of Design, amiskiv@radford.edu, and John Jacob, a faculty member in the Department of design, jbjacob@radford.edu. We are asking you to take part because of your fashion industry field experience. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What the study is about: The purpose of this research study is to explore the roles and perspectives of the multiple stakeholders in the Los Angeles garment industry, including apparel producers, designers, workers, and consumers, about ways to reduce the exploitation of labor due to the piecework system. With the increased awareness on humane practices, this research will examine potential solutions for the research problem.

What we ask of you: For this study, we are asking participants to participate in a face-to-face interview that will last approximately 15 to 20 minutes. During the interview, the student researcher will record the conversation on her password-protected I-Phone. Interview questions will be printed, available for participants to view. The interview will be kept at a minimum for the participants to share their professional experience based on the questions. Once the participants completes the list of questions, the graduate student, will initiate the next strategy, What's On Your Radar.

For the What's on Your Radar design-thinking strategy, participant will fill out a bull's eye diagram that examines your personal yearnings and motivations. The investigator will provide a detailed explanation of the strategy and the diagram. The diagram will contain circles within circles and divided into slices that represents personal yearnings and motivations for the participants. The slices on the bull's eye diagram represent the core essential needs to the definition of a rich and full life. This strategy looks into your priorities that may extend beyond monetary needs and desires. The What's on Your Radar session will last approximately 15 to 20 minutes. Both the interview and What's on Your Radar Strategy will take place at the student researcher's Design Studio located at 824 S. Los Angles Street, Suite 507.

This study poses minimal risk, and there are no direct benefits or monetary benefits to you for participation in this study. This study is voluntary and you can choose not to be in this study. Participants can choose not to participate in any of the activities. If you decide to be in this study, you may choose not to answer certain questions.

If you decide to be in this study, what you share with the researcher(s) will be kept private and confidential. If we present or publish the results of this study, it will be done with complete confidentiality.

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you

should contact Dr. Orion Rogers, Interim Dean, College of Graduate Studies and Research, Radford University, jorogers@radford.edu, 1-540-831-5958.

It is your choice whether or not to be in this study. What you choose will not affect any current or future relationship with Radford University.

If you have questions: The principal investigator conducting this study is John Jacob, bjacob@radford.edu. The student researcher is Alnea Nabos. Please ask any questions you have now. If you have questions later, you may contact Alnea Nabos at amiskiv@radford.edu.

You will be given a copy of this form to keep for your records.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Your Signature _____ Date _____

Your Name (printed) _____

This consent form will be kept by the principal investigator for at least three years beyond the end of the study.

I/We have explained the study to the person signing above, have allowed an opportunity for questions, and have answered all of his/her questions. I/We believe that the subject understands this information.

Signature of Researcher(s)

Printed Name(s)

Date

Appendix C: What's on Your Radar

Instructions

Please take 15-20 minutes to fill out the different circles based on the 4 categories of Work, Play, Love and Health and put a value of Less Important to Very Important. For example: Work: Less Important: Daily Tasks at the Factory, Important: Preparing Dinner. Health: Important: Exercising and Eating Healthy. Love: Important: Having a good partner to spend time with. Play: Very Important: Walks at the park, Important: Listening and playing music.

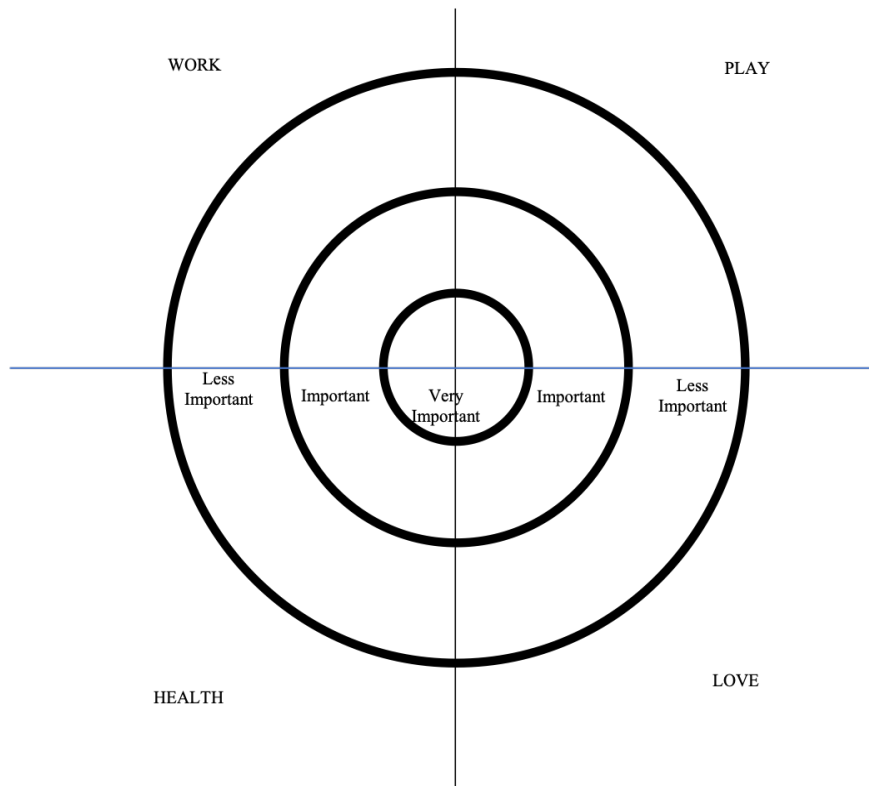
Please submit via email after completion to Alnea Nabos at amiskiv@radford.edu.

Appendix C: What's on Your Radar

Instructions

Please take 15-20 minutes to fill out the different circles based on the 4 categories of Work, Play, Love and Health and put a value of Less Important to Very Important. For example: Work: Less Important: Daily Tasks at the Factory, Important: Preparing Dinner. Health: Important: Exercising and Eating Healthy. Love: Important: Having a good partner to spend time with. Play: Very Important: Walks at the park, Important: Listening and playing music.

Please submit via email after completion to Alnea Nabos at amiskiv@radford.edu.

