

# EXAMINING GENDER EQUALITY IN MEDIA TECHNOLOGY COMPANIES

Jenny Sanchez

Dr. Cristina Mislán, Project Supervisor

## ANALYSIS

### **Introduction**

Feminists have struggled against political systems to change structures, attitudes and behaviors to be less dismissive and discriminatory of women. We are at a point in history where treating women with equality in the workplace is a prevalent topic across American culture. This topic of gender equality has slowly worked its way into tangible programs and conversations in different industries, but some more than others. While the media technology industry has made strides in this area, much more research still is needed. Current scholarly research asks why there are more men than women in this industry, and how women are treated once they are *in* the industry. The literature also discusses an absence of women in relation to the history of technology, gender discrimination in the workplace, gendered technology, and the lack of women role models in the industry. However, there needs to be more research comparing women's perspectives to their male counterparts' perspectives in the workplace.

I conducted a research study on the relationship between gender and media technology using a feminist theoretical approach. By taking a qualitative approach to this topic, I address women's perceptions and experiences in the media technology industry as well as men's perceptions and experiences. With more qualified women continually entering the work force, but facing unequal treatment, this research study provides insight

into gender discrimination in the media technology industry. Anonymous semi-structured interviews of professionals currently working in the technology field allowed me to extract not only information, but also a narrative about men and women's experiences in a male dominated industry.

Below, the literature review discusses the relationship between gender equality and technology within the context of feminist discourse. To understand the current literature landscape, it is essential to outline a brief history of women in relation to the media technology industry. This will be followed by a discussion of liberal, radical and cultural feminism and the connection between feminism, gender and technology. Finally, the well-known problem of underrepresentation of women in technology companies will be discussed.

Following the literature review, an analysis of three main themes that emerged from the research is discussed. These themes are as follows: the media technology industry is male dominated and has aspects that are discouraging to women; there are common hurdles and barriers faced once in the industry; and within the industry there is a discussion of whether or not gender diversity on a creative team affects the end product, creative element, or web tool. I conducted this research study while completing a professional project at a media technology company. I applied the insights learned from the research study to my personal experience at work. Likewise, because I was in a similar position to the participants of the research study, I had an enhanced comprehension of their experiences.

## Literature Review

### History of Women in Technology.

Media technology is broadly described as the technology used to create media. I am defining the “media technology industry” as an industry that encompasses *applied creative services*, which are “those fields where creativity is used for commercial purpose” (Windels, 2012, p. 503) plus the use of technology to create digitally interactive products, such as an app or website. Within the media technology industry, there are many types of job positions to be held. This project will talk specifically about those positions that use the knowledge of interactive design, web design, and web development or programming combined with creativity to execute a digital component of a product or an advertising campaign. People in these job positions are referred to as web professionals. According to A List Apart, a website that “explores the design, development, and meaning of web content, with a special focus on web standards and best practices,” describes web professionals and their impact as people who “call [themselves] a user experience consultant, web developer, or content strategist; whether you design customer flows, buttons, or brands; no matter what title you hold as a full- or part-time web professional, your work shapes our future and ought to command the world’s respect” (“A List Apart,” 2016).

According to *Women, Science, and Technology*, “...the absence of women in the history of technology has to do with the traditional identification of invention with men and machines, and that technology has been defined to exclude women’s work” (Wyer, 2009, p. 9). However, these historical accounts of technology are often incorrect, because women were not allowed to file for their own patents or inventions until the early 1800’s,

rendering women in technology almost invisible (Wyer, 2009). It is also known that women's contributions to computer technology were largely concealed until approximately the 1980's.

Another view from scholars of the history of technology is that since the nineteenth century, "as modern Western societies attributed the ability to create and wield technology to men, they concurrently socialized women to perceive that what technology consists of, how it works, and what it may be used for is beyond their ken" (Way, 2012, p. 187). Many feminist scholars have noted that the history of technology is "populated by white, middle-class men...[and] they are the makers of technology" (Kubik, 2012, p. 139), while women are on the receiving end. In summation, in this view women were invisible and not often given the opportunity to create or invent technology because they were conditioned by society not to.

Fortunately, women's involvement in technology throughout history has in some ways been rewritten and acknowledged by feminist literature. In an article written by Laura Sydell of NPR, she discusses an oral history project of the Computer History Museum and with Walter Isaacson about his book, *The Innovators: How a Group of Hackers, Geniuses and Geeks Created the Digital Revolution* (Sydell, 2014). In Isaacson's book, he states the importance of Ada Lovelace, a mathematician born in 1815, who created the "blueprints" of a computer that could display not just numbers, but words, pictures and music, as well. These notes were eventually used to create the first computer a century later. This is significant because college-aged students studying computer programming still seldom know who she is (Sydell, 2014).

Another example of where women were erased until recently is with the invention of the ENIAC machine, also known as the first general-purpose computer. A team of six women was called upon to write programs for the ENIAC during the 1940's, while two men built the hardware. On the day of the unveiling, the women were not allowed to partake in the celebratory activities or given credit for their work. The recognition went to the two men instead (Sydell, 2014). These two major events are recognized as irreplaceable influences on computer programming, yet these women's contributions were unknown for decades.

In addition to women's invisibility in the history of technology, "until recently, histories of technology did not feature women engaging with technology in capacities other than as passive consumers" (Way, 2012, p. 187). For example, a study examined personal digital assistant technology (PDA's) failed attempt at targeting women and shows how women had no choice in how technology was created for them. Rodino-Colocino compared PDA's to the television, because in the 1950's it was seen as a new piece of technology. Television programming was very specific to women who were at home during the daytime, so the room with the television became the heart of the home. "Audrey," a PDA, was supposedly the nerve center of the home, and was marketed to fit into the kitchen where the woman spends much of her time. However, because the interface and technology was too advanced for an average person, this product did not do well and was eventually pulled from the market (Rodino-Colocino, 2006).

This article also analyzed how a handheld device called the Palm V was first marketed toward women. In the late 1990's after a controversial advertisement degrading women ran on bus covers, Palm Computing answered backlash with this: "We're actually

trying to attract more women with the Palm V than ever before... The Palm V is more elegant and thinner which is more appropriate for female users whose hands are smaller” (Rodino-Colocino, 2006, p. 379). Overall, this article demonstrated that even in the early 2000s, technology was used to further separate men from women and put women “where they belong,” the home (Rodino-Colocino, 2006). With both of these technologies, women were on the receiving end of a piece of technology created by men.

Although women are now present in the industry and history, many still face gender discrimination and uncomfortable situations on a daily basis in media technology companies. For example, TechCrunch covered a string of events that led to the departure of engineer Julie Marketing Consultant Horvath from a well-known tech company called GitHub (Tsotsis, 2014). As one of few female engineers in the company, Horvath dealt with male colleagues erasing her work for refusing romantic advances; the founder’s wife verbally harassing and threatening her on a daily basis; the founder chastising her for “bad judgment” to which she was left crying uncontrollably; and a “strip-club” like environment where a line of men gawked at two women hula-hooping (Tsotsis, 2014). While women slowly get rewritten into the history of technology, research on this topic is deficient of women’s contributions. Also, as seen by the GitHub example, women are still not equal in the media technology industry, rendering it difficult to have women’s contributions to technology even be written into history.

