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# The chains that bind: Gender, disability, race, and IT accommodations

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#### Abstract:

This chapter explores intersectionality of gender, disability, and race relevant to Information Technology (IT) accommodations and employment. More specifically, we investigate individuals' experiences and differences in receiving IT accommodations as an organizational diversity intervention that helps disabled employees integrate into the workplace. The goal of this chapter is to seek a better understanding of individual differences in the accommodation process and how to empower disabled women in the workplace. To do so, by applying the Individual Differences Theory of Gender and IT (IDTGIT), we focus on the experiences disabled men and women have with regard to IT accommodations as well as the role of individual differences in their experiences.

Keywords: Gender, Disability, Race, Intersectionality, IT accommodations, Interventions

#### **INTRODUCTION**

Around 15 percent of the world's population, or roughly one billion people, live with a disability (International Labour Organization, 2020). About 80 percent are of working age. We want to acknowledge and recognize at the onset of this chapter that there is still a debate in the disability community regarding identity-first (where the disability is recognized before the person (e.g., disabled person) versus person-first language (where the person is recognized before the disability (e.g., person with a disability) (Ferrigon & Tucker, 2019). There are valid arguments on both sides. In this chapter, we use **identity** first language and will continue to learn from research and seek more guidance from self-advocates to inform our work and the language we use. We hope readers

will receive this work as it is intended, to support, celebrate, and empower the disability community.

Diversity includes people with varying abilities as well as different genders and race (Loiacono & Ren, 2018; Nkomo, Bell, Roberts, Joshi, & Thatcher, 2019). A diverse and inclusive workforce can lead to numerous organizational benefits, including economic, legal, and cultural ones (Dong, Oire, MacDonald-Wilson, & Fabian, 2013; Kaye, Jans, & Jones, 2011). For example, diversity adds differing perspectives, which can help organizations create more innovative products that attract a wider consumer base. Additionally, heterogeneity of lived experiences helps organizations see where their business may be inaccessible and susceptible to lawsuits. Finally, there is a moral imperative for organizations to include disabled people into the workplace. Organizations that hire and support disabled workers often increase employee morale. However, the employment rate of disabled people remains low (19.3%, compared to 66.3% of those without disabilities) (Bureau of Labor Statistics of United States Department of Labor, 2019). In particular, disabled women may face greater hardship than disabled men in employment because they face a triple bind (Moodley & Graham, 2015). Typically, women face a 'double bind'-incompatible gender stereotypes in which they are disliked if they are assertive and take charge in the workplace. However, if they are more nurturing and caring, they are seen as less capable. So, women can be seen as competent or likeable, but not both. These often-contradicting messages can cause stress and feelings of failure in women.

Disabled women face even greater hardships (triple bind), because they face stigmas related to their disability as well. Even when employed, disabled women are likely to work part-time at lower skilled jobs (Lindstrom, Harwick, Poppen, & Doren, 2012), earn less than men with and without disabilities, as well as women without disabilities (Doren, Gau, & Lindstrom, 2011; Emmett & Alant, 2006), and receive only 82.5% of what disabled men are paid (National Women's Law Center, 2014). They are treated worse in the workforce than women without disabilities (Doren et al., 2011; Emmett & Alant, 2006; Foley, Schuster, & McInerny, 2002; Hanna & Rogowsky; 1991; Lindstrom et al, 2012; Moloney et al., 2019; National Women's Law Center, 2014). Being a disabled woman of color may create a quadruple disadvantage for some, since some companies feel there are fewer incentives to hiring a disabled woman of color compared to a man or non-disabled female or white individual (Foley et al., 2002; Hanna & Rogowsky; 1991; Moloney et al., 2019).

In order to equally include disabled people into the workforce, accommodations are often necessary. Accommodation can be considered as an organizational diversity intervention since an accommodation is designed to help disabled employees perform effectively and enjoy work benefits as others (Annabi & Lebovitz, 2018; Annabi & Locke, 2019). Today, many accommodations include an information technology component, such as screen reading software, touch screens, and accessible electronic forms. According to the Equal Employment Opportunity Commission (EEOC) and Title I of the Americans with Disabilities Act (ADA), accommodations need to be requested, negotiated, implemented, and monitored (Job Accommodation Network, 2018; Kofi Charles, 2004). During the process of receiving an Information Technology (IT) accommodation, disabled women may face more challenges because the IT accommodation may be interpreted by some as "special treatment". Besides needing childcare and transportation resources, disabled women, "often seek workplace accommodations and rehabilitation services" (Timmons, Hall, Bose, Wolfe, & Winsor, 2011). But the typical expectation of women is that they

perform better than their male counterparts and are rewarded less than they are rewarded (Catalyst, 2007).

These intersectional issues hinder disabled women's employment. However, very little attention has focused on the intersection of gender, disability, and race relative to IT accommodations and employment in the Information Systems (IS) literature (Moodley & Graham, 2015; Nelson & Probst, 2010; Traustadottir & Harris, 1997; Zanoni, 2011). This chapter aims to explore these individual identities and other individual differences relevant to IT accommodations and employment. More specifically, we investigate individuals' experiences and differences in receiving an IT accommodation that helps them integrate into the workplace. The goal of this chapter is to seek a better understanding of individual differences in the accommodation process and how to empower disabled women in the workplace. To do so, by applying the Individual Differences Theory of Gender and IT (IDTGIT) (Trauth & Connolly, forthcoming 2022), we focus on the experiences disabled men and women have with regard to IT accommodations they have asked for in their jobs. We also delve into the interplay of gender, disability, and race in relation to IT accommodations.

