Gendering Climate Change through the Transport Sector

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ESSAY

The most pressing global environmental problem today is climate change. A variety of prominent reports all point to the seriousness and potential catastrophic consequences that will result unless radical changes to reduce greenhouse gas emissions are realized (IPCC 2007; Stern 2006). Despite the visibility of such debates, there is doubt regarding the willingness and ability of present generations to change their current behavior quickly enough to reduce the scope of future catastrophes. Greenhouse gas emissions from the transport sector are a prime example where, both commercial and private use of fossil fuels are increasing at alarming rates despite international consensus regarding the need for massive reductions. One of the major points of contention stems from global inequalities regarding carbon dioxide emissions. Countries with low per capita levels of fossil fuel use do not see themselves as responsible for climate change and demand the right to con-

tinue their carbon based economic development. Highly motorized countries show little success or interest in reducing their greenhouse gas emissions to the extent and in the time frame that may be required. Overall, a radical and immediate reduction of carbon dioxide from the transport sector is not seen as feasible in highly motorized countries, or fair to less motorized ones.

Within the climate change discourse, equality most often refers to macro differences between countries that have fully industrialized and countries that demand a right to industrialize to meet development potentials, and to ascertaining who is responsible for the rights of future generations to an undamaged environment. Furthermore, as John Whitelegg noted in 1993:

"[i]f we cannot accept the conversion of all third world countries to European levels of consumption as far as vehicles and transport are concerned then we are expressing a commitment to global inequality and exploitation neither of which is compatible with any definition of sustainability" (Whitelegg 1993).

The most pressing challenges are how to reconcile global conflicts over both natural resources and the right to pollute in the present and who is responsible for future use and degradation. Given the stalemates that result from such conflicts and their impact on political feasibility, the uncertainty surrounding acceptable emissions levels, and the hegemony of the global carbon based economy, a great deal of attention is also being directed towards long term solutions such as managing and mitigating the consequences of climate change once it occurs.

The impact of gender differences on climate change

This macro focus on equality between hemispheres, rich and poor, and present and future, obscures the profound differences in carbon dioxide emissions that exist today between different users within both highly and less motorized countries. Within the climate change discourse, definitions of equality are not primarily formulated to take differences that are based upon the influences of gender, class, race and ethnicity within countries into account. One of the main differences are seen between women's and men's travel behavior and their resultant impact on carbon dioxide emissions. Current research in Sweden, one of the most gender equal countries in the world, shows substantial differences between women's and men's greenhouse gas emissions (Carlsson-Kanyama et al 1999; Polk 1998, 2004). Even though there are large individual variations among both women and men, overall men are more represented among the users who travel the longest, by the most energy intensive modes, resulting in significantly longer travel distances per day than women. Men, on an aggregate level, thus stand for a majority of kilometers traveled by car, and consequently for a majority of carbon dioxide emissions from the transport sector in Sweden (Carlsson-Kanyama et al 1999; Polk 1998). While Sweden is just one case in point, it represents the apex of present gender equality. Similar, if not larger differences, can be seen in other European countries as well as in the US (Crane 2007; Hjorthol 2001).

Differences in travel behavior and their consequent carbon dioxide emissions between women and men become visible when different measures of individual behavior are quantified and aggregated. Such quantified differences must be interpreted carefully since they are generalizations and simplifications from a wide array of complex interactions within social relations and obscure broad variations among women and among men. The concept 'gender' was developed within feminist theory to better articulate and identify the process of the social construction of women and men and to

reject seeing social relations as being determined or legitimated by biological categories (Connell 1987; Scott 1986). Gender is not only, or primarily, a characteristic of the individual, it is, importantly, also a property of collective groups of individuals where social practices, institutions and historical processes are constantly being constructed and re-constructed in the way they are associated to different interpretations of what it means to be a woman or man, and feminine or masculine (Connell 1987; Hirdman 2001). Gender differences can be seen in who does what (jobs, activities, behaviors, norms), who we are (subjectivity, identity, socialization), how society is structure to incorporate women and men (institutions, social organization), and the way the meanings that are given to objects and activities evoke different associations to women/men, femininity/masculinity. This gendering of social practices normalizes certain identities, practices and values as more feminine or masculine and through this process constructs a variety of combinations of femininities and masculinities, where certain hegemonic gendered identities and practices emerge. The climate change discourse exists within and is informed by such gendered relationships, practices and ideologies.

