

A Utilitarian Perspective on Gender-Equal Snow Plowing in Karlskoga, Sweden

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On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

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Introduction

In 2011, the municipality of Karlskoga, Sweden, redesigned its system of snow plowing as part of a gender-equality initiative. Traditionally, main roads are cleared first, with less priority given to areas for pedestrians like sidewalks, bicycle paths, and bus stops. However, because women on average have different travel patterns than men and are statistically more likely to be pedestrians, the existing snow removal methods disproportionately favored male modes of transportation (Criado Perez, 2019). Scholars have understood that this is a result of the default male user; due to a lack of gender-disaggregated data, the male experience appeared to be the universal experience. Additionally, outcomes of the gender-equal snow plowing system have been analyzed, but none have assessed the ethicality of the new system through the lens of utilitarianism. Developed by the philosopher Jeremy Bentham in the 18th century, utilitarianism is the idea that the morally right action is the action that produces the greatest good for the greatest number of people (Driver, 2014). By examining this case in terms of utilitarianism, it can be understood that gender-equal snow plowing is not only an issue of gender but an issue of maximizing utility in society. As a result of reframing this issue in terms of utility, the prospect of implementing a gender-conscious initiative is made less polarizing. Gender-equal snow removal adheres to utilitarian ethics by reducing the number of slippery accidents, being more cost-effective, improving accessibility, and creating a more equitable community. To support this claim, I will analyze a study conducted by Skåne County, Sweden, that outlines pedestrian-related accidents under traditional snow removal methods (Berntman et al., 2012). Additionally, I will build upon the work of Caroline Criado Perez, author of *Invisible Women: Data Bias in a World Designed for Men*, to qualitatively compare the utility of gender-equal snow removal to traditional snow removal (Criado Perez, 2019).

Background

Matters of transportation and city planning are typically thought of as gender-neutral, as everyone benefits from a sound infrastructure. The same holds for snow plowing; it seems quite reasonable that the busiest areas, like major roads, should be prioritized for snow removal, and this decision has heretofore appeared to be the most beneficial for the greatest number of people. City officials in Karlskoga, Sweden agreed, making jokes that “at least snow is something the gender people won’t get involved in” (“What Works for Men”, 2016). The existing approach in Karlskoga was to give priority to roads and streets, then sidewalks, bus stops, and cycling paths. On further reflection, it was recognized that the areas prioritized for clearing reflected the travel patterns of men far more than those of women. After examining these patterns, the municipality of Karlskoga redesigned its approach to snow removal, clearing areas around schools, sidewalks, and bus stops before roads.

Literature Review

Several previous works have investigated how traditional snow removal methods are rooted in bias and have analyzed the outcomes of gender-equal snow plowing to determine its efficacy. While scholars agree that this new approach to snow removal is more equitable for women, none have yet considered how this system is backed by utilitarian ethics even before considering the value of social equity. In her book *Invisible Women*, Caroline Criado Perez describes the gender data gap: a lack of sex-disaggregated data that results in society’s default user being male (2019). A default user is the user that is implicitly assumed when no other demographic data is taken into consideration, therefore creating a bias towards male representation. When distinct data sets for men and women do not exist, the risk of presuming

the typical male experience heightens. This has serious implications for women, exemplified by traditional snow removal methods that target major roads first, which reflects men's transportation needs more so than women's. Women are more likely to walk or use public transportation, while men are more likely to drive. Additionally, men typically commute twice daily to and from work, while women generally travel to run errands or take children to and from school, resulting in widely different travel patterns. Upon taking these differences into account, the municipality of Karlskoga implemented gender-equal snow removal that prioritized the areas that women were more likely to travel through.

Johanna Karlén studies gender-equal snow plowing in relation to feminist theory in her thesis, *När Patriarkatet Snöröjer*, or *When the Patriarchy Clears Snow* (2022). Karlén compares two Swedish municipalities that have implemented new snow removal methods to two that have maintained traditional methods. The area prioritization for Karlskoga and Karlstad, the municipalities with feminist snow removal, is as follows:

- Schools and preschools are given the top priority.
- Bicycle paths, pedestrian paths, and roads connected to public transportation are given priority over main roads.
- Snow removal is equally prioritized between female-dominated and male-dominated workplaces.

For Växjö and Mora, the two municipalities with traditional snow removal methods, area prioritization is as follows:

- Main roads are given top priority, especially near commercial or industrial areas.

