

Communicating as a Woman in the Information Technology (IT) World

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Abstract

Effective communication can be a challenge for any individual in a homogenous workplace, and it is especially more difficult when there is diversity of gender, age, ethnicity, language, culture, and other such dimensions. With increased diversity of gender in the modern workplace, communication lines may get crossed causing miscommunications between the two sexes. These differences create biases that affect the way women are seen and perceived in the industry. As such, this paper focuses on the status of women in the information technology (IT) industry in the United States by providing the latest statistics, discussing some of the existing challenges, and offering recommendations for professionals in this industry. Having a diverse workforce can provide a competitive advantage for firms, and having women at all levels of the hierarchy in the workplace can attract more diverse professionals. Suggestions and recommendations for the creation of a fair and diverse workplace for IT firms are provided.

Keywords: Information technology, sexism, females in IT, discrimination, gender diversity

Introduction

Books like "*Men Are from Mars, Women Are from Venus*" by John Gray and "*You Just Don't Understand*" by Deborah Tannen are just two examples of top selling publications that discuss the mystery of the communication gap between men and women. This topic has been a mystery for decades.

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It has been scientifically proven that men and women communicate differently, causing friction between the two groups. This pop culture trend has prompted many people to constantly analyze the two groups in hopes to better understand the differences, and to attempt to adapt to those differences so that life can be a little more harmonious amongst men and women.

During this research we aimed to not only discover why men and women have a difficult time communicating, but specifically why this is so within the Information Technology industry, and the affects that follow due to lack of communication. We also took it several steps further to question a few other debates that pertained to this theme. The first question pertained to the breakdown of the major differences between men and women that have been hypothesized over many years, and what did these components translate to mean. The next area we decided to touch on involved the issue of women being outnumbered in the workplace. Is this outnumbering due to lack of communication, or are there underlying issues that cause women to be looked at differently in the workplace.

We further discuss common stereotypes that hinder the performance and the growth of women across all industries. Some of these stereotypes are looked at as factual behaviors that are used to characterize women as a whole. Finally, we felt the need to tie everything together by bringing attention to where these differences end up leading, and that is the topic of discrimination. Although both men and women groups can be the face of discrimination, our focus remained on what women in the Information Technical industry have to endure, along with other findings we found were important to mention.

How Men and Women Communicate

One would think by the way that men and women differ, that the two come from two different planets. This is actually the running theme that people tend to use when making jokes pertaining to the battle of the two sexes.

The two speak different languages. Is there a science to this? There actually is. Over 30 years of research has shown that although the two do not speak a different language, but that the way they view particular situations differs because of their sex, and many other factors (Cameron, 2007; Mujtaba, 2010).

According to researchers, diversity plays a major factor in the differences in men and women, and how their actions are affected in the workplace because of it (Cameron, 2007).

Cameron brought up the issue of men being looked over for call center jobs because of stereotypes on how they may talk to customers, or if they may have a difficult time building rapport and connecting emotionally with customers (Cameron, 2007). Authors like Simon Baron-Cohen, author of "*The Essential Difference*" believe that men and women are suited for particular jobs. Simon Baron-Cohen believes that the female brain helps them be the most wonderful counsellors, primary school teachers, nurses, caretakers, therapists, social workers, mediators, while the male brain makes men the most wonderful scientists, engineers, mechanics, technicians, musicians, architects, and electricians because females tend to be more empathetic, while males tend to be better with analytical situations (Cameron, 2007).

Many agree that these stereotypes are formed from patterns that are noticed and displayed by women (Leigh, 2010). A common assumption that we found was that many of these authors believed that these gender differences begin very early in life, and that even if the two sexes grow together within the same culture, they still are affected by gender differences within that culture (Leigh, 2010). Deborah Tanen's book, "*You Just Don't Understand*", is mentioned in more than one article we researched. Tanen believes that this gender separation can begin as early as three years of age, and progresses depending on how the child is raised (Leigh, 2010).

An actual geneticist and author, Anne Moir, and her co-author Daniel Jessel, both agree that men and women process information differently, and in detail discuss this topic in their book called "*Brain Sex*" (Leigh, 2010). There were many examples of gender communication characteristics that were given that we will now review. One characteristic was women for the most part focus on building and maintaining relationships, while men tend to focus on power, rank, and status.