Within the climate change discussion, private car use is one of the main sources of carbon dioxide emissions. The practical efficiency, convenience and comfort connected to car use; and above all, the connections between transport and economic growth, have fueled the rise and spread of motorized based forms of private transport the world over. Cars have been, and in some cases still are, the fastest, most convenient, comfortable and flexible transport mode available. But cars are not only an instrumental and rational transport mode, they also embody desires and pleasures far beyond their ability to move humans easily from place to place as symbols of status, freedom, power and sexuality, evident in their use in films, advertisements, literature and by individuals and groups of individuals. While car dependency can be looked at in purely instrumental terms, it is a strongly gendered realm. Within the transport sector, different types of masculinity, for example such as physical strength, rationality and technical know-how construct different gender patterns of behavior, attitudes and social relations (Connell 1995). The street is an especially gendered space, a masculinized domain full of low-level harassment, male on male violence, as well as sexually related violence. Gender is also expressed in the interactions of familial responsibility and time-space constraints where nearness to the home, the family and children and relations to travel, movement, speed, distance and technology are highly gendered, effecting travel patterns and overall car use (Kwan 2000). The practical efficiency of the car as well as its symbolism embody different types of masculinities and femininities, from technical know how and women drivers, to minivans, pick-up trucks and off-road SUV's, and with them, the entire system of transportation that is based upon their use. The individual behavior and attitudes of women and men in the transport sector, thus exist within a wider social context of gender norms, practices and ideologies resulting in a variety of constructions of gendered mobility patterns.

Gender expresses itself through behavioral norms in the sector which include both differences in travel length and mode use as well as differences in behavior while driving such as risk taking behavior such as speeding and unlawful driving, and the use of protection devices such as seat belts. In all instances, women's behavior, on average, contributes less to pollution and accidents than does men's, on average. For example, public transit itself is gendered; it is seen as a 'women's' form of transport in the transport policy discourse in Sweden. On average, women travel shorter distances by car and use environmentally benign trav-

el modes to a greater extent. As a car driver, women, on average, are significantly safer than men; they take fewer risks, drive slower, use protective devices to a greater extent, drive unlawfully to a lesser extent and are involved in fewer accidents. A recent report from the Swedish Road Administration calculated that if men were to drive like women, 150 to 200 lives would be saved yearly (SRA 2008).

All of these behavioral differences, such as mode choice, travel distances, and speed, though often noted for their significance for increasing safety, also have a clear impact on greenhouse gas emissions. Women, on average, are better at following speed limits than men, who are overrepresented for speeding, especially at very high speeds. Women's more diverse use of travel modes supports and promotes public transport, which is both more socially inclusive and results in lower emission levels than the private automobile, and a foundation upon which more climate smart transport systems must be based.

Gender also expresses itself in the way different attitudes and values are more strongly associated with women or men within the sector. These differences include the concern and or prioritization of safety and security, planning priorities and the environment. Women, on average, tend to have values and attitudes towards the environment, infrastructure needs, mode use, speed limits, road pricing, speed cameras, congestion charging, business travel and driving under the influence, to name a few examples, that can be interpreted as more compatible with a sustainable transport system. For example, women, on average, are more supportive of reducing speed limits in towns, while men are more positive to increasing speed limits on freeways. On average, women show more acceptance of congestion charging and other political measures to reduce climate change. Women are also more positive to investments in bicycle and public transit infrastructures, whereas men tend to prioritize road building and airports to a greater extent than women. Overall, women, on average, are more positive to traffic regulations and laws that support the reduction of climate change.