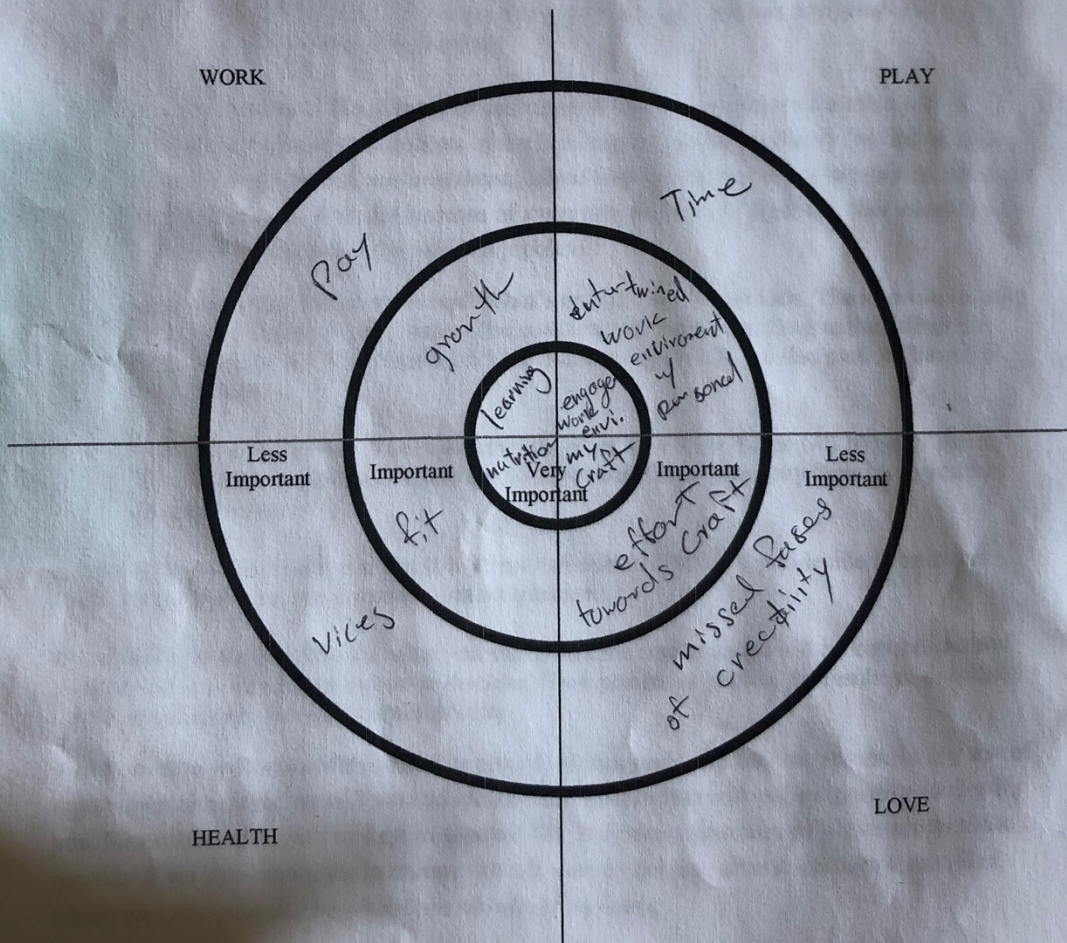


Appendix C: What's on Your Radar

Instructions

Please take 15-20 minutes to fill out the different circles based on the 4 categories of Work, Play, Love and Health and put a value of Less Important to Very Important. For example: Work: Less Important: Daily Tasks at the Factory, Important: Preparing Dinner. Health: Important: Exercising and Eating Healthy. Love: Important: Having a good partner to spend time with. Play: Very Important: Walks at the park, Important: Listening and playing music.

Please submit via email after completion to Alnea Nabos at amiskiv@radford.edu.



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SUSTAINABLE PRACTICE

Appendix C: What's on Your Radar

Instructions

Please take 15-20 minutes to fill out the different circles based on the 4 categories of Work, Play, Love and Health and put a value of Less Important to Very Important. For example: Work: Less Important: Daily Tasks at the Factory, Important: Preparing Dinner. Health: Important: Exercising and Eating Healthy. Love: Important: Having a good partner to spend time with. Play: Very Important: Walks at the park, Important: Listening and playing music.

Please submit via email after completion to Alnea Nabos at amiskiv@radford.edu.

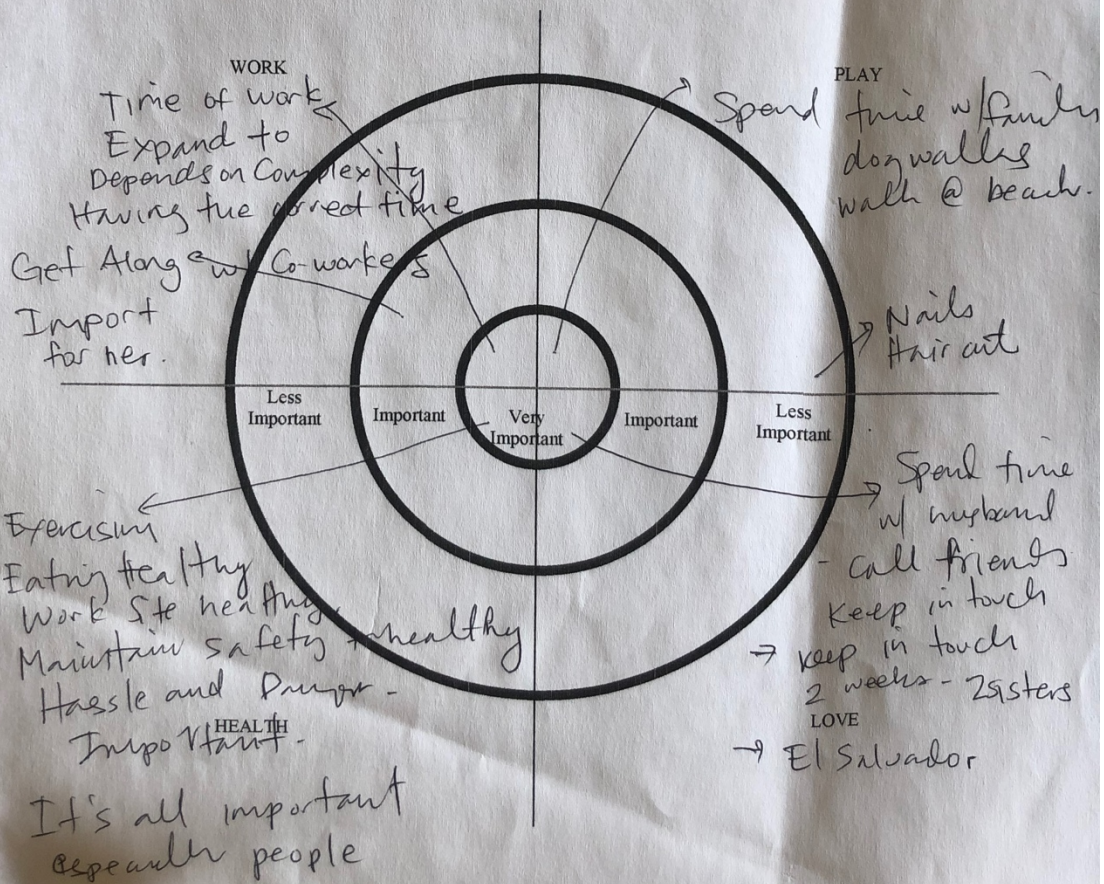
Category	Activity	Importance Level
PLAY	GOING TO MUSEUM	Very Important
PLAY	WATCHING MOVIES	Very Important
PLAY	LISTENING TO MUSIC	Very Important
PLAY	READING NOVELS	Very Important
PLAY	DRINKING BEER	Very Important
LOVE	being happy w/ partner	Very Important
HEALTH	EATING WELL	Very Important
WORK	(unlabeled)	Very Important
ENVIRONMENT	PEOPLE	Very Important

Appendix C: What's on Your Radar

Instructions

Please take 15-20 minutes to fill out the different circles based on the 4 categories of Work, Play, Love and Health and put a value of Less Important to Very Important. For example: Work: Less Important: Daily Tasks at the Factory, Important: Preparing Dinner. Health: Important: Exercising and Eating Healthy. Love: Important: Having a good partner to spend time with. Play: Very Important: Walks at the park, Important: Listening and playing music.

Please submit via email after completion to Alnea Nabos at amiskiv@radford.edu.



Appendix D: Contextual Inquiry Observation Guide

1. Describe the factory, location, square meters, size, layout, numbers of machines and operators.
2. Describe the conditions of the factory.
3. Describe the factory workers.
4. Describe the work in the assembly line, including the type of apparel manufactured (womenswear, menswear, contemporary, athletic wear, etc.). If possible, what are the piece work prices for the current components on the machines?
5. Describe break areas if there are any.
6. Describe the type of interactions.
7. Describe the mental and physical state of wellbeing of the factory workers.
8. How many men and women operators? What age group are they in?
9. Record observations on speed according to each machine.
10. Describe the types of brands, companies, garments that are being produced in the factory.

Appendix E: Consent Form

Department of Design



Consent Form for Phase Two

Title of Research: The Role of Piecework Compensation in Labor Exploitation in the Los Angeles Garment Industry

P.O. Box 6967
Radford, VA 24142

(540) 831-5386
(540) 831-5719 FAX

Researchers: John Jacob, Associate Professor and Alnea Nabos, MFA in Design Thinking Student Researcher

www.radford.edu

We are requesting your participation in a research study intended to use design-thinking strategies to examine the role of piecework compensation in labor exploitation in the Los Angeles Garment Industry. Phase Two involves asking what can be gained from analogous situations and history in other industries. This phase of the research will examine comparable processes in furniture manufacturing and organic foods production. The goal is to analyze and better understand industries that have tackled difficult problems related to labor exploitation. This study is being conducted by Alnea Nabos, a graduate student in the Department of Design, amiskiv@radford.edu, and John Jacob, a faculty member in the Department of design, bjacob@radford.edu. We are asking you to take part because of your fashion industry field experience. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What the study is about: The purpose of this research study is to explore the roles and perspectives of the multiple stakeholders in the Los Angeles garment industry, including apparel producers, designers, workers, and consumers, about ways to reduce the exploitation of labor due to the piecework system. With the increased awareness on humane practices, this research will examine potential solutions for the research problem.

