

Image Description: A collage of bright abstract patterns with colours of red, purple, green, and gold frame a hand drawn face with looping black lines. Above the face reads the title of the Journal Including Disability. This is also handwritten in beautiful cursive vertically at the centre of the page, overlapping with the colourful cutouts

Created by Alex Pilon <u>@alexjamesonline</u>, Artistic Director, Including Disability

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The Disability Tax and the Accessibility Tax: The Extra Intellectual, Emotional, and Technological Labor and Financial Expenditures Required of Disabled People in a World Gone Wrong...and Mostly Online

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Introduction

This paper navigates the impacts of the novel coronavirus pandemic (COVID-19) on the disability community. In particular, how shifting resources within workplaces and educational institutions change the expectations imposed on disabled employees and students. Many changes that were implemented as a result of the restructured work and educational environments in the pandemic were of benefit to disabled people, but were only implemented because they were a benefit to the entire workforce of an organization. At the start of the pandemic, many products that became central to pandemic-era work were not as accessible for disabled people and required extra financial investment to unlock accessibility features. While these products generally were updated to become more accessible and inclusive during the course of the pandemic, disabled people now face concerns about the extent to which advances in accessibility and inclusion during the pandemic may disappear in the rush to return to perceived normalcy as different countries reach various vaccination milestones.

Within this unsettled social and technological context for disable people, this report creates a conversation between intersectional experiences and introduces the concepts of the disability tax and the accessibility tax as forms of cultural taxation. These disability-specific forms of taxation are explored to contribute to existing understandings of emotional labor and

other forms of intellectual and economic cost imposed on those from marginalized groups. Technological advances such as videoconferencing and web-based collaboration software systems, facilitated by requisite high-speed Internet, have enabled an incredible migration to nearly universal telework under the pandemic. However, without a better understanding of the problems faced by disabled people in education and in employment, we may "snap back" to a pre-pandemic normal around the globe that continues to be exclusive and inaccessible for the disability community.

The Imbalances of Disability

As society has become more aware of the imbalances of labor required for marginalized populations in education and employment, disparities in labor by gender (e.g. emotional labor) and by race (e.g. the Black tax) have been identified as key inequities in both public and private spheres of life (Stephen 2007; Costakis et al. 2021; Erikson and Ritter 2001). These investigations, however, have neglected the same kinds of labor disparities imposed upon disabled students and employees. For disabled people, while inequities in labor have existed as long as disabled people have been allowed to participate in education and the workforce, the virtual learning and work environment thrust upon the world by the COVID-19 has made these inequities especially pronounced to disabled people. These inequities in virtual work and learning remain unacknowledged, further contributing to the social and technological marginalization of disabled people.

This report argues, therefore, that disabled people face two simultaneous taxes.

Firstly, there is the disability tax, which is similar to the emotional and economic taxes placed on other marginalized populations, and secondly the accessibility tax. This second form of taxation is unique to disabled people who face inherent barriers to simply using the technologies of physical and virtual work and must pay the direct and indirect financial costs as a result of inaccessibility. Introducing and exploring the nature and the impacts of these

two taxes on disabled people, this paper considers the implications of the cultural taxation of disabled people in employment, education, technology development, and public policy.

Written by researchers with a range of disabilities – along with a couple close allies – from three different nations, this report is intended to provide insight into these imbalances for disabled people and perspectives on how a post-pandemic reopening can serve to improve access for and inclusion of disabled people.

The (REQUIRED) ZoomTM Life

Telework has long had the potential to improve employment opportunities for disabled people by removing barriers related to physical presence in an office. Home care medical needs, disability related sensitivities to light, scents, noise, crowded spaces, commuting barriers, fatigue, chronic pain, and much more can all be accommodated through telework options. However, while the efficacy of these types of workplace accommodations are substantial, they have largely been denied as unreasonable or counter to organizational culture (Kaplan et al. 2006; Moon et al. 2014) despite a 1999 ruling in the US that telework may be a form of reasonable accommodation under the Americans with Disabilities Act (ADA) (EEOC 2002).

The emergence of COVID-19 and subsequent global pandemic forced much of the activity and interaction of business, education, and governance online. Many individuals and entities embraced videoconferencing and web-based collaboration platforms not as an accommodation for disabled people but as a key means for continuation of work (Shew 2020). As such, these changes have been implemented as organizational adaptations and not as a means to make work and learning more accessible for disabled individuals who have been advocating for these changes for decades. At a German university it was no longer considered a legal problem if a disabled colleague did not grade student term papers with handwritten remarks but on a computer (Marx 2020).

Because accessibility was not a central focal point of the move to near universal telework in industrialized nations, it has not been such a simple transition for all people.

Limited Internet access or connectivity; homes multi-purposed as classrooms, daycare, and offices; and inadequate or absent hardware to remain connected have all posed problems.

Some attention has been paid to people with limited at home Internet access or connectivity, with schools distributing laptops and hotspots to ensure that students of lower socio-economic status are able to continue learning through virtual courses. On the other hand, many workers have incurred costs necessary to upgrade their home Internet access speed to maximize their productivity, or invest in ergonomic workspaces or even larger living arrangements to accommodate multiple workers and students at home (Department of Labor n.d.). Those types of problems with the transition have been solvable, at a monetary cost, through technical and material solutions. However, there are other, more intractable, barriers to the transition to successful virtual students and employees.

For many disabled people, the path to "Zoom life" has been laden with challenges.

For some disabled people, of course, eliminating the need to go to an office or classroom has been a tremendous blessing, removing challenges of transportation and navigation of inaccessible built environments. Many people with mobility impairments, compromised immunity, chronic pain, and other disabilities are positively rejoicing in the virtual work environment. For other disabled people, there is little difference between the challenges of working online or working in an office. The need to do their jobs and take their classes online without necessary accommodations has made work more difficult, more time-consuming, and even opened the door to new prejudices against these individuals.

