



Gender, Place & Culture

A Journal of Feminist Geography

ISSN: 0966-369X (Print) 1360-0524 (Online) Journal homepage: <http://www.tandfonline.com/loi/cgpc20>

Gender and mobility: new approaches for informing sustainability

Susan Hanson

To cite this article: Susan Hanson (2010) Gender and mobility: new approaches for informing sustainability, *Gender, Place & Culture*, 17:1, 5-23, DOI: [10.1080/09663690903498225](https://doi.org/10.1080/09663690903498225)

To link to this article: <http://dx.doi.org/10.1080/09663690903498225>



Published online: 16 Feb 2010.



Submit your article to this journal [↗](#)



Article views: 9001



View related articles [↗](#)



Citing articles: 120 View citing articles [↗](#)

Gender and mobility: new approaches for informing sustainability

Susan Hanson*

School of Geography, Clark University, Worcester, MA 01610, United States

Feminists have long known that gender and mobility are inseparable, influencing each other in profound and often subtle ways. Tackling complex societal problems, such as sustainability, will require improved understandings of the relationships between gender and mobility. In this essay I propose new approaches to the study of mobility and gender that will provide the knowledge base needed to inform policies on sustainable mobility. Early in the essay I survey the large literature on gender and mobility, teasing out what I see as two disparate strands of thinking that have remained badly disconnected from each other. One of these strands has informed understandings of how mobility shapes gender, while the other has examined how gender shapes mobility. Work on how mobility shapes gender has emphasized gender, to the neglect of mobility, whereas research on how gender shapes mobility has dealt with mobility in great detail and paid much less attention to gender. From this overview of the literature, I identify knowledge gaps that must be bridged if feminist research on gender and mobility is to assist in charting paths to sustainable mobility. I argue for the need to shift the research agenda so that future research will synthesize these two strands of thinking along three lines: (1) across ways of thinking about gender and mobility, (2) across quantitative and qualitative approaches, and (3) across places. In the final part of the essay I suggest how to achieve this synthesis by making geographic, social and cultural context central to our analyses.

Keywords: gender; mobility; sustainable mobility; Frances Willard; context

In 1895, Frances Willard, an ardent suffragette and Founder of the Women's Christian Temperance Union (WCTU),¹ published an engaging account of how, three years earlier at the age of 53, she had learned to ride a bicycle (Willard 1895). When this slim volume, *A Wheel within a Wheel* was first published and became an instant best-seller, the subtitle was *How I Learned to Ride the Bicycle, With Some Reflections Along the Way*. On the cover of the reprinted version (n.d.) the subtitle appears as *A Woman's Quest for Freedom*. Both subtitles are appropriate, as Willard places the bicycle – and the mobility it provided – at the center of feminism. In explaining why she wanted to learn to ride a bike, she sets the stage by talking about how, as a girl, she had loved to roam the outdoors around her prairie home in the American Midwest and 'ran wild' until that moment when, at the age of 16 and in the name of becoming a proper middle-class woman, she was reined in, 'enwrapped in the long skirts that impeded every footstep', and forced to abandon her 'beloved and breezy outdoor world to the indoor realm of study'.

Why, then, learn to ride a bike at the age of 53? 'I did it from a pure love of adventure – a love long hampered and impeded. ... Second, from a love of acquiring this new implement of power and literally putting it underfoot. Last, but not least, because a good

*Email: shanson@clarku.edu

many people thought I could not do it at my age' (Willard 1895, 72–73). Willard (1895, 53) says that learning to ride a bike 'exactly coincided with that which had given me everything I possessed of physical, mental or moral success – that is, skill, knowledge, character'. (Remember, this is the founder of the WCTU speaking!)

Willard sees the bicycle as far more than 'just' a means to regain her lost mobility after too many years of being trapped in decorous middle-class womanhood; the freedom of movement it provides her is bound up with an exhilarating feeling of confidence and accomplishment and a sense of expanded possibilities, aspirations and personal growth, not to mention an upright moral character. For Willard, the bicycle is, moreover, a way to advance the cause of feminism. She tells how she and one of her female teachers in the matter of mastering the bicycle

rejoiced together greatly in perceiving the impetus that this uncompromising but fascinating and illimitably capable machine would give to that blessed 'woman question' to which we were both devoted ... We saw that the physical development of humanity's mother-half would be wonderfully advanced by that universal introduction of the bicycle sure to come about within the next few years, because it is for the interest of great commercial monopolies that this should be so, since if women patronize the wheel the number of buyers will be twice as large. If women ride, they must, when riding, dress more rationally than they have been wont to do. If they do this, many prejudices as to what they may be allowed to wear will melt away. Reason will gain upon precedent, and ere long the comfortable, sensible, and artistic wardrobe of the rider will make the conventional style of woman's dress absurd to the eye and unendurable to the understanding. (Willard 1895, 38–39)

Seeing the bicycle as a no-nonsense way to advance 'the woman question', Willard (1895, 39) adds, 'An ounce of practice is worth a ton of theory'.

Willard saw women's physical prowess on the bicycle as a challenge to male dominance, a means of improving on prevailing norms of masculinity and an impetus for transforming gender relations. She and her teacher

discoursed on the advantage to masculine character of comradeship with women who were as skilled and ingenious in the manipulation of the swift steed as they themselves. We contended that whatever diminishes the superiority in men makes them more manly, brotherly, and pleasant to have about. ... The old fables, myths, and follies associated with the idea of woman's incompetence to handle bat and oar, bridle and rein, and at last the cross-bar of the bicycle, are passing into contempt in presence of the nimbleness, agility, and skill of 'that boy's sister'. (Willard 1895, 40–41)

Willard (1895, 12–13) also recommends the bike for men, as a life-changing agent luring them away from drink. In her temperance work, she considered the bicycle her

strongest ally in winning young men away from public houses ... [A]s a temperance reformer I always felt a strong attraction toward the bicycle, because it is the vehicle of so much harmless pleasure and because the skill required in handling it obliges those who mount to keep clear heads and steady hands.

