

Alienation of The Self

by

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The Math Child

I was a math child. Growing up, I never put up a fight about doing my math homework. I liked numbers, and what kind of child likes numbers? Children are usually more excited to be playing than learning, but not me. It never helped that the playground or anywhere other children would be, was a perilous jungle gym for a child with a physical disability. Other kids would watch me struggle to keep up - if they waited for me at all.

It took a while for me to realize why numbers appealed to me, but it makes sense in retrospect. Numbers never had to wait around for me. Numbers couldn't do anything until I told them to, giving me that control I never socially had. I couldn't feel "left out" of math as I could playing with friends. Growing up at the turn of the digital era, this love of numbers turned into a fascination for the solitude of the computer. This interest in computers gave child-me endless access to math games on the internet. Hours and hours of solitary entertainment at my own pace. The computer was one of the rare few things where my disability played no factor in how I was able to enjoy it, and it shaped my interest in them for life. Upon reflection, this was a vital step towards eventual self-discovery.

The internet gave me resources and the escape I had only dreamed of. Whereas making and keeping friends got harder as my disability sucked more and more energy from me, absolving my physical self into the bodiless world wide web became the most peaceful part of my day. I no longer had to grapple with the outdoors and my physical limitations if I could play alone or with friends online. These friends no longer had to be real life acquaintances either, I

could find other disabled or othered people my own age, hiding from the same real-life consequences as me.

Access to the internet as a safe space became more attainable for many. Strikingly different from physical structures currently existing, since these spaces are not real, they are more physically accessible. So a new culture of expressing and exploring identity online- a space without color, gender, class, or ability- and people looking to understand and explore their place in society, emerged. These needs are coming at a time, also, when the internet is thriving as its own social landscape, and fewer interactions, in general, are occurring in physical spaces. Since man is becoming digital, preconceptions cannot be tied to visible indicators, and now more than ever, anonymous interactions are vital encounters in which we can engage our prejudice.

Generally, initial face to face interaction between abled and disabled people can be unpleasant, scary, or ineffective on both sides. The digital landscape allows interactions to occur in ways that are more controlled for both parties. The internet also acts a safe space for disabled people to express themselves, explore their identity, and share their experiences. In order to begin bridging the gap between offline and online interactions between differently-abled people, disabled experiences must be shared, and abled people must learn what disabilities are like past their preconceptions. If video games are a way to engage players in experiences outside their own, they hold the potential to engage abled people in dismantling the perceptions they have.

In Offense of the Physical Space

Physical interaction is far less effective than the modern alternative. Face-to-face interaction is becoming less necessary thanks to the digital self. Socialization is the core of being

human. To be human is to uniquely interact with your environment and other humans, building a network of life, sharing resources and bonds essential for a fulfilling life. The conflict here is the irrationality of man. For ages, man has attempted to domesticate man, taking the “lesser” to serve the elite. Othered people are institutionally disadvantaged, and those in power keep barriers and prejudice as a means of control. The category of “others” are the backs on which society treads to function. It is no wonder, then, that these people are rarely considered in the needs of society. Because of this, the physical social spaces we have created are inaccessible to many, either physically or by way of the uncomfortable interactions able to take place there.

Participating in society is essential to connecting with others and utilizing public resources. Interaction with others and the community is essential to our social health. What happens when the physical spaces used for socialization are not accessible to everyone? Social health, along with the right to access public goods, spaces, and resources, is compromised in a barrier filled society. The accessibility and viability of public spaces for common use is the biggest disabled struggle. The issues arise in both the design of spaces and the socialization of abled people towards others.

The Americans with Disabilities Act’s (ADA) checklist for accessibility addresses known accessible design concerns common in public spaces (2010 ADA Compliance). To many abled people, these requirements may seem strange or surprising. The sheer length of the list as well seems dramatic, as if disabled people need an instruction manual to navigate society. The long-standing disinterest in disabled needs has created a society with inaccessible and useless public infrastructure. To combat this, the Department of Justice created priority areas and guidelines for public spaces so bare minimum access to public goods is universal. The list of

priorities includes accessibility for entering buildings, accessing public goods and services, such as businesses, public bathrooms, water fountains, and telephones.