A sensory, mobility, learning, or cognitive disability may dramatically alter interactions with videoconferencing and collaboration programs online. Consider these very real challenges, as examples:

- A deaf person who has learned to read lips to understand colleagues who do not speak
 sign language now has to try to read lips when there may be many faces on the screen,
 faces that are much smaller than in person and whose clarity is dependent on
 connection stability and quality of cameras, or faces that are obscured by virtual and
 blurred backgrounds;
- A visually impaired person who cannot see what is on the screen and uses a
 screen-reading program to vocalize the text on the screen trying to simultaneously
 keep track of both what the screen reader is reading from documents and chat boxes
 on the screen and what colleagues are saying, as well as being able to deftly turn the
 screen reader off every time they wish to turn on their microphone to say something
 in the meeting;
- A person with a motor impairment who requires more time to take the physical
 actions to switch between elements and functions on the screen, trying to physically
 keep pace with colleagues even though they are interacting virtually;
- A person with chronic pain issues who has to adjust to spending more time sitting in one particular way at the computer so that they are visible to their colleagues during their meetings;
- A person with learning disabilities that makes learning new technologies more time-consuming while a steady stream of new collaboration, communication, and conferencing products are being adopted by their organization; and
- A person on the autism spectrum asked to absorb a huge range of sensory inputs and varying formats all at once through their virtual interactions with multiple other people and information flowing through multiple channels all on screen at the same time.

For a range of disabled workers and students "Zoom fatigue" exacts a genuine physical and emotional toll that impairs their ability to do their job (Firozi and Chiu 2021). Ironically, many of the key tips from communication experts to reduce Zoom fatigue, which include reducing the size of videoconferencing windows, staying far back from the screen, and moving around (Shea 2021), create new challenges for many disabled people and can in fact decrease accessibility. All of these examples, of course, assume that the platforms used are accessible and work smoothly with assistive technologies, both of which are, sadly, untrue. The complexity of these issues are magnified when multiple people with disabilities are involved in work that employs these inaccessible platforms.

Many of these conferencing and collaboration platforms do not have the assistive features built in that would be of great help to many disabled users, such as real time captioning or narration features; in fact, some platforms continue to collect an additional charge to use the built-in accessibility features. As such, disabled users are reliant on other assistive software or devices to create that accessibility. A great many disabled people working online require screen readers, screen enlargement, captioning, alternative ("alt") text tags, voice to text, alternate input devices, laser pointers, or many other assistive technologies. Not all of these conferencing and collaboration platforms are well-designed to work with assistive technologies, which can create enormous barriers to a disabled user who relies on an assistive technology if the organization's chosen platform only works partially or does not work at all with the employee's assistive technologies.

If the platform does work with assistive technology, the user may still need to dedicate a substantial amount of time learning how to make the platform and the assistive technology work together, a time cost other employees do not have. If the platform does not work with the specific assistive technology a user is familiar with, but instead works with a similar type of assistive technology, then the user must spend time – and sometimes money –

learning the new assistive technology, as well as how to make the assistive technology and the platform work together. This investment of time and intellectual energy are costs not expected of other employees. The worst-case scenario is when a platform is chosen by an organization for conferencing and collaboration that lacks internal accessibility features and does not work with the assistive technologies a user requires. Therefore, that user will have limited or no access to the platform and be cut off from a central part of their work experience, perhaps putting their job at risk (Hoque et al. 2018).

Oftentimes, the accessible version of these platforms offer a diminished version. Zoom, for example, allows users to join by phone for audio only. While these options may have been designed primarily to increase access for people with limited or no Internet connectivity, they do offer an option for visually impaired, autistic, and other disabled users to interact with colleagues in a more manageable way. However, if the meeting organizers do not account for audio-only participants, those users are missing much of the content of the meeting that is only visible on the screen and may suffer prejudices based on their lack of virtual "presence." Google Meet has automated closed captioning, but this takes up a substantial portion of the screen. Meaning sighted users will have trouble seeing any materials being shared online as well as engaging with colleagues unless they have large screens or multiple monitors – both of which come at extra cost. Cisco WebEX + Teams

This creates new opportunities for drawing negative conclusions about disabled colleagues whose participation in these platforms is limited by this inaccessibility. Comments in the chat of conferencing sessions along the likes of "we never get to see her during meetings" take inherent limitations of the technology and make them the responsibility of the disabled user. When so many jobs include some version of collegiality or being a team player as part of the evaluation process, the limitations of these platforms for some disabled users

represent a real threat to annual reviews, raises, promotions, and even continued employment (Hoque et al. 2018; Shantz et al. 2018).

These threats are magnified by the fact that disabled people are the most underrepresented, and arguably declining, population in the workforce and in education (Donohue et al. 2011; Maroto and Pettinicchio 2015). In many organizations, a disabled employee or student may be the only disabled person there, or the only person with a particular disability. The disability, its impacts in the virtual environment, and the barriers and extra work needed to achieve accessibility may be entirely unfamiliar – and perhaps completely unrecognized – by all the other members of the organization. And even if there happen to be several disabled employees in an organization, this does not mean that they will share the additional labor. Because some of the disabled employees may still be able to adjust to the non-disabled environment, while others will struggle undeniably. Coping mechanisms may even be amplified in a work environment which is either unaware of or unwilling to discuss the additional labor.

As the threat of contagion decreases, organizations will transition away from virtual environments to more traditional, in-person work and learning environments. Some entities may not completely return, because of the effectiveness, increased global reach of communications and cost savings of the online platforms (Larson and Zhao 2017; Ruth and Chaudhry 2008). However, as evidenced by recent "return to work" business policies, in-person academic conferences, and in-person educational settings, it is unlikely that this represents many organizations or work and learning options. Just as the transition to telework privileged the organization without considering the individuals within, there is the threat that the return to work will also neglect the needs of disabled people. This leaves those with disabilities with a series of questions:

• Will those that benefit from telework retain the option?

- Have physical spaces morphed during the pandemic such that mobility is inhibited?
- Will the immunocompromised be at the forefront of plans to return to "normal"? Given the scarcity of disabled people in most work contexts and many educational contexts, the extra emotional and intellectual labor of disability and the extra technological labor of accessibility may be utterly ignored, perpetuating and sometimes increasing the barriers that the disabled person is working to overcome.