### **Frameworks of Feminism.**

In society today, females are still favored less than men when it comes to power, prestige and money (Tong, 1989). In its most simple form, feminism means the “advocacy of women and the support of women’s political rights,” (Kitch, 1994). While

there are different strands of feminism, “all feminist positions are founded upon the belief that women suffer from systematic social injustices because of their sex, and therefore, ‘any feminist is, at the very minimum, committed to some form of reappraisal of the position of women in society’” (Whelehan, 1995, p. 25). While feminism is rooted in the same problem, the differences in feminisms arise out of defining the ‘oppressor’ and offering conflicting ideas of solutions to be liberated from the oppressor that has been identified (Whelehan, 1995). The three most prevalent strands are liberal, radical, and cultural feminism.

According to Imelda Whelehan, liberal feminism is the oldest form of feminism and very challenging to define (Whelehan, 1995). Liberal analytical frameworks can be traced back to the seventeenth century and involves a male-oriented meaning of politics. Although stemming from a liberal analytical framework, liberal feminists “tend not to identify their position as ‘political’ but rather as a sensible, moderate and reasonable claim for formal sexual equality” (Whelehan, 1995, p. 27). Instead of thinking of liberty and equality in abstract terms, liberal feminists think in concrete terms for what liberty and equality mean for men and women (Tong, 1989). An emphasis is placed on equality of men and women in every way (Kitch, 1994), meaning that biology differences should not be used to “create distinctions between the mental or rational capacity of men and women” (Whelehan, 1995). The overall goal of liberal feminists is to “free women from oppressive gender roles,” or roles seen as justification of women’s lesser place in academia and business, as well as any environment in which women are not allowed to excel as far as men (Tong, 1989). Some view that liberal feminism is the only way to create a society in which “women and men can thrive equally” (Tong, 1989).

Liberal feminists also argue that because women are prone to a more nurturing disposition compared to men's rational disposition, they are pushed into jobs such as nursing or childcare and "steered away from jobs in business, science, technology, engineering and mathematics" (Tong, 1989). While women are pushed toward certain jobs, men also experience de facto gender discrimination. "Although liberal feminists sympathize with men who find it difficult to pursue child-centered careers," (Tong, 1989, p. 34-35) they also believe these men do not receive the same systematic constraints that women experience. But because both genders experience discrimination in some form, liberal feminists believe that "women and men might be able to develop the kind of social values, leadership styles, and institutional structures needed to permit both sexes to achieve fulfillment in the public and private world alike" (Tong, 1989, p. 30). While liberal feminism focuses on concrete ways to lessen the gap between men and women, radical feminism focuses more on the political systems in place.

Second wave feminism, along with radical feminism, began in 1968 (Whelehan, 1995) and arose from Friedan's *Feminine Mystique*, where it was realized that women's limitations in society are due to a systematic structure that privileges men. This rhetoric is argued to have surrounded the whole women's liberation movement (Denker, 2015). Additionally, second wave feminism places women in a victimized state, where the blame is placed on the shoulders of patriarchy. Women should not see themselves at fault for their "weakness," but should see that this weakness is "a part of a larger system of oppression" (Denker, 2015). Klein has defined different aspects of radical feminism to offer a clear description of the concept. (1) Patriarchy is "a system of structures and institutions created by men in order to sustain and recreate male power and female

subordination” (Klein, 1996, p. 15), (2) radical means “pertaining to the root” (p. 9), and (3) radical feminism is looking at the “roots of women’s oppression” (p. 9). In other words, radical feminists’ view is that “...women as a societal group are oppressed by men as a social group and that this oppression is the primary oppression for women” (Klein, 1996, p. 11). In order for women to gain equality “a total revolution of the social structures and the elimination of the processes of patriarchy are essential” (Klein, 1996, p. 12).

One way to describe why women graduate with a degree in science or engineering, but do not have a career in the field can be explained within a radical feminist lens. According to Mary Wyer, this is called the deficit model. Within this model, the reason women are underrepresented is because of “structural barriers” such as legal, political and social differences in the way women are treated (Mary Wyer, 2009). Underneath structural barriers, there are some to be considered formal, such as laws, and informal, such as lack of resources available or “boys clubs.” The second way to describe this phenomenon is within a cultural feminist context, or the difference model. This states that women and men’s goals are different (Mary Wyer, 2009). The reason women are not represented equally is because women have culturally been told that science is masculine and, therefore, do not want to participate in the field. Both of these models emphasize that there are constraints against women. They are either constrained by the system or constraining themselves (Mary Wyer, 2009).

Cultural feminists believe in the differences between men and women, and that social change will come by adding feminine values to the masculine values that currently run society. According to cultural feminists, men have created a negative cultural

connotation for female attributes, so a main component of this strand of feminism is to “revalidate [those] undervalued female attributes” (Alcoff, 1988). “Cultural feminists have not challenged the defining of woman but only that definition give by men” (Alcoff, 1988, p. 407). Unlike radical feminism’s belief that liberation will come from demolishing the patriarchal society, cultural feminism “equates women’s liberation with the development and preservation of a female counter culture” (Alcoff, 1988, p. 411). There is a “commitment to preserve rather than diminish gender differences” (Alcoff, 1988, p. 411).

In a study that conducted interviews with female educators of technology, women stated that playing with “male toys” when they were younger helped them feel more comfortable around a male-dominated organization as adults. This challenges cultural feminism because these women have shed their feminine identity to fit in with the male colleagues and students (Berger, 2008). This study’s participants describe the women as a “jack-of-all-trades,” able to have both feminine and masculine qualities (Berger, 2008). When this trait of a woman is seen as positive in a work environment, it sheds light on a larger issue within the feminist conversation. The hasty answer is that having more women in the field of technology reduces the problem of isolating women. But Faulkner describes how thinking in these terms creates a problem of either women joining the field to bring a so-called womanly touch (cultural feminism outlook) or women having to become “one of the guys” (liberal feminism outlook) (Mary Wyr, 2009). In either of these scenarios, the woman has to alienate herself as different from her colleagues, or has to pretend to be something she is not for the sake of a job.

There are different views about feminists classifying one another as one of these

three strands, and one view is that it is extremely problematic toward the goal that all feminists (theoretically) agree upon. When one identifies as a feminist, they are asked to pick a “tribe and then to pick up arms against the other competing feminist tribes” (Denker, 2015, p. 321). Denker affirms that this “keeps women from uniting in any functional way,” which furthers the patriarchal society (Denker, 2015). She claims that this also forces feminists to think in dichotomous terms like patriarchy has always done, which creates unnecessary distance and anger within the different strands of feminisms (Denker, 2015). Those that have classified as a certain type of feminist would then be in opposition to this view.