By offering insights into the intersectionality of gender, disability, and race relative to IT accommodations and employment, this chapter addresses a significant gap in the IS literature. It focuses on the individual differences in the processes of receiving IT accommodations. This topic is particularly interesting because for disabled women, requesting an IT accommodation can be an even greater concern, since the accommodation may be interpreted by some as "special treatment".

The chapter proceeds as follows. First, we provide the background and literature review in gender, disability, race, intersectionality, individual influences, and IT accommodation as an organizational diversity intervention. Second, we present the research methodology grounded in a critical lens. Third, we discuss our findings of individual differences in the process of receiving IT accommodations. Last, we present the theoretical contributions and the practical implications of this research.

# BACKGROUND

This section provides the background and literature review in gender, disability, race, intersectionality, individual influences, and IT accommodation as an organizational diversity intervention. We use Trauth & Connolly's (forthcoming 2022) IDTGIT as a framework to present the relevant literature because it helps us better understand why these bodies of work are relevant and how they address the various dimensions. The IDTGIT framework (Trauth & Connolly, forthcoming 2022)-supports an intersectional approach by highlighting that organizations must account for the diversity and variations among women and move away from a 'one size fits all' approach to engaging women in the workforce. Using the three constructs of the IDTGIT framework, the themes of interest in this chapter include: 1) individual identity (gender, disability, race, and intersectionality); 2) individual influences (abilities, past experiences, and supervisors); and 3) environmental influences (IT accommodation as an organizational diversity intervention).

Individual Identity: Gender

Gender has been defined as a "social practice" (Bruni, Gherardi, & Poggio, 2004a; 2004b) which is constructed in daily interactions (Acker, 1992). More specifically, it "... is understood as the expected or perceived differences between women and men which are socially constructed, reflecting assumptions about principles, values, and attributes associated with femininity and masculinity" (Alvesson & Billing, 2009; Williams & Patterson, 2019).

Within IT, the role that gender plays in one's IT career, creating opportunities and barriers, has received more attention in recent years. As IT professionals are in high-demand, women have great opportunities to join and advance in the IT industry (Annabi & Lebovitz, 2018). However, the number of women working in IT continues to drop in numbers (Annabi & Lebovitz, 2018; Goulden, Mason, & Frasch, 2011). Ahuja (1995, 2002) and Armstrong, Riemenshneider, & Giddens (2018) looked at the barriers for women to enter and advance in the IT workforce. Social (e.g., social expectations and work-family conflict) and structural factors (e.g., lack of role models and mentors) were identified which may act as barriers to women in IT (Annabi & Lebovitz, 2018; Tapia & Kvasny, 2004). One of the reasons why women doubt their competencies for IT jobs is that they do not see many representations who look like them and have succeed in the IT industry (Tapia & Kvasny, 2004). This creates a negative feedback loop, which causes women to remain underrepresented in the IT industry (Armstrong, Riemenshneider, & Giddens, 2018; Goulden et al., 2011; Ramsey & McCorduck, 2005).

Several recent papers have looked at women in IT academics in particular (Loiacano, Iyer, Armstrong, Craig, & Beekhuyzen, 2016; Loiacono, Urquhart, Beath, Craig, Thatcher, Vogel, & Zigurs, 2013; Williams, Higgins, & Brayne, 2006). For many women in IT academics (39%), their career choice was influenced by their gender and the fact that they faced more challenges than their male counterparts. Women respondents also had a significantly more optimistic outlook for men in the field than they did for women (Loiacano et al., 2016). This is likely related to the double bind women are subject to in the workplace. On the one hand, they are confronted with getting recognition for their work, but on the other hand, they do not want to draw too much attention to themselves lest someone think they require special treatment (Williams et al., 2006). Moreover, a recent study that focused on how gender shapes the careers of women and men in the IS academy in relation to their employing institutions and the Association for Information Systems (AIS) found some interesting insights into what women IT academics face in their jobs (Gupta, Loiacono, Dutchak, & Thatcher, 2019). Women had lower levels of job satisfaction and felt less valued and supported by their universities. They perceived greater inequality at both their university and at the association levels. They experienced fewer opportunities for advancement at the association level and greater sexual harassment on the job than their male counterparts as well.

# Individual Identity: Disability

Disability is defined by the Americans with Disability Act (ADA)<sup>ii</sup> as an individual with "(A) a physical or mental impairment that substantially limits one or more major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment"<sup>iii</sup> (Americans with Disabilities Act, 1990). This definition takes a medical model perspective, which highlights a person's limits either physically or mentally. However, there is growing support for the social model perspective, whereby, disability is not perceived as an impairment, but rather a normal variation (Gray, 2009).

In today's workforce, the employment rate of disabled people remains low (19.3%, compared to 66.3% of those without disabilities) (Bureau of Labor Statistics of United States Department of Labor, 2019). There are multiple major reasons why disabled people are less likely to be hired, including a lack of awareness of disability and relevant responsibilities by organizations, employers' stereotypes and biases towards disabled people, employers' concerns about coworkers' negative reactions, fear of discrimination by disabled individuals, and a lack of work-related trainings for disabled people (von Schrader, Malzer, & Bruyère, 2014). Even when disabled people enter the workforce, they still face these challenges, which may also impact their decisions to disclose their disabilities and request accommodations.