I begin with this extended vignette not only because I share Willard's devotion to cycling and to feminism, but mainly because Willard puts her finger on what has so interested feminists about gender and mobility: the two are completely bound up with each other, to the point of almost being inseparable. The literature on gender and mobility is large, sprawling and diverse in its portrayal of the relationship between the two concepts. In this essay, I take a broad look back at this literature of some three-to-four decades and tease out what I see as two quite distinctive strands of thinking about the question of gender and mobility, strands that have unfortunately remained almost entirely disconnected from each other. I summarize the two strands in terms of what I see as the central question in each: how does mobility shape gender and how does gender shape mobility?

I then use this overview of the literature to ask how useful our current knowledge of gender and mobility is for charting directions toward sustainable mobility, that is, mobility that does not compromise the sustainability of the planet. Because some of the work on gender and mobility has led to interesting speculation – and some advice – about how best to move forward on questions of sustainable transportation, I use the sustainability question as an example of the kind of major societal problem that will require new approaches to understanding gender and mobility. Frances Willard was not concerned with sustainability in the contemporary sense of the term (i.e., sustaining life on earth), but much of her life's work was aimed at pushing gender relations onto a more sustainable footing. Because the bicycle is a contemporary symbol of sustainable mobility and because of the close links between gender and mobility as well as between sustainability and mobility, Willard's story is also a good lead into thinking about gender, mobility and sustainability.

In what follows, I briefly clarify the central concepts in this essay, mobility and gender (and to a lesser extent, sustainability), and then describe each of the two main strands – or ways of thinking about gender and mobility – that I see as dominant in the literature. In connecting gender, mobility and sustainable movement, I will argue that, in order to address sustainability issues and other major societal problems in which gender and mobility are central, we feminist geographers need to shift the research agenda so that it includes synthesizing along three lines: (1) across ways of thinking about gender and mobility, (2) across quantitative and qualitative approaches, and (3) across places. In the final part of the essay I want to say something about how we might do that by making context central to our analyses.

Clarifying the key terms

Before delving into questions *about* gender, mobility and sustainability, I want to clarify how I am thinking about these concepts.

I use the term *mobility* to signify the movement of people from one place to another in the course of everyday life. Although some arguments in this essay may also apply to the movement of goods or to long-distance migration, my concern here is primarily with the personal travel that is part of people's participating in the daily round of activities such as paid and unpaid work, leisure, socializing and shopping. Increasingly relevant, too, is virtual mobility (access to places via the internet or other forms of information technology) (Gilbert et al. 2008) and the intersection of virtual with physical mobility (Schwanen and Kwan 2008), about which very little is currently known. Understanding everyday mobility is vital not only because it is fundamental to livelihoods, family life, community life – and to conceptions of gender, as described in the following section – but also because it is at the core of issues surrounding energy consumption, carbon emissions and settlement patterns, all of which are central to sustainability questions.

Sustainability has proven to be a slippery concept but engages the idea of meeting the needs of the present without compromising the ability of future generations to meet their own needs (Bruntland Commission 1987; Serageldin 1995; Kates and Clark 1999). Recognizing the integration of environment, economy and society in place, scholars of sustainability have urged that none of these three major dimensions of sustainability be neglected: the environmental (sustaining resources and ecosystems), the economic (incorporating the environmental impacts of economic decisions), and the social (meeting human needs in an equitable and just manner) (Bruntland Commission 1987; Lucas et al. 2007).

Exactly what *sustainable mobility* might look like on a societal scale has been the source of considerable debate (see, e.g., Whitelegg 1993; Deakin 2002), but it would certainly entail the emission of fewer greenhouse gases and other pollutants, the reduced use of non-renewable resources (especially petroleum), and the provision of greater equity of access to all. The means for moving toward these goals are myriad and include alterations to fuels, vehicles, land use patterns and mobility practices (e.g., increased use of non-motorized modes such as walking and biking; reduced travel; or substituting communication for physical mobility). Clearly, decisions affecting sustainable mobility are made at many spatial scales, from the global to the local, but to be effective, such decisions must be context specific, incorporating the knowledge and practices in particular places at particular times.

I want to stress that mobility is not just about the individual (as so much of the literature would have us believe), but about the individual as embedded in, and interacting with, the household, family, community and larger society. That is, it should be impossible to think about mobility without simultaneously considering social, cultural and geographical context – the specifics of place, time and people.

Gender has a long and complex genealogy (see Haraway 1991) but is generally linked to the perceived differences between women and men and to the unequal power relations based in those perceived differences (Scott 1986). Geographer Andrea Nightingale (2006, 171) appropriately grounds gender in a definition that points out that the meanings and practices of gender vary from place to place (and among different groups of women and men in the same place): ‘Gender is the process through which differences based on presumed biological sex are defined, imagined, and become significant in specific contexts’. The processes that define gender are always inflected by other dimensions of perceived difference (e.g., age, ethnicity, physical ability) and develop through everyday practices in place, including of course practices relating to daily mobility (Pratt and Hanson 1994). As in the case of mobility, geographic, cultural and social context are essential to understanding the meanings and practices of gender.

It is important to keep in mind that this post-structural view, which sees gender as a socially constructed system of dynamic differences, coexists with a still very powerful structural view that sees gender as an innate source of fixed and universal male/female difference. Although the two views are contradictory (in that one sees gender as constructed and therefore changing and changeable whereas the other sees gender as biologically determined and naturalized), both views remain in circulation. Like Linda McDowell (2004), I think gender scholars have to recognize that, because these two views of gender are always in play when we look at gender and mobility, we must not lose sight of either one. When I use the terms *women* and *men*, therefore, I am using words that signify categories that are indeed messy and heterogeneous but at the same time do carry some meaning.

Gender and mobility: two divergent strands

I see two different ways in which scholars have thought about gender and mobility over the past three to four decades. Each can be succinctly summarized in terms of the core question (my translation) driving that line of research. In essence, one asks, ‘How does movement shape gender?’ and considers problems such as how processes of mobility/immobility shed light on the shifting power relations embedded in gender. The other line of research asks, ‘How does gender shape movement?’ and focuses on how gendered processes create, reinforce or change patterns of daily mobility. It is interesting

that whereas each of these non-intersecting literatures starts from different assumptions about what is important, exhibits distinctive methodologies, as well as different understandings of gender, mobility and which elements of context are important, the two strands actually – as we shall see – arrive at a common fundamental message. This part of the essay is devoted to exploring in some detail the nature of each of these research streams.