Consider every entrance to every building in the world. Consider every apartment, every shop, every doctor's office, every house. Have you ever encountered a door with a step to enter the building? Was that the only entrance? Odds are, you have experienced this, even if you didn't recognize the consequences. Another innocuous structure is the hallway, which must be wide enough for wheelchairs, and beyond that, wide enough to allow people to pass a wheelchair in a hallway longer than 200 feet.

Concerning access to goods and services, including bathrooms and water fountains, public areas must meet the above standards, and meet other standards as public institutions. There are further accessibility concerns around being able to read and identify places based on sign requirements, and concerns of using/getting to these services through elevators and related requirements, the height of automatic door buttons, light switches, and other common accessibility needs. Space concerns in grocery aisles and bathrooms are other examples of typical public spaces that can become challenges for mobility impaired people.

Often these guidelines are not met, as architecture built before these guidelines, but recently enough to be new, are too modern and costly to update immediately. Unless the space was assessed since the passing of these regulations, odds are there are unmet accessibility needs. There are entire blocks of buildings with bathrooms too small to accommodate wheelchair users, and some starting businesses may not have the experience to offer their services in braille to accommodate visual impairments. These issues will be difficult to rectify without including disabled needs into the needs of the community from the start. Even when speaking up, the

culture of not listening to disabled input has affected community spaces and fostered barriers between disabled people and social resources.

These ADA regulations still do not protect the right to access public goods to all disabled people. The regulations set forth by the 2010 standard for accessible design do not need to be met if doing so would cause “undue hardship” to the business (2010 ADA Compliance). The undue hardship of public spaces and business are more important than the undue hardship disabled people face to have equal access to the world.

Socialization of people with disabilities is affected by more than the physical barriers associated with disability. Even when structures are accessible, or when physical barriers aren't the issue, physical interaction has repercussions for disabled people. The stigma of otherness, in general, is inhibitive. Picture, for example, the common perceptions of weakness or weirdness given to wheelchair users. Whereas physical barriers can be rectified or overcome, stigma is a barrier currently without remedy that causes disabled people to work harder to fill their social needs.

Due to the status of being beneath abled people, and the stigma of being deemed incapable, there is a real reluctance to initially approach disabled people. Initial contact can be jarring, or awkward, as Maria Papasotiriou learned from assessing disabled students, which prevents abled people from ever making the personal connections they need to find value in disabled people. Abled people are often “put off by the disability at first and don't know how to relate” (Papasotiriou, 940), a common reaction disabled people face when socializing. This awkwardness comes from the forced realization of power. When confronted so harshly with the reality of their ability compared to the disabled person in front of them, the reaction is a mix of

relief that you are “normal” and hold the social power, and an inability to relate to the other person’s experience. Being unable to relate while being relieved at your own social advantages contribute to able-bodied complacency with barriers. If you cannot relate to disabled struggles and are not attuned with disabled needs, critiquing your surroundings through this lens requires extra work.

These perceptions that disabled people face contribute to the unwillingness of many to go out in public. Reports of disabled experiences in Cahill’s “Reconsidering the stigma of physical disability” conclude that going out in public can draw unnecessary attention, and it causes disabled people to avoid unnecessary encounters with the public. Public encounters between well-meaning but uninformed abled people and disabled people end with disabled people “getting hurt rather than being helped” (Cahill, 693). This is a result of “too much morality” (Cahill, 689) from the helpful public, forgetting at times that disabled people are people who can vocalize their needs. When the perception of disabled people is that they are incapable and need assistance from others, strangers may approach and give help where it is not needed or wanted. The help may be in the form of physically disrupting a disabled person who does not need it or by giving uninformed opinions that are hurtful to disabled peoples self-perception. And as Werner describes, a “lower degree of acceptance” and a “lower perception of rights” are associated with “greater social distance”(262). These, Werner continues, “may negatively impinge on their ability to be socially integrated into society.... [and] fully enjoy their basic human rights” (268).