Much work is needed to reduce these challenges. First, we need to understand and recognize that these barriers and challenges are strongly related to the medical model perspective, which reinforces ableism. Recently ableism, the dominant attitude in society that devalues disabled people, has entered the lexicon of disability studies. Specifically, it points to the "ideas, practices, institutions, and social relations that presume ablebodiedness and position disability as inability" (Williams & Mavin, 2012, p. 171; first mentioned by Chouinard (1997)). Thus, within the organizational context, ableism puts the burden of seeking work adjustments on the person with a disability and fails to challenge the assumption of the normative (non-disabled) body (Williams & Patterson, 2019). Contrarily, the social model perspective emphasizes the responsibility of the organization or society to enable disabled people to be "bodily present, acknowledged, accommodated and enabled...in organizational life" (Cockburn, 1991, p. 212). Based in the 1975 writings of the Union of Physically Impaired Against Segregation (UPIAS), the social model turns the definition of disability as a factor contained within an individual to one imposed by society. Specifically, the UPIAS claimed that, "...it is society which disables physically impaired people. Disability is something imposed on top of our impairments, by the way we are unnecessarily isolated and excluded from full participation in society. Disabled people are therefore an oppressed group in society" (UPIAS, 1975). However, since the establishment of the ADA in 1990, organizations have had to abide by the medical model terminology defined in the Act itself. Unfortunately, this has led to conflict with those who feel the social model is a more accurate definition of disability. More and more researchers, on the other hand, are taking a social interpretation perspective and acknowledging that impairments are simply cognitive and physical variations from normative expectations and associated value judgements (Overboe, 1999; Thomas, 2007).

Second, disabled people need fulfillment and job stratification just like everyone else. People need to feel that they are part of something, contributing to something, and making a difference. Working brings better mental health for disabled individuals and can decrease the need for government support (Dong et al., 2013; Loiacono & Ren, 2018; Mavranezouli, Megnin-Viggars, Cheema, Howlin, Baron-Cohen, & Pilling, 2014). Therefore, it is a moral imperative to provide equal employment opportunity to disabled people. Moreover, developing a diverse workforce benefits organizations (Janssens & Steyaert, 2019; Loiacono & Ren, 2018; Nkomo et al., 2019; Tasheva & Hillman, 2019). Studies have shown that employing disabled people can lead to economic benefits for organizations, such as an increased bottom line and product and service innovations through diverse perspectives and ideas (Accenture, 2018; Loiacono & Ren, 2018). These, in turn, can lead to opening up additional untapped markets (Loiacono & Ren, 2018).

Furthermore, in order to include disabled people into the workplace, accommodations are often necessary, if not required. According to the EEOC and Title I of the ADA, accommodations need to be requested, negotiated, implemented, and monitored (Job Accommodation Network, 2018; Kofi Charles, 2004). Through an effective accommodation process, disabled people can get the support they need, integrate into their work environments, and enjoy the same benefits of employment as others (Lindsay, Cagliostro, Albarico, Mortaji, & Karon, 2018; Solstad Vedeler & Schreuer, 2011; Vornholt, Uitdewilligen, & Nijhuis, 2013). In addition, when disabled employees are provided with necessary accommodations that equitably include them in the workplace, organizations gain tangible and intangible benefits (Austin & Pisano, 2017). Additionally, job satisfaction, commitment, and performance of all employees are improved (Park, Seo, Park, Bettini, & Smith, 2016). Despite the importance of accommodations, companies face many challenges with current processes to provide accommodations. These challenges include mismatches between increasing accommodation demands and limited resources to provide accommodations, little understanding of the accommodation process by supervisors and employees, a lack of a formal corporate accommodation process, and slow information flows among stakeholders in the process (USBLN, 2017).

#### Individual Identity: Race

Similar to gender and disability, race is the result of the social, historical, and political construction of racial categories (Tapia & Kvasny, 2004). Reducing the diverse voices of people of color ignores the unique challenges they face in the areas of recruitment, retention, and promotion in their IT career (Tapia & Kvasny, 2004). Especially, women of color may face different obstacles from men of color in the male dominated IT industry.

Although there is still a paucity of research on race for women in IT, some studies have looked at this topic (Kvasny, 2003, 2006; Kvasny, Trauth, & Morgan, 2009; Landivar, 2013; McGee, 2018; Morgan & Trauth, 2013; Tapia & Kvasny, 2004; Trauth, Cain, Joshi, Kvasny, & Booth, 2012, 2016; Windeler & Riemenschneider, 2016). These studies collectively showed that women of color faced barriers at almost each stage of the IT professional pipeline, from secondary education, higher education, to workplace (Windeler et al., 2016). A key reason for these barriers is the gender and racial minorities have limited access to IT resources compared with their majority counterparts (Windeler et al., 2016). Studies showed that women of color are less likely to take IT, science, or engineering centered courses and enroll and remain in these majors at much lower rates then men do (Kvasny, 2003, 2006; Landivar, 2013). Other studies found that women of color faced obstacles to advancing to senior IT executive roles influenced by factors such as individual's ability to change, established and gendered beliefs about leadership, as well as less access to mentors, sponsorship, and role models through traditional informal networking and promoting practices (McGee, 2018; Tapia & Kvasny, 2004).

#### Individual Identity: Intersectionality

Coined by Kimberlé Williams Crenshaw (1989), intersectionality initially referred to the oppression of black women in society. It has since expanded to include many other social identities, including social class, age, religion, ethnicity, sexual identity, nationality, and ability (Bose, 2012; Trauth, 2013). Taking an intersectional approach allows one to better recognize and

understand the reasons for certain instances of oppression in society, which in turn can allow for better policy development to address such inequities (Kitching, 2014; Shields, 2008).

This chapter focuses on the intersection of gender, disability, and race as well as its relevance to one's employment. The extant studies support the importance of moving away from conceptualizing women as a homogeneous group (Díaz García & Welter, 2011; Godwyn & Stoddard, 2011; Morris, 1993; Welter, 2011, 2012), who experience the world in the same way. It is critical to recognize that people experience the world differently based, not only on their gender, but other categories of social difference that they occupy (Holvino, 2010).