Women speak to gain information/insight and build rapport, while men speak to report to persons or only give information. Another characteristic was that men focus on facts and logistics, and women focus on feelings, senses, and meanings (Leigh, 2010).

Over the past three decades this controversial topic has raised questions on whether this is sexism, or is it science (Cameron, 2007). Just like in Leigh's article, Cameron touches on common characteristics that are observed between men and women that separate the two when it comes to communication. For example the point made about men being more focused on the facts and trying to find logic in something, while women will go off of their feelings and find relationships to be very important. If these differences are not managed properly, or are overlooked and ignored, then miscommunication is naturally to follow. So how is this managed? The goal is not to continue this battle between the two sexes, but to embrace the two have many communication differences, and use these differences as an advantage to create synergy (Leigh, 2010).

If men seek information, then women can attempt to provide information upfront to avoid potential friction. If metaphors are being used, the two can try to find neutral ones that pertain to movies or nature, instead of sports or home-life (Leigh, 2010). Finally, in a business setting getting to the point is always a great idea, because time is money. So with that said, women can gear towards sticking to the facts, and do research so that if there are follow-up questions, they are already prepared. If women use the knowledge they have about the opposite sex in their back pocket, they have a better fighting chance of surviving and successfully thriving in male-dominated industries.

Women Outnumbered

The tech world has been a male dominated field for a long time. Although women have been able to make their presence known in other traditionally male dominated fields, making that same imprint in the Information Technology (IT) industry has been a little more challenging. IT is still a field in which women are outnumbered (Mujtaba and McFarlane, 2011). Information technology is a field where men hold 75 percent of all jobs, and nearly 90 percent of the executive positions at Fortune 500 companies (Humphrey 2013). There has been a decrease in degrees awarded to women in computer science in the past few decades.

This industry has a "masculine feel" notwithstanding successes by other women in this field, for instance Marissa Mayer CEO of Yahoo (Humphrey 2013). According to the founder of a nonprofit tech company and whom also is a veteran of tech careers, "there's no reason it can't be changed" (Humphrey 2013).

The annual conference which commenced at the beginning of October of 2013, the Grace Hopper Celebration of Women in Computing in Minneapolis, and it was named after United States Naval Rear Admiral Grace Hopper, one of the pioneering women in computer science. The message being transmitted during this conference was “women belong” (Humphrey 2013).

Even though the number of jobs requiring high-tech skills have grown within the past few decades, the percentage of undergraduate degrees given to women in both computing and information sciences has fallen. According to the National Center for Women and Information Technology in 1985, statistics showed that 37 percent of IT degrees went to women while only 18 percent in 2009. At the University of Minnesota Professor Maria Gini was the only woman in the department faculty for many years and stated that this year 3 out of 38 are women pursuing majors in computer science. There are women in the field who say that the disparity in this field is due to the misperception that tech workers are antisocial, and stare at computers all day. These stereotypes might also lead to such perceptions that women must look a certain way to partake in a particular profession. For instance Liz Lupper, a project manager at Clockwork Active Media Systems from Minneapolis, said, “If people think about the stereotypes of someone who works in software or hardware development they don’t think of someone who looks like me, I wear a lot of dresses.

I go to rock shows” (Humphrey 2013, para. 3). This image that has been created is one of the biggest problems. There is not a visible role model in this field for women to look up to. Many women have admitted to stumbling into the field, and that it was not an intentional career path.

Many issues can arise since IT is a male dominated field and, and at times, it can be uncomfortable moments for women. There was a presentation made by two men at TechCrunch Disrupt Hackathon presenting an app called Titstare in a pitch that was inappropriately containing jokes with regard to women’s breasts. At another conference there was a women experiencing an uncomfortable moment when she overheard men making sexual jokes about her while she sat in front of them.

Out of frustration she took pictures of them and made a tweet with regard to her disapproval, and in turn lost her job, along with one of the men (Humphrey 2013).

Needless to say, these scenarios happen in all male dominated fields, and sexual harassment trainings can aid to create a greater awareness of such challenges. Women in the IT field find the Grace Hopper Celebration to be a moment to unite and create this awareness. According to Kate Agnew, who works for Target and also leads the Twin Cities chapter of Girls in Tech a networking and advocacy group, "there's still a stigma against women in technology, but there is a shift happening." Girls in Tech hosted an event regarding developing applications for Google; there are other projects on the way including all girls CoderDojo, which has an agenda of teaching programming. In addition to projects like CoderDojo there is a contest hosted by Technovation Challenge, which is a contest for teens seeking to develop apps. This is also a great way to allure young women into the field.