Barriers to space, negative perceptions and alienating actions from the public make existing in physical space a challenge for disabled people. The lack of access and negative

experiences that are common from public trips cause disabled individuals to stay hidden, affecting their mental health even more. With all the free time indoors, disabled people have turned to the internet to access social resources without the hassle of face to face interaction.

In Defense of the Digital Space

Social health in terms of access to meaningful social interaction, ability to integrate with peers, and self-worth in the microcosm of being judged, are all affected by the way disabled people are allowed to navigate physical spaces.

These experiences do not wholly translate into the use of the internet. Still, the internet is not widely accessible. There are many physical and mental disabilities that restrict the ability to interact with tiny computers or fully access the combination of sight and sound. These barriers are also economic, as many technologies that exist are not attainable for everyone. The defense of the digital space for those who can access it remains, as the community and resources it brings directly to the user are unmistakably important.

One use for the digital, bodiless, self that exists in the internet is in identity construction. Online identity construction comes from a number of places- a need to conceal your disability, a way to discuss disability without social repercussions, to genuinely express feelings and experiences, or to gather resources and information otherwise unattainable from the physical world. Some people use it as an escape, others as a place to freely identify. Digital spaces can be utilized as a therapeutic experience for disabled people, a way to exist apart from stigma. The ability to exist digitally and create communities of sharing information and experiences helps disabled people explore identity in a way not limited by their physical selves. Since the

internet is inclusive, there is no risk of being judged based on the degree of disability. There exists a space for those who can pass as abled in real life to escape social persecution, but who need a space to vent free from public view. This is a popular concept among disabled internet users in identity making, since online spaces can create an intersectional community forum (Miller, 516).

The use of the internet as an identity making landscape is one that takes the intersectionalism formed from the bodiless digital world and fosters a diverse forum. Digital interaction between similarly disabled people with varying experiences creates a sense of validation and self-education (Miller, 517). By being able to identify with a collective experience for perhaps the first time, since abled interaction in person is usually not relatable for disabled people, an authentic sense of self can form. This in turn creates a space where disabled people can “give back” to other disabled people, by giving them the advice and comfort that they wished they had at the beginning of their journey (Miller, 518).

The modern alternative of a digital landscape for social interaction is a look at the possibility of a society without barriers. Digital spaces are not restricted to physical limitations, allowing equal access to disabled and abled people alike. This is the place for social interaction between dis/abled people that is not always possible in physical spaces. First, digital interaction is more convenient for disabled people. A study done by Kowalski, Morgan, and Taylor, offers that “mobile technology would be a means of facilitating... ‘good adjustment’ by allowing stigmatized individuals to acquire information about their disability and communicate... without having to engage in face-to-face interactions”, which “may alleviate negative emotions that may accompany it” (603). These negative emotions concern “fear of new places, people, situations,

etc” which disabled people may have when interacting in public spaces, as described by the challenges in the previous section. Overall Kowalski concludes mobile technology may be “a less stigmatizing means” for accessing necessary information and interactions.

The digital barrier between disability and the disabled person increases the positive perception of disabled people. Overall, when there is a protective shield keeping the interactor from being immediately aware of someone’s visible disability, these interactions are more positive. This is reflected in a study where a nondisabled person is partnered with a disabled person without meeting in person. Overall, this study by Lucas and Phelan concludes that “making persons explicitly aware of the competencies of persons with mental illnesses or physical disabilities might reduce social rejection” (329). In this study where partners are to work digitally on a task, once the nondisabled person was explicitly told the disabled person had “high task ability”, or could do the task well, the likelihood that they would keep the same partner increased. While optimistic that there is a way to address the social rejection of disabled people, it is not without the frustration that “individuals tend to expect less competent performances from physically disabled [people]” (Lucas and Phelan, 315) without a warning label to state otherwise. Encountering a person with disability digitally, and being able to meet them, see their competencies, and humanize them before an initial meeting, could help ease preconceptions of uselessness or incompetence.