Taxes on Marginalized Populations

The concept of cultural taxation was first introduced a quarter century ago, initially articulated as a means to capture the extra time and emotional labor that members of marginalized groups were required to invest in their careers (Padilla 1994). These taxations can include disproportionate expectations of service, mentoring, and committee membership, often specifically for Justice, Equity, Diversity, and Inclusion (JEDI) initiatives (Cleveland et al. 2018). Since its introduction, discussions of cultural taxation have tended to focus on issues of race and gender.

This report seeks to extend discourse about cultural taxation by introducing the disability tax and accessibility tax as forms of emotional, intellectual, and economic labor disproportionately paid by disabled people on a daily basis. These concepts are not a unique manifestation of disability, as marginalized persons based on their race, class, gender, and sexual orientation have all been charged a toll to decrease the barriers to entry in a variety of spaces. Therefore, these conceptualizations of disability and accessibility taxes are meant to add to existing conversations from which they take inspiration.

The term "pink tax" has been utilized to denote the disproportionate economic impact on women, namely on pink-ified consumer products that are oriented around feminized bodily maintenance (Jacobsen 2017; Lafferty 2019). While these products have been satirized in the media, there are financial impacts felt by women, who are expected to invest in these

products to maintain "proper" feminine performance in their workplaces and as "professional" students in a classroom. This performance itself, materially embodied, has immaterial impacts. In short, women's bodies become a space where greater intellectual, emotional, and economic labors are expected, and, unfortunately, uncompensated (Hoschild 2001).

The term "emotional labor" was coined to link expected and feminized labor of women in workplaces with the immaterial toll this can take on individuals. Feminized expectations of labor include perceptions of the "naturalness" of service-oriented, compassionate, organizational and project management capacity regardless of job description or past work experience (Erickson and Ritter 2001; Meier et al. 2006). This aligns in part with the economic imposition of the pink tax because there are economic costs for being identified as a woman in the workplace. However, emotional labor has deeper, more insidious manifestations that are far less visible, and can leave a lasting impact. Particular industries impose greater expectations on feminized individuals, through gendered expectations of performance, including tone (calmness), attractiveness, manner of speaking and movement among others (Green 2003; Hoschild 2001). Women are therefore more often volunteered (voluntold) to be on service-oriented initiatives, as they are seen as naturally more inclined towards this work. This can cause women to be burnt out by their workplaces, as the performance of feminized labor requires a great deal of work, which is unseen, uncompensated, but expected. This is highlighted in many caring and service professions, characterized by an overrepresentation of women, due to this flawed vision of biology-based workplace skills.

Additional labor expectations are further exaggerated for women of color, who experience an intersection of emotional labor and the "Black tax" (Stephen 2007). The Black tax is the emotional, economic, and intellectual labor imposed on people of color who must

navigate hegemonic White culture in the workplace. When operating under colorism, Black women, in particular, must maintain a feminized performance, while also adhering to White expectations of "professionalism" (Akin 2020; Stephen 2007). Black women's bodies are disproportionately policed based on their hair, nails, and skin, being questioned for their capacity to do their jobs based on their appearance and comportment. An example of this is the phenomena of "office housework" where menial tasks such as organizing space, cleaning up, taking notes or even getting coffee is demanded of women and women of color in particular (Tulshyan 2018).

These take the forms of stories where individuals were told to "take notes" at a meeting when in reality they are the most senior person in the room. While secretarial work itself is no less valuable than much other labor performed in any organization, it is the implication that this should be done by women, and women of color, that reveals an undercurrent of racism, colorism, and sexism. The expectation that women and women of color are only capable of certain tasks showcases the ways in which they are forced to navigate a workplace or educational setting that was not built for nor welcomes them with open arms. Another example is the composition of any type of "diversity work" (Cork et al. 2019). Committees, event planning, working groups, and other facets of unpaid equity-focused labor are often the purview of those who inhabit these intersections.

There are many other examples of this, which align well with the stigma and extra labor imposed on disabled individuals. Those with disabilities share a great deal of the intellectual, emotional, and economic taxation with other groups. They differ, however, in terms of having a secondary form of taxation. While it is clear that sexism, racism, classism, transphobia, colorism, and many other forms of exclusion are perpetuated in the presumed and expected labor of women, women of color, and other marginalized voices in organizations, there is seemingly no parallel to the accessibility tax. There is a frustrating

uniqueness to accessibility tax because of the compulsory able-bodiedness expected by organizations and the digital divide based on inaccessible technology (Dick-Mosher 2015; McRuerc 2006). There is extra effort required to navigate physical or virtual environments for other marginalized groups, but not all groups must simultaneously pay multiple taxes for a singular identity. In terms of cultural taxation, a disability is akin to belonging to multiple other marginalized groups.

Rarely are intersectional needs met by boilerplate affirmative action legislation and policies. This means those who experience disability as well as sexism, racism or other intersectional forms of exclusion are especially likely to be left behind (Miles 2018). The pandemic and the move to Zoom life may have made these discrepancies even more pronounced. Students with disabilities, for example, must expend enormous amounts of additional emotional labor compared to their peers as a result of acquiring effective accommodations, navigating inherent physical and technological barriers, and dealing with documentation and disclosure requirements (Hannam-Swain 2017). A study in Chronicle of Higher Education found that these issues in the pandemic became even more difficult and draining for many disabled college students, but nonetheless the virtual environment was an overall positive for many disabled students compared to the challenges of the in-person learning environment (Puang 2021).

The Disability Tax

Like other marginalized populations, disabled people pay a tax of additional emotional and intellectual labor as part of being a student or being a professional. As the population that suffers the highest rates of unemployment and lowest rates of enrollment in higher education programs, a large number of disabled people spend their adult lives in isolation in their places of work and learning. Even for the fortunate minority in higher education and paid employment, disabled people still take on extensive extra labor for being

disabled. Work expectations function under the premise of compulsory able-bodiedness, and therefore, there is rarely an option to decline extra labor (Lakshmi Piepzna-Samarasinha 2018; McRuer 2006). The inherent discrimination in hiring, promotion, and retention processes toward disabled people leaves disabled people in a position of constantly having to prove their value beyond other people in similar positions (e.g., Bowman and Jaeger 2007; Thompson et al., in press).