There are some studies integrating gender and disability (Annabi, 2018; Annabi & Locke, 2019; Ben-Moshe & Magaña, 2014; Garland Thomson, 2005; Rohrer, 2005; Sheldon, 2004; Thomas, 2006; Traustadóttir, 2006; Williams & Patterson, 2019). A growing number of feminist disability study researchers emphasize the need to include disability in business research as well (Williams & Patterson, 2019). Especially, in the US, there is a need to study disability in relation to work because "Nowhere is the disabled figure more troubling to American ideology and history than in relation to the concept of work: the system of production and distribution of economic resources in which the abstract principles of self-government, self-determination, autonomy, and progress are manifest most completely (Thomson, 1997, 2017, page 46)." Consistent with this line, there is evidence that disabled women fare much poorer than disabled men overall. In terms of education, disabled women are at the lowest level. They are most likely to be unemployed and earn the lowest median income (Erevelles & Minear, 2010; Moodley & Graham, 2015).

To expand this intersectionality to include race, the Women, Gender, and Families of Color Journal published a special issue focusing on race, gender, and disability grounded in critical theories in 2014 (Ben-Moshe & Magaña, 2014). It recognized the importance of using a critical framework to study the intersectionality. As indicated in the preceding review, gender, disability, and race are all historically constructed. A critical approach takes the constructed nature of these identities as an entry point, puts them in a social, cultural, and historical context, and challenges the prevalent perspective (Ben-Moshe & Magaña, 2014).

Annabi et al. (2018, 2019) have studied women with autism working in IT. They proposed a framework of Organizational Interventions Mitigating Individual Barriers Framework (OIMIB) to understand the individual barriers and coping methods as well as organizational interventions that are used to mitigate these barriers. Through a critical analysis, these studies empower women with autism in the workplace.

# Individual Influences

The IDTGIT framework (Trauth & Connolly, forthcoming 2022) outlined individual influences in women's participation in the IT field, incorporating *abilities, past experiences*, and *supervisors*. These individual influences mainly explain within gender-group variation. Each are discussed in more detail below.

Abilities: Individual interests and abilities for IT topics affect one's engagement with IT. These abilities include technical knowledge and skills as well as "soft" abilities such as seeking for help

in the workplace, garner resources, and network with people (Annabi & Lebovitz, 2018; Armstrong et al., 2018).

*Past experiences*: One's past experiences at home, school, and work are very likely to impact their decisions about how to interact with IT. These experiences could serve as motivations to overcome negative cultural messages or barriers to preventing from moving forward (Trauth & Connolly, forthcoming 2022).

*Supervisors*: As significant people in one's career, supervisors play an important role in individual choices related to work. Subordinates can reciprocate in the relationship with their supervisors by leveraging leader support to work on their well-being, job stratification and performance (Annabi & Lebovitz, 2018; Windeler & Riemenschneider, 2016).

#### Environmental Influences: IT Accommodation as an Organizational Diversity Intervention

In this chapter, we pay particular attention to one environmental influence—IT accommodation as an organizational diversity intervention. Environmental influences refer to contextual factors in society and organizations relative to women's professions (Trauth & Connolly, forthcoming 2022). Annabi et al. (2018, 2019) did a comprehensive review of existing studies in interventions and proposed a framework for investigating the interplay between organizational interventions and employment barriers. An intervention is defined as "an activity designed to change a state of affairs" (von Hellens, Trauth, & Fisher, 2012, p. 343). Annabi et al. (2018, 2019) identified intervention constructs such as social and structural interventions as well as intervention characteristics such as catalysts and objectives, methods and practices, as well as measurement and evaluation.

As described previously, accommodation is often necessary to equally include disabled people into the workplace. Today, many accommodations include an IT component, such as screen reading software, touch screens, and accessible electronic forms. Therefore, this chapter focuses on IT accommodation as an organizational diversity intervention. The goal of IT accommodations is to empower disabled employees with the help they need so that they can perform effectively and enjoy work benefits as others. However, organizations are often concerned about costs of providing IT accommodations (Breen, Havaei, & Pitassi, 2019; Coole, Radford, Grant, & Terry, 2013; Ekberg, Pransky, Besen, Fassier, Feuerstein, Munir, & Blanck, 2016; Kaye et al., 2011; Khayatzadeh-Mahani, Wittevrongel, Nicholas, & Zwicker, 2020; Kuznetsova & Yalcin, 2017; Yosef, Soffer, & Malul, 2019). When organizational interventions do not work, individual coping methods can mitigate employment barriers and improve individuals' accommodation experiences (Annabi & Lebovitz, 2018). Besides needing childcare and transportation resources, disabled women, "often seek workplace accommodations and rehabilitation services" (Timmons, Hall, Bose, Wolfe, & Winsor, 2011).

#### Methodology

To investigate how gender, disability, and race impact IT accommodations and employment, we used a critical lens to guide our study design and method. The critical lens fits the social model perspective of disability and accommodation process because it emphasizes individual experiences of disabled people as well as the responsibility of the organization and society to enable disabled people (Kvasny & Richardson, 2006). We followed the suggestions on how to conduct a critical

fieldwork by Trauth & Howcroft (2006). First, we designed a semi-structured interview protocol reviewed by experts in the disability and accommodation field. Overall, the interview questions were about participants' experiences in the workplace accommodation process and IT accommodations that help with their work. The interview protocol was approved by the Institutional Review Board (IRB) prior to the field study.