What we ask of you: The student researcher will examine comparable processes in furniture manufacturing and organic foods production. The goal is to analyze and better understand industries that have tackled difficult problems related to labor exploitation. The student researcher will first provide you with an overview of the findings from a previous phase of research that will help start information gathering and Affinity Clustering.

After the principal investigator has completed information gathering on the furniture manufacturing and organic food industries, the design thinking strategy of Affinity Clustering will be completed with the thesis M.F.A. committee from Radford University. This will consist of the principal investigator's Design Thinking Chair, and two department professors. The principal investigator will send the summarized information gathering to the committee members two-weeks before the Affinity Clustering activity begins. The method will help identify issues and insights, reveal thematic patterns, facilitate productive discussion and build a shared understanding (LUMA Institute, 2012).

The principal investigator will schedule a video conference meeting with the committee. The video conference will begin with an introduction to the method by sharing the findings, including articles and current events about piecework, factory conditions, and industry news. The principal investigator will invite the participants to share their thoughts about the presented research. Participants will log into Mural Online to post ideas and group them according to similar categories. Clusters with similar ideas will be labeled. Participants will be given 15 minutes to complete the task. Phase Two should take approximately 40-60 minutes. The meeting will be video and audio recorded, accompanied by notes and a summary.

This study poses minimal risk, and there are no direct benefits or monetary benefits to you for participation in this study. This study is voluntary and you can choose not to be in this study. Individuals can choose not to

participate in all activities associated with this phase of the research. If you decide to be in this study, you may choose not to answer certain questions.

If you decide to be in this study, what you share with the researcher(s) will be kept private and confidential. If we present or publish the results of this study, it will be done with complete confidentiality.

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Dr. Orion Rogers, Interim Dean, College of Graduate Studies and Research, Radford University, jorogers@radford.edu, 1-540-831-5958.

It is your choice whether or not to be in this study. What you choose will not affect any current or future relationship with Radford University.

If you have questions: The principal investigator conducting this study is John Jacob, bjacob@radford.edu. The student researcher is Alnea Nabos. Please ask any questions you have now. If you have questions later, you may contact Alnea Nabos at amiskiv@radford.edu.

You will be given a copy of this form to keep for your records.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Your Signature _____ Date _____

Your Name (printed) _____

This consent form will be kept by the principal investigator for at least three years beyond the end of the study.

I/We have explained the study to the person signing above, have allowed an opportunity for questions, and have answered all of his/her questions. I/We believe that the subject understands this information.

Signature of Researcher(s)

Printed Name(s)

Date

Appendix F: Statement Starters

How might we...

What could we do...

Piecework compensation is...

The healthy working environment is...

How might we.. get factories and brands on board with paying workers a minimum wage?

How might we... find a sustainable, livable minimum wage for workers?

What can we.. do to ensure that even minimum wage is acceptable for how workers can survive and pay for their families?

What can we do to highlight the types of products that can be made in Los Angeles for a livable wage?

Piecework compensation, is a way to underplay to underpay factory workers.

Piecework compensation is not sufficient in covering the costs, the true costs of creating a garment in Los Angeles.

Healthy working environment is a place where everyone has access to equitable wages that reflect their work, their contribution.

Healthy working environment is being able to pay workers a wage that enables them to thrive.

Appendix G: Round Robin

What are new / fresh ideas in creating healthier ethical practices for the operators in the Los Angeles Garment Manufacturer?

Write down unconventional solution. Then pass to the person to your left.

Why will the proposal/ solution above fail? Write down and pass to your left again.

Write down unconventional solution. Then pass to the person to your left.

Why will the proposal/ solution above fail? Write down and pass to your left again.

Write down unconventional solution. Then pass to the person to your left.

Why will the proposal/ solution above fail? Write down and pass to your left again.

Write down unconventional solution. Then pass to the person to your left.

Why will the proposal/ solution above fail? Write down and pass to your left again. The

Role of Piecework Compensation in Labor Exploitation in the Los Angeles Garment Industry

ROUND ROBIN

Suggest to have a strike. there can be a strike, nobody will do any piece of work or any production. struggle. Great idea. Wow. I love this idea. Everybody hands together. If all the factory workers work together, they could just refuse to work. And then they could start a Go Fund Me. And people would donate and see and have more visibility into what's happening in the factories, you know, set up a GoFundMe is and then people that can help fund them while they strike.

When workers strike, they don't have they're not being paid, they can't, you do need a way to cause that. So my counter argument to that would be that the factory owners would not budge, and they would band together and create their own factory owners lobby and say, we're not, we're not caving in, and we're not going to, we're not going to pay and then just sort of wait it out. But that would cause huge problems. Everybody, like the brands would be pissed. The owners and then no one would benefit. No one would benefit and another factory would just take that production.

My solution? Well, it's kind of hard because I feel like okay, we talked about it being illegal. We talked about unions.

Okay, this is hard to imagine, but solution factory owners banding together and rejecting work from brands that doesn't meet the minimum wage, the hourly minimum wage requirement.

But on the other hand, there are brands that want to manufacture in the US. Yeah. So that's like, part of their ethos. They they can't let's say they can't go overseas, because it's their mission. Yeah, it's for ethics. Yeah, totally. Then the counter, and I'm only countering because I have to counter to that would be are there enough brands with that mission? To have enough work to produce within United States? Yeah. Great question. Market big enough? Yeah, exactly. Because really, the the demand is very small compared to versus the mass production.

I also think at the end of the day, it's like the customers problem. Because they want everything cheaper. Min hmn. Right. And I know even for me if like I'm posting a picture of like only and I did this bucket had that was organic, and it was \$115, which I thought was really cheap. And on Instagram, all my comments, because it had like 6000 likes, and there was all these comments from random people who didn't follow us. And it was all these people saying \$115 for this, no thinks like, why is this so expensive? Like, I think, I think because we work in the industry, we understand the true cause. And we understand why things cost what they cause. But for the average person, which is like the majority of everybody else in the world, like my mom, or my sisters, or my cousins, they have no idea. Yeah, right. And so they just, it's the price part, I'm happy to pay more, because I know, you know, like, oh, this is hard headed, and this probably took so many hours, but the average person does not think of that. Yeah, I mean, so I think at the end of the day, it's the customers the problem.

pay up campaigns and people calling out the fact that factories didn't pay workers last year and still haven't paid their workers because they have a direct dialogue with the factory workers in those locations. Yeah, it seems like American workers don't have that same kind of platform, I guess through the garment work center. But it's like, it's tough because, yeah. Yeah, I don't know. They just seem they seem disenfranchised. To be totally Frank Proctor workers here seem totally disenfranchised. I don't know if that's because sometimes they're not here legally. Sometimes they don't have any other option. Or they don't speak English very well. Yeah. We don't speak English. Well, yeah. Yeah, allowing them to unionize or just give them so much more leverage. Yeah. I mean, I think that, yeah, for all those reasons that you that convention, too.

But that's the struggle that garment WorkCenter goes keep having is that when they got they can't even get into the brand. They can't even get into the brand. The brand just shuts them down and doesn't even allow them to come in. Yeah. And they always feel threatened. That's the problem. I think is like, you know, the fact that when you feel threatened right away, and even for me as a factory owner, like anytime someone's you know, I feel attacked right away, you know, like, gosh, you know, what, why, why are you saying this?

