

THE INTERSECTION BETWEEN HUMAN RIGHTS AND TRANSPORTATION:
ACCESSIBILITY TO TRANSPORTATION FOR PEOPLE WITH DISABILITIES

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ABSTRACT

The purpose of this paper is to provide an overview of the intersection between transportation and human rights and how this intersection has impacted the disabled community. First, the consequences of a lack of accessibility are examined. The sub-categories of social well-being, physical barriers, financial earnings and ability to obtain employment, and health are focused on. Second, Canadian and Ontario legislation and case law are reviewed to see how they respond to some of these consequences. These include the Canada Transportation Act, The Canadian Charter of Rights and Freedoms, The Canada Human Rights Code, The Ontario Human Rights Code, and Accessibility for Ontarians with Disabilities Act. After establishing that not enough has been done to reach as adequate resolution, solutions outside of legislation are explored. These solutions focus on universal design, citizen science, and autonomous vehicles.

Key words:
Transportation
Accessibility
Disabilities

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Chapter 1: Introduction

The purpose of this paper is to provide an overview of the intersection between transportation and human rights and how this intersection has impacted the disabled community. Before expanding on the focus of this paper it is necessary to establish some clarifications.

First, the term ‘disability’ according to the Ontario Human Rights Code, “covers a broad range and degree of conditions, some visible and some not visible. A disability may have been present from birth, caused by an accident, or developed over time. There are physical, mental and learning disabilities, mental disorders, hearing or vision disabilities, epilepsy, drug and alcohol dependencies, environmental sensitivities, and other conditions.” Second, the term ‘transportation’ refers to both public and private modes, however the majority of this paper will focus on the public realm.

The right to transportation hinges on the pillar of accessibility. Accessibility can be described as “the degree to which services can be reached” (Gray, Shaw, & Farrington, 2006). This can mean either physically moving to reach a service or a service being brought to a person (Marr, 2015). The locational scope of this paper will examine this issue through a federal and provincial lens. At times comparisons will be drawn to the United States.

There are two dimensions that influence the degree of access for disabled people. One stems from their own personal disability. The second takes place at the societal level where inadequate solutions or responses exist on the part of the institutions that are responsible for creating and maintaining services and the built environment (Paez, 2010).

It is only when these two dimensions intersect that a disability which hinders accessibility.

The connectivity between transportation and human rights is not a new idea. The Ontario Human Rights Commission (“OHRC”) has already identified the right to transportation as something that everyone should be entitled to. The Commission writes, “Equal access by persons with disabilities, older Ontarians, and families with young children to adequate, dignified public transit services is a right protected under the Ontario Human Rights Code.” The OHRC further asserts that accessibility in relation to transportation is a key factor in determining how people experience, participate, and interact with the world around them. A lack of accessibility can lead to isolation, loneliness, and a general lower quality of life.

In addition to the Human Rights Code, the Supreme Court of Canada has also highlighted the importance of accessibility in the landmark case of *Eldridge v. BC*. This case held that a core feature of the constitutional right to disability equality is the duty to accommodate disability-related needs (*Eldridge v. BC*. [1997] 3 S.C.R. 624). Access to transportation would fall under the category of a need that is required for disabled people to achieve equality. Canada is a signatory to the United Nation’s Convention on the Rights of People with Disabilities.

This paper will show that despite all of these commitments to improving accessibility and the rights of disabled people, significant barriers still exist for disabled people within our society. This will be done by examining current federal and provincial legislation and case law as well literature that interprets these. Other secondary sources

will be examined for potential solutions to the issue of accessible transportation for disabled people.

This paper will begin by examining why accessibility to transportation is such a difficult problem to solve and why it is a significant problem. Second, the consequences of a lack of accessibility will be identified. A lack of accessibility can create real and visible consequences with lasting impacts. Third, Canada and Ontario's current commitments to ensuring that the right to accessibility is maintained will be examined by looking at the existing legislation and case law that has been developed.

On a Federal level, these commitments have long been enshrined in the Charter, The Ontario Human Rights Code, and the National Transportation Act. On a Provincial level the Ontarians With Disabilities Act was created in 2005. These pieces of legislations and initiatives will be scrutinized for their effectiveness and it will be examined how successful they have been to date. It will be seen that despite these commitments transportation for disabled people continues to be an issue. Part of the reason why this issue is so difficult to solve will involve an examination of the difference between procedural and substantive justice. This is useful because it will help develop the framework which future legislation and solutions will need to use in order to come up with an effect solution to this issue.

Fifth, innovative solutions to the issue of accessibility within transportation will be assessed, as well as what impacts future technology may have on this issue. These solutions include universal design, citizen science, and automated vehicles.

Chapter 2: Why Access to Transportation is a Problem Worth Solving

2.1: Transportation Infrastructure as a Public Interest

A public interest can be defined as, “ a common concern among citizens in the management and affairs of local government (Black’s Law Dictionary, 2017).”