### **Gender and Technology.**

To address the relationship between gender and technology, it is important to discuss different ways technology can be defined in relation to society. Technological determinism asserts that the technology itself determines the culture it resides in, acting as an external agent disconnected from its users and creators (Chandler). This is the most extreme form of relating technology and society, which leaves room for less extreme theories to oppose. Within the context of gender and technology, specifically feminism and technology, it is essential to reject hard technological determinism and instead opt for soft technological determinism. Soft technological determinism means that technology cannot be separated from those who create and employ it. “Those who design technologies are by the same stroke designing society” (Faulkner, 2001, p. 82). Also within this view, society is seen as able to alter a technology’s intended uses once it interacts with the physical world. For example, technology is defined differently depending on which gender has invented or uses something more (Zoonen, 1992).

Within the topic of gender and technology, there are similar subsets of research discussing *women and technology*, *feminism and technology*, *feminist technologies*, and *gendered technology*. *Women and technology* “focuses on specific technologies or technological arenas encountered by women” (Faulkner, 2001, p. 80), and the implications of gender in those areas. For example, cyberfeminism sees the Internet as a vast territory of “arenas in which technological process is gendered in a manner that excludes women from access to the empowering points of techno-culture” (Oh, 2012, p. 1). This includes not only the Internet, but “also in institutions that shape the layout and experience of cyberspace” (Oh, 2012). At the core, this aims to point out that “women and technology” encompasses the physical piece of technology as well as the way women interact with that technology. There are three main ways women can interact with technology: 1) Women use the technology in their everyday lives; 2) women use technology to create an end product in a professional setting; and 3) women create the technology in a professional setting to be used by others. Research shows that “vastly more women are “on the receiving end” of technologies than create them” (Faulkner, 2001), so more often men are creating technology for everyone to use.

*Feminism and technology* focuses on “not only how gender can shape technology but also how the design and/or use of technologies can constitute gender identities and relations” (Lohan & Faulkner, 2004, p. 321). For example, when cell phones were marketed with pink rhinestones, it was clear that this technology had been designed for men, not for people, and now the design needed to be altered to appeal to women, too (Layne, 2010). “The changes they made based on their understanding of ‘women’s aesthetic’ raised...the question of whether these were actually women’s choices or men’s

choices for women” (Layne, 2010, p. 5). “Feminizing an existing technology does not make it feminist, but often just the opposite” (Layne, 2010, p. 4) as seen with this example.

Layne has defined *feminist technologies* as “tools plus knowledge that extend our human capacities and enhance women’s ability to develop, expand, and express their capabilities,” not to be interchanged with *feminine technologies*, which are “technologies associated with women by virtue of their biology” (Layne, 2010, p. 3). According to Layne, this means that feminist technologies are more likely to be designed by women “because the life experience of a designer informs every aspect of design, including problem identification and selection” (Layne, 2010, p. 7). With this view, it is clear why male dominated creative media technology teams are at a disadvantage to generate technologies with women’s use in mind.

There are two ways gendered technology can be viewed. The first is *gender of technology*, which according to Wendy Faulkner, means that the technology itself is gendered. Gender of technology assumes there is a duality to technology. Some artifacts take a masculine form and others take a feminine form creating a “hard” and “soft” technology dichotomy. Hard technology can be considered rockets or weapons, and an example of soft technology is a kitchen appliance. Although women interact with “soft” technology on a regular basis, the artifacts are not considered to be “real” technology (Wyer, 2009).

Similarly, “in technology oriented fields, females tend to enter office-type jobs where they are directed *by* the technology while males enter fields such as engineering in which *they* direct the technology” (Wyer, 2009, p. 73). Although both are interacting with

technology, “men’s relationship to technology is often seen as more natural, and hence more legitimate” (Kubik, 2012, p. 137). Along the same lines, job positions that create technology are seen as working towards societal progress, which is associated with power and control. The need to dominate and have power and control are seen as masculine, so technology is understood as a “masculine culture.” (Faulkner, 2001).

On the other hand, *gender in technology* means that “gender relations are both embodied in and constructed or reinforced by artifacts to yield a very material form of the mutual shaping of gender and technology” (Faulkner, 2001, p. 85). This is evident in the design of technology, where, “features designed into artifacts tailored specially for women or men users tend to reflect and reinforce gender stereotypes, which in turn, play into design choices” (Faulkner, 2001, p. 84). For this reason, women are expected to catch up on the technology of today so as to become equal counterparts to the men who have created and use the technology. But “men’s interests, priorities, perceptions, and experiences are bound to be reflected in the design of artifacts,” (Wyer, 2009, p. 149) which makes it more difficult for women to use these technologies. In addition, the omission of women “from the design, production, application and use of technology leave a male bias to be unchallenged” (Zoonen, 1992).

For example, a case where the design of technology reinforces gender stereotypes is the Apple Watch. There have been many articles discussing where Apple went wrong on the design of this piece of technology and where reviewers of the product went wrong with facilitating the conversation. Sophie Charara from Wareable.com points out two main missteps. First, “most of the reviews (written by men, for men) of the Apple Watch (designed by men) will have made some assumptions” (Charara, 2015). The first area the

Apple Watch missed is the size. Charara explains she has “a smaller wrist than pretty much all male tech reviewers...every single smartwatch I've worn so far has looked - and felt - a bit too big” (Charara, 2015). Secondly, Apple has integrated new tracking technology with their software updates, specifically health information. The interesting point is that “Apple Health tracks bizarre metrics like copper intake but not periods.” Because men designed this new technology, their bias is engrained in to the product.

### **Underrepresentation of women in media technology companies.**

An overwhelming theme woven throughout the literature on gender and media technology is that women are vastly underrepresented in technology, science, and information technology fields. The main problem lies within the idea that “in disciplines where there are few or no women in a position to promote change, there are few who have a vested interest in challenging the status quo” (Wyer, 2009, p. 1). For example, a study conducted with in-depth semi-structured interviews of 25 executive women in information technology, revealed that two, of six total, major challenges the participants faced in their career were gender discrimination (32% of participants) and male dominance in IT (32% of participants). The participants elaborated that because of their gender, (1) their advancement was slower, (2) they had to prove themselves, and (3) they were not treated with respect and taken seriously. The participants also said that their bosses oftentimes did not think women should have leadership positions (Thomas, 2007). The solution these participants offered was that instead of stifling women’s advancement and even existence in information technology, organizations should be working to create an environment where women feel welcome and as an asset (Thomas, 2007).

Furthermore, a content analysis study conducted on the publication called

*Science*, revealed how advertisements showed women half the time they showed men in regular issues. The study also exposed that advertisements including men were commonly used with words such as “accurate, fast, and precise,” while advertisements with women were paired with the overarching theme of “science made simple.” A feminist theoretical framework helps underscore this because those types of descriptions are only instilling a certain type of patriarchal culture, where science is cool for men, but confusing for women. Additionally, “the fact that popular images of both science and technology are strongly associated with the masculine side...must be one of the reasons why, in a deeply gender divided world, most girls and women do not even consider a career in engineering” (Wyer, 2009, p. 144). In the conclusion of the study, the author stated that when advertisements change their reflection of culture, it would be possible for science stereotypes to change too, as well as lead to the diversification of gender in science (Mary Wyer, 2009).