I think that they definitely customers definitely deserve more transparency into the process of making clothes and how much things actually cost. I agree that they have no idea. And then they just go for what they can afford, or what they think that they can afford. Or the cheapest or what. Yeah, exactly. Yeah. You know. And I think it's hard, though, because I don't I don't think that, you know, there's people who price things fairly like both of you. And then there's people who take advantage and still price things incredibly high. So just because it's it's expensive, doesn't mean that the workers were paid well, either. So kind of hard, because if you don't have total transparency from all brands, it can seem like there's huge disparities, and then the customer doesn't trust brands, you know, or they don't trust the model or they

I mean, I think that, you know, I'd have to kind of go into this because of the different sweatshops that I've seen here in Los Angeles. And it's hard because I've seen so many brands a part of that, and you're really surprised that I don't know if the owners know actually that they are getting made in sweatshops. And even for me, you know, sometimes, like, when I look at my pricing, and I, you know, I, you know, when I like cut this and invoices, I'm like, this is crazy that it cost this much money, but then, like, what do I do? Do I, you know, like, tell the team like, Hey, you guys got to speed this up. And I do already, you know, but like to, I think it's fair for what, you know, I'm paying them and for what's expected and what's fair, and but I have that kind of like, you know, kind of alarm. But most emulating, that's when abuses start to happen when you don't have that kind of cue or that light. Switch on and be like, this is a little too much like 5000 units per day with five people for masks. It's tiny little thing but it's it really is a lot too. Expect to do that.

Appendix H: Consent Form Phase Three

Department of Design



Consent Form for Phase Three

Title of Research: The Role of Piecework Compensation in Labor Exploitation in the Los Angeles Garment Industry

P.O. Box 6967
Radford, VA 24142

(540) 831-5386
(540) 831-5719 FAX

Researchers: John Jacob, Associate Professor and Alnea Nabos, MFA in Design Thinking Student Researcher

www.radford.edu

We are requesting your participation in a research study intended to use design-thinking strategies to examine the role of piecework compensation in labor exploitation in the Los Angeles Garment Industry. For this phase of the study, we are asking participants to participate in a face-to-face interview and a design-thinking strategy termed, What's on Your Radar. This study is being conducted by Alnea Nabos, a graduate student in the Department of Design, amiskiv@radford.edu, and John Jacob, a faculty member in the Department of design, bjacob@radford.edu. We are asking you to take part because of your fashion industry field experience. Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What the study is about: The purpose of this research study is to explore the roles and perspectives of the multiple stakeholders in the Los Angeles garment industry, including apparel producers, designers, workers, and consumers, about ways to reduce the exploitation of labor due to the piecework system. With the increased awareness on humane practices, this research will examine potential solutions for the research problem.

What we ask of you: For Phase Three, the principal investigator will begin with Statement Starters and Stakeholder "Changemaker" Mapping. These methods will investigate opportunities to promote change in the garment-manufacturing industry. Participants will include a University Fashion Chair, Los Angeles Fashion Week Former Fashion Director, Fashion Buyer, Fashion Designer, and a Fashion Consumer. The participants will understand the need for "Made in USA" manufacturing. They will be knowledgeable about and supportive of the sustainable and ethical industrial practices. They must have previously demonstrated commitment to finding solutions to improve the fashion industry.

The principal investigator will present the findings from Phase One and Two to the participants. For example, if a factory operator identified childcare services as a primary need, the participants in Phase Three will be prompted to consider how this need might be met. If a participant identifies stress and physical fatigue as an outcome of piecework conditions, the participants will be prompted to identify potential solutions to this finding.

This phase will be held at the principal investigator's design studio. The methods should take 20-30 minutes each, amounting to approximately one hour to complete. Prior to beginning this Phase of strategies, participants will sign a consent form (see Appendix B) after the principal investigator has explained the purpose of the study and activities to take place. The principal investigator will explain the purpose of the Statement Starters by creating the first statement starter. To illustrate, the principal investigator might start with "How might we..." Participants will be provided with a pencil and sticky notes. Each participant will have two minutes to complete the Statement Starters. The principal investigator will encourage participants to quickly finish each Statement Starter. Next, the investigator will ask the participants to share what they wrote for discussion with the group. The discussion will last three to five minutes. The discussion will be audio recorded. The principal investigator will locate a wall space where participants can post their sticky notes for the group to read. After completing the Statement Starters (see Appendix E: Statement Starters), the participants will vote on the best statement starter for each problem of piecework compensation. The benefits of Statement Starters are that they challenge

assumptions, help develop a different perspective, provide a direction for problem solving, and invite divergent thinking (see Appendix E).

The Stakeholder “Changemaker” Mapping will follow the Statement Starters. The principal investigator will repeat the problem of piecework compensation in manufacturing and provide the definition of Stakeholder “Changemaker” Mapping. The principal investigator will prepare a blank poster that can be pinned on the wall. The participants will draw symbols of a person who has potential to influence change. The participants can actively discuss networks of “Changemakers.” Participants will write a speech-bubble to summarize their mindset, write a label describing their role or title, draw lines with arrows connecting the “Changemakers”, write a label on the line to describe relationships, and circle and label related groupings (LUMA Institute, 2012). This portion of the method will take approximately 30 minutes. This will be audio recorded, accompanied by photographs and summary of the session. Design Thinking Phase Three aims to better understand and identify potential “Changemakers” and agents that push for change within the garment industry.

This study poses minimal risk, and there are no direct benefits or monetary benefits to you for participation in this study. This study is voluntary and you can choose not to be in this study. Participants can choose not to participate in any of the activities. If you decide to be in this study, you may choose not to answer certain questions.

If you decide to be in this study, what you share with the researcher(s) will be kept private and confidential. If we present or publish the results of this study, it will be done with complete confidentiality.

This study was approved by the Radford University Committee for the Review of Human Subjects Research. If you have questions or concerns about your rights as a research subject or have complaints about this study, you should contact Dr. Orion Rogers, Interim Dean, College of Graduate Studies and Research, Radford University, jorogers@radford.edu, 1-540-831-5958.

It is your choice whether or not to be in this study. What you choose will not affect any current or future relationship with Radford University.

If you have questions: The principal investigator conducting this study is John Jacob, jbjacob@radford.edu. The student researcher is Alnea Nabos. Please ask any questions you have now. If you have questions later, you may contact Alnea Nabos at alnea@radford.edu.

You will be given a copy of this form to keep for your records.

Statement of Consent: I have read the above information, and have received answers to any questions I asked. I consent to take part in the study.

Your Signature _____ Date _____

Your Name (printed) _____

This consent form will be kept by the principal investigator for at least three years beyond the end of the study.

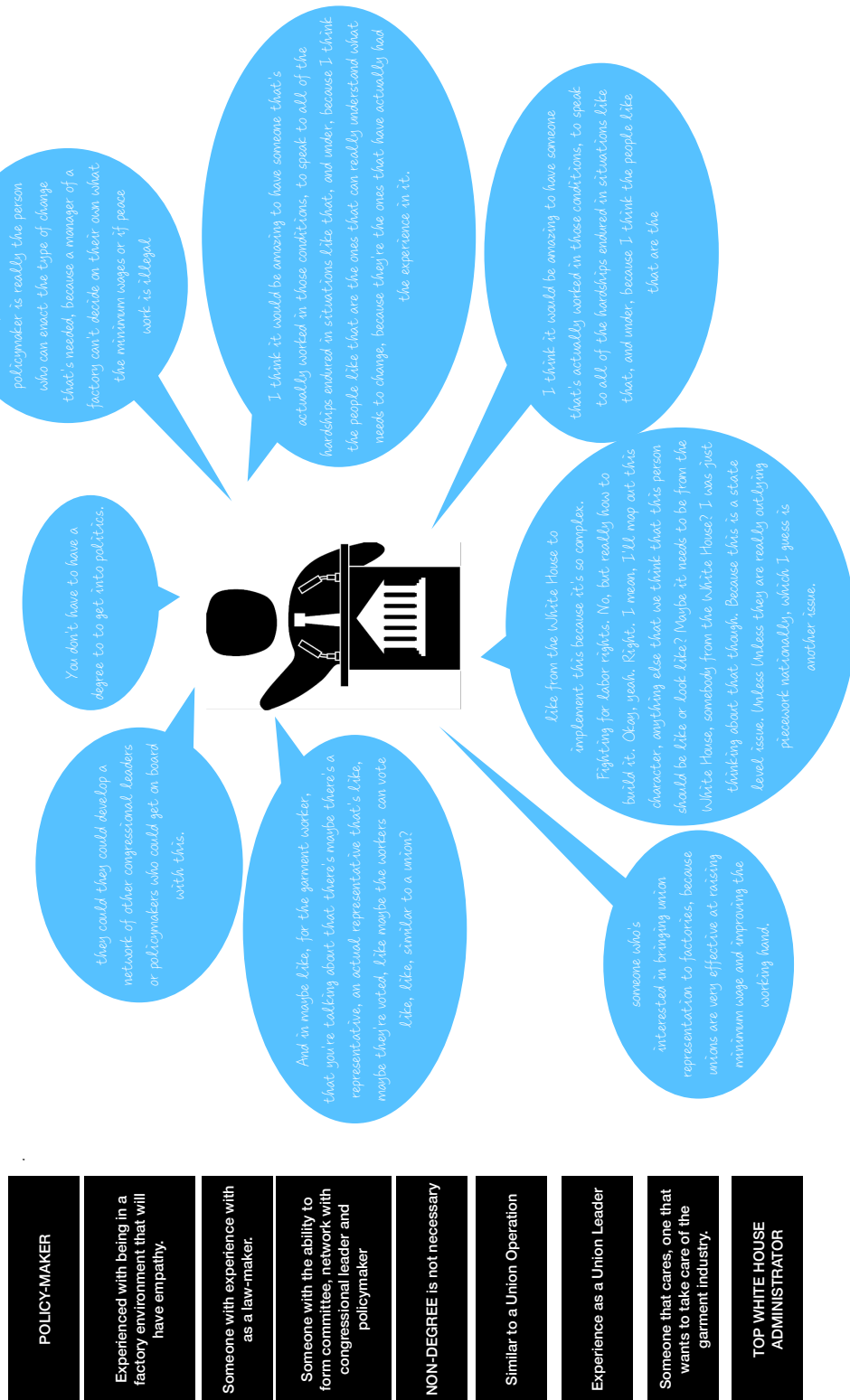
I/We have explained the study to the person signing above, have allowed an opportunity for questions, and have answered all of his/her questions. I/We believe that the subject understands this information.