Transportation infrastructure is a government initiative. Governments provide for the funding and allocation of resources for this development. The Province of Ontario has committed to investing \$160 billion in vital public infrastructure over a 12-year period. This will include making, “strategic investments in roads, bridges and public transit, modernizing infrastructure in communities across Ontario, as well as dedicated funding for transportation infrastructure” (BuildON, 2017). The reason that governments have taken the initiative in providing this infrastructure is because of the benefit that it confers on its citizens.

Development of transportation infrastructure is related to improving the welfare of a society through social, political, and economic conditions (Rodrigue & Notteboom, 2017). When transportation systems are efficient they lead to added economic and social benefits. Citizens have better opportunities to access places such as markets, employment areas, and other aspects of daily life. When transportation systems are deficient they can lead to reduced or missed opportunities and a lower quality of life (Rodrigue & Notteboom, 2017).

When the government provides a service it is important that certain people are not excluded from that service and the benefits that it provides. Governments cannot pick and chose which of its citizens obtain the benefits from a public interest investment.

Investments in transportation infrastructure must benefit everyone and not just the generic majority.

2.2: Planning for Infrastructure Based on Inclusion

Planning for an inclusive form of transportation infrastructure should not only be a duty of governments but should also be a goal. The reason for this is twofold. First, inclusion is important to the democratic process. Second, planning for inclusion benefits all of society.

Iris Marion Young, in her book “Inclusion and Democracy” argues that inclusion is central to democracy. She states that, “Democratic norms mandate inclusion as a criterion of the political legitimacy of outcomes.” These norms entail that everyone whose basic interests are affected by policies should be included in the process of making them. With regards to transportation, people with disabilities have their interests effected by the policies that surround this topic. It is therefore reasonable they are included in the process of formulating these policies.

Planning for inclusion also adds value through the contribution that it can have to society. Young explains how when you plan for inclusion it requires you to have an objective understanding of society. It gives a detailed knowledge of events and conditions in different places and positions and the ability to predict the consequences of actions and policies (Young, 2000). When planning happens in a way that is inclusionary for everyone, all of this knowledge from different perspectives can be pooled and can create a rich resource of social knowledge.

Additionally, planning for inclusion will force policy makers to separate themselves from their own objectives because everyone's opinion will have to be accounted for. This creates a situation in which decisions are legitimized through the process of inclusion (Young, 2000).

Chapter 3: Why Accessibility to Transportation is such a Difficult Problem to Solve

Before examining the specific details regarding legislation, initiatives, effects, and solutions to accessible transportation for disabled people, it is useful to glance at this problem through a broader lens. The first step in addressing this issue is looking at the nature of the problem itself. This could be done in two ways. The first is by understanding why ‘transportation in general’ poses challenges that are so difficult to solve. The second is examining ‘transportation for disabled people’ and exploring why this term makes it equally complex to come up with solutions to the issue of accessibility to transportation.

3.1: The Problems with Transportation in General

Transportation is an area that is broad and complex. The size and complexity of this topic makes the issues that arise out of it difficult to solve (Steinfeld et al, 2009). Issues relating to this subject include topics ranging from congestion management to land use to safety (U.S Department of Transportation). Because of the depth of this topic there is a slow adoption rate for best practices which hinders the ability of knowledge re-use further enhancing the difficulty of finding meaning solutions to transportation problems (Steinfeld et al, 2009).

These problems often must also be looked at in both a present and future lens. Transportation is always changing and adapting and therefore solutions that may be thought to be effective at the time of conception may not be relevant by the time they are implemented. It is important when analyzing transportation problems to have a future-

forward gaze and to be cognizant of the changes that may take place.

The agencies that have the ability to dedicate themselves to solving these problems are limited given a lack of public or private funding (Steinfeld et al, 2009). An example of this limited commitment and funding will be explored more fully in the discussion of the Accessibility for Ontarians with Disabilities Act.

There are also a large number of modes of transportation that exist and these different modes can cross between Federal, Provincial, and Municipal boundaries. The combination of different modes of transportation and the fluidness for these modes to cross between various governmental barriers makes coming up with solutions to transportation problems a difficult task.

In addition to the nature of general transportation problems being difficult to solve, there are also difficulties when we try to understand the nature of the problems surrounding transportation for disabled people. This further adds to the complexities in identifying solutions to the issue of accessibility to transportation.

3.2: The Problems with Transportation for Disabled People

A comprehensive solution for accessibility to transportation for disabled people must take into account all modes of transportation. This includes both private transportation networks such as personalized motor vehicles and public transportation networks such as transit.

Many policies around transportation for disabled people issue ignore the fact the most travelers with disabilities take the majority of their trips in private vehicles and, depending on the disability, rely heavily on walking to facilitate different modes of travel

(Field, M & Jette, A, 2007). From this observation it can be seen that we cannot have a narrow focused policy on accessibility to transit. We must take an all-encompassing approach that recognizes that all modes of transportation are interrelated.