Second, we sent the recruitment emails to Facebook and LinkedIn disability groups, and other disability organizations in North America<sup>iv</sup>. If an individual responded to the email within the recruitment information and indicated interest in participating in an interview, we contacted him/her to verify an interview date and time as well as sent him/her an IRB approved consent form. A total of 23 disabled people (8 males and 15 females), who were employed and had sought an accommodation were interviewed (see Table 1. Description of the Participants). The disabilities of the interviewes varied from vision impairments (11), cognitive impairments (5), hearing impairments (4), and mobility impairments (3). Participants who completed the interviews were given a \$10 Amazon gift card.

Alias	Gender	Type of Disability	Job Position
Abby	Female	Cognitive	Librarian
Ben	Male	Vision	Government Staff
Beth	Female	Cognitive	Archivist
Bill	Male	Vision	IT Office
Chloe	Female	Vision	Customer Service
Donald	Male	Vision	IT Specialist
Donna	Female	Cognitive	Manager
Ellen	Female	Vision	Government Staff
Fran	Female	Mobility	Archivist
Grace	Female	Vision	Consultant
Hope	Female	Hearing	Project Manager
Jane	Female	Vision	Teacher
Joe	Male	Vision	IT Support Technician
Kate	Female	Vision	Attorney
Kevin	Male	Mobility	Adjunct Professor
Laura	Female	Vision	IT Specialist
Mary	Female	Mobility	IT Software Analyst
Mike	Male	Hearing	Architect
Monica	Female	Hearing	Archives Director
Rachel	Female	Hearing	University Staff
Rich	Male	Cognitive	Manager
Sandra	Female	Cognitive	Instructor
Thomas	Male	Vision	Dispatcher

Table 1. Description of the Participants

Third, during the interviews<sup>v</sup>, we encouraged participants to critically think about their accommodation experiences (Trauth & Howcroft, 2006). In the meantime, we assured participants that we were not looking for a definite, "correct" answer (Trauth & Howcroft, 2006). Moreover,

we adopted an iterative approach to include critical questions that arose from the first few interviews in the interview protocol.

Further, we conducted content analysis to understand individual experiences and differences in the process of receiving IT accommodations, which are appropriate to acquire a rich understanding of this unexplored area (Yin, 2003). The themes of the findings fit with the IDTGIT framework (Trauth & Connolly, forthcoming 2022), so we use this framework to present our results including individual identity, individual influences, and environment influences. Among these, the quadruple bind disabled women of color faced, a special budget to support IT accommodations, and individual coping methods to mitigate the effect of IT accommodations are critical to understand the intersectional barriers and potential solutions for disabled women in the workplace.

# INDIVIDUAL DIFFERENCES IN THE PROCESS OF RECEIVING IT ACCOMMODATIONS

Several inductive content analyses were conducted to better understand the factors that affect people's experience with their IT accommodations and individual differences during such experience. The first was an examination of the words participants used during their interviews in order to understand participants' experiences with their IT accommodations and the processes that provide them with these accommodations. Using the word cloud function in NVivo (version 12.6.0.959), we compared the top 10 words used in the interview by men and women. We discovered that for the most part men and women used the similar terminology to discuss their disabilities and the accommodations they received. Men and women used the term need with 524 (2.0%) and 724 (1.8%) of mentions accordingly and used the term *people* with 433 (1.7%) and 721 (1.7%) of mentions accordingly. The main reason why these two terms are significant may be because the accommodation process is a social process that emphasizes individualized need and interaction with people. Job, process, and help were also used relatively similarly by both groups. However, though most of the frequently stated words were similar for both groups, women were more likely to actually use the words *disability* and *ask* (see Figure 1) in their description of the accommodation process. Men were not as likely to use them during their interview (see Figure 2). They were more likely to mention technology, such as *software*, and *email* (see Figure 2). And, though men and women both mentioned email as a technology they use in the accommodation process, men were clearly focused on the technology terminology (see Figures 1 and 2). The reason behind this may be partly because 3 male participants (over 1/3 of all the male participants) that had IT jobs tended to talk much more about IT solutions than 2 female participants (2/15 of all the female participants) working in IT and other female participants.

We also compared the top 10 words used in the interview by participants who had different disability types. We found that *need*, *people*, *job*, *process*, *help* were still among the most frequently mentioned words. We observed that participants tended to mention a lot about specific disability terminologies related to their disabilities. For example, for participants who had hearing disabilities, interpreter, deaf, hearing, sign, and language were ranked 2<sup>nd</sup>, 4<sup>th</sup>, 5<sup>th</sup>, 6<sup>th</sup>, and 7<sup>th</sup> most frequently mentioned words. Across disability types, participants who had vision disabilities were more likely to mention technology, such as *email*, *technology*, and *computer*. The reason behind this may be because (1) people who have vision disabilities often use more technology-related accommodations, such as screen reader, electronically formatted material; (2) the 3 male participants working in IT who talked more about IT solutions all had vision disabilities. It is worth

noting that participants who had cognitive disabilities used the term *job* the most (1.3%), possibly because people who have cognitive disabilities face more challenges in finding a job. These variations across disability types give us implications that we need to accommodate disabled people to meet their individual needs.

Figure 1: 10 most frequent words by female participants Figure 2: 10 most frequent words by male participants.

The findings, below, are presented using the IDTGIT framework (Trauth & Connolly, forthcoming 2022) to understand the issues that influenced participants' experiences in their accommodation process. The goal is to better understand the nuances of how participants experienced the process of receiving an IT accommodation.

# Individual Identity

Individual identity factors that came out in the interviews were related to gender, type of disability, race, and intersectionality. Among these factors, the different types of disability and the intersectionality of gender, disability, and race seem to be impactful in individuals' experiences in the accommodation process.