All of these average differences between aggregated groups of women and men show how expressions of gender in the transport sector have a significant impact on climate change and on the wider environmental and social consequences of car dependency. Regarding distributions of power, the transport sector is dominated by men in decision-making, participation in planning processes, implementation and planning. Consequently, behavioral and attitudinal differences between women and men have had and still have little impact in how the transport system develops over time, what is prioritized and what is seen as feasible and legitimate. The latest governmental bill from 2008 on infrastructure financing, for example, allocates a majority of funds for maintaining and building new road infrastructure and one third for public transportation and rail (Regeringens Proposition 2008). Other on-going debates in Stockholm include the great amount of funding that is going to a highly contested loop road, where environmental and social benefits are highly questionable. In an example from Göteborg, one of the most future oriented public transit planning projects in Sweden is limited to switching a majority of transport growth to public transit, because it was not politically feasible to suggest reducing the absolute volume of carbon dioxide emissions, i.e. reducing car use, in 2025. While small level city based projects abound for increasing bicycle use and promoting changes in travel behaviors, overall the most recent decisions that are being taken in Sweden show no real change of course regarding the promotion of private cars and trucks, and thus no substantial overall absolute reductions in carbon dioxide emissions.

The impact of the male norm on climate change

One of the ways that the present situation can be explained is that men are seen as the norm within the transport sector, regarding travel needs and preferences, priorities, and overall orientation to different types of solutions. The transport sector is dominated by traditionally masculine areas of expertise and interest such as engineering, planning and technological development. There is male domination in public participation and decision-making and planning. The fact that men are the norm in the transport sector is not something which is acknowledged or discussed openly; it is an accepted, unconscious fact. It is thus difficult, if not impossible, to gain legitimacy for a position which questions this male norm. The normalization of male dominance in the transport sector masks the roll of gendered norms, ideologies and power relations, rendering them more or less invisible.

One consequence of this masculinization is the dominance of technical approaches within the sector. This dominance excludes a wide number of skills, scientific paradigms and knowledge bases crucial for reducing carbon dioxide. Different types of interdisciplinary and social science approaches, for example, span a much wider array of societal mechanisms and goals than can be incorporated in technical and instrumental approaches. It is important to identify both the gender biases inherent in the sector and work to integrate more inclusive, collective and environmentally sound approaches to problem framing. Additionally, the male norm does not question the promotion of certain types of travel patterns and mode use, such as the car, the high number of deaths and injury, the social exclusion of different groups of individuals, environmental degradation, both local and global, the wasteful and unsustainable use of resources, and degraded and inaccessible urban environments. A less masculinized transport system could reduce environmental degradation, traffic related accidents and deaths, and social exclusion.

The differences in women's and men's behavior and attitudes in the transport sector cannot be explained by rational factors alone. The intersections between cars, masculinity, environmental degradation, speed, social exclusions, power, freedom and technology are all manifest within the gendered norms that are prevalent in the transport sector today. An awareness of gender opens up such symbolic associations by not only looking at behavior, but also questioning why certain behaviors are accepted and others are not, what problem formulations are included and which are not, and why certain solution formulations are seen as being legitimate and others not. Gender enables a more realistic reading of the relations between transportation and climate change because it subsumes the multidimensionality of social relations, problematizes accepted positions and explains the sources of the assumptions that underlie the norms that are most prevalent.

The risk of gender blindness for climate change

For these reasons, adaptations and re-structurings that are undertaken in the name of climate change cannot be gender blind. The differences between who pollutes, who is affected and who needs to change their behavior and the consequences on women and men must be an important basis for this adaptation. But it is even more crucial that measures be taken to reduce the extent of climate change now, in the present. A great deal of such measures involve the transport sector. Men on average cause climate change to a greater extent than women and need to adapt their behavior to a greater extent than women to be sustainable. An awareness of gender differences should be used as effectively as possible to promote the transition to the more sustainable travel behaviors and attitudes. Gender

should become a central topic for reducing carbon dioxide emission levels within highly motorized countries, with high per capita emissions. Thus more attention should be given not only to increase women's participation in planning and decision-making, and is presently the case, but also to question the male standard or norm of travel needs and solutions to climate change. In other words, the travel habits and attitudes which dominate among women should also be seen as a norm within the transport sector, and integrated more fully into planning and policy.

Climate change in essence is about winners and losers, how some take advantage of the economic and practical benefits of fossil fuel use while others suffer the consequences. The benefits and negative consequences of fossil fuel dependency are not only unevenly distributed among both the rich and poor, and South and North, but also between women and men. Climate change and gender need to be seen in this concrete context. Climate change is not just about carbon dioxide emissions, it is about the entirety of social systems and ideologies that support carbon based industries and forms of transportation, where gender, especially the unquestioned dominance of the male norm, plays an essential roll.

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