Policy makers are limited in the information that they have. Consumers of both public and private transit provide little feedback and when problems are reported that often contain little detail. In public transit complaints it is even often unclear which route has the problem. (Steinfeld et al, 2009). Additionally, there is also limited information on the travel patterns of people with disabilities. The data that does exist fails to differentiate travels by aspects such as: degree of severity of a person's disability, household income, driver's license possession, car ownership, sex and age (Field, M & Jette, A, 2007).

The term disability is broad and therefore having this knowledge is important when trying to come up with policies to best achieve accessibility to transportation. To try to group all people with disabilities into one social group may not be ideal because of the differences that exist between individuals (Yonge, 2000).

Someone who is in a wheelchair might have a very different experience with accessibility then someone who is blind. Because of this policies may not cover or focus on important travel barriers experienced by disabled people.

Chapter 4: The Consequences of a Lack of Accessibility

Access to transportation plays a significant role in shaping quality of life. For this reason, as previously mentioned, the Ontario Human Rights Commission states that transportation is a key factor in determining how people experience, participate, and interact with the world around them. The consequences of a barrier to accessibility could include things such as isolation, loneliness, and a general lower quality of life. Notwithstanding these implications an extremely large amount of people suffer from a lack of access to transportation. Compared to the general population, disabled people travel approximately 33% less because of the difficulties that they experience (Miller, P., Gillinson, S. & Huber J., 2006).

According to The Canadian Survey on Disability in 2012, 3,775,900 (13.7%) Canadians aged 15 and older reported to have some type of disability. Of this number, 1,917,800 (7.2%) identified as having a disability that affected their mobility and limited their daily activities. It is important to note that these disabilities increase with age. This can be seen in the chart below:

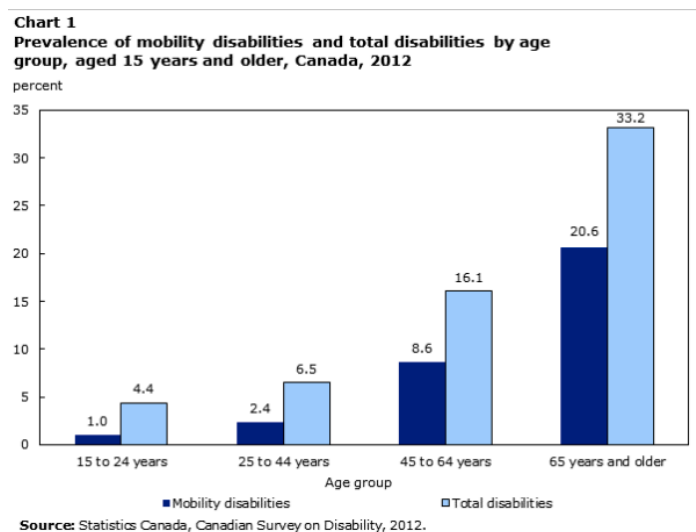


Figure 1

In Canada people 65 years and over represent Canada's fastest growing group. This trend is expected to continue for the next couple decades (The Chief Public Health Officer's Report on the State of Public Health in Canada, 2014). Based on the chart on the previous page, it can be inferred that the number of disabled people in Canada will continue to increase in the future as the population ages.

People who cannot leave their homes or experience difficulties leaving their homes due to a lack of accessible transportation experience various effects and hardships. Some of these effects and hardships will be explored in the following subsections.

4.1: Social Well-Being

Measures of social well-being are subjective. They are assessed by how an individual perceives their condition from their own point of view (Blais, 2014). Based on these subjective measures studies have indicated that a lack of accessibility can be detrimental to social well-being. One study indicated that a lack of accessible transportation could lead to feeling isolated from the community in which a person lives in. This study found that 46% of people with disabilities reported feeling isolated from their community (National Organization on Disabilities, 2004).

In addition to feelings of isolation, disabled people who lack access to transportation were found to be five times more likely to report dissatisfaction with their lives than non-disabled people (National Organization on Disabilities, 2004). Studies have also indicated that people with disabilities will have a greater quality of life if they live in areas that provide for multiple transportation options (Blais, 2014). One such

example is the proximity to accessible public transit. Statistical analysis has found that people with disabilities who have access to public transit have a higher sense of well-being. Even when disabled people attempt to access transportation they must still overcome a system that is riddled with physical barriers.