Signature of Researcher(s)

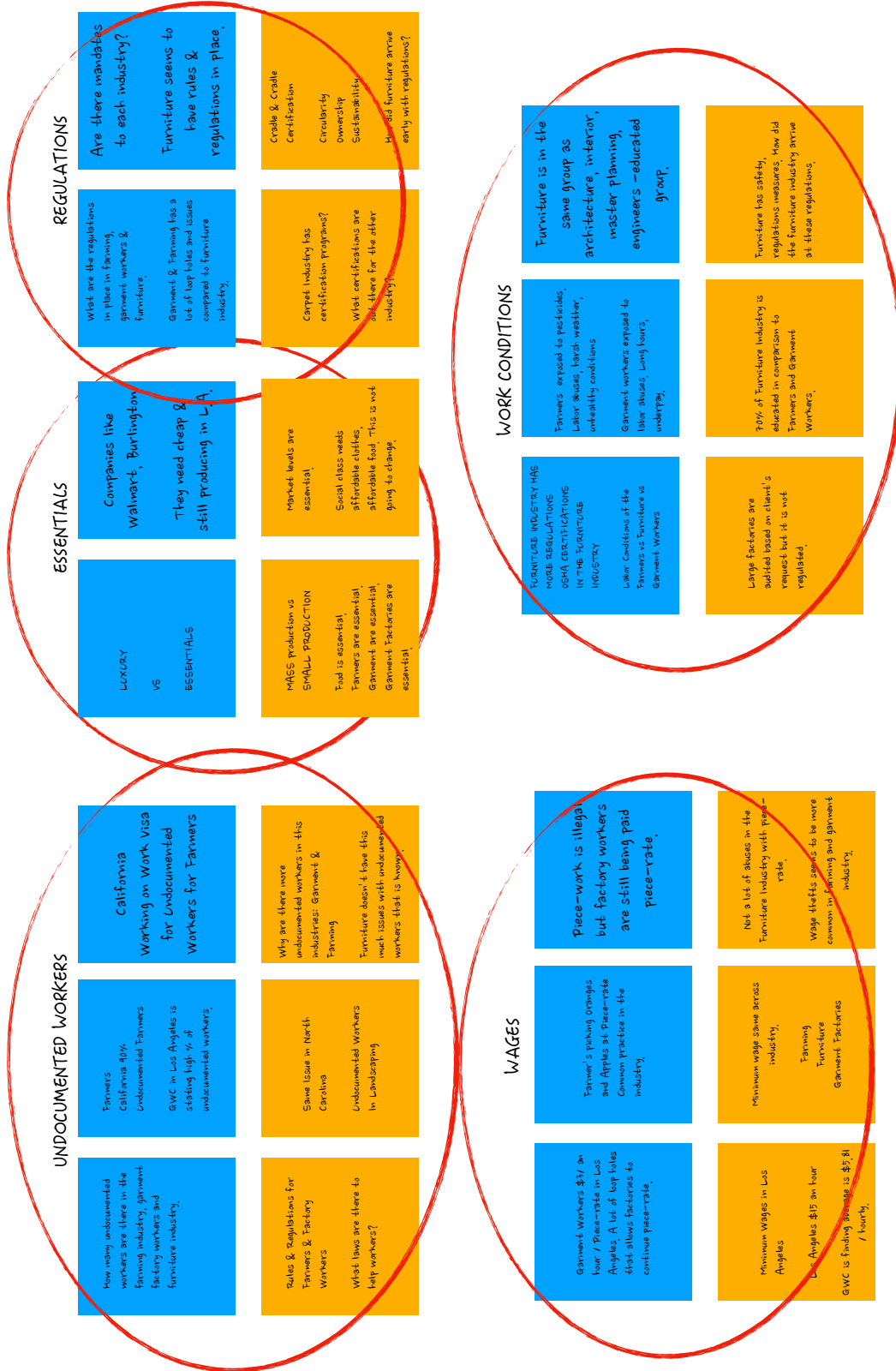
Printed Name(s)