How does mobility shape gender?

This body of work has informed understandings of how mobility and immobility are implicated in creating, reinforcing and changing the meanings and practices of gender (see, e.g., Valentine 1989; Koskela 1999; Hapke and Ayyankaril 2004; Mandel 2004; Kern 2005; Wright 2005). I should stress at the outset that the chief question driving most such studies has not necessarily been how mobility shapes gender, and yet mobility and immobility have been central to these analyses. Scholars working in this tradition have conducted detailed, contextualized case studies, in many locations – urban and rural – around the world. In my view their research has emphasized gender to the relative neglect of mobility, in that authors have paid a great deal of attention to illuminating, in considerable detail, the ways in which the gendered dimensions of power, agency, identity and subjectivity relate to mobility. But mobility enters these analyses in only highly generalized terms, such as through reference to public/private space or confinement/constraint vs. freedom; details about movement patterns or reasons for movement have received relatively little attention in this strand of research.

Much of this thinking about how mobility shapes gender ideologies, meanings and practices has its origins in the observation that mobility/immobility stand at the core of traditional gender ideologies, which are infused with notions of space, place and mobility. These ideologies echo the familiar dualism that on one side equates women and femininity with the home, the private, with domestic spaces and restricted movement (which translates into interactions that are routine, quotidian, familiar), and on the other, equates men and masculinity with the not-home, the public, with urban spaces and expansive movement (which translates into interactions that bring excitement, challenges, new experiences, encounters with the unknown) (see, e.g., Saegert 1980; Cresswell and Uteng 2008). Mobility in the form of simply moving the body or of physical activity for the sheer joy of movement is deeply related to these gender ideologies (Young 1990).

Frances Willard's book is a clear example of work that explores how mobility, including athleticism (and mobility's twin, confinement), are active agents in the creation of gender and class. Her fundamental goal is to demonstrate how mobility is empowering, with the capacity to transform women's as well as men's identities and subjectivities. For her, mobility is completely bound up with questions such as, 'who am I?', 'what can I accomplish in life?', 'what do I see as possible?' Willard's work exemplifies the most commonly embraced view of how mobility shapes gender: Mobility is empowering, and because it is empowering, more mobility, especially for women, is a good thing.

For many geographers and planners, the empowering aspect of mobility is straightforward; it comes from seeing mobility as a means of access to opportunity, enabling people to get to the places, the destinations (schools, jobs, hospitals, stores, parks) where they want or need to go (e.g., Hanson and Hanson 1980; Kwan 1999). Jennifer Mandel's (2004) study of women traders in Benin provides clear evidence of the empowering benefits of mobility; she found a strong relationship between women's physical mobility (ability to travel to wholesalers in specific other places and to access

distant social networks) and livelihood: Women traders who were able to travel about had higher incomes. Interestingly, Mandel also learned that, for the women she studied, mobility was enabled by hiring someone to look after the household.

But for women in some settings, mobility is empowering quite simply because it is a way to leave the house and enter the public domain. Saraswati Raju (2005) evaluated a women's development project carried out in many villages in Northern India; the project was designed to increase women's empowerment (which she defines as 'undoing internalized oppression') through, *inter alia*, increasing women's civic participation. One of the most empowering changes that women reported was simply the ability to move outside the home, into public spaces, and attend a variety of activities on their own. Being able to enter the public domain and talk with strangers for the first time increased women's self-confidence and, however incrementally, challenged gender power structures.

In a similar vein, Juanita Sundberg (2004), who did a study of Mayan women's participation in a conservation program in Guatemala, quotes one of the participants as saying,

At home when you have finished the housework, you may want to go somewhere, but there is nowhere to go. If I go out in the street, people will say, 'that woman just wanders around.' ... But with this responsibility [participating in the women's conservation group] I have somewhere to go. (2004, 59)

This comment reminds us that mobility usually – but not always – entails 'having somewhere to go', a dimension of mobility that many take for granted. For these women in India and Guatemala, newly experienced mobility induced fundamental changes in their views of who they were – in their identities – and in so doing began to erode traditional gender ideologies and practices.

The converse of these examples is, of course, cases where enforced immobility or denial of mobility is used to keep women in a subordinate position and to sustain traditional gender relations. In Willard's case, becoming a woman at 16 (that is, a middle-class woman in the mid-nineteenth century US) meant being bundled up in hoops and corsets and denied personal mobility and physical activity. Contemporary examples include the prohibition on Saudi women driving or the practice of *chopadi* in Nepal, which requires that women during menstruation or after childbirth be confined to a tiny hut away from the main dwelling. Rachel Silvey and Rebecca Elmhirst (2003) note that women in Indonesia are excluded from certain types of work (like street vending) because they are not supposed to be out and about after dark. Gerry Pratt and I found exactly the same prohibition on women's mobility and labor market participation in Worcester, Massachusetts in the late 1980s (Hanson and Pratt 1995). The point is – and I think it is a well-known point – that women are quite literally kept in their place by being denied access to certain locations at certain times, and these proscriptions on mobility are not confined to women in the developing world by any means.²

But, academics being who we are and feminists always insisting on complicating things, as well we should, this view of mobility as an undiluted, unbounded positive has been contested by an opposing view that sees mobility as not necessarily empowering and immobility as not necessarily disempowering. Melissa Gilbert (1998), for example, has argued that equating mobility with power, and immobility with lack of power, is too simplistic. She believes that 'no spatiality is inherently with or without power', and she showed in her study of African American women in Worcester, Massachusetts how spatial containment can actually be enabling because rootedness in place can lead to

well-developed social networks that provide support in numerous ways, including access to childcare and housing.

Key questions here are how mobility and access to opportunity are related and what mobility or lack of mobility means to people. In the US context, mobility is not necessarily empowering for people who must travel long distances to reach low-wage jobs (McLafferty and Preston 1991; Johnston-Anumonwo 1997) or for women who spend hours every day chauffeuring children to their various activities. In the Bangladeshi context, Naila Kabeer points out that equating Muslim women's lack of mobility with their disempowerment is not always valid because moving in public spaces may run counter to their religious sensibilities (cited in Raju 2005, 198).