4.2: Physical Barriers

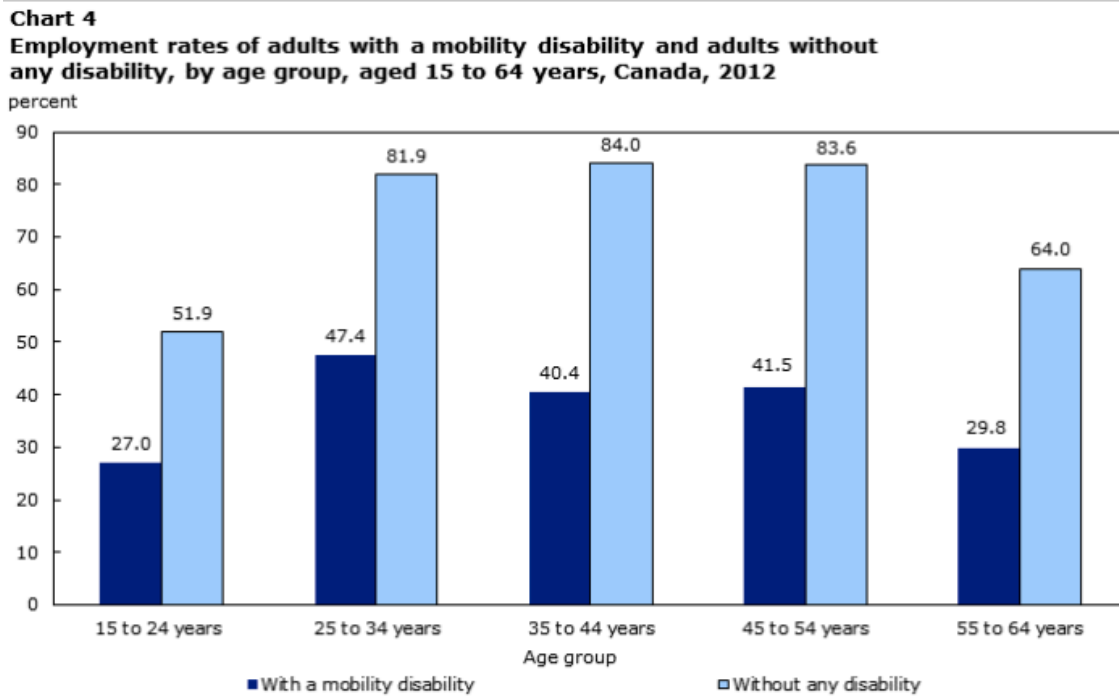
In a report titled, “The Current State of Transportation for People with Disabilities” the National Organization on Disability identified several problems with public transit systems. The issues that were reported include reliability of stop announcements, maintenance problems with lifts, compliance with lift operation policies, planning accessibility to stations (i.e. accessibility beyond key stations), wheelchair securement policies, elevator maintenance problems, and continued use of poor accessibility solutions like mini-high platforms. Physical access barriers such as these discourage disabled people from engaging with public transit which can lead to furthering the already prevalent social problems that stem from a lack of accessible transportation.

4.3: Financial Earnings and Ability to Obtain Employment

A third consequence that a lack of transportation can have on disabled people can be seen through financial earnings and the ability to obtain employment. When looking at the population in general, barriers to accessibility have been found to be a leading factor in terms of preventing people from obtaining employment. One survey found that 29% of people cited lack of transportation as a reason for being discouraged from looking for

work (Loprest & Maag 2001). When the same survey was applied exclusively to disabled people the percent of discouragement increased significantly (Loprest & Maag 2001).

People with disabilities that affect their mobility are less likely to actual enter the workforce then non-disabled people. These affects can be seen in the chart below:



Source: Statistics Canada, Canadian Survey on Disability, 2012.

Figure 2

A lack of accessibility can also have an impact on the financial earnings of disabled people. In the U.S., before the ADA was passed, men with disabilities earned 36% less than men without disabilities. Of the people surveyed, 28% blamed a lack of accessible transportation for the income disparity (Lewyn, 2001). In Canada the Canadian Survey on Disability, 2012 reported that the median personal income of working-age adults aged 15-64 with a mobility disability was \$17,000. People without disabilities

make almost double this, making a median personal income of \$31,200 (Canadian Survey on Disability, 2012).

4.4: Health

A final consequence of a lack of transportation has to do with health. Disabled people, as well as the rest of the population, rely on transportation for access to health-related goods and services (Gold, 2008). These can include trips to pick up prescription drugs, trips to the doctor, or even trips to the grocery store for fresh food. Transportation is necessary to get to places such as these so that people can sustain their health and physical well being.

Based on the above information it can be seen that a lack of accessibility to transportation has significant impacts on people. These impacts are arguably more pronounced when looking solely at the disabled population. The survey and statistical results examined show a direct effect on peoples social, financial, and overall quality of life.

If the issue of accessibility is not resolved these discrepancies will continue to hinder disabled people. For this reason many countries and jurisdictions have been actively trying to achieve a solution. The next chapter of this paper will examine some of the solutions that are available on a Federal level and the inadequacies that exist in relation to these. In response to this Ontario has enacted it's owns legislation to try to combat inequality for disabled people in relation to transportation accessibility.