Some of this disability tax is psychological. Disabled people are unlikely to encounter many, or any, people like themselves in their organization. According to the US Bureau of Labor Statistics (2020), sixty-one million Americans have a disability under the ADA, yet fewer than twenty percent of disabled people were employed in 2019. This unemployment rate of over eighty percent is several times the National average and has been this way as long as the employment of disabled people has been tracked. Additionally, those that are employed are paid far less on average than their non-disabled counterparts – the small percentage of disabled people who are employed only make sixty-three cents on the dollar compared with nondisabled counterparts.

Being the only disabled person or one of a small number, and likely being paid far less than everyone else, means significant feelings of being isolated or alone in the organization (Baldridge and Swift 2016). Lack of representation also creates an organization that does not know how to support disabled members of the organization or offer peer models in self-advocacy around such topics as pay and labor equity. Being a rarity also means a great deal of extra effort to explain, over and over, issues of your own disability as it impacts the working environment, or to justify accommodations necessary to work or learn in the environment (Baldridge and Swift 2013; Davison et al. 2009). It also means being "the person" who is tasked with all disability issues your workplace encounters, as you are seen as representing all disabled people. Visible disabilities may inspire expressions of pity, while

invisible ones often inspire confusion in organizations. As the local disabled person, you are expected to explain it all in a non-threatening fashion. You are the Lorax, you must speak for the trees – whether you like it or not. Moreover, you are the one who has to offer the one-for-all solution, because if thanks to you a "real(ly)" disabled person was involved in the process, then the concepts/solutions you came up with are expected to work for all disabled people. If they are not that "universal", then why did you as a disabled person not try harder to make your ideas more inclusive for your "own" peers? What able-bodied people tend to forget is that medical labels can differ and so do the accommodations needed. An autistic person may need less light to be able to give a paper at a conference, while a legally blind person may need more light to do the same. In addition, both professionals may present at the same panel or they may want to attend the same panel. Also, even in cases where disabled professionals share the same disability, the accommodations they (wish to) ask for may differ significantly. This is not meant to be annoying for conference organizers, organizations or workplaces; it's just a matter of fact. If anyone expects all disabled people or at least all wheelchair users or all autistic or all blind people to need the same adjustments in order to give a talk, for example, then why don't they expect people with a certain first name to have more in common then their first name and therefore be willing to become friends?

In addition to the emotional labor and frequent awkwardness of constantly explaining your own disability, there is the added concern around how it may or may not impact perceptions of performance. Those with invisible disabilities may find themselves weighing whether and to what extent to disclose for fear of being passed over on projects due to assumptions about ability or bandwidth, and this may unduly impact organizational perception of productivity and performance. Coupled with the statistical likelihood of a non-disabled supervisor, performance reviews to which merit increases and other bonuses are increasingly tied are likely to over- or under-compensate for any recognized or disclosed

disability. This is further compounded by organizations that are ill-prepared to train those in supervisory or managerial positions to be aware of internal bias or ableism in the work culture that would be reflected in the performance review. The end result is that disabled employees must weigh what, how much, and to whom to disclose in order to mitigate negative impacts on perceived performance and associated pay and advancement. Those with visible disabilities have no control over this disclosure, and therefore must deal with the burdens of ableism regardless of their capacity to do their job or continue their studies.

The disability tax typically includes extra, uncompensated labor. Just as women are typically expected to volunteer for extra work related to gender equity issues (Meier et al. 2006), it will be taken for granted that the disabled people in the organization will fill any service roles related to disability. This can include support, advocacy, educational or social functions. The paucity of disabled people in any organization means the possibility of many expectations being placed on a very small group of individuals. There are no expectations or ability to refuse these extra hours of unrecognized and uncompensated labor. In fact, the emotional labor and disability discourse centers those who work with or around disabled people, preventing the possibility of acknowledgement that disabled people themselves labor (Costakis et al. 2021; Mancini and Lawson 2009).

It also includes diminished opportunities that are available to others. Part of the disability tax is the toll taken by things that are absent. Disabled people may be without mentorship in terms of being disabled in that organization or even an entire field. There are few – if any – others to go to for guidance about navigating organizational culture as a disabled person. Any kind of mentorship is hard to find, as the typical societal reaction to disability is to avoid it, ignore it, and erase evidence of its presence (Willingham 2016). While much of this predates the global pandemic, COVID-19 exacerbates these issues, as

resources that were previously available to those with disabilities may have diminished or vanished.

The Accessibility Tax

Beyond the parallels in payment with other groups that can be seen in the disability tax, there is another form of payment that uniquely impacts disabled people. There is extra labor, sometimes tremendous amounts of extra labor, in the accessibility tax. Differences in gender, race, or sexual orientation, to name a few, will not make using technology inherently more complicated or navigating a building inherently more difficult in the same way a disability can. These extra exertions of getting through physical spaces, of compensating for different levels of sensory inputs, of needing to learn and use assistive technologies, of training others on how to adapt their accommodations, of mastering the partial use of unfriendly and inaccessible technologies, and maybe even of living with constant pain, among much else, can all be core aspects of the accessibility tax. They can be exhausting, especially in combination with the companion disability tax, both of which are paid on a daily basis.

Beyond the effort to make assistive devices designed for others work for them, there is a financial cost for disabled people who do not receive the assistive software and hardware that they require through their employer or school. This significant direct economic tax is a part of the accessibility tax as well. Many highly specialized assistive devices or software programs are very expensive, with costs in the thousands of dollars in some cases, costs that the disabled person must absorb somehow just to get online. This intersects with high unemployment rates within the disability community, and the fact that those with jobs make far less than members of other populations doing similar work (Bureau of Labor Statistics 2020).

In the online context, in particular, the accessibility tax can be very heavy. From the beginnings of the Internet, accessibility for disabled people in the creation of software and hardware has primarily been an afterthought, when it has occurred at all (Jaeger 2012). User-centered design (UCD) is a widely touted design method that emphasizes the user experience in the design of both hardware and software technologies, incorporating the end user in all stages of development (Gould and Lewis 1985; Sharp et al. 2007). As part of the UCD process, the end user is defined and individuals matching the characteristics are recruited for evaluation and testing of the new technology. Although UCD practices should offer multiple opportunities for developers to include disabled people into the design process, developers instead ignore the population completely or assume what disabled people need and how they interact with technology and create products accordingly.