Overall, these spaces facilitate interaction between disabled people and abled people in a controlled way, allowing abled people to shed their perceptions prior to interacting with disabled people. These spaces also allow disabled people to live free of their physical forms and exist in an equal, judgment-free, community filled environment. Together, these cultivate a safe haven

where social interaction is accessible to disabled people, giving them access to social networks they need for independence, privacy, and close social bonds. (Raghavendra, 118)

Learning Empathy through Games

If digital spaces can provide education on empathy, as well as be a resource for the social needs of disabled people, using the internet as a means for teaching empathy utilizes the capacity for disabled people to broadcast their experiences, and for abled people to share those experiences. The proliferation of internet content led to an oversaturation of games. Play, an important part of human growth, was most at risk to be contributed to by a wide range of people. Game distribution became easier, so game production increased. The games became a way for content creators to share their experiences in the forms of stories and interactive lessons for content consumers. There is a new language of communicating one's experience by creating a game about it. These experiences can be lived and played by anyone, opening possibilities to co-experience life in a way not possible with physical stories.

Consider the RPG or role-playing game. The point of these games is for the player to identify with a character or to play the role of a character. As the player becomes another being, they learn to make the distinction between their own goals and experiences and the goals and experiences of what they are role-playing. (Resnick, 168) This is a way of going beyond the player's own experience and is a critical step towards empathizing with others.

Beyond role-playing, the mechanics games use to keep players invested could be translated into educational practices. For example, in many games, you are presented with an initial task or issue. After the issue has been solved, a second, harder issue will arise. This is seen

in games that use levels to distinguish proficiency or difficulty, or quests that advance skills or more request difficult tasks. Coupling progressive problem-solving with the ability to have new experiences, video games show powerful potential to inform unaware people of different social struggles.

The player can go beyond what is allowed by her experience to the extent that her development potential is constantly exercised throughout the games. The games are able to provide support for the player to execute cognitive tasks that she is potentially able to perform, but at which she cannot, at first, show full performance. However, as she goes on playing and participates in social networks and communities of players, she may become able to perform the tasks required as competently as other players who share the same socio-historical circumstances. (Munoz, 913)

This concept of learning beyond your own experiences is a vital part of a video game's ability to teach empathy. If a player with no background for empathizing with disabled people is able to experience a situation in which they must empathize with a disabled person to complete a game, they can exercise their empathy skills. This translates to real life skills, as "video games have the potential to be part of the gamers' developmental process... and this characteristic may be used... for learning conceptual, attitudinal, and procedural contents" (Munoz, 913). Bogost expands on this in his book *Persuasive Games*, adding to this theory that "reinforcement through gameplay establishes repeat behavior, to which the player/learner adapts" (Bogost, 236) and "the game teaches players how to transform skills into strategies, and to turn failure into success"(Bogost, 242).

Bogost offers another way in which video games can facilitate learning. In *Persuasive Games*, he discusses how proceduralizing experiences offers a unique perspective for breaking down political issues. Since disability and the stigma surrounding it are often socio-political issues, I argue the proceduralization of interacting with disabled people may also be accomplished through gaming. By turning the rules and cultural behaviors of society into steps, players can notice the patterns as Munoz discussed. Resnick refers to this as the “ ‘sciences of complexity’—the investigation of how complex phenomena can arise from simple components and simple interactions” (155). By breaking complex social phenomena, like the stigma of disability, into simple interactions, the topic can be approached and digested more easily. Video game mechanics, too, can be broken down into smaller systems that could become tools for learning empathy and situational awareness.

Bogost also discusses how both behaviorist and constructivist theories on education can be utilized in the way games are played. While behaviorist theories rely on repetition and positive reinforcement to learn, constructivism relies on individualized experiences and rewards and the ability to solve problems in multiple ways with varying rewards. In video games, both level systems and RPGs that allow players to continuously alter and continue their experience can be used to reinforce lessons or morals in this way. Take a hypothetical video game for example, a game where a player must react to and work through varying degrees of stressful encounters with disabled people, by completing each scenario successfully, players would learn patterns in strategies for encounters, potentially giving them the skills to have a successful initial encounter with a disabled person in the real world. Additionally, by only being able to move on when a scenario is successfully completed, there is a positive reinforcement to have successful

outcomes, in this example potentially meaning interacting with disabled people in a less prejudiced way.