Chapter 5: Canada and Ontario's Commitment to Equal Access

5.1: Federal Legislation

In attempting to ensure equality for disabled people various legislations have been enacted in Canada. The first one that will be examined is The Canada Transportation Act of 1987. Part V of this Act is dedicated to people with disabilities. It states that:

“170 (1): The Agency may make regulations for the purpose of eliminating undue obstacles in the transportation network under the legislative authority of Parliament to the mobility of persons with disabilities.” Second, there is the Canadian Charter of Rights and Freedoms and the Canadian Human Rights Act. These both provide broad guarantees of equality for disabled people.

These guarantees are further supported by Supreme Court Legislation such as *Eldridge* which, as noted above, states that there is a duty to accommodate disability-related needs. At the Provincial level legislations exists in the form of the Ontario Human Rights Code and the recently instituted Accessibility for Ontarians with Disabilities Act (AODA). The following subsections will focus on issues and limitations with the Federal commitment to equality among people with disabilities. The Provincial legislation will be discussed in more depth in a later subsection.

5.2: Canada Transportation Act

Part V of the Canada Transportation Act is dedicated to ensuring equality for people with disabilities. When scrutinizing the language of the Canada Transportation Act however there is one important factor to note. This is the use of the word “may”. The word “may”, as opposed to something like ‘must’ or ‘is obligated’, implies that there is

no requirement to do what is stated. It leaves a great deal of deference to the one responsible for enforcing the legislation. In this case, it merely provides the authority to eliminate obstacles if the Agency chooses to do so. Another issue with the Canada Transportation Act, is that the focus of the Act is too broad. This Act is focused on intercity and interprovincial transportation rather than local transportation.

5.3: Canadian Charter of Rights and Freedoms and the Canadian Human Rights Act

The Canadian Charter of Rights and Freedoms and the Canadian Human Rights Act have been pointed to as the reason why Canada does not need an independent Federal Disabilities Act. There are however significant limitations within this legislation that prevent achieving the goal of equality for disabled people.

These limitations are well articulated by David Lepofsky, a well known Canadian lawyer and advocate for disabled people. He criticizes that neither the Charter nor the Human Rights Act give organizations clear directions on what steps must be taken to ensure accessibility. Although the above pieces of legislation mention the words ‘discrimination’, ‘equality’, and ‘accommodation’ they are stated in a broad context and fail to specify the specifics of how to achieve these goals. Lepofsky believes that organizations are much more likely to take action if the law specifies what to do and when.

Another factor that limits the impact of the Charter and the Human Rights Act is that these two pieces of legislation are claim based. This means that in order for disabled to achieve the equality promised to them by these legislations they must fight each barrier to accessibility separately (Lepofsky, 2016). This puts an unnecessary hardship on people

who wish to assert the basic human rights promised them. This hardship can take the form of time spent fighting these challenges as well as financial hardship. People often do not have the ability to take off the extended amount of time required to mount such a challenge. Additionally these challenges can lead to substantially legal fees and unsuccessful applicant risks financial exposure to paying the respondent's legal costs (Lepofsky, 2016). To compound this barrier, disabled people are on average more often to be unemployed or live in poverty.

A final factor that confines the usefulness of the Charter and the Human Rights Code is the enforcement protocol behind the legislation. Because this legislation is claim based many people view compliance with it as voluntary. Unless there is a complaint organizations need not fear practical enforcement (Lepofsky, 2016). Even when a claim is brought organizations have the ability to drag out these hearings for years. The human rights enforcement process is a slow one and can often require discrimination victims to first take their cases to other regulatory agencies (Lepofsky, 2016). If organizations are less likely to be penalized they will be less likely to comply with their accessibility obligations.

For these reasons David Lepofsky argues that there is a need for a national wide disabilities code similar to what the United States has in the Americans with Disabilities Act, 1990 ("ADA"). If and when a national act such as a 'Canadians with Disabilities Act' is formed, we must be prudent in how we form it so that it does not contain the same issues that exist within the Americans with Disabilities Act.

One issue with the ADA was that it imposed costly requirements upon local public transit systems but did not give local governments funds with which to satisfy this

mandate (Lewyn, 2001). Another concerning aspect of the ADA though is that, it "does not require public transit systems to provide better service to disabled passengers than is provided to other passengers, only comparable service" (Midgett v. Tri-County Transp, 2009). What this means is that there is no requirement that disabled people are provided with the same level of accessibility as people who have automobiles accessible them. Rather the statute only requires that disabled people are made equal to other transit-dependent Americans (Lewyn, 2001).

This gives local government the power to make the unilateral decision to stop investing in transit and invest in highways and other driver services instead without the need to consider how this may impact the disabled population (Lewyn, 2001). This could create a "transit-dependent disabled second-class citizen" (Lewyn, 2001). The above shows that if a Canada-wide disabilities code is implemented it must improve on these limitations that exist within the ADA.