Date

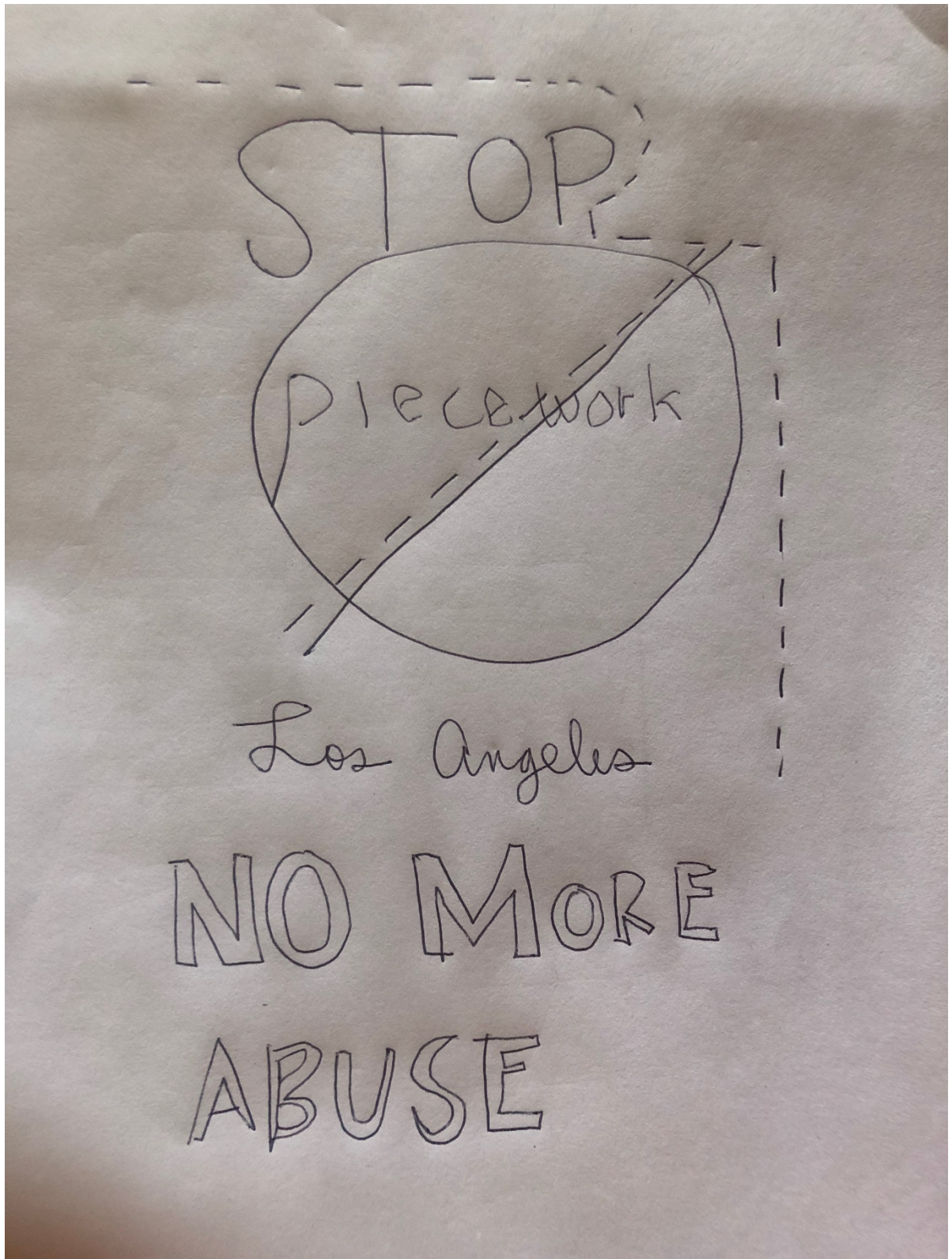
Appendix I: Changemaker Mapping



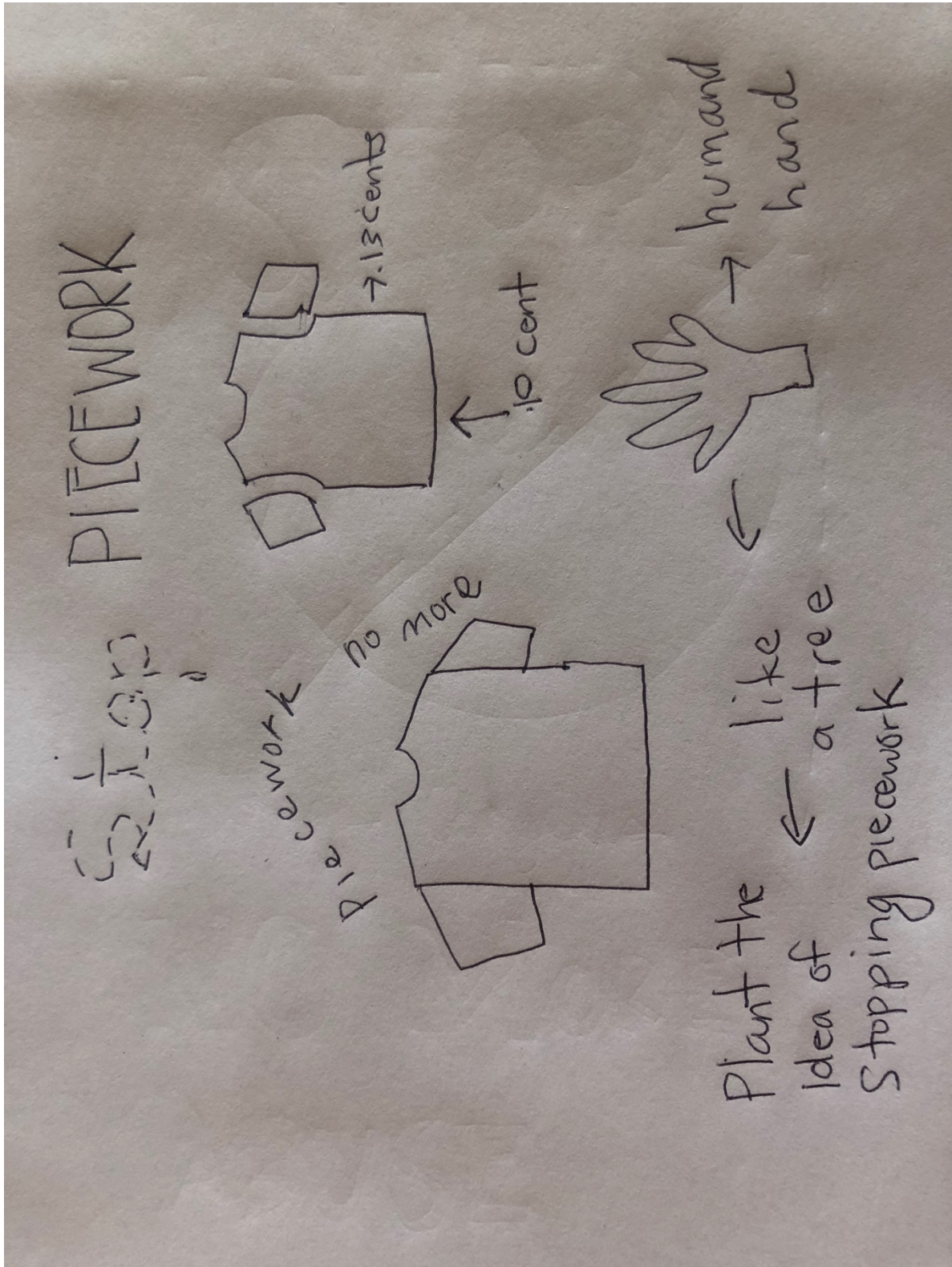
Appendix J: Affinity Clustering



Appendix K: Concept Poster/ Quick Sketches



Appendix L: Concept Poster/ Quick Sketches



Appendix M: Concept Poster

FASHION MADE ETHICALLY & MINDFULLY WITH PEOPLE & PLANET

I support SB62.

www.againstpieceworklabor.org



Appendix N: Thesis Defense Slideshow

The Role of Piecework Compensation in Labor Exploitation in the Los Angeles Garment Industry

MFA Design Thinking
Alnea Nabos
Thesis Defense

GARMENT MANUFACTURING

- Having worked in Asia and in the USA, there is a collection of global experiences and observations of the practices in the garment industry.
- Currently living in Los Angeles.
- Los Angeles is has the largest garment manufacturing industry in the US and it is the second largest industry in Los Angeles.
- The fashion industry been in crisis.
- Los Angeles continues to work on piece-rate vs. hourly minimum wage.

Fashion Industry Crisis & Purpose of the Study



- CRISIS: POOR EXECUTION & LABOR ETHICS.
- Los Angeles Garment Manufacturing Industry has been the subjects of many labor exploitation cases.
- The study looked into possible incentives to end piece-rate and move towards better, sustainable and ethical practices.

Purpose of the Study

The study looked into possible incentives to end piece-rate and move towards better, sustainable and ethical practices.





Despite Los Angeles recent decision to raise the minimum wage to **\$15 per hour**, there are findings that the average wage for workers in the Los Angeles garment industry was only **\$5** per hour, and most of the workers reported no overtime compensation and unsafe working conditions.

HOW MUCH
DOES YOUR
T-SHIRT
COST?