It is clear that mobility *and* immobility can be empowering for some people in some circumstances, just as each can be seen as oppressive for others in other situations. But it is also clear that to answer that initial question, 'How does mobility shape gender?', we need detailed understandings of the gendered meanings and power relations embedded in various forms of mobility/immobility in various social and geographic contexts. While this strand of literature has begun to provide such understandings, much remains unknown.

In sum, the work that has focused on how mobility shapes gender has emphasized gender to the neglect of specifics about mobility (which remains 'mobility/immobility in general'); has been carried out largely through qualitative case studies; has paid attention to context, with emphasis on the household, family, community or culture rather than on the nature of the spatial or built environment; and has focused on lived experience and on what mobility (in general) means to people in those different contexts.³

How does gender shape mobility?

For bike rider Frances Willard, her gender had certainly shaped her (im)mobility, which had been ensured via gender and class norms that dictated mode of dress and the impropriety of independent mobility, much less running wild outside. While Willard's brush with this question of how gender shapes mobility was discursive, contemporary research on this question has been largely quantitative and carried out by geographers, civil engineers and urban planners in the urban areas of North America, Europe, Israel and Australia.⁴ Fortunately, studies from a broader array of places have begun to appear in the literature (see, e.g., Tanzarn 2008 on Kampala, Uganda; Srinivasan 2008 on Chennai, India and Chengdu, China; Hough, Cao, and Handy 2008 on rural North Dakota; and Elias, Newman, and Shiftan 2008 on two rural Arab communities in Israel).

In contrast to studies of how mobility shapes gender, most work that has asked how gender shapes mobility has taken a simplified view of gender but has paid a lot of attention to measuring 'mobility' in great detail.⁵ These studies of gender differences in travel-activity patterns have employed two types of data: (1) large, national secondary data sets, most of which include mobility information only on the journey to work and (2) travel-activity diaries, recording the out-of-home movements for all purposes, usually over one or two days, for a sample of people living in a metropolitan area. In the US context, examples of the former are the National Personal Travel Survey (which does have data on travel for all purposes, not only the work trip), the American Time Use Survey, and the American Housing Survey; all of these data sets are for national samples and are very sketchy on variables measuring the geographic context of sample individuals.⁶ In some cases travel diary data for a metropolitan area are accompanied by detailed spatial data bases describing the nature of the urban environment at a fine spatial scale; the Uppsala Household Travel Survey, collected in 1971 in the days before GIS, was the first to include

detailed data on the urban environment (e.g., Hanson and Hanson 1980; Hanson 1982), but the current availability of urban GIS has made including such data as a part of travel-activity studies increasingly feasible (Kwan 2004). Regardless of the data source, however, gender enters analyses in this strand of the literature usually, though not always, as a binary male/female variable in a data matrix, whereas mobility is carefully measured along multiple dimensions (for example, distance and time traveled, mode of travel, linkages among trips, reasons for travel).

The most robust finding from this group of studies as a whole is that the spatial range of women's daily mobility is smaller than men's, essentially the same meta-message emerging from work about how mobility shapes gender. Because of the widespread availability of data on travel to work, many such studies have examined gender differences in travel time and/or distance to work, showing that, in general compared to men, women work closer to home. Many studies, undertaken in a diversity of places, have found this gender difference in the length of the journey to work (e.g. Blumen and Kellerman 1990 for Haifa, Israel; Song Lee and McDonald 2003 for Seoul, Korea; Hanson and Johnston 1985 for Baltimore, Maryland; Hanson and Pratt 1991 for Worcester, Massachusetts; Cristaldi 2005 for nine urban areas in Italy; and Schwanen, Dijst, and Dieleman 2002 for the Netherlands). In travel for all purposes, not just work, women also use the car less (Polk 2004; Vance and Iovanna 2007) and drive fewer miles than men do (Rosenbloom 2006). As well as holding cross-nationally, these gender differences tend to remain when socio-demographic variables like education, income, and marital status are held constant. Two recent US-based studies using national data sets (Sandra Rosenbloom using the 2001 National Household Travel Survey and Randall Crane using the 2005 American Housing Survey) confirm that in the US context, this generalization of women's lower mobility levels remains despite altered gender relations within homes and workplaces (Rosenbloom 2006; Crane 2007).

Other diverse pieces of evidence support this conclusion: Women are more likely than men to work at home (Rosenbloom 2006); less likely to have a mobile workplace, as in the case of construction workers or visiting nurses, for example (Hanson and Pratt 1995); less likely to engage in work-related overnight travel (Presser and Hermsen 1996), and less likely to engage in 'extreme commuting', defined as a one-way commute of 90 minutes or more (Marion and Horner 2007). When women start businesses, they locate them closer to home than men do (Hanson 2003), and the spatial range of girls' activities is smaller than that for boys (Van Vliet 1983; O'Brien, Jones, and Sloan 2000).

Women's travel differs from men's in many ways other than spatial range of travel; for example, women are more likely to use public transportation (Rosenbloom 2006), engage in more non-work travel (Vance and Iovanna 2007), and make more multi-stop trips, run household errands and serve passengers (usually kids) (Murakami and Young 1997; Root 2000; McGuckin and Nakamoto 2005). In addition, this literature on gender differences in travel-activity patterns has documented many significant and interesting differences among women and among men, for example, by age, marital status, income, place of residence, mode used on the work trip and so on (e.g., Rosenbloom 2006; Shearmur 2006). But instead of delving into those differences, I want to focus here on two important deviations from the overall generalization about a gender difference in spatial range of travel. This counter-evidence emerges in some of the studies in which the focus has been on the gender dimensions of mobility among certain racial or ethnic groups or certain places (metro areas).