One way to improve on the ADA when thinking forward to a Canadians with Disabilities Act is by examining disability rights in the light of substantive, in addition to procedural justice. The next subsection of this paper will examine the difference between procedural and substantial justice and why there must be a balance when thinking about a solution for accessibility to transportation for disabled people.

5.4: Procedural vs. Substantive Justice

When examining how disability rights should be constructed and interpreted it is important that both procedural and substantive rights are taken into account. This chapter will begin with a brief explanation of what procedural and substantive rights are and the

difference between them. It will then examine the direction that Canadian legislation has been taking and how this direction could be helpful in the future to ensure equality for disabled people in relation to transportation.

Procedural fairness is defined as “proper adherence to the rules relevant to procedure” (Trinder et al, 1991). The aspect that matters most in this form of fairness is procedure. If the procedures leading up to the result are equal then procedural fairness has been realized. This means that in order for fairness to be achieved like cases must be treated alike and unlike cases differently. Procedural fairness embraces things such as consistency, non-arbitrariness, nondiscrimination, and evenhandedness (Trinder et al, 1991). Applying this back to the ADA, this is the type of fairness that the ADA embraces. By ensuring that equal transit is available to everyone while ignoring other forms of transportation, the ADA is only taking into account the procedural element of fairness while ignoring what the actual results of these implications are. To ensure results in addition to just process leads to fairness, substantive fairness must be taken into account as well.

Substantive fairness is focused on the equality of final outcomes. It takes into account more than just process and examines things such as circumstances and people’s inherent difference (Farrow, 2014). If this form of fairness were to be applied to the ADA, in addition to stipulating that everyone should have equal access to transit, substantive fairness would look at whether the result of this legislation leads to equality and whether it eliminates the circumstances that led to the inequality. By accounting for substantive fairness the issue of “transit-dependent disabled second-class citizen” that Lewyn identifies would likely be eliminated. Canada has already begun to take steps in

the direction toward ensuring substantive fairness. This can be seen in the cases of *Council of Canadians with Disabilities v. VIA Rail Canada Inc.* and the case of *Eldridge v. BC*.

The Via Rail case held that disabled people constitute members of the public and that their right to have equal opportunity to travel must not be sacrificed for things such as amenities, facilities and services at a better price (*Canadians with Disabilities v. VIA Rail Canada Inc.*, 2007). Reasoning such as this promotes a substantive fairness that helps to ensure disabled people end up with the same advantages offered to non-disabled people.

Another case that helps to ensure substantive fairness is the Eldridge case. This case states that, “once the state decides to provide a benefit, it must do so in a non-discriminatory manner where a failure to do so has an adverse effect on an enumerated group”(Eldridge v. BC, 2007) This case recognizes that there are circumstances in which it may be necessary to modify existing practices. The modifications need to exist in order to provide appropriate accommodations that are required for all people to flourish equality (Malhotra, 2012). This is the kernel of substantive fairness; different people require different things in order to achieve the same goal. Disabled people interact with transportation differently than able bodied people and therefore a procedural process is not enough to ensure equal access. The transportation goals and objectives of disabled people must be taken into account if we hope to achieve a completely equal ability to access transportation.

5.5: Ontario Legislation

In 2005 the Province of Ontario enacted the Accessibility for Ontarians with Disabilities Act (“AODA”). This was in part due to pressure from the disabled community which pointed out the major issues inherent in the procedure of Charter and Human Right claims.

As mentioned earlier in this paper, under the Charter and Human Rights Code people with disabilities were left to enforce their own rights on a case-by-case basis (Beer, 2015). These caused problems related to timeliness, finances, and navigation of the overall procedure. The AODA sought to expedite this process and help remove some the barriers that were implicit in the Federal legislation. The goal of the AODA is to achieve full accessibility for disabled people with respect to goods, services, facilities, accommodation, employment, building, structures, and premises by the year 2025 (*Accessibility for Ontarians with Disabilities Act, 2005*).

It is now the year 2017 and it has been 12 years since the passage of the AODA. With just 8 years remaining to achieve its goal many people within the disabled community are frustrated with the current progress to date. The Province is behind schedule and achieving its 2025 goal does not look optimistic (Beer, 2015). One reason that has been cited for this deficiency in progress is a lack of awareness (Beer, 2015). The goals, although mandated by the Province, are left in the hands of individuals and businesses to impose. For this reasons it is important that individuals and businesses are actually aware of the requirements that are mandated by the Province.

Unfortunately, there has been minimal promotion and publicity of this Act among both obligated organizations and the public at large. Even members of standard

development committees know little about this legislation and the requirements that it imposes (Beer, 2015). Even once the issue of awareness is tackled there is still the issue of enforcement.