- Less congested roads, schools, and pedestrian and bicycle paths are given the next priority.
- Residential areas are given the lowest priority.
- In Mora, industrial workplaces are given top priority; Karlén argues that this is a prioritization of male-dominated workplaces over female-dominated workplaces.

These policies illustrate how Karlskoga and Karlstad place more emphasis on clearing areas for pedestrians, schools, and users of public transportation, while Växjö and Mora prioritize removing snow from their main roads and industrial areas. It should be noted that in the event of very heavy snowfall, all towns prioritize only their main roads.

Karlén describes feminist snow removal as a shift in agency; previously, accidents or difficulties in transportation after snowfall were attributed to the snow itself, as if the snow had agency. By taking measures to improve conditions for pedestrians, cities are reclaiming their agency over the snow and its impact. Additionally, Karlén agrees with Criado Perez in that traditional snow removal methods are a product of a society built for men, given that the traditional snow removal system is structured to favor the workplaces and means of transportation more frequently used by men than by women.

Both scholars provide crucial insight into snow removal as a gendered issue and have outlined the results of a gender-equal approach to this issue. However, neither consider a utilitarian motivation for implementing this system, which would add to the current understanding of its impact beyond increased equity for women. To further comprehend the benefits and consequences of gender-equal snow plowing, I will analyze the practice from a utilitarian perspective to argue for its ethicality.

Conceptual Framework

The shift from traditional to gender-equal snow plowing in Karlskoga, Sweden, resulted in both positive and negative outcomes for its constituents. By employing the ethical framework of utilitarianism, I can gain an understanding of how these results balance out purely in terms of their utility. Pioneered by the English philosopher Jeremy Bentham, utilitarianism is the view that the morally right action is the action that produces the greatest good for the greatest number of people (Driver, 2014). As a form of consequentialism, this framework views an action entirely in terms of its consequences, excluding any focus on the morality of the actor or the action itself (van de Poel & Royakkers, 2011). Bentham held that all humans innately seek pleasure and avoid pain, so the morally right action is the one that maximizes pleasure and minimizes pain. Bentham also believed that pleasure and pain could be measured quantitatively with the use of a *moral balance sheet*, according to the feeling's intensity, duration, certainty or uncertainty, and propinquity (van de Poel & Royakkers, 2011). By summing the individual pleasures and pains of each person impacted by an action, the action can be deemed morally good or evil depending on which side outweighs the other.

A shortcoming of utilitarianism is that consequences cannot always be foreseen when evaluating an action that has not yet occurred. Additionally, pleasure is a highly subjective measure, so utility often cannot be measured quantitatively in practice nor be the same for all parties involved. Utilitarianism also does not account for the protection of smaller groups in cases where the greatest good for the majority may have negative consequences for the minority. John Stuart Mill, a follower of Bentham, addresses this shortcoming by introducing the freedom principle, which asserts that everyone may seek their own pleasure so long as they do not deny the pleasure of others (van de Poel & Royakkers, 2011). A final criticism of utilitarianism is that

it does not account for distributive justice, which is the value of having an equitable distribution of resources across individuals and groups. Richard Hare, a modern utilitarian, argues that utilitarianism does provide for a just distribution of welfare due to the economic concept of diminishing marginal utility. Marginal utility is the additional utility gained from an increase in a resource. Hare holds that individuals who are most in need of a resource will experience a greater marginal utility (and greater happiness) from gaining it than would those who are not as in need of it (van de Poel & Royakkers, 2011). Therefore, the greatest good does not necessarily have to impact the greatest number of people so long as more marginal utility is generated from serving the minority than the majority.

In the analysis that follows, I will outline the impacts of Karlskoga's redesign of its snow removal system in terms of utility and then examine equity through a utilitarian lens.

Analysis

The municipality of Karlskoga redesigned its snow-clearing policies in 2011, after a gender-equality initiative required officials to re-evaluate their policies to ensure that they were equitable (Criado Perez, 2019). By shifting focus to clearing regions used by pedestrians as outlined above, Karlskoga experienced both benefits and consequences. I argue that according to the principles of utilitarian ethics, these benefits outweigh the consequences and that gender-equal snow plowing can be considered morally right. I will demonstrate how this system provides the greatest good for the greatest number of people by reducing slippery accidents, saving money for Karlskoga, improving accessibility, and supporting equity according to the concept of diminishing marginal utility.