Today more than half of all PhDs in life sciences are awarded to women compared to a 13 percent back in 1970, yet there is still a significant absence of women in math-intensive fields (Yoshida, 2011). Against the thought that this absence could be due to discrimination against women, according to a review written by Stephen Ceci and Wendy Williams of Cornell University there is little evidence for sex discrimination in some fields and concluded that the cause is not directly related to such discrimination (Yoshida, 2011). In the same review written by Stephen Ceci and Wendy Williams, there was no evidence found of sex discrimination in regards to research being published. On the other hand it was noted that the lack of women being published was due to a lack of resources. Such explanation provided was due to women holding teaching positions which did not allow them to dedicate the time nor effort into preparing as often nor as high quality research for publication as males (Yoshida, 2011).

Another concern which arose was women being at a disadvantage when it came to obtaining funding for their work. There is a 1997 Nature publication by Wenneras and Wold, which found that women needed to be "2.5 times more productive" than the male to be funded by the Swedish Medical Research Council in 1995 (Yoshida, 2011). But this study was questioned on methodological and conceptual issues and in 1996 a study of females funded by a UK panel found that they have published 11.2 papers on average while males had published an average of 13.8 papers (Yoshida, 2011). Research does suggest that prior to the 1980s it was even more difficult for females to be receiving grants than males.

Diversity is a great competitive advantage and having both men and women working in the IT field will be of a great benefit for its growth (Mujtaba, 2010).

Like most fields the innovations and or thoughts that women, men, and individuals from different races and cultures can provide such diversity (Mujtaba, 2007). As stated by Schlosser from Thomson Reuters, the company makes a point of building diverse teams through referrals and outreach. Tech-related job postings are examined for balance between seemingly masculine words (string, assertive) and those that may appeal to women (collaboration, problem solving). Having a diverse group is important to all professions. Nancy Lyons, the president and CEO of Clockwork, said “women often bring an emotional intelligence to hard-to-understand technology.”

Common Stereotypes

Even though some might argue that men and women are the same, the two will clearly always have their differences. Women have to fight harder to be noticed over the male competition. Women in the workplace are often wrongly and stereotypically viewed as less decisive, slower to make decisions or even naïve at time (Mujtaba, 2010). It might not be close to accurate for all women, but the stereotype of their work ethics does affect them whether they realize it or not. Women and minorities in the information technology world as well as most other fields often work twice as hard and twice as long to be viewed equally to men in the workforce (Nieves and Mujtaba, 2006; Mujtaba, Cai, Lian, and Ping, 2013; Hussian and Mujtaba, 2013; Jones and Mujtaba, 2006; Mujtaba and McFarlane, 2011 and 2005; and Mujtaba, Griffin and Oskal, 2004).

Emotion is a big part of why women are seen to have a tough time communicating in a male driven industry. Women tend to be more compassionate, caring, and more careful with decisions versus men. Emotion can affect the business interests if women do not want to “step on anyone’s toes”. Men are known to be goal focused and tend to have the mindset to not let anything get in the way of what they want. It is hard to tell women not to show any emotion, but it is a good suggestion to learn the right time to display them.

For example, when a business is in the middle of a negotiation, women will tend to give more of an apologetic tone that could end up working against them.

Even if the women don’t necessarily agree with what is being presented, women should keep a straight face as men do and be professional at all times.

Woman should realize that sometimes risk can work in their favor. Men learn to compete at a young age where they learn how far they can push a situation. Many entrepreneurs are known for being successful by taking risks (i.e. Mark Zuckerberg). Most women are afraid of rejection, and of possible negative outcome on projects. If women do not take risks, how are they going to know what is going to work or not? Men will take whatever risks are necessary to get to the top, and that is what women should also be doing in a professional and ethical manner. By putting their emotions aside and simply doing what they feel is the right move, this stereotype will affect them less. Women should see taking risks as a positive thing. If the end results are not what they expected, something can still be learned from that particular situation, and can be used in the future. People who tend to take risks are often more respected.