The final reason the literature pointed to as to why there are fewer women in these industries is because of the lack of women role models. By the same token, the few women who are present have attributed their success to having a role model or mentor, but not always female. According to a study about the number of women teaching in the science and technology fields, only 3 to 15 percent of faculty members were women. “The lack of female faculty undermines efforts to attract girls to science and engineering, and particularly into the classroom on the college level – largely due to a lack of role models” (Wyer, 2009, p. 73). A previously mentioned study about educators of technology stated that “young girls need female technology education and STEM role models to guide them into these non-traditional fields, since gender role modeling

directly supports intellectual and emotional growth” (Berger, 2008, p.65). This study also says that support was a major reason these women decided to enter the field of technology, however it is generalized that all of the participants had a male role model growing up (Berger, 2008).

Additionally, in a study mentioned above that conducted in-depth, semi-structured telephone interviews with 25 participants about their path and role as women executives in information technology, the women responded overall, that support was what helped them advance in their careers. This meant support from parents, spouses, and sometimes children (Thomas, 2007). They also “felt that having female role models to look up to and having the opportunity to talk and share your experiences with a female mentor was important for building self-confidence” (Thomas, 2007, p. 41).

Many qualitative studies conducted on this topic so far do not include the views of men, or a comparison of two people of opposite gender in the same workplace. Other studies focused on women who made it to the top of the career ladder, while I gathered material on people with a range of experience in the media technology industry. This information is a missing component of the literature and will lead to a deeper, relevant understanding of the discriminatory or non-discriminatory culture of media technology companies in the United States. Based on the literature review, it is apparent that women’s contributions to the history of technology are extremely important, but not as well recognized. This speaks to a greater problem relating to gender and technology. Women’s’ relationship with technology and the environments where technology is used and created can be seen as favoring men. Furthermore, positioning this problem within a

feminist context allows for a lens with which to analyze these experiences of men and women. The research questions I aimed to answer with this research study are as follows:

- 1) How do women and men perceive and experience web professional positions in a media technology company?
- 2) How do these similarities and differences reflect or challenge liberal, radical and/or cultural feminisms?

### **Methodology**

The methodology for this qualitative study was anonymous semi-structured interviews. “Qualitative interviewing explores respondents’ feelings, emotions, experiences and values within their ‘deeply nuanced inner worlds’” (Brennen, 2012). With this methodology, I allowed subjects to think deeply and understand for themselves their true experiences and emotions. Thus, a narrative of their experience was told more so than a list of answers to questions. These types of interviews are “usually based on a pre-established set of questions that are asked to all respondents” (Brennen, 2012). But, with semi-structured interviews, I was able to ask follow up questions specific to the interviewees’ response. This tactic is used to “delve more deeply into some of the topics or issues addressed, or to clarify answers given by the respondent” (Brennen, 2012).

I interviewed males and females with job positions that use the knowledge of interactive design, web design, and web development or programming combined with creativity to execute a digital component of a product or an advertising campaign from five different media technology companies. This resulted in eight interviews total. Each interview took place separately in order to keep anonymity of the participants. Eight interviews allowed for many different perspectives to be shared and brought to light

without becoming redundant.

The initial point of contact for all five of the media technology companies participating in this study varies, but all were followed up with by email to organize the time and date of the interview. Two of the interviews were conducted in-person, but because the participants are spread across the country, six of the eight participants were interviewed via video-chat. This method was preferred over phone interviews so as to engage with the participants on a more personal level.

The five media technology companies provide a large range of different services and are varied in size. Company A has approximately 200-500 employees; Company B has approximately 10,000 employees; Company C has approximately 50-200 employees; Company D has approximately 5,000-10,000 employees; and Company E has approximately 2,100 employees. Regardless of company size, however, all participants worked on a team of 10 or less doing web design, digital product development, or programming web tools. Additionally, while each design, tool or product is different; all are created for other people to use. All participants also work with the same mix of technologies on a day-to-day basis. These technologies include the Adobe Creative Suite programs, programming languages such as HTML, CSS, JavaScript, or PHP, text editors, and email.

Participants ranged between the ages of 24 to 35, and two were over the age of 40. Participant 1 is a female Web Developer/UX Designer; Participant 2 is a male Web Developer; Participant 3 is a female Art Director and Web Designer; Participant 4 is a male Web Developer; Participant 5 is an female Interaction Designer; Participant 6 is a female Design Strategist; Participant 7 is a male Programmer/Web Developer; and

Participant 8 female is a Data Programmer/Web Developer. Each interview ranged from 45 minutes to 1 hour and a half and the main questions I asked the participants are as follows:

- 1) Can you describe what an average workday looks like for you?
  - a. What types of processes do you carry out each day?
  - b. How would you describe your main responsibilities?
- 2) Can you describe any key points in your journey to becoming a job position title here?
  - a. What types of role models did you have growing up?
  - b. Can you describe a specific moment where you knew what you wanted to do as a profession?
  - c. Can you share about a time when you felt your passion was crushed or you were facing a hurdle that may hinder you from pursuing the profession you were seeking?
- 3) In your opinion, what personality types usually succeed as a web designer, web developer and interactive graphic designer?
- 4) Can you describe an example of how office meetings are run?
  - a. How would you describe the communication styles present during those meetings?
- 5) Have you ever felt held back from achieving something you wished to attain?
  - a. How would you describe any barriers you have faced in gaining success at work?
- 6) Talk to me about the gender inconsistencies in this industry, specifically among

web designers, developer and interactive graphic designers.

- a. Research shows this is still a male-dominated industry. What are your thoughts on this?
  - b. In your opinion, why are there so few female web designers, web developers and interactive graphic designers compared to male?
- 7) Are there aspects about the job position of a web designer, web developer and interactive graphic designer that might discourage women from staying in those roles?
- 8) Are there any aspects about those job positions that make it easier for a male to succeed?
- 9) Are there any aspects about those job positions that make it easier for a female to succeed?
- 10) Your company was involved in the creation of product/campaign, what do you think this means for the culture of the company?
- a. How has this affected the type of work you produce in that work environment?
- 11) How do you think your role as a job position title here affects the content your company creates?

Because these interviews were semi-structured, follow up questions not listed in the original interview questions document were asked when necessary. This type of question occurred when clarification or more information was needed to describe the participant's thoughts.

## **Findings**

Three prominent themes emerged from the research collected to support the literature review: 1) the media technology industry as male centered, 2) the hurdles and barriers in the industry, and 3) gender diversity as it may or may not affect content. These themes illustrate how gender norms are reinforced in the industry and how a cultural feminist framework emerged from some of the discourse from interviews with participants. As such, this project underscores how participants highlighted the role of culture in influencing gendered ideologies. These three themes relate to the topics mentioned in the literature review such as the underrepresentation of women in the industry and where technology comes into play within the frame of gender and feminism.