Beyond the video game, these skills are practiced through simulated situations or experiences. “As we master the rules and techniques of each game, we become more and more apt to generalize strategies to other games”(Munoz , 915). When applying this to social situations, the more one masters the rules of social interaction, the more those strategies can be applied to interactions with disabled people. In the wake of the internet, the ability to distribute independently made games has exploded. People are using this to engage in games and play all the time. I argue this can be capitalized on by disabled people looking to share their experiences and activists looking for ideas on how to begin addressing anti-disabled norms in society. Supported by Bogost, who writes that by “constraining the strategies that yield failure or success” game makers can “enforce player behavior along a particular moral register” (Bogost, 287).

Alienation: A Self Reflection

Alienation was a way to reflect on how I explored my identity growing up attached to the internet. The ability to share games through the internet gave me access to and knowledge about ideas I wouldn't have come across otherwise. These games and the other knowledge that can be found on the internet taught me about my identity and about the identity of others. The internet as an all-encompassing encyclopedia makes it ideal for self-discovery. Playing games as a way to learn through the experience of characters makes online games a great resource for those

exploring their identity and excited to broaden their world view. Through the combination of these, I reflected on my own identity as shaped through a gaming experience.

Creating the game was therapeutic. Though there wasn't much game to the piece, the labor for the art, being able to code art with words and numbers is beyond satisfying. My love for coding is tangent to my love of solitary arts. Art, in general, was always satisfying, a one-man struggle with a medium to produce a message. The medium never had to be physical or physically taxing to interact with, and as an activity for one, never required me holding anyone back. In this way, the art of technology felt beautiful. To compose art with numbers and pixels was both mechanical and freeing at the same time. The security of following a procedure and being able to work methodically through problems to find a solution is a large part of math and art to me. It's a job that waits for me and doesn't pressure me.

The intention of the game being coded and held online reflects my desire to work with methodical, solitary programming to create something accessible and distributable. With the internet came the ability to share games universally, something that fascinated me since playing math games online as a child. If this experience could be shared easily, why not share it? I believe firmly that experiences are best when shared, allowing others to learn without having to waste their own time engaging in a situation someone else has already had. This is easy with the way the internet connects us to art as well as others. In this way, I stress the importance of being able to share games, host them online and play them across the world at any time. The melding of interaction and personalization through bodiless means is important to our new paradigm of internet socialization.

The method behind creating a game was an important part of the process to me. I pulled inspiration from memorable games I've come across on the internet. Simple, text-based games are the best examples I've come across. For example, Kittens Game, by Bloodrizer (<http://bloodrizer.ru/games/kittens/>), is a text-based online game. It almost doesn't seem like a game, and the story ends up pretty involved. Your goal is simple, survive. A concept I mirrored to give the game freedom to explore otherwise, but with the understandable expectation that you must figure out how to do that simple thing. In Kittens Game, it is by discovering your resources and learning how to allocate them. In Alienation, it is by completing your tasks within a time frame while tending to your stats.

A second influential game in my life was Homestuck, by Andrew Hussie (http://www.mspaintadventures.com/test_index.php). A webcomic-game hybrid that told a story about making friends and finding yourself. It was a simply drawn, simple to navigate game. There were few command options, usually just to continue and go to the next page. This was my original intention, to make a game where you approached things and the game happened to you. The idea of telling a story like this is to make you a part of the story. You can play a game to play through the game and read the story as you go. But when you play a story or read a game, you're immersing yourself in a different way with the character and the text that drives them. Since you're at the will of what's next in the story, you have to seek out how to get there. It was this storytelling mechanism in Homestuck that drove me to write my game in a first-person immersive story.