A few US studies have found no gender differences in work trip length for certain groups defined by race/ethnicity. Using 1980 data for the New York City

metropolitan area, Sarah McLafferty and Valerie Preston (1991) found no difference between women's and men's commute times for Hispanics and African Americans.⁷ Similarly, Doyle and Taylor's (2000) analysis of the 1995 National Personal Travel Survey showed that, for non-whites who commuted by the same mode, gender differences in commute time were negligible. In contrast, Randall Crane (2007, 304), analyzing data from the 2005 American Housing Survey, found that a significant gender gap in commute distance holds for people commuting by auto in each race/ethnicity category; the gap is absent for those who commute by transit, with the exception that Asian males traveled farther to work by transit than Asian females in 2005.

The second set of exceptions to the generalization that women's spatial range of travel is more restricted than men's comes from studies of particular metro areas in which researchers have found no differences between women and men in certain aspects of their travel. For example, using travel survey data for the San Francisco Bay Area from 2000, Gossen and Purvis (2005) found no gender difference, except for people in their 50s, for 'travel time for all purposes'. In their analysis of 2001 data from the Quebec metro area, Vandermissen, Theriault and Villeneuve (2006) showed that, controlling for mode of travel and socio-demographics, women and men had essentially the same work trip distances. In these studies – each of which refers to specific times, places and groups – the evidence contravenes the 'Big Generalization' about women's spatial containment, thereby reinforcing the importance of paying close attention to geographic and social/cultural context. Unfortunately, these quantitative studies of how gender shapes mobility reveal little about the nature of relevant contexts because the secondary data do not provide the needed insights.

Enough about patterns! What about causes? How *does* gender affect mobility? Posing this question starkly reveals that most studies in this research tradition have not delved very deeply into the gender processes (power relations, identity formation and transformation, and the meanings of various aspects of mobility) that shape varied mobility patterns – Robin Law (1999) has made this critique as well. At the outset of this essay I mentioned that, in conceptualizing gender and mobility, it is essential to see the individual as embedded in household, neighborhood, region and larger society; all of these contextual elements matter in understanding how and why gender influences mobility.

Quantitative studies of how gender shapes mobility have been able to address gender processes only obliquely from variables that are at best rudimentary proxies for these concepts. For example, measures of 'intra-household social relations' are variables like 'marital status' or 'number of children at home', which are poor surrogates for – and not very rich ways to understand – the power dynamics and intricate processes of negotiation and conflict that go into 'household decision making'. As another example, the fear of violence is a major influence on the travel patterns of many people, especially women, serving to curtail mobility as well as influencing time and route of travel (Wekerle 2005; Goddard, Handy, and Mokhtarian 2006; Loukaitou-Sideris and Fink 2009), but data on these gendered processes are not routinely collected in mobility studies.

Other key elements of household decision making, such as how a residential or work-place location is selected, or why some women might not venture beyond their ethnic neighborhood (e.g., because their male partners forbid them to do so), are not captured in most studies that focus on personal mobility. Nor has much systematic attention been paid to the daily travel patterns of international migrants, whose everyday post-migration travel is likely shaped in significant ways by their migration experiences. This body of work has also failed to consider what certain gendered mobility patterns mean to people in terms of how people view themselves or how they might be seen by others. For example, can one *be*

a middle-class banker in Sao Paulo, Brazil and ride a bicycle to work (Vasconcellos 1997)? Because of this difficulty in grappling with the complexities of gender, the existing literature on how gender shapes mobility has been short on process while providing valuable insights on mobility patterns for large, representative samples.

In sum, work that has focused on how gender shapes mobility has paid detailed attention to mobility but neglected gender; has been carried out mainly through quantitative studies, with large samples of individuals; has considered specific contexts only to a limited extent and, when it has considered context, has done so mainly in terms of the built environment or urban spatial structure to the neglect of social and cultural, and to some extent, non-urban contexts; and while indeed focusing on the role of mobility in everyday life, has not considered lived experience, the importance of identities or the meanings of various aspects of mobility.

As this brief synthesis of two substantial branches of the gender and mobility literature has indicated, the two strands are different yet deeply complementary. Understanding how *gender* in all its complexity and diversity affects mobility and how *mobility* in all its complexity and diversity affects gender – and how each does so differently in different contexts – will require in-depth, contextualized studies, whether quantitative or qualitative in orientation. Each approach, as surveyed in this overview, has contributed significantly to understandings of gender and mobility, yet each alone is wanting. Only by connecting the two now-divergent strands, and building on the strengths of each, will we feminist geographers be able to contribute significantly to the discussion about sustainable mobility.

Gender and sustainable mobility

I will use sustainability as one example of the kind of policy-relevant problem in which gender and mobility are absolutely central and in which any progress will require joining these strands together.⁸ Clearly, at a highly generalized level the two approaches to gender and mobility that I have set in opposition actually share a central theme and, to some extent, a central finding – namely that women's mobility is less than men's. Despite exceptions – important exceptions – this is the takeaway message that sticks.

I think this shared dominant generalization is one reason that feminists have tended to see spatial mobility mainly as empowering, rather than as oppressive. As Doreen Massey (1993, 62) has put it, 'mobility and control over mobility both reflect and reinforce power'. That is, we feminists have by and large interpreted women's lower mobility – wherever we find it – as a negative, as evidence of lack of equal access to opportunity and in some sense evidence of women's subjugation. (Rarely do we see feminists – even difference feminists – celebrating women's spatial confinement.)

But I believe we have come to this conclusion because in most cases we have lacked knowledge of (1) whether any observed aspect of mobility or confinement in a particular social, cultural or spatial context is the result of choice or constraint (which is often complicated and difficult to discern) and (2) what observed mobility patterns mean to people. These shortcomings become painfully acute when we consider questions of gender and mobility in the context of sustainability.

As indicated in the previous section of this essay, work on gender differences in daily mobility patterns supports the contention that in many ways (not all) and in many places (not all), women's travel looks more like sustainable mobility than does men's travel (Zauke and Spitzner 1997; Polk 2003; Plaut 2004; Johnsson-Latham 2007). Specifically, women travel shorter distances (Rosenbloom 2006), make less use of the car (Schwanen,

Dist, and Dieleman 2002; Rosenbloom 2006; Vance and Iovanna 2007; Srinivasan 2008; Tanzarn 2008) and more use of public transit (Polk 2003; Cristaldi 2005; Rosenbloom 2006; Vance and Iovanna 2007; Srinivasan 2008).