A great tool that works for men is networking. Women tend to shy behind their desk and projects. Even though they might be working hard, it does not necessarily put them in the limelight. Networking allows employees to stand out, especially when competition is high. Women should understand that not every relationship is going to turn into a friendship. Sometimes in the business world it is whom you know that can help you get to the top. Without putting oneself out there, one is putting himself or herself into potential risk of not being noticed for their efforts and the promotion opportunity might go unnoticed. Women should put themselves out there professionally, and let others know what they are capable of doing and achieving.

Criticism and denial is never a fun thing to deal with. Women tend to not handle them as well as men do. When a man is criticized, they likely will not take it to heart and just deal with it. Women might take criticism more personal than what it actually is, resulting in excuses or tears. If women want to be considered at the same level as men in the workplace, they should learn how to interpret criticism when given and realize that denial is not a bad thing. When something is denied, it should be seen as an opportunity on how we can make it better. Women should be worried of their credibility in the workplace and avoid any emotional breakdowns.

Confidence can take an individual a long way. Whether it is verbally shown or physically shown, confidence makes the person appear to be knowledgeable and creditable.

If someone is standing in front of a meeting during a presentation with no confidence, individuals present during the meeting will lose interest and think the person does not know what they are talking about. Men are more comfortable with themselves so that if they need to lie about something, it can go unnoticed because they presented themselves with enough confidence for the individual to not even question it. Women should step out of their bubble, even if they are not comfortable with doing so. This will make less people question what they are saying. If a woman believes they deserve a raise, they should speak with the head manager and express it with confidence. They should keep their expectations down so that if there is ever denial, at least it was expected.

Discrimination, Recommendations, and Other Findings

Women and minorities are facing discrimination in the workplace for varying reasons. According to the author of "*Workforce Diversity Management*", in its simplest form, discrimination means treating people differently, which is not necessarily unfair or illegal (Mujtaba, (2010). Additionally, discrimination is illegal and unlawful when protected classes of people are treated adversely from others who fit into the mold of the norm. Illegal discrimination is unlawful, and when this is proven in the court system, the perpetrators and their organizations will be assessed fines inclusive of penalties, judgments, and damages. These organizations will also have the burden of paying attorney costs and fees plus the stigma that will be associated with these results. Now let's look at diversity a bit further in the IT industry.

According to experts like Valentino Lucio (2012), the writer of the article "*The IT industry is begging for women workers,*" women workers in the IT field are very scarce and hard to find. This is so because men predominantly dominate the IT field and there are stigmas associated with women performing certain jobs. Because of this, diversity is hindered and the workforce will not be conducive for inclusiveness. The percentage of females entering the information technology fields is significantly disproportionate in comparison to their male counterparts.

The trend doesn't look good because these entrants' keeps getting smaller and when you look at the mid management and upper levels it is even worse. Because few women are employed in this sector most women aren't inclined and are unmotivated to pursue academics related to this industry.

It is becoming worrisome for employers because they would like to hire more females to work for their companies but this isn't the case. Women aren't seeking careers in this sector so employers have no choice but to hire males. The reasons women aren't employed in this industry may be cultural and stereotypes (Lucio, 2013). This may have to do with how kids are differentiated and treated differently. Jenny Slade, who is the communications director for the National Center for Women and Information Technology, emphasized that unconscious bias is the reason women aren't attracted to the information technology field.

Boys are given toys that facilitate putting things together and then taking them apart whilst girls are given dolls to play with which encourages teamwork. Because of such conditioning, boys and girls will be more inclined and persuaded to pursue vocations that they have been exposed to or learned.

To engender women in the IT field, organizations are going into their local communities setting up outreach programs to allow middle grade kids to get acquainted with the STEM subjects. The STEM subjects are science, technology, engineering, and mathematics. Doing this will enhance girls and other minorities' abilities and confidence in pursuing careers in this sector. From this article, it is evident that racial and gender bias is prevalent in this occupation group. The reasons for these findings are that women comprised 25 percent of the workforce, and other minority women inclusive of Asians, African Americans and Hispanics are grossly disproportionately represented. There are more women working in other capacities in these firms other than in IT positions. According to Slade, the technology field is predominantly represented by Caucasian males therefore heterogeneity is hindered. Slade exclaimed that in 1985 approximately 37 percent students earning computer science degree in the US were women. In 2010 this figure dramatically fell to 18 percent. She also inferred that during the early years the high percentage was due to the newness of the industry, and the latter was when women realized gender stereotype became very prominent.