A third game that influenced my research was Dys4ia, by Anna Anthropy (<https://freegames.org/dys4ia/>). In this game, you play through a story and learn about your

character's struggle throughout. The simplicity with which you participate in the story is key to its effectiveness. By making the character play through a story as opposed to playing a game with an end goal, the player is forced to identify and struggle alongside the storyteller. By the end of the game, you feel as though you've beaten something, just as the storyteller has beaten their own struggles. This game was designed so that players who have no experience with dysphoria or transgender individuals can learn through the character's experiences instead. This style of forcing the audience to relate and participate in an experience that might not be their own is the path I wanted to take my game.

The audience of my game was abled people. Through the same methods of immersion as *Dys4ia* and *Homestuck*, I aimed to create a story that players could learn from. Using my experiences as a story and walking someone through it, I wanted the same effect of understanding my struggle without the need for the player to be me. By the end of the game, the player feels accomplished for completing one day- the same relief I feel when I complete everything for the day.

In trying to make my dreams a reality, I ran into a lot of challenges. Two of the biggest challenges included time, as well as my ability. Other challenges included the limitations of the library I was using, my choice of language, and inexperience with storytelling. I was always concerned and pressured by the limited time in which I had to not only conceptualize the game but execute it. As Professor McKay said, "I'm upset because you'll never make a video game this amazing in three months". It was true, the ideas I had and the many many stages of redesigning the game to fit my limitations abstracted my concept more than I wanted it to. My own limitations with what languages I was comfortable in and my ability with each of them

played a role in choosing the language I used to make my game. Had I been more comfortable in Unity, I could have created a more 3D immersive world than I could using p5.js. The p5.play library just does not have the same functionality as Unity. My storytelling ability also affected the outcome of my game. Not being much for sharing my own experiences, it was a challenge to get a story I wanted to tell out on paper, especially one that I could fully tell given my other limits. Since the game is story-based, and sharing experiences relies heavily on the ability to make others relate to you, this affected how players experienced my game.

The time limit had several other adverse effects. I was unable to have much of a testing time of the true game. My friends played along the way and would give me feedback when I became stuck. However, I realized once in the gallery setting that players were more interested in the initial story in the introduction than any subsequent strategizing through the levels. If I had the opportunity to work in a gallery setting before, I could have focused more on making the introduction a short-story experience rather than being framed as a tutorial.

Overall I think players enjoyed the game. Many played just the introduction part, and figured my title screen was an end game. I didn't mind at all, and only wish I had been able to give more attention to that initial story line. I don't know if I was blatant enough in showing the physical limits of the main character, as I had initially planned for that to gradually increase in difficulty throughout the game. I would have made it a constant and obvious part of the introduction in retrospect. The message may not have been as strong to the players, but the positive feedback I received on the title sequence for its beauty and personal story shows me I started in the right direction. I was specifically approached by one of my roommates, none of whom I know personally, who attended the show. She told me the story during the title sequence

felt personal and relatable. She said she felt it was genuine and made it feel like the entire experience was real. This will be important feedback as I edit the game for a final release online. To understand that the most genuine story came out of a paragraph I wrote to express my experience is vital as I rewrite the tutorial scenes to be more impactful.

I plan on re-releasing the game online over the summer, using the feedback I got from the gallery and friends and family who attended. The best part about the internet and a digital game is that I can continuously update and fix this game as I need, letting its story evolve with my life and my skills, as well as with my free time. It is most necessary with my game to make sure I am relaying important themes in my life for others to experience. This is a continuous, life long process.

My advice for disabled people who may want to share their experiences with the world is to take your time. There is no time limit for sharing your story in a comprehensive way. The most important part of communicating our disabled experience is to make sure those who engage with it come away understanding our humanity. Sharing your experiences is not accessible to all, but know there is a community fighting with you who would be happy to be your microphone.

Conclusion

What is a genuine experience? Who is to say that digital experiences are less valid than physical ones in an era of redefining accessibility. Experiences both digital and physical are now an integral part of forming an identity. My own identity was shaped through recognizing what was socially available for me both physically and in the digital safe space, I created. The lack of need for physical forms in digital socialization has created a place where all othered identities

can meet, relate, and discover themselves. Through so many games we have learned empathy and compassion, and we can continue to have experiences that aren't our own in these ways. Combining the shareability of the internet with the need for relatable experiences to be shared provides a path towards empathy and understanding for disabled people. Eventually, abled people will be able to connect with the human behind the disabled stigma and unlearn prejudices before encountering a disabled person in the flesh. To do so, representation in games and internet presence must be multiplied. Eventually, games concerning the experience of disabled people will be played as widely as games concerning the experience of athletes, assassins, or soldiers.