In many parts of the world, women conduct a far larger proportion of their travel on foot than do men; in Chengdu, China, for example, 59% of women's trips were by foot (cf. 39% of men's trips), and in Chennai, India, 83% of women's trips were by foot (cf. 63% of men's trips) (Srinivasan 2008; see also Elias, Newmark, and Shiftan 2008 for Israel; and Polk 2003 for Sweden). With regard to the bicycle, although women's share of total bike trips in the US is only 25% (that is, 75% of all bike trips are made by men), in Denmark, Germany and the Netherlands, women's share of bicycle trips is 45%, 49% and 55% respectively (Pucher and Buehler 2008, 504).

These characteristics of women's travel mean that women contribute fewer vehicle miles traveled (VMT) than do men (NB: the 'vehicles' in VMT are all motorized). Reducing VMT seems to be one policy goal on which considerable consensus exists in terms of what sustainable transport would look like. If recent trends in the US continue, VMT will double from 3 trillion to 6 trillion by 2050 (Sperling and Gordon 2009, 7). Even if or when zero-emission autos appear on the scene (i.e., no consumption of petroleum, no pollution), the VMT-induced problems of congestion, crashes and sprawl will remain, suggesting that reducing VMT will remain a sustainability goal.

Two related problems with this observed connection of gender and mobility to sustainability highlight, for me, the need for new approaches to understanding gender and mobility. First, this linkage of women's mobility characteristics to sustainability goals pertains to only two of the three dimensions of sustainability, namely those relating to environmental (e.g., reduced use of petroleum, lower carbon emissions) and economic sustainability (e.g., reduced use of petroleum, efficient use of resources by reducing or eliminating congestion, sprawl, crashes). The third dimension, namely the goal of achieving social justice and equity, remains un-addressed and un-redressed. That is, the overarching generalization (women's mobility *is* less than men's) remains, along with all the inequality of access it implies. This observation seems especially pertinent in view of the fact that women's travel patterns remain more complicated than those of men (Rosenbloom 2006), with women making more linked trips and more trips to serve passengers (McGuckin and Nakamoto 2005).

Second, a concern for equity in mobility and access leads straight to the observation that in order to assess equity, we need to know if – and when and where – women's lower (or equal or greater) mobility level reflects choice or constraint. When and where is it imposed or chosen? In other words, in true feminist geographic fashion, we need to move beyond the big picture observation that women's travel looks more sustainable than men's to ask questions such as: When and where do women understand their lack of mobility (if applicable) as constraining and disempowering or as empowering, sustainable, and perhaps enjoyable because, for example, it might involve more walking and less driving? How much agency is involved? Do women with relatively low levels of mobility nevertheless have sufficient access to opportunity? Answering any one of the many relevant questions like these can be tricky and must entail delving into questions of identity and meaning as well as examining mobility in contextualized detail. But because studies of mobility and gender to date have been bifurcated into the two non-intersecting literatures I have described, we do not have answers to these questions. In most cases we do not know what an observed mobility pattern means for someone's life. In other words, we do not really have the knowledge base to figure out how gender might actually feed into, and be affected by, sustainable mobility.

For example, suppose everyone were to agree that sustainable mobility will necessarily entail reducing vehicle miles traveled. Among the many and varied approaches to achieving this goal are to: increase vehicle occupancy, reduce number and/or length of trips, shift travel to transit or non-motorized modes, use information technology instead of traveling or change land use patterns to bring destinations closer together. How might each of these options affect understandings and practices of gender? How does social and geographic context affect these processes? And how might gender affect the viability of any of these options in various contexts? At present, we have no idea.

One point is clear: moving toward sustainable mobility by, for example, reducing VMT, will require people to change their mobility practices, and such changes are not likely to be forthcoming without public policies designed to encourage mode shifts, carpooling, fewer and/or shorter trips, denser land use, and so forth. While several policy options are under consideration (e.g., taxing travel on the basis of infrastructure used or kilometers traveled instead of taxing fuel; land use regulations), very little is currently known about the likely effectiveness of these options, individually or collectively. This lack of knowledge about potential policy impacts stems from our currently poor understanding of how people change their mobility practices in response to changing circumstances. Addressing this question of response to change will entail building knowledge that goes beyond asking how ‘people’ respond to ‘change’ to ask how different groups of people change certain aspects of their everyday activities differently in different contexts. Because many women have a different relationship to mobility than do most men, gender (as well as race/ethnicity, class, age, household composition, and so on) must be central to such efforts.⁹

Clearly, achieving an effective understanding of how gender and mobility interact in the context of sustainability goals requires knowledge about both (1) the specifics of meanings and identities, especially those related to gender, race/ethnicity and class (a major strength of the strand of work on how mobility shapes gender) *and* (2) the specifics of mobility patterns (a major strength of work on how gender shapes mobility). To move toward sustainability (or to be able to tackle other such issues) we need studies that combine attention to gender in all its resounding dynamism, diversity and complexity with attention to mobility, in all *its* resounding dynamism, diversity and complexity and do so while also paying close attention to social and geographic context. In other words, we need to truly synthesize the two major strands of work on gender and mobility.

Making context central

Moving toward sustainable mobility will require improved understanding of how fully fleshed-out gender and fully fleshed-out mobility connect together differently in different contexts. The centrality of context is especially apparent in advancing a sustainability agenda, as the kinds of changes that will be required to move toward sustainability will be different for different places and times, depending, as they will, on particular context-specific knowledge bases and practices. Before describing my views on how to move forward on this matter of achieving a deeper comprehension of the role of context, I want to clarify what I mean by the term, and especially what aspects of context are likely to matter most to gender and mobility.

Identifying the aspects of context that matter most to gender, mobility and sustainability should actually be the main *outcome* of the analysis I will propose later in this section, but some salient aspects of context are likely to be: (1) the individual’s embeddedness in household, family and community; (2) the built environment (BE),

including elements of transportation infrastructure, at varying spatial scales and how these elements relate to perceptions of personal safety and accessibility; (3) institutions, such as those governing the permitting process, property ownership or the design and construction of the BE and transportation systems; (4) access to the internet and other forms of information technology (such as the cell phone) that affect mobility; (5) cultural norms and expectations such as those governing gender-based labor market segmentation; childcare; travel over certain distances, at certain times, by certain modes or to certain places. Most studies of gender and mobility include some of these elements of social and geographic context. My central question in this section of the essay is how to increase understanding of the relationships among gender, mobility, and these and other relevant elements of social, cultural and geographic context.