A Qualitative Moral Balance Sheet

First, I will consider the positive outcomes of the snow removal reprioritization. A major result of clearing sidewalks first was a reduction in slippery accidents. Before this change, pedestrians were injured three times more often than motorists during snowy or icy conditions, many requiring hospital visits (Criado Perez, 2019). Women are more likely to be pedestrians than motorists and it has been found that women make up the majority of these injuries (Carlsson & Lundälv, 2022). A study that took place in Skåne County, another region of Sweden, estimated that the total cost in terms of hospital care and productivity loss in the winter of 2010 was about 36 million Swedish Kronor, or 3.75 million USD (Berntman et al., 2012). It turned out that the cost of pedestrian accidents was twice as much as the cost of winter road maintenance in Karlskoga. By moving to gender-equal snow plowing, such injuries have been reduced by half; furthermore, the cost of snow removal has not increased, as the only significant change was the order in which areas were cleared (“Gender Equal Snow Clearing in Karlskoga”, 2014). Therefore, gender-equal snow removal resulted in a net gain financially for Karlskoga. In addition to a monetary profit, a reduction in accidents directly translates to a reduction in pain of varying levels of severity.

Proponents of traditional snow plowing systems could argue that with roads being of lower priority, the number of costly car accidents is likely to increase. While this is a logical potential consequence of clearing roads with less urgency, no evidence suggests that the number of automobile accidents has increased in Karlskoga since the snow plowing redesign. Additionally, the same study conducted in Skåne County found that traffic-related injuries are less dependent on the season than are pedestrian- and cycling-related injuries, as shown in Figure 1 (Berntman et al., 2012).

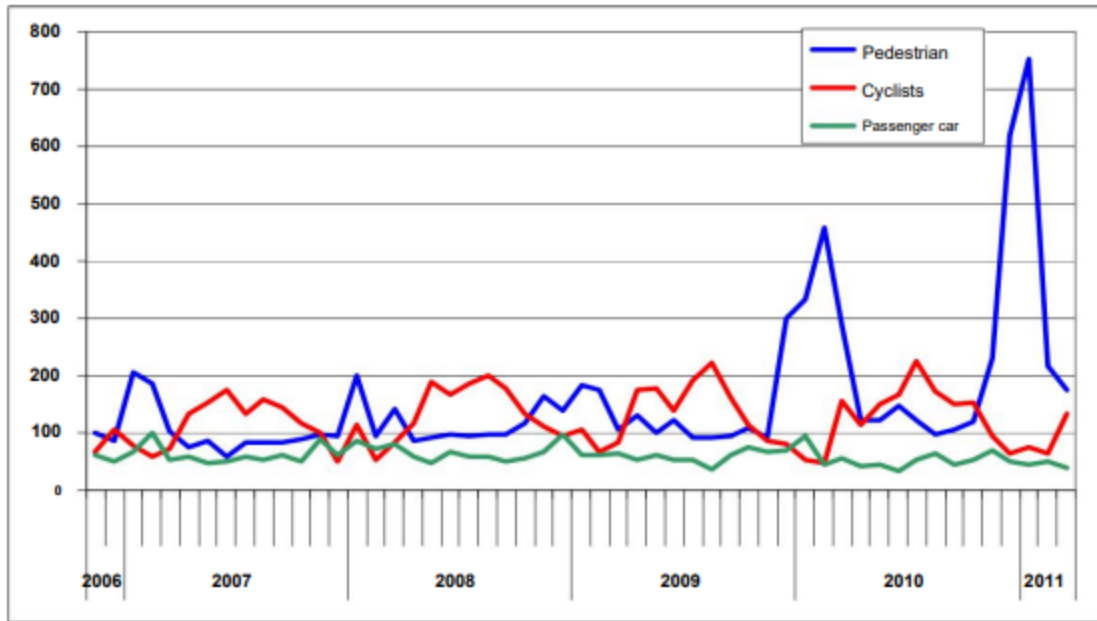


Figure 1. Number of injured road users in single accidents per month in Skåne during the period November 2006 - March 2011

The patterns in Figure 1 suggest that cars are less impacted than pedestrians and cyclists by winter weather conditions, likely because walking or pushing a stroller through several inches of snow is more cumbersome than driving through the same amount of snow. This may explain why no evidence has indicated an uptick in car-related accidents since the implementation of gender-equal snow removal. Such information also serves as evidence that pedestrians experience a greater good from having clear sidewalks and cycling paths than drivers experience from having clear roads since the total number of accidents is reduced.