There is more need for disabled representation. Disabled people need a voice in the physical structures that surround us and a chance to be destigmatized through media. Games from disabled makers are good, but abled support is necessary. Without abled people addressing disabled stereotypes, supporting disabled experiences being shared, and making society physically and socially acceptable, the struggle will continue to be overlooked and downplayed.

Bibliography

Antropy, Anna. "Dys4ia (Free Flash Game)." *FreeGames.Org*,

<https://freegames.org/dys4ia/>. Accessed 14 May 2019.

Bloodrizer. *Kittens Game - Year 23 - Summer, Day 44*. <http://bloodrizer.ru/games/kittens/#>.

Accessed 14 May 2019.

Bogost, Ian. *Persuasive Games: The Expressive Power of Videogames*. The MIT Press, 2010.

Cahill, Spencer E., and Robin Eggleston. "Reconsidering the Stigma of Physical Disability:"

The Sociological Quarterly, vol. 36, no. 4, Sept. 1995, pp. 681–98. *Wiley Online*

Library, doi:[10.1111/j.1533-8525.1995.tb00460.x](https://doi.org/10.1111/j.1533-8525.1995.tb00460.x).

Campbell, Jane, et al. *Disability Politics: Understanding Our Past, Changing Our Future*.

Psychology Press, 1996.

Charlton, James I. *Nothing About Us Without Us: Disability Oppression and Empowerment*.

1st ed., University of California Press, 1998. *JSTOR*,

<https://www.jstor.org/stable/10.1525/j.ctt1pnqn9>.

Daniels, Jessie. "Rethinking Cyberfeminism(s): Race, Gender, and Embodiment." *WSQ:*

Women's Studies Quarterly, vol. 37, no. 1, June 2009, pp. 101–24. *Project MUSE*,

doi:[10.1353/wsq.0.0158](https://doi.org/10.1353/wsq.0.0158).

Davis, K. "Tensions of Identity in a Networked Era: Young People's Perspectives on the

Risks and Rewards of Online Self-Expression." *New Media & Society*, Nov. 2011. *Talis*

Aspire, doi:[10.1177/1461444811422430](https://doi.org/10.1177/1461444811422430).

Department of Justice., United States. *2010 ADA Standards for Accessible Design*.

<https://www.ada.gov/regs2010/2010ADAStandards/2010ADAstandards.htm>. Accessed 29 Apr. 2019.

Flanagan, Mary, and Helen Nissenbaum. *Values at Play in Digital Games*. The MIT Press, 2014.

Goodley, Dan, et al. "Dis/Ability and Austerity: Beyond Work and Slow Death." *Disability & Society*, vol. 29, no. 6, June 2014, pp. 980–84. *Taylor and Francis+NEJM*, doi:[10.1080/09687599.2014.920125](https://doi.org/10.1080/09687599.2014.920125).

Haraway, Donna. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs and Women: The Reinvention of Nature*. Routledge, 1991.

Hussie, Andrew. *MS Paint Adventures*. http://www.mspaintadventures.com/test_index.php. Accessed 14 May 2019.

Kendall, Lori. "Meaning and Identity in 'Cyberspace': The Performance of Gender, Class, and Race Online." *Symbolic Interaction*, vol. 21, no. 2, 1998, pp. 129–53. *Wiley Online Library*, doi:[10.1525/si.1998.21.2.129](https://doi.org/10.1525/si.1998.21.2.129).

Kittens Game. <http://bloodrizer.ru/games/kittens/#>. Accessed 14 May 2019.