The kind of knowledge needed to move toward sustainable mobility emerges from in-depth, context-sensitive, place-based, qualitative and quantitative studies. Over the past few decades feminist geographers and others have undertaken a large number of such studies, which, for lack of synthesis, remain interesting, largely individual or free-standing, case studies. Taken collectively, these studies provide a range of findings, some of which are quite disparate. How might we go about making sense of this diversity to see how context affects the relationship between gender and mobility? Teasing out the effects of context will entail synthesizing this body of work, sorting through many context-sensitive studies to discern any patterns and generalizations lurking therein about how gender and mobility are inflected by certain aspects of context.

I suspect that for many readers of this journal, the word 'generalization' sets off alarm bells and raises red, green and yellow flags. Geographers, especially feminist geographers, have long been suspicious of universals and overarching generalizations; knowledge does not mean much if it is not contextualized, if we do not know where it came from in terms of social and geographic context. Yet I believe most of us are a bit conflicted about this admonition to eschew generalization. As scholars, we definitely want to consider context, to be grounded, to speak from somewhere and to articulate the contextual bases of knowledge production, yet every study I know of that is set in a particular place and time seeks to make claims that reach beyond that time and that place, claims that are portable and have traction in other (not necessarily all other) contexts. I think that most of us (feminist) geographers seek to be able to make statements that are at least somewhat generalizable but at the same time are contextualized.¹⁰ Such statements will be useful to sustainability efforts that seek to transfer knowledge and practices from one time/place to another; what practices proven sustainable in one milieu might prove sustainable in others?

The key to making contextualized statements successfully portable is to make sure that the relevant elements of context are *absolutely central* to the effort to understand the relationship between gender and mobility and to synthesize across studies (places). The first essential is for scholars to design and carry out studies – whether qualitative or quantitative – that take context seriously by including as many as possible of the aspects of context that are relevant to the problem at hand (in this case, gender and mobility). The second essential is, in synthesizing case studies, to make context central to the analysis.

To convey some glimpse of what I have in mind here, I will provide one small example from my research in Worcester, Massachusetts. One element of Worcester's context that makes it somewhat unusual as a laboratory for studying any urban process is the high level of residential rootedness of the population, a large proportion of whom have lived there 'forever'. Because this rootedness affects almost everything that goes

on there, including of course mobility (through, for example, processes of residential location, job search, childcare, and so on), it often prompts the reaction, ‘Oh, why would you study Worcester? It is just too weird; how can you generalize anything you might learn from Worcester?’

So how *can* findings from Worcester be related to findings from other places? How might we be able to detect if a sustainable mobility practice adopted in Worcester might also be effective in another place? The answer lies in spelling out how a given process (like some dimension of mobility such as propensity to walk, bike or drive) relates to rootedness (or does not) in each place and how rootedness affects the gendered meanings associated with varying aspects of mobility (such as a short work trip, use of the bicycle instead of the car or living within walking distance of convenience stores).

Linking specific elements of context to specific aspects of spatial mobility and of gender is a way to improve our understanding of the role of context in shaping both. Synthesizing the diversity of findings in the literature by making context central to the analysis – creating if you will a contextualized meta-analysis – would also put us in a far better position to think about how gender and mobility studies might inform sustainable transportation policies. If all we have is a finding (e.g., in the US women ride bikes less than men) without knowing the variety of circumstances that this generalization masks or what it means to the people involved in each of these diverse circumstances or how it relates to people’s gender and class identities, it is hard to see how the finding might link up to any sustainable mobility effort aimed at converting auto trips to bike trips, for example.

Concluding thoughts and questions

It seems clear that if we are going to pursue sustainable mobility seriously, it does not make sense to posit the mobility patterns associated with masculinity as any kind of desirable benchmark with respect to personal mobility. At the same time, equity issues – that is equality of access to opportunity, including opportunities accessible in cyberspace as well as grounded space – still loom large in the realm of gender and mobility. And they remain almost entirely unknown.

What we as feminist geographers have to offer by way of illuminating this conundrum, I think, is to bring together the two main strands of thinking I described at the outset and to do so while teasing out the effects of diverse social, cultural and geographic contexts across a variety of places. In addition to bringing together the two strands of literature, this effort will also entail synthesizing across quantitative and qualitative studies and across diverse, place-based studies (see, e.g., Ragin 1987).¹¹ It is not enough to say that context matters, just as it is not enough to say that gender matters. We need to demonstrate how and where these matter and to whom. Otherwise, I do not think we will be able to make much progress toward sustainability of any kind.

As an activist, Frances Willard appreciated the potential of (bicycle) mobility to transform gender meanings and practices. While sharing Willard’s interest in the transformative potential of the bicycle, mobility and gender, I want to look to a future in which sustainable mobility is a reality, and pose two forward-looking questions for feminist analysis: I wonder to what extent (sustainable) mobility can be an agent of change for gender and to what extent gender can be an agent of change in creating more sustainable mobility. I hope that the analytical approaches I have raised here will place gender and mobility at the center of thinking about how to move to a (more) sustainable future.

Acknowledgements

This article grew out of the Jan Monk Lecture, presented at the University of Arizona and then the Association of American Geographers in spring 2009; some of the ideas in this article were also presented in the Martin Wachs Lecture at the University of California, Berkeley in October 2008 and in a workshop on gender and mobility at the University of Malmo, Sweden in May 2009. I appreciate the comments and discussion that followed these presentations. Thanks to Susan Blickstein, fellow cyclist, who celebrated completing her PhD by giving me a copy of Frances Willard's book. Thanks also to Megan Blake, Sophie Bowlby, Susan Blickstein, Melissa Gilbert, Mei-Po Kwan, Jan Monk, Marianna Pavlovskaya, Lydia Savage and three anonymous reviewers for helpful comments on the penultimate draft.

