



100 Institute Road
Worcester, MA 01609
www.wpi.edu

Working Women into the Technological Mainstream

Jen Kunkel, from REACH '98

The year is 2019, and the world is at the height of the technological revolution. Due to a steady increase in the use of technology, nearly 65 percent of jobs either deal with engineering or are computer oriented (Daley 2). Women, who represent about half of the workforce (McLester 2), only make up a small amount, 16.32 percent, of workers in the technological fields ("Employment Gap..."). Because so many jobs deal with technology, most women are forced to pursue occupations of lower pay.

Although it is not actually the year 2019, the statistics given are very possible for the workforce situation around that time period. Why is this such a sobering thought? The reason is that the year 2019, is not that far off. If women continue to enter the technological mainstream at the rate they have been, they will greatly narrow their career options in the future (Daley 2). Gender inequality exists in the technological world today due to various biased attitudes, and certain efforts should be made to prevent it in the future.

Gender inequality, though the existence of it is sometimes disputed, can be easily illustrated through the Wage Gap. The Wage Gap is exactly what it sounds like: the difference between the earnings of men and that of women ("Women, Work, and Wages..."). A perfect society would have men and women making relatively the same amount of money, but such is not the case. For example, in 1999, women made 76.5 percent of what their male counterparts made in an average that consisted of all occupations ("Women, Work, and Wages..."). In occupations dealing specifically with technology, women make 16.8 percent less than men on a weekly basis ("Household Data Annual Averages"). The Wage Gap is continuing to slowly close, but the fact that it even exists in today's society is proof of gender inequality.

A partial explanation for the gap between the wages of men and that of women is the difference in the types of jobs each gender holds. Women are known to dominate the sales, service, and clerical occupations ("Women, Work, and Wages..."). In fact, 57.4 percent of working women can be found in positions such as nurses, secretaries, and waitresses (Mansfield and Behravesch 536). Because these jobs have a much higher concentration of women than men, they are often referred to as pink-collar jobs (Macionis 229). Men, on the other hand, tend to dominate fields such as engineering, medicine, and law (229). In the year 2000, approximately 1,788,000 men were in some form of an engineering occupation, while only 210,000 engineers were females ("Household Data Annual Averages"). Pink-collar jobs tend to pay less than the jobs that men dominate ("Household Data Annual Averages"), which is why the job choices of both males and females contribute to the existence of the Wage Gap.

Gender stereotypes play a large part in the job choice of both men and women alike. Each gender has certain characteristics normally associated with it, and these associated characteristics have great influences on the choices that males and females make. Attributes that are considered to be masculine are strength, toughness, decisiveness, and the possession of leadership abilities and power (Eisler 8). Even though women tend to identify with a more social perspective, they are at a disadvantage when it comes to gender stereotypes. Weakness, "attention to relationships, contextualized thinking, and a worldview of interconnection are still generally viewed as feminine traits" (Eisler 13). As long as these stereotypes exist, gender inequality also will. Members of both genders at least partially believe in these stereotypes, and these beliefs are what hinder the progression of females into the technological world. Stereotypes intimidate women by making many occupations dealing with science and technology appear to be male occupations. The former British Prime Minister, Margaret Thatcher, once said that women trying to succeed in what are considered male occupations must "step into the shoes of men" (Eisler 10). Women and men must be thought of as equal before they can actually become equal.

Due partially to stereotypes, female attitudes show a very weak interest in science and technology. In high school, girls are less apt than boys to take computer, biology, chemistry, or physics courses, and they are more likely to take data entry classes (Daley 1-2). Besides the high school gender gap, approximately 70 percent of the total amount of people online are males (Coleman 2). This less-than-enthusiastic female attitude has its roots in a number of differences between the ways men and women think regarding technology. A study conducted by the Center for Children and Technology/ Education Development Center, made the existence of these differences a fact. The masculine view of technology was found to be that it is seen as a source of power that should be used for one-way communication and the conquering of nature (Brunner 2). The feminine view of technology, on the other hand, is just the opposite. Females see it as a way "to communicate, connect, and share ideas" (Brunner 2). They also question its effects on nature and try to develop different ways society can benefit from it (2). These differences of opinion have both positive and negative aspects. They are what make women so essential in technological careers, but they are also why women are not equal in the technological world.