Regardless of how aware people are of the AODA not everyone will have the will to impose these requirements on their own. For this reason the legislation should have an enforcement mechanism that can be enacted by the Province. Currently this is not the case. In 2012 Economic Development Minister Brad Duguid stated that 65% of businesses had yet to file their 2012 accessibility reports. As recent as 2015, 60% of businesses were still in violation of the AODA standards (Monsebraaten, 2015). Despite this the Province still cut back on compliance audits (Monsebraaten, 2015). These cutbacks to the commitment of ensuring accessibility will certainly affect how disabled people experience transportation.

Due to this lack of awareness and enforcement, the 2025 deadline of the AODA is still very far off. This means that both the Federal and the Provincial government unable to come up with adequate solutions to the issue of access to transportation for disabled people. The next chapter of this paper will outline some potential solutions to this issue.

Chapter 6: Solutions

Current attempts to make transportation accessible for people with disabilities have fallen short. An example of this can be seen by exploring public transit in the city of Toronto. In this case study the results of government and municipal inaction can be witnessed and the consequences of this inaction observed. In 1990 the TTC set a goal to make all subway stations accessible. They committed to full station accessibility in 2020. In 2013 the TTC revealed that it would only achieve subway/RT accessibility by the year 2025, the year mandated by the AODA. As of November 2016 however, only 34 of 69 subways are fully accessible. In the spring of 2016 the TTC also announced that they will be reneging on their commitment to full accessibility and no longer have intentions of making all stations accessible. It currently plans to leave 17 stations inaccessible by 2025 despite the mandate of the AODA (Mandel, 2016).

This example shows that when there is a lack of commitment inaction will follow. This inaction can lead to the consequences that were discussed in chapter 4 of this paper: Consequences of a lack of Accessibility. These consequences can include things such as social isolation, burdens on obtaining employments, financial set backs, and health related issues.

Developing ideas outside of existing legislation can provide for innovative solutions as well as informing the way that future legislation is crafted. This chapter will begin by examining solutions in the broad context of the philosophy of Universal Design. Universal Design holds the idea that the process of creating products and built environments should be created to be usable by all people, to the greatest extent possible, without the need for adaption (Pilarski & Rath, 2013). Subsequent to this more specific

solutions will be looked at including the idea of citizen science, and the implementation of Autonomous Vehicles.

6.1: Universal Design

At the kernel of Universal Design is the idea that creating accommodations should not be the main focus when thinking about how to shape cities for disabled people. Rather the started point should be to initially plan and build for accessible and the necessary accommodations should be applied when this ideal falls short.

‘Special needs’ accommodations are not only more expensive but they can also be stigmatizing for the people that have to use them (Pilarski & Rath, 2013). When society and government views creating accommodations as the main way to implement solutions it often creates situations where the burden of arranging these accommodations falls on the individual with the disability (Pilarski & Rath, 2013). This was examined earlier in this paper when the limitations of the Charter and the Human Rights Code were discussed.

Another benefit to the idea of Universal Design is that often products and designs that are essential for people with disabilities benefit the rest of the population. This could be seen with things such curb cuts or ramps that are necessary for people in wheelchairs but may also benefit people with luggage or strollers (Pilarski & Rath, 2013).

The idea of Universal Design can also be seen through the work of Iris Marion Young, which was previously discussed in this paper. When Universal Design is planned for, it is possible achieve the inclusion that promotes an objective understanding of society. By planning for accessibility disabled people are able to express their perceptions

of preexisting biases in society and this in turn allows everyone to see and understand the environment differently.

In the landscape in which we currently live however, many of the stages of implementing Universal Design have passed. This philosophy can stand to best serve the way in which we approach the future.

6.2: Citizen Science

Citizen science is an idea that suggests that a key limitation to improving accessibility starts at the foundation of how we attempt to tackle the problem; data collection (Steinfeld et al, 2009). When studies and surveys go about collecting their data the process is owned and operated by the researchers of these studies. This leads to a disempowering of the actual user of the services, the disabled people themselves (Steinfeld et al, 2009). A consequence of this is that the people or organizations who actually provide the services are left with inadequate evidence that offers practical ways in which to assist these people (Steinfeld et al, 2009).

Transportation agencies themselves often do not have the time, the will, or the recourses to undertake systematic research using conventional approaches (Steinfeld et al, 2009). Citizen science is offered as a tool to combat these issues.

This form of data collection is based on multimedia platforms that can engage people with disabilities directly so as to improve the every day experiences they have with transportation (Steinfeld et al, 2009). This form of data collection can collect and assess problems in real time, as they are experienced. By creating an avenue for this type of data collection it is hoped that a greater understanding about how disabled people

experience transportation systems will be established. This form of data collection may also improve the feedback loop between user and provider whether the provider is in the public or private realm (Steinfeld et al, 2009).