Another positive outcome of gender-equal snow plowing in Karlskoga is an increase in accessibility during the winter months. For those with disabilities that increase the difficulty of traveling on uneven terrain, like individuals using wheelchairs, snow-covered sidewalks can be impossible to traverse. By clearing these areas first, individuals with disabilities are more able to use them, reducing the chance of being confined to their homes during icy conditions. The city of

Karlskoga even provides continual updates on its snow clearing efforts on its website so that citizens can stay up-to-date on road and sidewalk conditions (Vintervägbloggen, n.d.).

The shift away from traditional snow removal is not without its shortcomings, as the new system cannot account for every individual's needs equally. Some news outlets have noted an increase in traffic, although city officials hold that this was a result of very heavy snowfall rather than a shortcoming of gender-equal snow plowing (Bojesson, 2016). Additionally, proponents of traditional snow removal methods argue that main roads must be cleared first to facilitate the travel of emergency vehicles like ambulances and firetrucks. Unfortunately, no data is available on whether emergency vehicles have been hindered by gender-equal snow removal despite it being a valid concern.

To summarize the positive and negative consequences associated with gender-equal snow plowing, the system has reduced the number of pedestrian accidents, saved the town money in both hospitalization and productivity costs, and provided increased accessibility. However, it also may have caused increased traffic congestion and has the potential to hinder emergency services. This relates to the factors proposed by Bentham that influence the weighting of pleasures and pains on the moral balance sheet: intensity, duration, certainty or uncertainty, and propinquity. For example, slippery accidents are a more intense and longer-lasting pain than waiting in traffic. Additionally, the positive outcomes are more certain than the negative outcomes as illustrated by a lack of proven findings on adverse impacts. Therefore, I argue that gender-equal snow removal provides the greatest good for the greatest number of people even before considering the benefits of equity for women. Although some individuals may be negatively impacted by increased traffic, the pleasure of reducing accidents and saving money outweighs that pain. In other words,

even if this new system does not impact the most people, the people that are impacted benefit the most.

The Utility of Equity

A traditional utilitarian like Jeremy Bentham may not have believed that increased equity for women has intrinsic value; however, I argue that designing from a gendered perspective provides the greatest good for the greatest number according to the concept of diminishing marginal utility, as introduced by Richard Hare. An article in the *Journal of Behavioral Decision Making* provides an apt analogy - if we were to transfer a thousand dollars from a millionaire to a pauper, gaining that amount would make a significant difference in the pauper's quality of life, but losing that amount likely would not make a significant difference in the millionaire's quality of life (Greene & Baron, 2001). Thus, total utility is maximized in this situation. This is a result of diminishing marginal utility; gaining an additional thousand dollars provides more marginal utility for the pauper than it would for the millionaire. This scenario can be applied to gender-equal snow plowing, though not as extreme, with the thousand dollars analogous to individuals' ease of travel. With traditional snow plowing, women are more likely than men to be hindered by winter weather conditions, because traditional snow plowing was unconsciously designed to cater to the average male's travel path. Therefore, an average woman's ease of travel would increase substantially from a system that prioritizes her travel paths. Conversely, the average man's ease of travel may be reduced by roads being of lower priority, but it is unlikely that this reduction would outweigh the average woman's increase, given that pedestrians are more directly affected by snow on their paths than cars. Therefore, the marginal utility that women stand to gain outweighs the marginal utility that men stand to lose, which demonstrates that this equitable solution also maximizes utility.

Conclusion

Gender-equal snow plowing in Karlskoga, Sweden is backed by utilitarian ethics due to the fact that it reduces accidents, saves the town money, and increases accessibility. Promoting equity for women also maximizes total utility according to the principle of diminishing marginal utility. This analysis indicates that gender-equal snow plowing is not strictly an issue of advancing equity for women, but a matter of maximizing the total utility in society. Not only does the implementation of gender-equal snow removal provide the greatest good for the greatest number of people, but it also addresses and corrects a system designed for the default male user. Understanding this issue from the perspective of utilitarianism provides another dimension by which to argue for its ethicality.

Word Count: 3237

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