Many things can and should be done to prevent this inequality. Parents should begin getting girls interested in science and technology while the children are still small. A child's opinion of a subject is formed at a very young age (McLester 7), so the sooner they are introduced to technology the better. Parents can start introducing this subject to girls by supplying materials that will foster an interest in technology. Along with interest, creativity can be developed through the use of blocks and legos. Female-oriented CD-ROMS, like Mattel Interactive's Barbie game, allow girls to become more comfortable with computers by building computer skills (McLester 3). Another step that parents should take in the introduction of technology is encouraging their daughters to enter activities and courses that involve science, such as science fairs, clubs, and camps. The more encouragement a girl receives as a child, the more likely she is to continue working with science and technology when she gets older (McLester 6). Hopefully, with

encouragement, more women will enter the technological field, and the inequalities that exist between men and women will begin to decrease in number.

Along with parental encouragement, more organizations should gear towards helping girls with technology and the use of it. For example, the Girl Scouts Association is a well-established organization that does very little with technology (McLester 5). A technology patch program should be started within this organization due to the large amount of girls involved with the organization. It would be able to reach a great number of girls, which is always a good thing. On top of the improvements needed within the Girl Scout Association, more camps such as WPI's Camp REACH (Reinventing Engineering And Creating new Horizons) and Camp GEMS (Girls in Engineering, Math, and Science) should be in existence. These all-girl camps are run by an all-female staff from WPI (Worcester Polytechnic Institute). They place girls in an environment where they have support and are encouraged to use advanced technology. The girls are educated in the areas of forensic science, car mechanics, computers, and home heating systems. Along with learning about all of the aforementioned areas of engineering, girls also get to meet and talk with women engineers. These camps help build self-esteem and promote the use of technology and problem solving. There are countless advantages to having these programs in existence. They reach out to girls that already have some sort of interest in technology, and they encourage the development of that interest into something much larger that will most likely serve as being very useful later on in a girl's life.

School is probably the second most important influence in children's lives, and because of that, school systems should do more to promote the use of technology in the classroom. This is especially true when it comes to ensuring that males and females are being provided an equal technological education. Ways to involve girls and get them excited about technology are numerous. Teachers should assign projects that deal with technology in their every day use, such as multimedia projects, graphing using computer programs, and the use of online research. These are all great ways to get girls involved in technology because girls tend to be interested in aspects of technology that can be used in their every day lives (Brunner 2). When girls cannot relate a project to their lives, they lose interest quickly (2). During such group projects, girls also tend to let the boys take over whatever technological aspect there may be (Daley 3). Teachers should make sure that all of the work is split equally and not allow a certain gender to take over. By allowing males to have more control over the technology of a project, a teacher is only serving to further justify the gender stereotypes that already exist in today's society. One last strategy for getting girls interested in technology is bringing women engineers into the classroom or bringing classes to meet women engineers. That way, students can see women engineers in action. Hopefully, that would help to dispel any stereotypes that exist in the students' minds. Any and all of these tactics would be useful in furthering girls' interests in technology, and a furthered interest in technology would mean a better chance of more females entering the technological workforce.

In conclusion, gender inequality exists in the technological world today due to various biased attitudes, and certain efforts should be made to prevent it in the future. The problem of gender inequality is illustrated through the Wage Gap and the size of it

("Women, Work, and Wages..."). This Wage Gap is a consequence of the differences in the job choices of men and women, well-known gender stereotypes, and the average female attitude towards technology. Parents, organizations, and schools can do many things to help in the prevention of gender inequalities in the future. Supplying girls with materials that encourage an interest in technology, creating more all-girl technology programs, and providing equal technological educations for males and females alike are a few tactics that could help in getting women more involved in technological careers. If these tactics fail and females do not begin entering the technological mainstream at a faster pace, they will greatly narrow their career options in the future, which is a disservice to society as a whole. With a very small amount of females in careers dealing with technology, society is deprived of any advances from which it may have benefited had more women been present (McLester 2). Working women into the technological mainstream is not merely a matter of inequality; it is a matter of societal well-being.

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