### **Male Domination in the Media Technology Industry.**

Participants expanded on possible reasons for a male dominated industry and certain aspects that may discourage women from joining the field, which helps maintain the presence of a male-dominated industry. The first two arguments participants made regarding a male dominated industry reinforces gender norms through cultural ideologies. They believe women are discouraged from joining the field because of wanting to start a family or wanting to spend more time with their family. They also indicated men and women have different communication styles that affect the types of job positions they hold. The third argument participants made for a male-dominated industry highlights the role of education, which they argue does not cater to the development of STEM skills in females. While the male participants' responses regarding education reinforces gender norms, female participants' reflected a cultural feminist framework.

The idea that women are not capable of maintaining a family and a career is not new. Hannah Pym, Marketing Director at Apadmi, a media technology company, parallels participants' views that the industry is male dominated and discouraging to women due to family constraints. Pym stated that retention rates for females in technology companies is 15 percent lower than males and is usually the "result of challenging working conditions and company culture" (Pym, 2016). She states that "it is widely accepted that working in the tech industry means working late hours and often staying behind" meaning that those with families, usually women, are affected negatively (Pym, 2016).

Participants #1F, #8F and #5M echoed this argument by indicating that many women are discouraged due to the demanding nature of the job. Interviews highlighted their belief that web professionals work too many hours to have both a family and a career. For instance, participant #8F said she thinks part of the reason she does not have children is because she spent her 20's and 30's working late hours. Additionally, participant #5M explained how a female coworker feels guilty for loving her job:

And that's what she says all the time, you know, I feel like a bad mom sometimes because I enjoy my work and I want to be at work right now. But that means my kids are at daycare a little bit longer. But I do enjoy being with my kid. And I'm like, you know, that doesn't make you a bad mom, that makes sure you have a life beyond your family. That's very healthy. I don't say all of that, but if it makes you happy being here you shouldn't feel guilty about that.

As seen with these examples, female participants discuss the subject of missing out on family in a despondent manner. When participant #8F discussed not having children she

ended by indicating that she does not regret anything about her life. This type of response from participants reinforces gender norms, which are defined as “a set of rules or ideas about how each gender should behave” (Center, 2012). Literature asserts that because “the patriarchy does have its specific set of rules in capitalist America...mothers who work, even if economically obliged to do so, are made to feel guilty for it...” (Lindsey, 1994, p. 431). Culture has designated certain traits, actions and spheres as either masculine or feminine, and these old ideologies are reinforced in the media technology industry.

In contrast to female participants, participant #5M discussed how a male coworker left his previous job and took a pay cut to spend more time with his family, but the feeling of guilt was never mentioned. This male coworker’s attitude about the situation was described in an assertive manner; he wanted to spend more time with his family, so he left his job and started a new one. Such insights about the connection between women and family in the media technology industry reinforce cultural gender norms, where it is believed that women are expected to remain in the household. Because gender norms, or this set of “rules,” are determined by culture and not by biology (Center, 2012), men and women are expected to remain in certain spheres even if they are better at something else. Literature says, “while men hold fast to the domination of the ‘public sphere,’ it has been the world of home and family that is woman’s domain” (Ehrensaft, 1994, p. 434). Culturally, “men and women are brought up for a different position in the labor force: the man for the world of work, the woman for the family” (Ehrensaft, 1994, p. 434).

Additionally, participants mentioned that a difference in communication styles between men and women contributes to the discouragement of women in the industry. Literature demonstrates how this argument reinforces gender norms. According to Yun Ling Li and Anthony Peguero, for many years, women's professional occupations resembled "their domestic responsibilities," which assumes that "women are incapable of performing complex tasks" (Li, 2015). Cultural assumptions about the gendering of professional occupations, therefore, has influenced how individuals perceive feminine traits. In turn, such values may be perceived as negative in the industry. For instance, women are pushed toward job positions that require less technological competence, which are seen as "softer" positions and not as important as web developer positions.

For example, participant #7M offered the idea that a gender difference in temperament has helped push people toward certain skill sets. He provides support for differing communication styles contributing to the male-female disparity in the industry by stating, "men are not as good at communicating in a more nuanced way." Here, he refers to men in web developer positions who lack the ability to effectively communicate with personalities that differ from their own. He explained that different communication styles lead to particular job positions. For instance, males "tend to be more successful in jobs where a nuanced communication is not required," such as web developers, while, "people who are project managers taking client observation and translating it to web developers are women." As a result, for this participant, cultural assumptions about gender differences has helped influence how particular skill sets and positions are also gendered. Thus, he argues that these assumptions lead to "pay disparity."

Participants also highlighted flaws in the education system. Responses from males reinforce gender norms that assume women do not have the same access and exposure to subject areas pertinent to the media technology industry. For instance, participant #4M offered the idea that middle and high school are critical for determining the education path a person will take:

That's usually when people pick up if they are really good at science or math or not. And its one of those defining moments, if you are really good at math and embrace it, then that's what you end up doing, like being an engineer or something like that. And the people who are not, don't like math, that's when they know they aren't going to do any type of engineering later on in life. I would say that males when they are younger have more exposure to math and science get pushed more toward that then girls do.

This reinforces gender norms in the assumption that it is an exposure problem when it is not. Literature points out that it is a cultural issue: "...many girls are indoctrinated to believe that they should be feminine and modest about their abilities, as well as brought up to assume that girls are not innately gifted at science or math" (Pollack, 2015). It is not that females aren't exposed to the subject areas as often as males; but when females are exposed, oftentimes computer science and STEM classrooms lean masculine. For example, the classrooms are decorated with "'Star Wars' posters, science-fiction books, computer parts and tech magazines" (Pollack, 2015), as opposed to gender-neutral décor. This plays into the stereotypes of the technology industry. "At a young age, girls already hold stereotypes of computer scientists as socially isolated young men whose genius is the result of genetics rather than hard work" (Pollack, 2015). Eileen Pollack from the

New York Times stated that research shows men steer away from English as an area of study for the same reason. She wonders, "...how many young men would choose to major in computer science if they suspected they might need to carry out their coding while sitting in a pink cubicle decorated with posters of "Sex and the City," with copies of Vogue and Cosmo scattered around the lunchroom?" (Pollack, 2015). While participant #4M's inclination that females are steered away from the technology industry at a young age resonates with female participants, the main component of his response contrasts to the way females described the education system.

Female participants believe the education system does not engage females in pertinent subject areas. Thus, they believed that combating the education system's flaws would require an adjustment to gender norms. These gendered norms are perceived as beneficial to women. Such arguments reflect a cultural feminist framework, commending feminine traits to allow females the same opportunities as their male peers. To demonstrate, participant #1F and #6F stated that in their experience, girls decide they do not like math and science when reaching puberty. Participant #6F said, "I'm sure it starts at a young age. I was good at math until maybe puberty and then I...didn't consider myself good at math anymore." Comparably, participant #1F connected the experiences she sees her niece going through to what she experiences at work:

Females become less confident in math skills in the age range of 10. That's a really critical age to keep girls in STEM. So I think it's an exposure problem and a lack of confidence. Females take a different approach to building something or coding traditionally rather than men, because men approach it like slaying the beast, that they can make this do what they want. And females take a more

nurturing approach; you know I'm going to build this up to be something awesome. I think there's maybe a disconnect with which style is better and I think there needs to be more of a mix of the two.