Kowalski, Robin Marie, et al. "Stigma of Mental and Physical Illness and the Use of Mobile Technology." *The Journal of Social Psychology*, vol. 157, no. 5, 2017, pp. 602–10. *PubMed*, doi:[10.1080/00224545.2016.1259981](https://doi.org/10.1080/00224545.2016.1259981).

- Lucas, Jeffrey W., and Jo C. Phelan. "Stigma and Status: The Interrelation of Two Theoretical Perspectives." *Social Psychology Quarterly*, vol. 75, no. 4, Dec. 2012, pp. 310–33. *PubMed Central*, doi:[10.1177/0190272512459968](https://doi.org/10.1177/0190272512459968).
- Miller, Ryan A. "'My Voice Is Definitely Strongest in Online Communities': Students Using Social Media for Queer and Disability Identity-Making." *Journal of College Student Development*, vol. 58, no. 4, June 2017, pp. 509–25. *Project MUSE*, doi:[10.1353/csd.2017.0040](https://doi.org/10.1353/csd.2017.0040).
- Muñoz, Yupanqui J., and Charbel N. El-Hani. "The Student with a Thousand Faces: From the Ethics in Video Games to Becoming a Citizen." *Cultural Studies of Science Education*, vol. 7, no. 4, Dec. 2012, pp. 909–43. *Springer Link*, doi:[10.1007/s11422-012-9444-9](https://doi.org/10.1007/s11422-012-9444-9).
- Papasotiriou, Maria, and Joel Windle. "The Social Experience of Physically Disabled Australian University Students." *Disability & Society*, vol. 27, no. 7, Dec. 2012, pp. 935–47. *Taylor and Francis+NEJM*, doi:[10.1080/09687599.2012.692027](https://doi.org/10.1080/09687599.2012.692027).
- Purc-Stephenson, Rebecca, et al. "'Forget about the Glass Ceiling, I'm Stuck in a Glass Box': A Meta-Ethnography of Work Participation for Persons with Physical Disabilities." *Journal of Vocational Rehabilitation*, vol. 46, Jan. 2017, pp. 49–65. *ResearchGate*, doi:[10.3233/JVR-160842](https://doi.org/10.3233/JVR-160842).
- Raghavendra, Parimala, et al. "'I like Talking to People on the Computer': Outcomes of a Home-Based Intervention to Develop Social Media Skills in Youth with Disabilities Living in Rural Communities." *Research in Developmental Disabilities*, vol. 76, May 2018, pp. 110–23. *ScienceDirect*, doi:[10.1016/j.ridd.2018.02.012](https://doi.org/10.1016/j.ridd.2018.02.012).

Resnick, Mitchel, and Uri Wilensky. "Diving into Complexity: Developing Probabilistic Decentralized Thinking Through Role-Playing Activities." *Journal of the Learning Sciences*, vol. 7, no. 2, Jan. 1998, pp. 153–72. www.scholars.northwestern.edu, doi:[10.1207/s15327809jls0702_1](https://doi.org/10.1207/s15327809jls0702_1).

Smith, Bonnie G., and Beth Hutchison. *Gendering Disability*. Rutgers University Press, 2004.

Tough, Hannah, et al. "Social Relationships, Mental Health and Wellbeing in Physical Disability: A Systematic Review." *BMC Public Health*, vol. 17, no. 1, May 2017, p. 414. *BioMed Central*, doi:[10.1186/s12889-017-4308-6](https://doi.org/10.1186/s12889-017-4308-6).

Werner, Shirli. "Public Stigma and the Perception of Rights: Differences between Intellectual and Physical Disabilities." *Research in Developmental Disabilities*, vol. 38, Mar. 2015, pp. 262–71. *PubMed*, doi:[10.1016/j.ridd.2014.12.030](https://doi.org/10.1016/j.ridd.2014.12.030).

Wu, Chuntao, et al. "Using Community Planning Method to Improve Effect of Urban Barrier-Free Transportation System." *Transportation Research Procedia*, vol. 25, Jan. 2017, pp. 4330–37. *ScienceDirect*, doi:[10.1016/j.trpro.2017.05.294](https://doi.org/10.1016/j.trpro.2017.05.294).