This is as evidenced by the number of Internet-related technologies still not born accessible, in spite of clear guidelines that have existed for more than two decades (Taylor et al., 2015; Sharp et al., 2007). Product development processes treat accessibility as an edge case, only to be considered if the feature addition results in significant revenues, or is required to comply with regulations (Field and Jette 2007; Olsen et al. 2019; Shinohara et al. 2018). As Internet use becomes ubiquitous, companies compete to develop software that improves the user experience. Even in education spaces where technology is accessible, large gaps in accessibility remain (Shaheen and Lazar 2018).

There is also an indirect financial aspect of the accessibility tax. For the entire history of online commerce, large portions of it have been inaccessible to disabled people because the sites were designed – sometimes intentionally as business decisions – to be inaccessible (Jaeger 2012). This situation means that disabled people have fewer choices when shopping online, which means they have less ability to get the best price on purchases. While in the best of times some might see this as an "economic nuisance," the ongoing COVID-19

pandemic has created a greater reliance on online commerce, oftentimes for basic necessities. The barrier to entry these platforms pose to the disabled community further endangers an already at-risk population during a public health crisis. Even the ability to bank and invest is severely limited by digital inaccessibility, which means that disabled people also make and get lower returns on their investments than they otherwise would (Wentz et al. 2019). While disabled people are intensely loyal customers to the options that are accessible (Accenture 2018), the large gaps in accessibility lead to direct and indirect financial costs, as well as social costs, that are part of the accessibility tax. Inaccessible technology prevents the disabled community from full participation in networking or socializing on online platforms, which compounds the feelings of isolation in both professional and personal relationships. Inaccessible technologies also indicate that the impact of disabled customers is still largely underestimated or even not taken into account, even if according to Domingos de Oliveira there finally are commercials with disabled celebrities or actors in commercials across North America and Europe. (de Oliveira n.d.).

Additionally, opportunities for networking that may benefit one's career or academic trajectory are currently conducted online during the COVID-19 pandemic. In these instances, the disabled community may be excluded from valuable opportunities as a result of the accessibility tax, or they take on additional emotional labor and financial costs when seeking accessible options. The reduced access to social capital during the current, exclusively online environment is yet another example of the ramifications of the accessibility tax.

If one does not have a disability, the weight of the accessibility tax online is not likely to be noticed, making it harder for others to understand. At least when people see you struggling to get a wheelchair up a ramp that is poorly designed, they get a sense of the difficulty. Online, no one else sees you struggling with the steep virtual staircase that was clearly not designed with you in mind. Instead you are expected to make "it" work, in order

to work or maintain your workplace. One could even say that despite the technical difficulties which occur if accessibility is only an afterthought and the accessibility tax which comes with it, the disabled employee or student is paradoxically expected to be able to achieve some kind of "native" virtuosity regarding technical devices. At the same time, the need to teach online during a pandemic sparked a big discussion in Germany in 2020 as a lot of lectures were convinced (and a lot of them still are) that remote teaching can only be "less than" teaching in class/in person, rendering digital classes as "per se insufficient" regardless of the time and effort invested (Marx 2020). An unimaginable and elitist attitude for countries that need to bridge way longer distances such as Australia or Canada.

Paying Taxes in Practice

The added labor, stress, and technological expertise of being a disabled user in a virtual work environment demonstrates the power of both the disability tax and the accessibility tax. These taxes, however, are by no means a product entirely of the online environment. A particularly disastrous job interview for a late friend of one of the authors of this report encapsulates the insidious nature of both the disability tax and the accessibility tax in one jaw-dropping anecdote (discussed in greater detail in Bowman and Jaeger, 2007).

We'll call the hero of this story Cindy, since that was her name. Cindy had numerous physical disabilities that required dozens of surgeries in her lifetime and had her using crutches on a good day and a wheelchair on most days to get around. She also, at the time of this particular interview, had completed her PhD and had been awarded multiple honors for her teaching from her university. She had disclosed her disability early in the hiring process and it was clear that when she went for the on-site interview, she would be using a wheelchair.

The director picked Cindy up at the airport in a vehicle that was not designed either for ease of getting into or transportation of a wheelchair, leaving Cindy to be hoisted into the

passenger seat by her potential future boss, who then complained loudly while trying to stuff the wheelchair into the back. When the formal interview began the next morning, Cindy, to her surprise, was led to an empty classroom with an essay question written on the board. She was told that she would need to write out an answer using pencils and paper provided. The question had nothing to do with the job she had applied for, so she inquired as to what the purpose was. It was explained to her that they wanted her to prove that she was literate.

This request was surprising, given that Cindy already had earned her PhD, had a list of journal publications to her credit, and had written and submitted her application materials for the job online. She inquired if this was some rather curious standard part of interviews at this institution; "no" she was told, they were just asking her. Cindy then pointed out that asking someone with limited mobility in their hands and fingers to write using a pencil seemed a bit unfair, in addition to the obvious discrimination in the essay requirement itself. However, her justified dismay was ignored, and she was left alone to write her essay to prove that she was literate. Grasping the pencil with both hands – instead of employing the prompt provided, she instead wrote down the key legal rights provided to disabled people under the ADA – because she was awesome like that. After she submitted her response an administrator she had not previously met in the interview process came into the room and offered her the job on the spot.

Apparently, this absurdly discriminatory act of proving her literacy had gotten the attention of someone at the institution with at least some awareness of discrimination law and they had decided that offering the job would be a good way to avoid a lawsuit. Cindy asked why they thought she would want to work there, given everything that had happened thus far, and the administrator replied because she was not likely to get any real job offers. Smartly, Cindy instead asked to be taken to the airport and put on the next plane out of there. Fittingly, an interview soon after landed her at an institution that she loved and where she taught for the

rest of her life. This bad interview experience provides a heap of examples of taxes based in disability: the assumption that physical disabilities imply mental inability, the assertion that she was not otherwise employable, generally behaving as if they had never interacted with a disabled person before, and accessibility: the car at the airport, the request to write using a pencil. While this is a particularly funny example of the all-encompassing obliviousness and ineptitude of the institution involved, the taxes detailed are far from unusual in employment processes for disabled people.