Although gender differences in individuals' accommodation experiences did not stand out in our data, it is worth noting that 3 male participants (all had vision disability) who had IT jobs appeared to have much more knowledge in IT accommodations than 2 female participants (one had vision disability, the other had mobile disability) working in IT and other female and male participants. For instance, Bill was confident that he knew about IT accommodations,

You have to be able to present and demonstrate why you should get a certain thing and people generally trust that, especially in my role that I know what I'm talking about. -Bill

Many times, the type of disability can impact how a disabled person is required to act. As Jane<sup>vi</sup> points out,

I know people forget [I'm low vision], especially with my disability. Because they forget I'm disabled at all, because they don't see it. I don't walk with the white cane." This often requires reminding supervisors and others of the need for accommodations and figuring out how to work around one's disability at times. – *Jane* 

Often times, as Sandra points out, it is necessary to reiterate, especially for those with learning disabilities that,

[These types of disabilities] are not something you outgrow. A lot of people who have these types of disabilities have grown up potentially if they were diagnosed. At school, they had a lot of resources available to them that when they go into the workspace, they no longer exist. And it's also the first time they have to ask and advocate for themselves, I mean something like we did in college to some degree.

But I've often said this is kind of like flying with broken wings and nobody's there to fix them because you don't know which way to fly, and you don't know how to fix your wings and you don't know what to do and there's not a lot of resources or information about how to handle these types of situations in the workplace and it's beyond frustrating to say the least. I'd also say that the ADA is available for any kind of work discrimination scenario, but often people do not disclose their disability at all. And they feel that they will be seen as stupid or less than. The more a company or organization can provide these resources to everyone, the better off it is for the employee. – *Sandra* 

One participant Abby compared it to pregnancy,

... when you're in the early stages of pregnancy, like no one really would know, but if they closely observe or like they kind of figure something that is up as you kind of go along and your interactions that they realized, oh, there's something a little bit different, but they might not know it's a disability really. -Abby

Also relevant to the individual identity factors mentioned was race, which was combined with gender and disability, suggesting a quadruple bind may actually exist in the workplace. As mentioned in previous literature, experiencing double bind, women face greater hardship than men (Moodley & Graham, 2015). They are expected to perform better than their male colleagues and receive less reward for doing so (Catalyst, 2007). Our empirical data suggests that the quadruple bind may impact the ability of disabled women of color to maneuver the accommodation process. As Monica pointed out that, she has,

...always been concerned about what they're going to think that I'm [race and gender intersectionality]. -Monica

And Monica used to be afraid of backlash,

... because I have always been concerned about what they're going to think that I'm [race and gender intersectionality]... – *Monica* 

Because of such difficulty and worry, people who face the quadruple bind may experience more mental health issues when they request an accommodation. In order to deal with these issues, Monica has been,

...working with a therapist. She will help me figure this sort of thing out. A lot of what I've discovered is that because I'm [disabled] I tend to fall back on that model minority kind of thing where I am overly helpful, I am overly nice, I am overly understanding. She has been working with me to say that saying 'no' or saying 'I will not' is not mean or passive aggressive. It's the way it needs to be. – *Monica* 

#### Individual Influences

Participants vocalized the impact that individual influences, such as their abilities, past experiences, and supervisors had on them.

A participant's ability to be self-directed is an individual characteristic that influences how they approach the accommodation process. For example, Joe pointed out, that,

Well, I'm pretty much self-directed. Various webinars, online training, podcast, email list, email groups. There's a few other AT [Assistive Technology] Specialists at work force that is in the same company that I might consult just to kind of get a second opinion. -Joe

Many acknowledge that the ability to know and articulate your needed accommodations also plays a part in if and how disabled workers obtain them. Several participants voiced this factor in different ways. For example, Ellen shared that,

I guess that depends on how well you explain what you need. If you can give a good explanation for why you need it, if you've written out an email in detail for why you need it, or if somebody makes a point and you're able to make a counter point, then you're going to get what you need. But no matter what technology you have, if you can't explain why you need something, then you're probably not going to get it. - Ellen

Donald stated,

But I mean generally if somebody needs to make an accommodation request, you make it yourself because you should know what you need... - *Donald* 

Similarly, the ability to advocate for oneself is a critical individual influence, even though it can be quite intimidating, that can impact one's accommodations and overall experience. For example, Sandra revealed that,

I've always been a very good advocate for myself. But there's that intimidation factor. It's my first job and I don't know what I can ask him, what I can say. Again, I was open with the fact that I was [disabled]. But every time I requested anything that would help me, I was always told no, partially why I left that job, to be honest. – *Sandra* 

Monica highlights how she has grappled with self-advocacy over time,

...[R]ight out of the gate, you need to advocate for yourself as opposed to those of us who learn to not advocate for something. It's weird I've been disabled my whole life, but I've only learned to advocate for myself in the last six or seven years. And I was even part of a group that wrote the original disability and accessibility standards for [a disability organization]. And we were so focused on [some types of disabilities] that only forgot to include myself in these accommodations. And when they updated them just a couple years ago, they said why aren't [certain type of disability] included, aren't you [that type]? I go yeah boy, that point we were so focused on just making sure that people [with some types of disabilities] had access to things that we didn't even think about that. And now people get to think about everything at once instead of being so focused on just getting the basics. And we can now think about [other types of disabilities] and the various spectrums of things... – *Monica* 

Moreover, experiences with past disclosure influences disabled people's choices to disclose in the first place. Jane took a negative view on disclosing upfront at interviews because she had not experienced a "good" disclosure,