The common string throughout the female participant's narratives about education is that certain subject areas are "off limits" to certain genders as soon as the student shows a sign of perceived weakness. A cultural feminist framework is reflected in the participant's views of wanting to adapt the education system to allow for engagement of both gender's common dispositions, regardless of subject area. As mentioned in the literature review, cultural feminism states that the "commitment to preserve rather than diminish gender differences" (Alcoff, 1988, p. 411) will lead to women's liberation. Cultural feminists preserve the female counterculture and commend the differences between men and women (Alcoff, 1988, p. 411). Female participants allege that the industry might benefit from the addition of feminine traits and that this starts with education.

Overall, participants gathered that the lack of women in web professional positions was due to family-related reasoning, the differences in the way men and women communicate, and early educational development. They also attributed these things to an engrained culture they never felt like they could challenge. To reiterate, these arguments reinforce cultural gender norms, and is only reflective of a cultural feminist framework in female participant's arguments on education.

### **Barriers faced once in the media technology industry.**

When asked about hurdles or barriers deterring participants from moving forward in their career, participants provided four different views: some presented the view that

few barriers hindered them, some said technology was a barrier, two discussed a time when their passion was crushed, and still others noted subtle, yet impactful, barriers. These four types of barriers, however, were perceived as temporary. Participants do not see the structural barrier of patriarchy in the first place; instead they see it as a small thing that can be overcome. The narrative from the participants about barriers in the media technology industry instead reinforces an ideology of individual responsibility.

The first route participants took was explaining how they did not have barriers, or if they did, technology was the only one. For example, participant #7M said that when he saw a barrier ahead in his career and life in general, he would maneuver around it and get to whatever was on the other side. He expounded saying, "...by working hard I have made it easier for myself to have no barriers. But it also helps that I'm a white male."

Similarly, participant #4M said he didn't have any issues or obstacles so far because he can learn whatever he needs to learn. His biggest hurdle is working for a company where the coding languages used for projects is outdated, so keeping up with the technology in an ever-evolving industry is a challenge for him. To further cement the theme of technology as a barrier, participant #2F explained how that she does not wait for someone who knows the technology to aid her in projects. Instead, she learns how to use that specific language on her own. Although she is able to move forward in this manner, she said learning a new language is "a hurdle every time." At the end of her explanation, this participant also mentioned that "even being a girl sometimes is a hurdle."

Both participant #4M and #2F recognize that there are barriers based around gender, but do not see this as a barrier that has held them back from achievement in the industry. This reinforces an American-based ideology of individual responsibility, which

highlights the myth of meritocracy. Richard T. Longoria defines meritocracy as “a society where every individual, regardless of circumstances of birth, can realistically compete with more advantaged members of society and upward social mobility occurs easily for those who are talented and make use of their talents,”(Longoria, 2009). However, this system cannot work because white males have benefited from older generations of white males positions in society, while females have suffered from the very reason males are advancing. The idea of meritocracy suggests that when hiring, only merit and talent should be taken into consideration. However, “if persons are hired solely on the basis of present qualifications, then many counterfactually deserving but actually less qualified females and blacks will be rejected” (Hardy Jones, 1994, p.68). This means that white males will mostly always have merit over females. “Many better-qualified males would have been far less qualified had they not reaped the benefits of an unjust system favoring them at virtually every turn” (Hardy Jones, 1994, p.66). The participants believe their work ethic and talent has allowed them to achieve success in the media technology industry, but they do not realize the different paths each gender took to get to the same place.

Both genders experienced situations where their passion for the industry was crushed. Each of them considered those situations a large barrier in their career path. However, only female participants addressed more subtle occurrences in which they were not deterred from the industry. Instead, they were worn down from the frequency of these indirect events. These subtle instances were not enough for the participants to classify them as hurdles or barriers, but many said the frequency of the micro-aggressions starts to add up, which can be crippling to their careers.

Of the eight research interviews, two participants described a point in their career journey where they felt completely knocked down by a male in a higher position than them. Of these two participants, one was female and one was male. This demonstrated that an extremely negative event like this is not experienced by just one gender. Participant #1F said she has blocked out most of the times she felt her passion was crushed, but described one situation where she went in for a job interview:

The CEO, founder of the company, who has some development skills basically went through and berated my entire graduate school project and also a tangential project, a side project I was working on. And also continued to berate strong mentors in my life and criticize their practices. To the point where I was pretty infuriated at the end of it and I left the building and thinking I'm not going to cry in front of this guy, but as soon as I got to my car I just sat there and was so frustrated I balled my eyes out.

Upon reflection, participant #1F said the experience was really demotivating and had a quick thought that maybe she should look into other type of work. However, because of her support system she was able to overcome the negative situation, and "instead of letting that permeate, I took it and said if he's going to say these things about me then I'm going to do everything I can to be better."

Participant #5M's experience was slightly different because it occurred while he was still in college, yet was pivotal on his path to becoming a web developer. After not passing a required computer science class three times, participant #5M went to his professor's office to ask a question about the upcoming exam:

I sat down with him one day after studying probably about eight hours a day for two weeks. I knew I didn't want to get another D in the class and so I went to him and asked him, "Hey what's the answer to this? Am I right?" And he said, "No you're wrong, the answer is this." And I go, "Can you help me walk through that?" And he goes, "That's the just answer." I'm like, "So you're not going to help me understand it?" And he goes, "Well if you can understand why that's the answer, then that's your fault." And I'm like, "What is there to understand, you haven't told me anything?" And I got so frustrated with him that he was like, "You know if you keep being like this you're never going to be a computer scientist."

Similar to participant #1F, participant #5M also had a support system surrounding him. He said, "At that point I decided I really wanted to learn programming and I got involved with an IOS app with my roommates the following year. You just need to have the passion and the community around it support you."

In both cases, the negative remarks seemed to relate more to an individual as opposed to the industry. The perception that individual incidents are the blame ignore structural issues within the industry. Both participants said after the instance occurred, they worked harder to understand and sharpen their skills.

In addition to these two situations where the participants felt inferior, many participants explained times where the hurdle or barrier was subtler. All of the participants who faced these types of barriers noted that the events were not debilitating to their career in any way, but is something that has stuck with them over the years for

one reason or another. As mentioned previously, the participants who experienced the subtler barriers are all female.

To begin with, participant #8F described a time at the beginning of her career when “there was a stigma of if you were a female, you weren’t part of the real work.” After a project had ended, a superior male was congratulating everyone and shaking their hands, but when he approached her, he said, “I even shake the hands of the secretaries.” After he was told that she was a part of the team, he did not apologize and kept walking toward the director’s office.