To enhance inclusiveness in the information technology field companies and organizations are formulating ways to attract and retain women.

They are working hard to achieve this, and a company based in San Antonio named Rackspace Hosting Inc. is doing this. Rackspace has instituted a diversity program that includes mentorship programs and networking events that will facilitate interest in the IT field.

In another article on FoxNews.com dated October 14th 2013, it was echoed, affirmed, and reinforced again that women undoubtedly are an endangered species in Silicon Valley. Vivek Wadhwa is an outspoken advocate for women in corporate boardrooms. Recently she had heated exchange of words with Twitter CEO Dick Costolo when they conferred about diversity issues in Silicon Valley. It is evidenced by the dialogue in this report that board members and the companies refrain from promoting women to the upper echelons of these corporations, because of the potential for conflicts. Mr. Rick Divine exclaimed that CEOs stay far away from these perceived issues. Mr. Devine additionally emphasized that few women are starting technology firms and they're not many women founding information technology companies.

Based on the literature presented in this paper, it is the decision of the authors that overwhelming information has been presented that has substantiated and predicated that discrimination, biases, stereotypes, and other indifferent attributes are used when promoting workers in the information technology industry. Because of this plethora of evidence, the information technology sector of our economy isn't heterogeneous hence diversification is hindered. Additionally, since this is a proven fact, people who are affected by discrimination in this realm tend to take flight instead of standing their ground and fight. The articles also stated that women are hired in these firms but not in the information technology capacities. Instead, they are gainfully employed in other administrative functions which are indeed necessary for all businesses to operate successfully.

According to one of these articles it was reiterated that its Caucasian men first and utmost then the other classifications of society afterwards. Also another executive inferred that there was widespread fear of promoting women to middle and senior managerial roles in these companies because of the fear of conflict. The authors construed that men in the upper echelon of these companies refuse and deliberately bar women from entering their all boys club, because they don't want to breakdown and change the status quo.

Because those who are at the helm of these corporations refuse to allow female and other minorities to assume top managerial positions the status quo remain intact.

If the status quo is changed in this employment sector of the society, women will be more inclined and motivated to prepare themselves to work in the information technology field of study.

To enhance and drive diversity in the information technology industry companies in this sphere have to first change their organizational culture. Organizational culture change should be done in small steps so that the workforce doesn't get overwhelmed. Additionally, each small step is a victory and this should be celebrated. By changing this, diversity initiatives and goals should be instituted so that it is deeply embedded and is evidenced throughout these organizations by having a heterogeneous workforce. These businesses also have to formulate diversity initiatives so that inclusiveness will be initiated, embraced, facilitated, and enhanced. Corporations in the IT field have to educate their workforce on the benefits of a heterogeneous workforce. They will also have to have mentoring programs to educate, train, and alleviate the issues related to a diversified workforce. When these corporations have fully formulated their diversity management plan top managers will have to institute the plan. It is imperative that senior management assume the role of diversity champions in these companies, because when they do their followers are more apt to follow. Last but not least, executives at these information technology corporations should do a diversity audit at least once annually to ensure that diversity is maintained throughout their workforce.

Summary

In closing, it is easy to see that men and women differ in many different ways. With differences like the ones we have discussed, communication lines are liable to get crossed and can cause a number of issues between the two sexes. These differences create biases that affect the way that women are looked at in the workplace. Their competence is constantly questioned and being measured against men that may evidently be less qualified, but men may still get promoted before these women do.

These stereotypes discourage some women from entering fields like Information Technology because men are constantly being praised and told that they are better for the job than women, and are more qualified for jobs that require analytical thinking or logistics.

A common characteristic that is mentioned when women are brought up in the discussion of the battle of sexes is emotion.

It is spoken about in a negative connotation, and looked down upon, but in fact is sometimes needed in many workplaces found today. Although some of these patterns of characteristics can be found, nothing is ever true for all and it must be understood that there are several variations of all types of people. Having a diverse workplace is important for countless reasons, competitive advantage being one of the number one reasons. Having women in the workplace brings a great balance that creates a diverse environment that will benefit any company. The characteristics that women will bring to the table will fill the gap of wherever the men are lacking, bringing the company to a full circle.

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