"I never used to disclose [during the interview] until it got to a point where they asked me specifically or I got the job in that I had to be like, by the way, I have to tell you about my disability... which every job I've ever had a sort of pull back that information because I know it might be the thing that puts me down on their list... They asked me about my disability and then I tell them and then I get a call back the next few days later, saying like we found someone with more experience. And yet I know that's just sometimes it's true, sometimes I know it's not true. So I haven't had good experiences disclosing." and "... I think I did it like once or twice... if they know, they'll say like well if you did get the job, what accommodations would you need? It seems to be a big concern to [them] than it is to me. – *Jane* 

However, Sandra felt very comfortable opening up about her disability since her first disclosure was understood well by her interview manager,

I always speak openly about my disabilities from the point that I'm interviewing... the first person I interviewed with, she mentioned she appreciated that I said something because she also had [a disability] and understood those challenges. She said if I'd gotten further into the process, she would do what she could to help me. -Sandra

Often participants are afraid to disclose their disability to coworkers, given their cumulative past experiences and angst,

Again, sometimes I feel like if I tell my colleagues about my disability, they're going to start treating me different. That they're going to somehow get that idea that person with a disability can't possibly be as good at this job as somebody else. And it does impact like today... I was sort of not willing to tell this new [colleague] who I've never met before like this is going to be harder for me than you think. So it does impact my... like I could have said like you know what, it's going to be difficult for me to [do that] ... So yeah, like I could have asked to be accommodated in that way, but I didn't because I just didn't want her to tell people that I was the kind of [professional] who won't do all the work that's asked of me. – *Jane* 

Experience at university or school is another significant individual influence on disabled people navigating the accommodation process. Many found it difficult to adjust to a world where accommodations were not fully supported. For example, Jane stated,

At the moment... I have to push for [accommodations]. If I want anything, I have to ask for it... I have a lot of accommodations during University. A lot... I had a letter of introduction from the University to tell my professors that I had a disability. So I had a lot of accommodation at University and then the workplace it's sort of I have to really ask for it and I provide a lot of it myself including financially... It's sort of like they're more than willing to help students out to get through University. But once you're in the workplace, you're on your own. – *Jane* 

In addition, the experience of disabled people asking for accommodations is affected by supervisors' attitudes and behaviors as well. One difficult supervisor situation was explained by Sandra,

I would say in the first job, it was to truly listen and understand that I wasn't bringing this up out of selfishness that it was bringing it up so that I could do my job more efficiently for them and for me and understand that that was also a work balance that was necessary, so listening. And even if he had said to me [participant's name], I hear you. I understand you. I know this can be challenging. I want to help you be a better employee for yourself but also for us and let me see what I can do. I think I would have felt at ease. – *Sandra* 

In particular, if others in the hierarchy (above the supervisor) do not understand disability, the accommodation process can get derailed. As Fran described,

The [boss' title] didn't think I needed one. She disagreed. She was like, well, I'm not going to order you one. We're done. We're done getting your stuff. This is essentially what happened, even though it caused problems in my [body]. - Fran

Alternatively, other participants found their supervisors very receptive to their needs and willing to work with them to make necessary accommodations. For example, Thomas stated,

He's very responsive to my requests. In the past we had an issue with something that wasn't working right and he was very proactive in helping me get the situation resolved. – *Thomas* 

Similarly, Donald noted that there was,

Again, no impact to me because I have a great manager if I explained to her what I need and she thinks it's a good thing, she's going to try to do everything she can to make sure that I get it. -Donald

Often times it helps to have a supervisor with direct connection to someone with a disability. As Abby illustrated,

...I was working for a boss whose daughter had some disabilities. So she was a little bit more accommodating and understanding and knows kind of a little bit more what the process was... -Abby

# Environmental Influences

As stated in the literature review, we focus on one environmental influence—IT accommodation as an organizational diversity intervention. A special budget that supports IT accommodations and individual coping methods seems to be impactful in the improvement of individuals' accommodation experiences.

If an organization has a centralized source of funding to support IT accommodations it makes it easier for disabled individuals to get needed accommodations. This is made clear in Kate's comment,

That program is a centralized source of accommodations... If you need adaptive equipment, my office did not have to pay out of the office budget for any accommodations that I got from [the program]. So that was just a matter of filling out a request form and then it would go through [the program]. And they would purchase the software or the hardware or if I needed training, I could request training to them. So that was pretty easy. – *Kate* 

Without a special budget, costs are a huge issue that stands often in the way between a disabled person's accommodation request and its fulfillment. This was an issue brought up by numerous participants and brings the most angst to both sides. As Kevin stated,

The biggest thing I see is talk about the cost of it. But I also think some of these people haven't really looked into the cost. -Kevin

Sandra added,

It was a lot of conversations. And basically, I was told that financially it didn't make sense and that if there was a handful of people who wanted something that they could ask for it. -Sandra

This is what causes many disabled people to support their work with their own personal technology. For example, Beth in an attempt to reduce costs for her employer shared that,

"I told my boss I could use my iPad. I knew because as a student I know what they have set up for disability support. I knew I should be able to get accommodations. That's why I did it. When I worked for [company name], they all were PC-based. The database I had to use were not web-based but PC based. And I always try to make it as least costly to my employer." "And I said I could just bring my own Mac because I was there as a volunteer, internship. I always try to do it as least costly as possible." – *Beth* 

#### Similarly, Jane pointed out,

... I have my technology. None of it has been provided by the [organization]. Even when I was under contract, I brought my own technology, but I did have some help

setting it up with the [organization] through the IT department. But other than that, basically just what I have. – *Jane* 

In addition, the inaccessible issues of technology in general makes disabled people's accommodation experiences frustrating and has a profound impact on their ability to be included in work and society. As Rachel indicated,