In another instance, participant #1F elaborated on an experience where she was working alongside another developer on one project, also known as “pairing” in the development industry. Her partner said they needed to write the code a different way, and after pushing his idea a couple of times, she replied, “I’m confident in that [the first] solution. I know it’s this way because I’m the one who wrote that code. I’m the person who implemented it and it works this way because I’m the person who wrote this.” This participant stated this type of situation has happened several times in her career.

Another subtle event happened to participant #6F. She explained how she was at an after-work event where her boss questioned her about her fiancé:

So we were talking about it and he was like, “Well, you don’t want to have kids?” And I’m like “No.” And he goes, “That means he’s not right for you. And I’m like what do you mean?” And he goes, “Well if he was the right person for you, you would want to have kids with him.” And I was like, “Excuse me? That has nothing to do with the fact I don’t want, it doesn’t matter who I’m with I just

don't want to have kids." And then I think he realized that was kind of inappropriate.

Participant #6F said when she receives comments such as the above, they do not deter her from the industry, but do make her feel uncomfortable.

Other subtle barriers involve situations where women had to communicate their ideas through men or experienced men taking ownership of their ideas. For example, participant #3F described a situation where she was partnered with a man on a project, and he would not accept her ideas. Instead, when she got into a room with her partner and their boss, their boss restated her ideas for her, and then her partner would agree with it. Likewise, participant #2F explained that if she wanted to convince her boss of something, she had to get her male coworker and partner on the project to tell him because he wouldn't listen otherwise. She said this coworker was an advocate for her in the office by asking what he could do to help or if he could talk to their boss for her. In another instance with participant #3F, she "had broken the glass ceiling" on accident. Because the company she was working for merged with another company, she ended up in a very high position in a room with all men from a different country. When she was presenting to a male VP, she said, "He was just super uncomfortable and didn't know what to do with himself. And so he would just talk to the note-taker [male] and wouldn't look at me."

Similar to speaking through men, as mentioned above, participants referenced situations when men would restate the idea as their own. In a different situation where participant #6F was speaking in a team meeting and stated an idea:

We were talking about user research and the potential and what we should do next and I was like well based on what we saw I really think we should do x – and this

is a new direction and I know it might be hard to think about this way but... So he basically heard it, restated it and then typed it down as if it was his idea and I was like did you really just do that? And everybody laughed at him. But it's just so engrained. Like it's a subconscious thing.

Unanimously, the participants who experienced these subtle barriers said that it's engrained into culture and their minds to think and act a certain way. They don't think anyone is intentionally trying to make them feel uncomfortable.

Because the female participants see these situations as something that can be overcome, there is no feminist argument to be made regarding barriers and hurdles faced in the media technology industry. Participants do not recognize the patriarchal structure as an issue. Instead of structural changes, this conversation about gender equality is embedded with individual responsibility as the solution. This can be problematic because it creates the assumption that women and men are equal. Literature discusses this as the assumption that a "failure of boys" is a consequence of "successful girls" (Ringrose, 2007). In other words, blame is placed on females for males' disadvantages, which causes people to believe there is no need for feminism anymore (Ringrose, 2007).

In an "aside" to the research, the notion that women feel the need to gain respect from their male colleagues is one way participants described overcoming the aforementioned barriers. Participants stated how women they worked with, or they themselves, felt the need to fit within a certain definition of a "woman" to be respected. On one hand, this can be seen as a reflection of liberal feminism. This is the idea that to be freed from the oppressive gender roles, women can act any way that suits them. For example, participant #5M said one of his female managers is just like one of the guys

because she uses “colorful language” when she speaks and “does a lot of activities outside of work that would be considered to be more at the male side, like shooting guns and camping and hiking, things like that.” He described her as respected around the office and that she “doesn’t take crap from anyone.” Participant #2F’s comment that “women feel like they have to be one of the guys” reflects that ideology across the industry.

Participant #2F also stated that there are different ways women can earn the respect of the men in the workplace. Acting like one of the guys is one version, but you can also come across as the “woman-in-power” stereotype too. Participant #2F talked about this stereotype from a personal place – recently, she had changed her style and went through a transformation:

I was a lot more tomboy, you know always wore my hair up and stuff and I was like fuck this, I’m straightening my hair. And then I went on a shopping spree to become more feminine, if you will. But there’s definitely some sort of respect that comes with that too. Guys will respect you in a different way. I mean there’s the obnoxious girly-girl that wears bright fuchsia pink all the time where, yeah that’s a little obnoxious and you’re probably not going to fit in. But then there’s the woman-in-power stereotype that you can play into too. So if you’re not doing tomboy, probably your best bet is to go kicking-ass-as-a-lady type of look.

Participant #2F’s notion of fitting a powerful woman stereotype reflects a cultural feminist framework. Cultural feminism issues that adding feminine traits and values to a patriarchal environment will further society in terms of equality for women and men and that women should not be shredding their feminine traits just because it is seen as “less

than.” According to this participant, feminine traits are applauded and will allow females to gain respect from males in the industry.

Similar to participant #2F’s thought process, participant #6F talked about the struggle to maintain an identity at the office that allows her to be respected, but also fit in with the more casual nature of a creative office space.

I wouldn’t feel comfortable wearing some of the things some of the guys I work with wear. Because I don’t want to be seen as being unprofessional and I don’t want to be seen as looking sloppy, or bad, or not taking care of myself. Generally as a woman there’s a lot of pressure to have a certain type of appearance. While outwardly, I have never had someone say you look bad and you can’t work here or something like that, but I think there is pressure to fit a certain... You have to be attractive, but you don’t want to be sexy, and you want to fit in and be professional, but I’m not going to come in wearing a suit, but not my sweatpants either. There’s a lot more thought that goes into that as opposed to men who just throw on whatever.

This participant’s thoughts on gaining and keeping respect in the industry also reflect a cultural feminist framework. She sees herself commanding respect when she is dressed attractively and professionally. However, because she struggles to understand why men do not feel the need to worry about the way they dress, this reinforces gender norms as well. This wardrobe conflict has been in question and debated over for decades. A journal article discussing Title VII of the Civil Rights Act of 1964 substantiates this problem:

“Employers have traditionally assumed substantial prerogatives with respect to the dress

and appearance of their employees, imposing burdens on women that are different from those imposed on men” (Bartlett, 1994).

To conclude, gaining respect in the industry from the female perspective can fall within liberal or cultural feminism. Some women change their appearance to become “one of the guys” to fit in better within a male-dominated environment. This reflects a liberal feminist framework. Others choose to become a “woman-in-power” stereotype to gain respect by emphasizing their feminine traits to a certain degree. This reflects a cultural feminist framework. Because both paths of gaining respect were successful in the narratives mentioned, it is difficult to determine if cultural or liberal feminism is more at play within the industry when discussing respect between males and females.