GRAPHIC-T-SHIRT
\$7

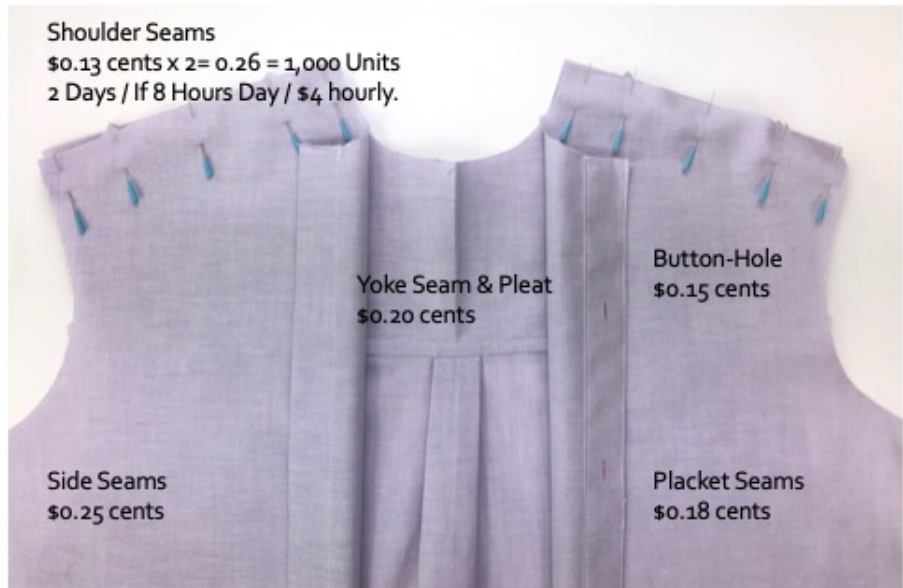


MATCHA LATTE
Blue Bottle
\$7

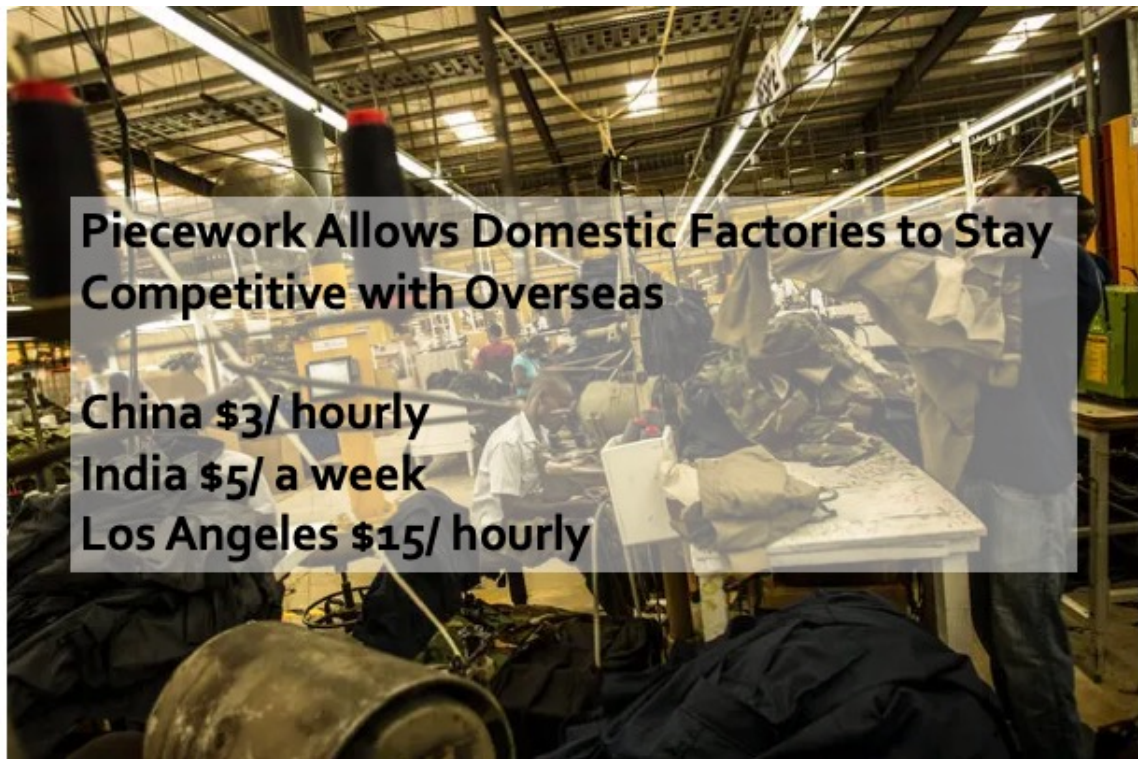
PIECEWORK COMPENSATION

- In Los Angeles, piecework pays garment operators by the seam vs. hourly.
- Piecework compensation allows manufacturers to skirt regulations, such as minimum wage law, by paying workers for each item of clothing they make, in most cases, by the seam.
- This compensation strategy allows manufacturers to control labor costs as they set compensation for each item made to deliver the desired profit margin.
- Piecework is said to be "a sweet spot for optimizing labor exploitation."

PIECEWORK COMPENSATION



"Sweet Spot"
Optimization of Exploitation
Undocumented Workers
Lax of Regulations
Long Hours
Below Minimum Wage



Piecowork Allows Domestic Factories to Stay Competitive with Overseas
China \$3/ hourly
India \$5/ a week
Los Angeles \$15/ hourly

This study conducts design-thinking sessions with various stakeholders in the Los Angeles garment industry to gain insight into the industrial culture and practices of manufacturing, specifically focusing on the piecework compensation strategy.

**CONTRIBUTING
FACTORS FOR
BUSINESS TO
CONTINUE
ENGAGEMENT
IN LOS
ANGELES**

- BUSINESS ABUSES
 - Lack of Regulations
 - Lack Enforcement of Labor Laws
 - Undocumented Workers
 - Below Minimum Wage / Costs of Living/ Non-Live-able Wage
- CONSUMER PRESSURE
 - Low Retail Cost/ Prices
 - Low Labor Cost

PURPOSE

The purpose of this research study is to explore the roles and perspectives of the multiple stakeholders in the Los Angeles garment industry and ways to reduce the exploitation of labor common in the piecework system.

With the increase in awareness of humane practices, this research examined potential solutions for the research problem.

Stakeholders/ Key Players

- Providing crucial insight into causes, impacts, and solutions to redressing this latest example of industry malfeasance.
- Garment Workers
- Garment Factory Owner
- Garment Factory Manager
- Fashion Buyer
- Fashion Consumer
- Fashion Designer

Design Strategy Methods

- Phase One / Looking & Exploration
 - Face-to-Face Interviews
 - What's On Your Radar
 - Contextual Inquiry

- Phase Two/ Understanding
 - Informational Gathering
 - Affinity Clustering

- Phase Three/ Understanding
 - Statement Starters
 - Stakeholder "Changemaker" Mapping

- Phase Four/ Making
 - Round Robin
 - Concept Poster

PHASE ONE

Face-to-Face Interview
 What's On Your Radar
 Contextual Inquiry

SUSTAINABLE PRACTICE 23

Appendix A: Interview Questions

Interview Questions for Factory Operator / Worker

Please take about two minutes to share your opinion about piecework compensation in the Los Angeles area.

1. General: Age, Ethnicity, Education level and Gender.
2. How long have you been a factory worker in Los Angeles?
3. Where did you learn your skills?
4. What do you dislike about your job?
5. Describe a typical day at work.
6. How many pieces do you sew per day? Why? Are you required to sew a certain amount by the factory owner or manager? How does that make you feel?
7. What styles do you mainly work with?
8. How do you feel about piecework compensation?
9. Do you stop even after knowing how to make clothes?
10. Do you feel you have a healthy working environment?
11. Do you like your work? Please explain your answer.
12. What do you like about your job?

Interview Questions for Factory Owner

1. General: Age, Ethnicity, Education level and Gender.
2. How long have you owned a factory in Los Angeles?
3. Why did you decide to go into manufacturing?
4. What are your requirements for hiring good skill workers?
5. Do you provide training for your employees?

SUSTAINABLE PRACTICE 24

6. How many pieces do you produce per month?
7. What styles do you mainly work with?
8. What do you think about piecework compensation? Why do you use piecework compensation as a strategy for production? Do you think piecework compensation is fair?
9. Do you feel you take care of your employees?
10. Do you feel you provide a healthy working environment?
11. Do you like your work and would you do anything different if you could?

Interview Questions for Factory Manager

1. General: Age, Ethnicity, Education level and Gender.
2. How long have you managed a factory in Los Angeles?
3. How did you become a factory manager?
4. What are your requirements for hiring good skill workers?
5. Do you provide training as a factory manager?
6. How many pieces do you produce per month?
7. What styles do you mainly work with?
8. How do you feel about the piecework compensation?
9. Do you feel you take care of your employees as a manager?
10. Do you feel you provide a healthy working environment?
11. Do you like your work and would you do anything different if you could?