Accounting for the Disability and Accessibility Taxes around the World

Through admitting and identifying the ways in which pink, Black, disability, accessibility, and other taxes are imposed, we can forge ahead with fruitful interventions into education and research to improve the experiences of disabled individuals in organizations. JEDI initiatives are now in vogue, adding onto the understanding of the need for overt anti-racist education and workplace intervention. We need to include anti-ableism work in the fight for diversity and inclusion (Williams and Hagood 2019). In the context of higher education, for example, this means looking to the "leaky" pipelines, which exclude and discount disabled and other marginalized voices' labor, from acceptance processes for students to promotion processes for faculty (Bowman and Jaeger 2007; Cork et al., Hannam-Swain 2017). To make a change in faculty the management of higher education institutions should welcome "inclusive teams" with more than just one disabled employee, so that the benefits of collaborating can become more obvious. The management needs to encourage individual and innovative (solution) strategies of disabled academics who often had to be creative to overcome barriers to get into academia in the first place. And it needs to care about things like mobility (issues) (Anders 2019). Through making diversity more inclusive at institutional levels (Cork et al. 2019; Jaeger and Bowman 2005), post-secondary institutions can help those taxed by disability and accessibility in an ableist world be more

successful. One space in which this could occur is grant funding. In the US, it could include parallel programs to the existing National Science Foundations (NSF) ADVANCE programming, which connects women in higher education through mentorship and other forms of support, to improve their educational and workplace outcomes (NSF 2021). In Germany, the project Akademiker*innen in die Teilhabe und Inklusionsforschung (AKTIF Projekt) started the campaign "Inklusive Forschung darf kein Wettbewerbsnachteil sein!" [Inclusive research must not be a competitive disadvantage!] in 2017 to call for funding guidelines which cover disability related expenses (AKTIF 2017). Because if there are institutional funds for things such as live captions or audio descriptions the individual disabled researchers can be freed from the ongoing fight for their work related accessibility budget. On the other hand, an academic project's public or in-house events can become frequently more accessible if they are freed from the need to find sponsors for accessibility requirements. The disability tax is so high that far fewer disabled individuals even exist at the upper echelons of organizations, therefore addressing recruitment and retention strategies for disabled students which foreground universal/accessible approaches to education with flexibility and creativity in mind would improve these outcomes at all levels (Homes 2010).

This must begin with more of a focus on design for diversity with disability being as inextricably interrelated. In the US, at least, the political and policy environment of the past few years has served to further diminish thought given to disability and accessibility, regardless of context. The years of the Trump presidential campaign and administration featured cruelty toward marginalized populations as a whole, and disabled people were a key target. Trump's 2016 presidential campaign emphasized derogatory rhetoric and images about disabled people, from mocking the disabilities of reporters to naming his campaign biography Crippled America, an obvious slur against disabled people (Cork et al. 2016). After the election, the Trump administration removed legal resources, summaries of rights, and other

guidance for disabled people and their families from the Department of Justice and Department of Education websites, while proposing budgets each year that would eliminate funding for or even the existence of programs that support disabled people (Douglass et al. 2017). Many Congressional Republicans, who sought to repeal the ADA, joined this assault on disability rights and thereby the civil rights of disabled people (Auxier et al. 2019).

As the US has long been the world leader in crafting legal protections for the civil rights of disabled people, the rise of a greater antipathy toward disability in the US certainly creates an unsettling tone internationally. The election of President Joe Biden – who has a long history of support of disability rights and personal connections with disabled people and whose presidential campaign platform paid more attention to issues of disability than any previous major party campaign in the US – promises a much more humane policy and political environment for disabled people. However, much work is necessary in policy and politics to simply rebuild what had been previously accomplished that was broken by the Trump administration and the legacy of Trumpist insurrection and hate, especially as Trumpism still reverberates in elections and governance in many nations.

The articulation of the disability tax and the accessibility tax offer opportunities to name, explore, and address glaring, well-documented, interrelated technological and societal barriers to disabled people. For disabled people, rights and equity as members of society are dependent on a unique intersection of law and policy with design and technology (Jaeger 2013, 2015, 2018; Wentz et al., in press). The disability tax and the accessibility tax offer new opportunities for examining access for disabled people as being not just a legal issue or design issue, but also as a social and societal issue. The most obvious research opportunity will be discerning the financial, social, psychological, and professional impacts of the disability tax and the accessibility tax in a range of professional and educational contexts.

Research can also begin to articulate the complex intersectional relationships between the

disability tax and the accessibility tax with other taxes imposed upon other marginalized populations.

The concepts and language of the disability tax and the accessibility tax also can inform expanding education programs about disability and accessibility, which can perhaps begin to change perceptions and treatment of disabled people. Just as significantly, the taxes can help to bring renewed attention to disability and accessibility as vital topics of public policy. While these topics have been long-neglected in policy, the recent dramatic, technology-driven changes in education, employment, and interaction make refocused attention to disability and accessibility policy a desperate need.

As this report is introducing the concepts of the disability tax and the accessibility tax, other disabled people, educators, researchers, and policymakers will hopefully use the concepts to identify many further avenues of exploration and application. For example, this discussion has been based in the dramatic move of much employment, education, and interaction to the online environment, and thereby does not account for the disability tax and the accessibility tax for disabled people with frontline jobs that cannot be conducted online. though these taxes will inevitably play roles in their lives and work as well. Permanent telework may not be an option for many disabled people, but neither is avoiding these taxes. One could even argue that if society becomes more aware of these specific taxes, those disabled people who benefit from telework could benefit even more. Because working remotely could help disabled academics get jobs in the highly competitive field of academia which they qualify but cannot apply for as they would involve either moving to a different city or even country (and finding, for example, new personal assistants, specialists or therapists, not to speak of the fact that a disabled person could happen to be not eligible for a foreign health system) or a long commute. On the other hand, we need to resist the temptation to ask disabled students or faculty to only participate online from now on as that could reduce

costs and planning on the higher education institutions' or organizations' part. This report is not an end, it is just a start.

Next Steps: Back to Better?