### **The impact of gender diversity on creative products.**

The final theme that emerged from the research interviews discusses how gender diversity may or may not affect the end result of the product/web tool. There were three different beliefs on this topic: 1) gender diversity on a creative development team does not affect the end product at all, 2) gender diversity only matters in places where key decisions are being made, and 3) gender diversity does affect the final product and helps the betterment of the final product. The fact that some participant’s believe gender does not affect an end product is insightful. Based on the literature, “a diverse and inclusive workforce can...help ensure that a company’s products and services are respectful of their clients’ cultures” (Egan, 2016). Additionally, a recent study about technology companies found that “companies in the top quartile for gender diversity are 15 percent more likely to have financial returns above their respective national industry medians” (Vivian Hunt, 2016). This means that gender diversity is not only important to

the end product, but also has an affect on a company's financial success. Those participants who believe gender diversity leads to the betterment of the final product at either key decision-making phases or throughout the whole process, reflect a cultural feminist framework.

Participants who stated that differences do not affect the end product result commented that the audience for their product is not skewed toward males or females. For example, participant #4M said, "I cant think of a way that me being a man has any affect on what I build. Or what I create. I guess I can't imagine there being anything that a woman would do differently." So if participants thought the product was not geared toward a certain gender, then they believed the gender make up of the team creating it does not matter. But, if the product is aimed at a targeted gender, then they believe the team creating it should be represented by that gender. Participant #2F said, "I do think if it's a woman's product, a woman should be involved."

Participant #6F was the only person to say that gender diversity only matters where key decisions are being made, but that it is important to have different perspectives for well-rounded designs and products:

I think there's only a difference when it comes to the people who are making key decisions, so the people who are developing the products or coming up with the ideas or concepts, not necessarily doing the code. I don't think that makes any difference. I don't think a man or a woman who's trying to fix a bug that makes any difference to what's being offered to people. But having equality where key decisions are concerned I think that that does make a difference.

Participant #7M did not directly echo the above statement, but he did make a similar argument by saying whenever a client asks for input on a design decision, he makes sure to loop in the female designer on his team. This is his way of letting the client know that she is an equal to him and more important in that decision-making process than himself, because it is her area of expertise. By including her in a way that acknowledges the importance of her skill set and perspective is imperative to the product they are working on. These two participant's responses are reflective of cultural feminism because again, adding feminine traits to the process is seen as positive.

Similarly, participant #1F said, "It's going to end up different no matter how you change it. I'm not sure how it would change, but I'm sure it would." This alludes to her thinking that adding different dynamics and perspectives to a team will change the final result in some way. Finally, participant #5M talked from his experience where the women he has worked with have helped him become better at his job:

...I also respect women being on my team because I get growth there too. I want growth everywhere. I want to be challenged by everybody and anybody because I'm willing to be wrong. Willing to be stupid or look stupid when asking a question. As long as I get to learn... I mean I don't think I've learned enough from women because there are not a lot of them in the development world. And so that's why I want more...I think it would change development and the quality. Because you hit more of a diverse audience in the development cycle and you get a different perspective to ask different questions. Or you see someone designs it differently and that there is why diversity should be encouraged and welcomed.

This third outcome where having multiple perspectives on a team is seen as bettering the final product reflects a cultural feminist framework as well. Instead of masking feminine traits, those traits are celebrated as a portal to discovery. Literature surrounding gender diversity on creative teams shows that “companies with more race and gender diverse teams had higher sales revenue, more customers, greater market share, and greater profits than did less diverse companies” (Lecia Barker, 2014). More specifically, a field experiment that “asked 12-person teams of student entrepreneurs to start up, sell stock for, and actually run 43 real companies...showed that gender-balanced teams outperformed both male-dominated and female-dominated teams” (Lecia Barker, 2014).

## Conclusion

The majority of the themes presented reinforce gender norms through cultural ideologies, which in some cases rejected feminism all together. This was evident in all the participants’ belief that facing subtle gender discrimination in the workplace was not seen as a barrier created by the patriarchal structure. A cultural feminist framework was reflected in only in a few instances such as in female participant’s stance on education, in the response about the inclusion of women in the industry leading to better content, and the respect feminine traits can offer in the work environment. On the flipside of that, a liberal feminist framework was reflected in the notion that women must shed their feminine identity to become respected in the industry. A radical feminist framework was neither challenged nor reflected in this research study. This is because none of the participants talked about the need to replace all males in the media technology industry with females, or proposed that laws needed to be changed in order for women to receive equality.

This study expands literature on gender and technology by looking at both male and female perspectives. From the analysis, it can be seen that there are conflicting arguments between genders when discussing the reasons for which the industry is male dominated. However, there are also many similarities in arguments between genders. For example, all participants described some sort of barrier or hurdle they have faced in the industry (although some first identified not having any barriers), but they do not see these as structural issues to be overcome. Both of these findings are insightful and descriptive of areas in which the industry has developed and where the industry still needs improvement in relation to gender equality.

As seen from the literature review, more research needed to be conducted to provide a comprehensive gendered experience in the media technology industry. In masculinity studies, it is imperative that to understand women's issues, there has to be an understanding of men's as well. If women are in opposition to men, then their experience needs to be discussed in terms of both male and female perspectives. Additionally, according to Wendy Faulkner, feminists must insert themselves into the "process of designing new technologies *as well as* in the context of use" (Faulker, 2001, p. 91) to combat the limitations against women and their relationship with technology. This goes hand-in-hand with Faulkner's outlook that designers of technology make gendered assumptions and in turn design those into the technologies they create. This study further analyzed those processes and provided insight into the current state of this objective.

By simultaneously conducting this study and working in a media technology company as a web developer and designer, I had first-hand insight into this research. During my time working in the media technology industry, I have faced many of the

same issues the participants discussed. For example, men have heard an idea of mine and then a few minutes later claimed it as their own. Additionally, men have also chose not to show my work to clients for no reason other than insecurities about their own work. Like the participants, these hurdles did not stop my motion forward in the industry, but they act as “paper cuts” to my career that are bound to add up someday.

Because I am in a similar position and on a similar career path as the participants, I was able to ask questions that lead to profound answers. By unearthing a deeper understanding of the issue of gender discrimination in technology companies from a perspective and comparison not often told, this could have implications on the entire industry and the processes and operations they carry out on a day-to-day basis. This is not a setback in only one industry by any means. This contribution to the technology industry, adds to the collection of knowledge and efforts under the whole umbrella of the creative industry in a practical sense, but also to the body of work relating to feminist discourse.

There are several limitations to this study that should be noted. Because each participant was located in a different part of the country, some interviews took place in person, while others were conducted via Skype. The interviewees I spoke with in person may not have felt as open to discussing this subject because they weren't in a well-known place, while for the Skype interviews, everyone was at home and perhaps more relaxed. Another limitation was finding people to participate after they knew the topic of the interview. Because of this, I was not able to interview ten people as I had hoped and I was only able to interview three men compared to the five women.

After speaking with these participants and hearing the narrative of their journeys in the media technology industry, I believe a quantitative study that proves or disproves conflicting perceptions that were brought up could be a next step. Diving into the numbers behind each company these people worked at and talked about could render interesting evidence pertaining to the hiring process and the longevity of women in this industry. Furthermore, a smaller theme of ageism emerged from the some of the research interviews. I believe key insights could be uncovered with another qualitative study focusing on age in the media technology company.

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