RESULTS

Industry Experiences/ Reflective and Comparative

Past & Current

Analytical & Useful Feedback / Contribution to Potential Change / Actions

Past: Positive Association towards Piecework

Today: Negative Association towards Piecework

Changes in Cost of Living, Lifestyle, Inflation / Rate Increase Over the Years

1. General Age, Strength, Education level and Gender

2. How long have you managed a factory in your life?

3. How long have you managed a factory in your life?

4. How long have you managed a factory in your life?

5. How long have you managed a factory in your life?

6. How long have you managed a factory in your life?

7. How long have you managed a factory in your life?

8. How long have you managed a factory in your life?

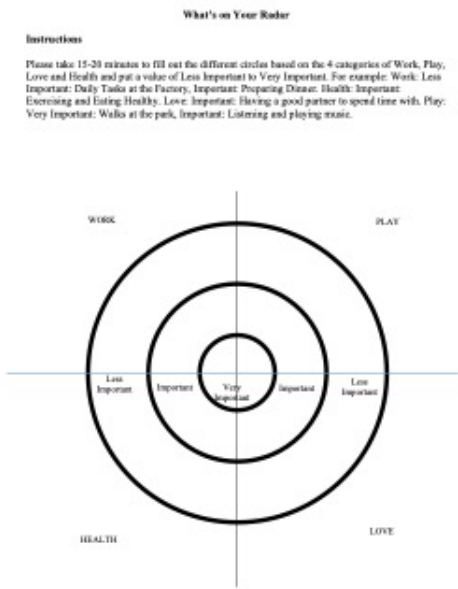
9. How long have you managed a factory in your life?

10. Do you feel you provide a healthy working environment?

"Yes, I think I make a healthy working environment."

11. Do you like your work and would you do anything different if you could?

"I wish for people to make fair money for their skill that they have. And because they are very dedicated, they need to make more money."



RESULTS

VERY IMPORTANT

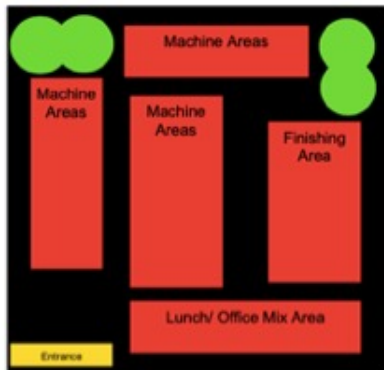
Work
// Workers wanted healthy work environment & quality of life.

Play
// Was not particularly important for participants.

Love
// They wanted to like what they did for a job but it wasn't as important as family and quality of life.

Health
// Very important that they are healthy.

Diagram of L.A. Factory Visit
1,000 sq ft



CONTEXTUAL INQUIRY/ OBSERVATION

Crowded, minimal walking spaces between machines, close proximity.
 Workers were diligently just on their machines.
 Dusty, machine noise.

INFORMATION GATHERING

Farming Industry
 Furniture Industry



PHASE TWO

Informational Gathering
 Affinity Clustering

Both Farming & Furniture has better enforcement of regulations.

Update-to-date policing of policies and industry.

Progressive compared to Fashion Industry

AFFINITY CLUSTERING

Categories

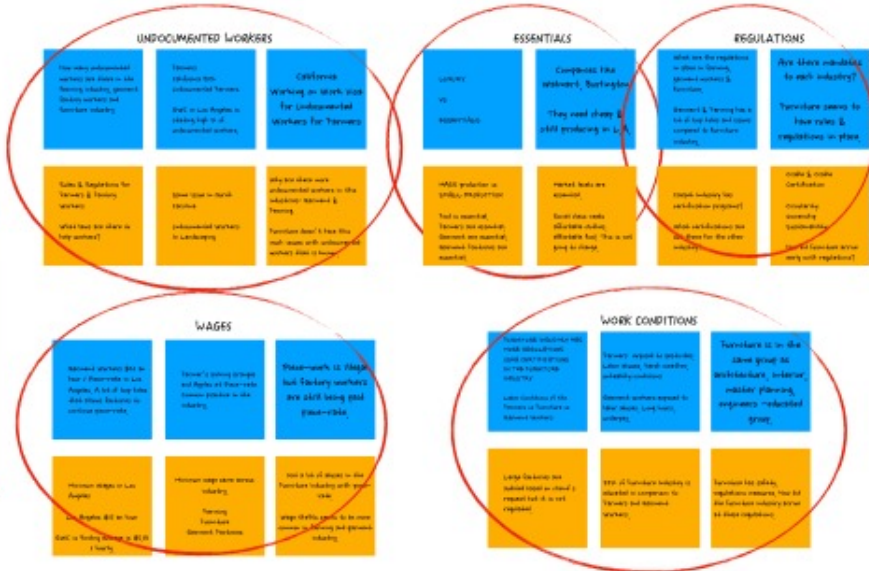
Undocumented Workers

Essentials

Regulations

Wages

Work Conditions



PHASE THREE

Statement Starters

Stakeholder "Changemaker" Mapping

SUSTAINABLE PRACTICE

Appendix B: Statement Starters

How might we...

What could we do...

Piecework compensation is...

The healthy working environment is...



DRAFTS OF
CONCEPT POSTER

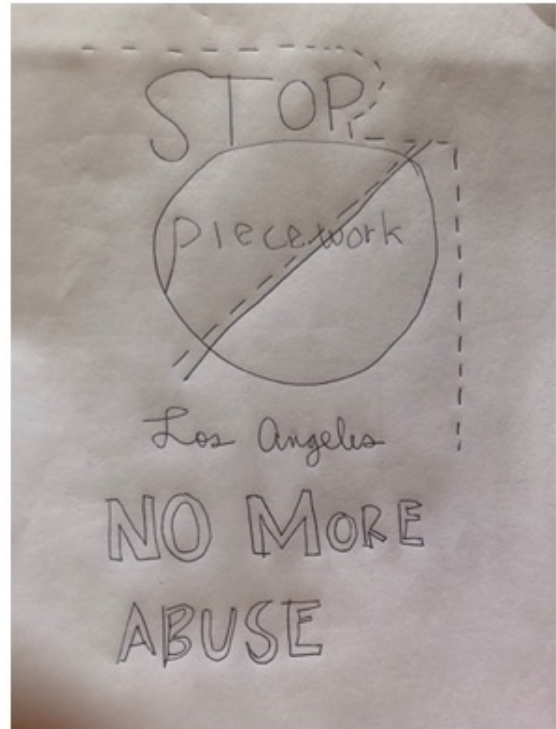
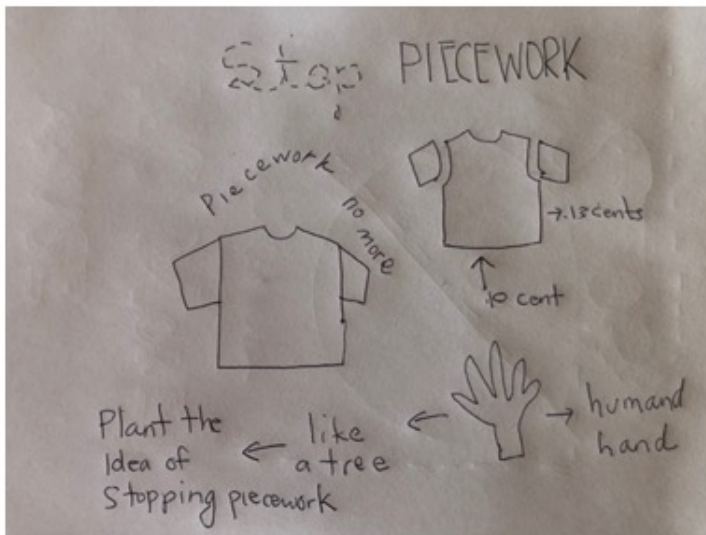
Be part of the healthy change.
Support local manufacturing.

**MADE
IN
AMERICA**

**MADE
IN
L.A.**



**MADE
IN
AMERICA**





Design Thinking Methods CONFIRMED CURRENT STATE of Los Angeles Manufacturing.

Design Thinking methodology can introduce alternative solutions that have not been explored before.

1990 Census on Earnings for Garment Workers were \$7,200 a year/ \$600 a month. Garment Workers Center has confirm the same salary, \$3 hourly. The wages has not increased since 1990.

US Consumers are "highly priced conscious", increasing the pressure on lower production costs to meet the consumer's demand. This pressure is constant.

Piecework/ piece-rate contributed a great deal to these horrific practices, creating unethical and unhealthy working environments.

The industry needs federal, state level policies that can create updates / create new policies, enforce policies for ethical and sustainable practices.