It is important to note that many of the strides during the pandemic around digital accommodations and accessibility did not arise from a shift in design priorities or research. Creating opportunities to work remotely was driven by organizations adapting to COVID-19 and investing in technology to reduce the pandemic's impact on revenue. As we move forward, it is vital to recognize investing in those who are discounted in the traditional inaccessible and inequitable workplace can improve outcomes for individuals and their organizations. Corporate Social Responsibility (CSR) has been shown to be effective means to distinguish organizations from those whose commitment to JEDI rings hollow, and to those who have true intentions to forward sustainable social change (Kaplan 2019; Gould et al. 2020). In the US, disabled people have about \$500 billion annually in disposable income, but can only invest in spaces they can access (Bureau of Labor Statistics 2020). Therefore, they invest in companies whose values they can engage and enjoy (Donovan 2014). Inclusive online accessibility can translate to capital gains.

Further, it is not just accessible consumerism that benefits organizations. Companies with the best track record of hiring disabled employees have higher revenue, net income, and profit margins than other companies. Each one percent growth in the number of disabled people in the workforce results in an additional \$25 billion in the US gross domestic product (GDP) (Accenture 2018; Kugliowski 2020). This should be integrated into our collective transition out of the pandemic. Wherein accessibility is prioritized as an organizational feature and inclusive protocol.

The development of numerous vaccines, the successful rollout of large-scale vaccination campaigns in places like the US, the UK, and Israel, and the hope for an

internationally coordinated rollout have allowed the opportunity for folks to envision getting back to "normal," or some version thereof. Though, it must be noted that inherent inaccessibility in many vaccination sign-up procedures and portals in the US served to make it much harder for disabled people to get a vaccine than most other parts of the population (Kaiser Health News 2021; Park 2021).

For disabled people now comes the added anxiety of what happens when we — employers, organizations, society — "snap back" to a world less reliant on virtual interactions. There was no sudden altruistic desire to center the needs of disabled students, employers, or clients before these events. Instead, the move to virtual was the result of a global crisis which necessitated a pivot away from in-person interactions. The digital world suddenly becoming the prime arena for interactions of all types required organizations to invest in technology to mitigate the impact to their bottom line that conveniently also provided some basic accommodations for the disabled.

Will the ability to safely gather face-to-face result in future lack of investment in digital accessibility? If history is any indication the answer is likely to be yes. As able-bodied and neurotypical people become less reliant on virtual connections, the disabled community is bracing to "hold the line" on whatever advances in accessibility we've been able to make – either as individuals or as a community. Ever used to navigating a patchwork of outdated and archaic policies, and maintaining mutual aid networks in order to collectively advocate for change has provided a foundation for disabled workers, students, and communities to leverage hastily assembled digital infrastructure to continue to bring the work of disability justice into the twenty-first century.

In a society where human value is equated to productivity the rapid expansion of telework options has shown that, with appropriate investment, disabled workers and students are more than able to perform on par with their able-bodied counterparts. The last year has

further highlighted how inaccessibility, not disability, has kept the disabled community locked out of spaces and conversations. In addition to maintaining and expanding on the advancements in digital accessibility the same critical lens needs to be applied to physical environments we return to as they are reconceptualized for a post-COVID era.

Inter(tax)tionality and Reparations

This report intends to use disability tax and accessibility tax to recommend more extensive language for the intersectional experiences of individuals in their organizations. While emotional labor has been understood under feminized and racialized vectors of identity, resulting in economic disparities, this conceptualization of taxation can be applied more broadly. For example, there are very real barriers to access when physical facilities are not available to those who fall outside the normalized assumptions about gender identity, weight, and mental health, as a few examples. There are many other groups that experience intellectual, emotional and economic taxation based on their subject identity, including the immigration status, language barriers, and religious observance to name a few.

This report hopefully facilitates a larger conversation enabling us to envision more inclusive physical and digital spaces as the world reopens, based on acknowledging and avoiding excess taxation for marginalized groups. Diverse recruitment and retention of top talent in all fields improve organizational outcomes, therefore investing in accessible digital infrastructure has wide-ranging benefits. Under the pressures of the COVID-19 pandemic telework, videoconferencing and other virtual solutions have enabled work and educational spaces to change their approach. The lessons learned can improve economic prosperity and pedagogy. Therefore, this goes far beyond a moral imperative to "do good" and aligns closer to the practical need for contemporary organizations to be more responsive to workers and consumer's needs.

The lack of clarity and lack of language for other groups indicates a dearth of work on this, which means there is more attention that needs to be paid, literally, to compensate for unsupported and expected labor. While there is extensive literature on women's experiences – emotional labor and pink tax – as well as the Black tax, there is little that aligns with this language to bring in the experiences of trans, queer, poor, Indigenous, Latinx, immigrant, mental health communities, and religious minorities, to name a few. Therefore, in articulating both the disability tax and the accessibility tax, we hope to open up a space for greater conversations around the tolls paid by different groups who experience an unnecessarily high cost of entry. Language that addresses the intellectual, emotional and economic burdens faced by individuals with different intersectional lived experiences is essential in quantifying the unequal price paid by many.

Conclusion

The current shift in culture, from a traditional workplace to immediate online and telework options has shifted perceptions of what work – and life – can look like. COVID-19 has forced everyone to adapt and change, but not necessarily willingly. Therefore, it is argued by many that we are all in this together. The pandemic is adjusting to less personal contact, learning new technologies, and being more physically and socially isolated than before COVID-19. While many claim they are "disabled" by the pandemic, this claim undermines the systemic issues faced by disabled people before online services become accessible for all. The "in it together" platitude continues to ignore the isolation and emotional labor experienced by disabled people prior to the pandemic and its different manifestations during the pandemic. For those with disabilities not only are "we" not in this together, but this lack of understanding of systemic issues predating pandemic conditions makes it easier for discrimination to thrive without direct, deliberate intervention. If nothing else, the lack of respect for disabled lives is encapsulated in the fact that in nations where such data is

collected – including Canada, Germany, and the US – disabled people were the population most likely to contract and die from COVID-19.

Continually those with disabilities face the "Goldilocks Dilemma" (Arehart 2008; Hannam-Swain 2017; Jaeger 2013) wherein they are "not disabled enough" to prove they require formal support, or they are "too disabled" to be able to communicate their needs. For those who are "not disabled enough" the need to prove their disability results in the sharing of private medical information (in violation of privacy protection laws) as workers attempt to prove they need the accommodations they have already worked on with their physicians. But are forced to navigate another power dynamics related to this (e.g. students vs. teachers, employers vs. employees).