It's just related with communication access, access with your family, access in the society and lack of captioning. For example, Facebook live videos, you pull that up and I don't know what they're saying. I've started my own Facebook page... because I'm frustrated, I'm tired, I'm tired of not having full access to things like other hearing people have access to in the world. They can just sit down and scroll through Facebook and watch many different videos and they can understand everything. But I'm scrolling through and I'm like, where's the captioning? So that's very frustrating. – *Rachel* 

COVID has provided some additional issues that disabled people have had to deal with. There are still complications that have arisen and companies have missed opportunities to accommodate their disabled employees. Rachel described her accommodation experience during this challenging time,

Current challenges with everything transitioning to the virtual world because of COVID, when we transitioned in March, from March and then moving forward until now, it's gotten better. But at the beginning of all this, I just noticed so many departments, professors, staff, many of them using or posting or emailing newsletters or videos or trainings with no closed caption. I'm an employee... I want to know what's going on. I want to be involved in the training in the workshop. Especially because we're transitioning to a virtual world and the training and everything with the cameras, they show the videos, they show how to setup your own virtual desk and how to set up, whatever things are related with this transition. They show how to set up different things online. I can't watch the videos. There's no closed captioning. I don't know how to set up my stuff. I don't know how to do x y z and that has been a big issue... if you send out something like a mass email with a video, but it's not accessible to everybody, then I just heard like for example, the IT department have IT print out letters, they have things that they show different things, and I'm like, okay, but it's still not the captain for the video. So I can't really follow along with these printouts that you're giving me. And then there was a workshop that was hosted by an outside organization and outside people and when the video came up, I signed it, I was ready to watch, and there was no captioning. There is the chat box and I sent a message saying you know, this workshop/training/webinar, does it have closed captioning? Does it have any transcript? That would be nice. And they were like, oh, no, I'm so sorry. We don't have closed captioning. We'll add captioning later and then we'll send it to you. Now I have to wait until after the workshop's finished instead of previously being involved with the workshop and having the captions right there. Everybody else has access. Why do I have to wait till later? If the college department, if they sent out anything videos or whatever, I would watch, if there is no captioning, if it was the captioning box, I would click it and it wouldn't work. It was there. They would have that out of there. But if you clicked it, it didn't work. – *Rachel* 

However, Monica has shown how necessity, such as COVID, has opened up companies to reevaluating costs and are willing to take on some of those that they once pushed back on,

We tend to take on the ownership of responsibility on ourselves. And I know a lot of people who pay for things out of their own pocket. They pay for their own wheelchairs and things like that. And I'm like we shouldn't be doing that. And COVID has shown us that employers are willing to pay for things that they claimed they weren't willing to pay for before. They're willing to pay for us to have a Zoom account so that we can meet in a format that's easier for me than talking on the phone. That means six months ago when I asked for it, you could have done it, then you just didn't agree to. – *Monica* 

#### CONCLUSION

In this chapter, we delved into the factors surrounding gender, disability, and race relative to IT accommodations and employment. By applying the IDTGIT framework, we sought a better understanding of individual differences in disabled employees' accommodation experiences. We found that the quadruple bind for disabled women of color existed in the workplace. This quadruple bind may impact the ability of disabled women of color to maneuver the accommodation process. Moreover, as an organizational diversity intervention, IT accommodations need organizational resources support such as a special budget in order to effectively improve disabled employees' accommodation and employment experiences. When the intervention may not work, individual coping methods can help mitigate the barriers to accommodations and thus improve individuals' accommodation and employment experiences. We recommend that a special budget for accommodations is an effective organizational intervention, which mitigates supervisors' concerns over costs of providing accommodations. Moreover, since the experience of disabled people asking for accommodations is affected by supervisors' and coworkers' attitudes and behaviors, we recommend that providing related trainings to supervisors and coworkers is another effective organizational intervention. Sensitivity and disability awareness training on how to support disabled employees can be very helpful (Loiacono & Ren, 2018).

This chapter makes a strong contribution to the IS research and disability studies by extending the application of IDTGIT to the disability community with more intention and offering insights into organizational diversity interventions. This work is multidisciplinary highlighting the relationship between the intersectionality of gender, disability, and race and the IT accommodations intervention to provide a holistic understanding of workplace diversity and relevant interventions. This research also has significant implications for practice. By identifying the quadruple bind disabled women of color face, organizations can minimize these barriers through awareness education to all supervisors and employees. Another practical implication of this research is to inform organizations and individuals of how to use resources and individual coping methods respectively to support interventions.

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<sup>&</sup>lt;sup>i</sup> Clance and Imes (1978) defined the Imposter phenomenon or syndrome as "an internal experience of intellectual phoniness that appears to be particularly prevalent and intense among a select sample of high achieving women" (p.1).

<sup>&</sup>lt;sup>ii</sup> This research focuses on the US law regarding disability. Though some similarities exist with other "western" countries' regulations regarding disabilities do differ across countries and cultures.

iii https://www.ada.gov/pubs/adastatute08.htm.

<sup>&</sup>lt;sup>iv</sup> The reason for limiting the participants to North America was to have some consistency in terms of legal expectations for accommodation. Both the United States (Americans with Disabilities Act) and Canada (Canadians with Disabilities Act) have similar work accommodation requirements for those with disabilities.

<sup>&</sup>lt;sup>v</sup> We feel it is important to note upfront that interviews were conducted during the COVID-19 pandemic. It was, therefore, impossible to interview participants in person. All interviews were conducted using Zoom online meeting software and when permitted recorded to ensure accuracy of notes taken and to produce a transcript for coding. <sup>vi</sup> All participant names have been changed to pseudonyms.