6.3: Autonomous Vehicles

The solutions that have been discussed thus far are solutions that have the capacity to be implemented in our present day society. The proposed solution of autonomous vehicles shifts the focus from currently available solutions to solutions that may occur sometime in the future. Because this is a forward thinking solution there are many uncertainties surrounding it. This subsection will explore some of these uncertainties as well as some of the potential impacts that autonomous vehicles may have.

At the core of autonomous vehicles is the fact that they are autonomous; they do not need a driver to operate them. This means that people with almost any type of disability can potentially have the freedom of increased mobility to the same extent as people without disabilities. One example of this was when Google allowed Steve Mahan, former director of the Santa Clara Valley Blind Centre, to use a autonomous vehicle completely on his own (Prigg, 2016). The situation may get more complicated when this technology is introduced on a larger scale. It is on this large scale where some of the uncertainties surrounding this technology exist.

Much of the testing of these vehicles has taken place in California. For this reason some of the uncertainties that exist are grounded in Californian regulated agencies. In this paper the concern is about how this technology would be applied in Canadian and

Ontarian legislation but seeing as California is at the for front of developing this technology their role in setting these precedents cannot be ignored.

The California Department of Motor Vehicles has taken the path that a human licensed driver should be required to be in the car at all times (Polonetsky, 2016). This is in contrast to the position that the Department of Transportation has taken which would allow for the possibility that autonomous vehicles could operate without a human driver at the wheel (Polonetsky, 2016). Depending on which of these paths is implemented there will be different outcomes for disabled people. If the requirements imposed by the California Department of Motor Vehicles are enforced people with disabilities will be left out of the benefits received from this technology and will have to wait for the technology to be redefined before they truly receive equal accessibility in regards to transportation.

Another issue that arrises if a driver needs to be included in the vehicle stems the definition of ‘driver’ as imposed by International Law. International Law describes a driver as “any person” who should “at all times” be “able to control” the vehicle (Abatzidis, 2014). A disabled person would fall out of the scope of this definition and thus would not qualify under a ‘driver’ for the purpose of accompanying an autonomous vehicle.

A final issue is that many types of disabled people may only receive the benefit of this transformative technology if the technology itself is designed and regulated with their use in mind (Abatzidis, 2014). For example, if an automated vehicle is built the exact same way as regular cars then someone in a wheelchair will still not be able to use this car. Autonomous vehicles should be build with the philosophy of Universal Design mind

so as to benefit everyone and not exclude certain people from the accessibility freedom that they offer.

Chapter 7: Conclusion

This paper parses out the complexities surrounding the intersection between transportation and human rights, and the issue of accessible transportation for people with disabilities. To accomplish this the first question that was asked was why transportation problems are so difficult to solve. Based on this question there were various complexities that were brought up that surrounded this question.

After analyzing this broad question the consequences of a lack of accessibility were examined. In this section statistics from the Canadian Survey on Disability were drawn upon. Four factors were also identified as areas where disabled experience hardships. There were, social well-being, physical barriers, financial earning and ability to obtain employment, and health.

Based on the consequences that a lack of accessibility to transportation can have both Federal and Provincial legislation have attempted to develop legislation that would lead to equality for disabled people. The legislations that were examined were the Canada Transportation Act, The Canadian Charter of Rights and Freedoms, The Canadian Human Rights Act, and the Accessibility for Ontarians with Disabilities Act. Case law was also examined in terms of the rights that it has conferred on people with disabilities. Despite these pieces of legislation and the existing case law accessibility to transportation for disabled people remains a problem.

One way that can potentially improve this situation is by modifying the legislation. A national legislation on disabilities such as a 'Canadian with Disabilities Act' could provide assistance. In crafting this legislation it would be important to find an

appropriate balance between procedural and substantive equality so that the same problems are not inherited from the Americans with Disabilities Act.

Another solution may be available through the more high-level approach of Universal Design philosophy. If all future designs and technology are created with this philosophy in my mind there may begin to be improvements.

This high-level area of thought can be applied to practical and real world examples such as autonomous vehicles. For disabled people to get the true benefit of accessibility to transportation two things must occur. First the legislation surrounding these must be designed with disabled people in mind. Second the actual vehicles themselves must also be designed with disabled people in mind.

It is the purpose of this paper to show that although the issue of accessible transportation for disabled people is a complicated issue it is an issue that is worth continuing to try and find a solution for. Legislature has begun this process by introducing various Federal and Provincial Acts. These may not completely solve the issue but they show that it this is an issue that Legislature cares to solve.

The rest of the population, businesses, and organizations also need to contribute to solving this problem though. This could mean through voluntary compliance of the Charter or AODA requirements or by abiding by the principle of universal design in future landscape or technological advancements.

The consequences that result from a lack of accessibility to transportation can have large impacts. It is important that this is understood so that there is a willingness to solve this problem and not exacerbate it. The first step in this process is making sure that

people are educated on this problem. It is the hope that this paper can help provide this education.

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