Therefore, because there is a lack of recognition of how disabled individuals are uniquely impacted by accessibility and disability issues simultaneously under COVID-19, many fear a collective forgetting that will occur upon the desired return to "normal." There is a distinct difference in collective experience of physical and social distance versus the isolation felt by the disabled community. This is clear in the ways in which the disabled people has experienced less access to vaccination, higher job loss and discriminatory hospital triage protocols that deem their lives are less worth saving. While information and communication technologies and many industries have embraced new technologies to become more accessible, what happens when we "snap back?" These taxes are not solved by the technology implemented under the current moment, and this lack of intentionality leads to continued exclusion. While we've begun to create accessible online spaces, what happens when it is no longer necessary for those without disabilities? Therefore, understanding the simultaneity of the disability and accessibility taxes are not only an ethical and moral imperative; but is a call for intersectional accessibility as an information and technology justice issue.

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Sara H. Olsen, MS, MPH, PhD started her career in the Navy as a Salvage and Diving Officer and Explosive Ordnance Officer. To meet the needs of wounded veterans, she co-founded Crossroads Adaptive Athletic Alliance. The nonprofit's reach and mission quickly grew to building a stronger fitness community for all people with disabilities, and enabling athletes with permanent impairments to participate in a wide variety of physical activity opportunities through education, grants, and competition. Through Crossroads, Sara developed curriculum for and currently teaches seminars and workshops for fitness and medical professionals, and speaks on national platforms about the evidence-based impact of inclusion in sport. She recently completed her Ph.D. in Behavioral and Community Health with funding from the Pat Tillman Foundation. Sara is currently employed as a Disability Rights Program Specialist.

Stephanie J. Cork, PhD, is the Manager of Student Accessibility Services (SAS) at Ontario Tech University in Canada. She is an internationally trained interdisciplinary scholar who centers her research, teaching and service on intersectional disability advocacy. Stephanie has published on pedagogy, disability, and accessibility in a variety of fields. She has a forthcoming book chapter for Human Kinetics, and was previously published in the award-winning *Handbook on Disability Activism* (2019). Stephanie co-created the international Disability Summit in 2016 with Dr. Paul Jaeger, which is one of the largest cross disability, cross disciplinary events in the world.

Petra Anders, Dr. phil., is a Research Assistant at the University of Bamberg in Germany. As a disabled academic, she focuses on different aspects of the representation of disability in film as well as disability studies, gender and inclusive academia. Petra's research draws on the belief that differences between people should not only be recognized, but accepted. She enjoys being part of a vibrant international community, e.g. by giving papers at international conferences and at non-academic occasions. Most recent publications include the chapter 'Welcome to the Freakhouse? Disability bei Wim Wenders' [Welcome to the Freakhouse? Disability in Wim Wender's (films)] in 'Kontinuität im Wandel. Begegnungen mit dem Filmemacher Wim Wenders' [Continuity in Change. Encounters with the Filmmaker Wim Wenders], edited by Jörn Glasenapp, and the contribution 'Welche Karrierechancen haben Akademiker*innen mit Behinderung?' ['What career opportunities do academics* with disabilities have?] for the inclusion portal of the Aktion Mensch.

Ron Padrón, MS, is the Director of Undergraduate Operations at the College of Information Studies at the University of Maryland. His work centers justice, equity, diversity, inclusion, and accessibility. He is dedicated to the development, implementation, and assessment of equitable institutional practices that foster diversity and inclusion in both the for-profit and nonprofit sector. In particular, he uses his expertise in administration, public speaking, coordination, logistics, teaching and facilitation to guide advocacy in higher education systems in order to support and elevate the voices of marginalized groups to hone inclusive institutional practices. He has served as co-chair for the University of Maryland Undergraduate Advising Conference and helped establish the Advisor Learning Network to promote community-building and knowledge sharing across student services and academic advising units on campus. He also serves as a facilitator with the Words of Engagement Intergroup Dialogue program through the UMD Office of Diversity and Inclusion.

Alexandra Peterson, MA, is a Speech-Language Pathologist Clinical Fellow (M.A. CF-SLP), at Ascension St. John's Hospital in Detroit, Michigan. She graduated from the Department of Hearing and Speech Sciences and was Graduate Assistant to President's Commission on Disability Issues (PCDI) at the University of Maryland. She received her BS in Communicative Sciences and Disorders from the University of Wisconsin-Madison in 2017, where she worked at both the Center for Healthy Minds and the Learning Cognition and Development Lab. Alex is passionate about the intersection of public health, equitable education, and accessibility; which she plans to apply as a future speech-language pathologist.

Amanda Strausser, MPH, is Communications Manager and Special Assistant to the Dean of the Graduate School at the University of Maryland. While pursuing her MPH, her research focused on health literacy and looks to establish more effective advocacy networks for those with visible and invisible disabilities within the American health care system. Now in her capacity at the Graduate School, Amanda is a vocal advocate for the disability community, using her own experiences within higher education to mentor and support others who are pursuing their degrees. Amanda also develops and supports graduate student programming through the creation of events, workshops, and digital spaces by working with different campus and community partners. She is one of the founding members of the UMD Disability Summit and works in many other contexts to help promote programming that is both inclusive and accessible for all.

Paul T. Jaeger, PhD, JD, MLS, MEd, is a Professor of the College of Information Studies and Co-Director of Museum Scholarship and Material Culture program at the University of Maryland. He studies the impacts of law and policy on information access and accessibility, with a focus on human rights and civil rights. He is the author of more than 200 journal articles and book chapters, as well as 20 books. His research has been funded by the Institute of Museum & Library Services, the National Science Foundation, the American Library Association, the Smithsonian Institute, and the Bill & Melinda Gates Foundation, among others. He is Co-Editor of the Library Quarterly and co-creator and Co-Chair of the UMD Disability Summit. In 2014, he received the Library Journal/ALISE Excellence in Teaching Award. His most recent books are Foundations of Information Policy (2019), Foundations of Information Literacy (2021), and Libraries and the Global Retreat of Democracy (2021).