Notes

1. The WCTU was formed in 1873 in Illinois to fight against the destructive influence of alcohol on families and society and to push for Prohibition.
2. As another example, Elder (2003) describes the confinement of women who were living illegally in hostels in South African mining areas in the early 1990s.
3. I do not mean to imply that every study that has shed light on how mobility shapes gender has all of these characteristics; rather, at the risk of over-generalizing, I wish to highlight what I see as the hallmarks of this line of work.
4. This pattern mainly reflects the costs and availability of appropriate data.
5. It is interesting that in each strand of work, it is the dependent variable that is the main focus of attention; the independent variable is less well specified. Not every study that has examined gendered mobility in detail, however, has failed to theorize gender.
6. For example, geographic context may be specified simply as location in one of the nine Census regions or by location in an urban area of a particular population size grouping.
7. McLafferty and Preston used the Public Use Microdata Sample from the US Bureau of the Census.
8. Examples of other such problems include (1) the relationship of physical activity to health/obesity and (2) the nature of inequality.
9. Using a national sample from Sweden, Polk (2003) shows that women are more critical of automobile use and more likely to tie auto use to environmental damage than are men, but the links between such attitudes and travel behavior are not clear.
10. This tension between the general and the specific is not unique to feminist geography. A strong move is now afoot throughout the human and ecological sciences toward place-based, context-sensitive science, especially in the emergent area of sustainability science (Kates and Clark 1999); this approach recognizes that the outcomes of multiple and often complex general processes (such as those leading to urban sprawl) are inflected by the particular conjunction of history, politics and landscape in place. As a result, no single approach to, say, sustainable mobility will provide a universally effective solution.
11. As Ragin (1987) points out, doing so will entail paying attention to variables as well as cases and taking history seriously, *inter alia*.

Notes on contributor

Questions of mobility and equitable access to opportunity have been central to Susan Hanson's interests since she was a graduate student at Northwestern University in the late 1960s. She began research on mobility, gender, and everyday life in the late-1970s, and this trio of issues has intrigued her ever since. Now retired from teaching formal courses, she is a Research Professor of Geography at Clark University and lives in Ripton, Vermont.

References

- Blumen, O., and A. Kellerman. 1990. Gender differences in commuting distance, residence, and employment location: Metropolitan Haifa, 1972–1983. *The Professional Geographer* 42: 54–71.

- Bruntland Commission (World Commission on Environment and Development). 1987. *Our common future*. New York: Oxford University Press.
- Crane, R. 2007. Is there a quiet revolution in women's travel? Revisiting the gender gap in commuting. *Journal of the American Planning Association* 73, no. 3: 298–316.
- Cresswell, T., and T.P. Uteng. 2008. Gendered mobilities: Toward an holistic understanding. In *Gendered mobilities*, ed. T. Cresswell and T.P. Uteng, 1–12. Burlington, VT: Ashgate Publishing Company.
- Cristaldi, F. 2005. Commuting and gender in Italy: A methodological issue. *The Professional Geographer* 57, no. 2: 268–84.
- Deakin, E. 2002. Sustainable transportation: U.S. dilemmas and European experiences. *Transportation Research Record* 1792: 1–11.
- Doyle, D., and B. Taylor. 2000. Variation in metropolitan travel behavior by sex and ethnicity. In *Travel patterns of people of color: Final report*, ed. C. prepared by Batelle, Ohio, 181–244. Washington, DC: US Department of Transportation, Federal Highway Administration.
- Elder, G. 2003. *Hostels, Sexuality, and the Apartheid Legacy*. Athens, Ohio: Ohio University Press.
- Elias, W., G. Newmark, and Y. Shiftan. 2008. Gender and travel behavior in two Arab communities in Israel. *Transportation Research Record*, no. 2067: 75–83.
- Gilbert, M., M. Masuci, C. Homko, and A. Bove. 2008. Theorizing the digital divide: Information and communication technology use frameworks among poor women using a telemedicine system. *Geoforum* 39: 912–25.
- Gilbert, M.R. 1998. 'Race,' Space, and power: The survival strategies of working poor women. *Annals of the Association of American Geographers* 88, no. 4: 595–621.
- Goddard, T., S. Handy, and P. Mokhtarian. 2006. Voyage of the SS minivan: Women's travel behavior in traditional and suburban neighborhoods. *Transport Research Record*, no. 1956: 141–8.
- Gossen, R., and C. Purvis. 2005. Activities, time, and travel: Changes in women's travel time expenditures, 1990–2000. In *Research on women's issues in transportation, Vol. 2: Technical papers, Transportation Research Board Conference Proceedings* 35, 21–9. Washington, DC: National Research Council.
- Hanson, S. 1982. The determinants of daily travel-activity patterns: Relative location and socio-demographic factors. *Urban Geography* 3: 179–202.
- . 2003. Geographical and feminist perspectives on entrepreneurship. *Geographische Zeitschrift* 91: 1–23.
- Hanson, S., and P. Hanson. 1980. Gender and urban activity patterns in Uppsala, Sweden. *Geographical Review* 70: 291–9.
- Hanson, S., and I. Johnston. 1985. Gender differences in worktrip length: Explanations and implications. *Urban Geography* 6: 193–219.
- Hanson, S., and G. Pratt. 1991. Job search and the occupational segregation of women. *Annals of the Association of American Geographers* 81: 229–53.
- . 1995. *Gender, work, and space*. London: Routledge.
- Hapke, H., and D. Ayyankeri. 2004. Gender, the work-life course, and livelihood strategies in a South Indian fish market. *Gender, Place, and Culture* 11, no. 2: 229–56.
- Haraway, D. 1991. Situated knowledge, gender for a Marxist dictionary. In *Simians, cyborgs and women: The reinvention of nature*. Chapter 7. New York: Routledge.
- Hough, J., X. Cao, and S. Handy. 2008. Exploring travel behavior of elderly women in rural and small urban North Dakota. *Transportation Research Record*, no. 2082: 125–131.
- Johnsson-Latham, G. 2007. A study on gender equality as a prerequisite for sustainable development: What we know about the extent to which women globally live in a more sustainable way than men, leave a smaller ecological footprint, and cause less climate change. Report to the Environment Advisory Council, Ministry of the Environment, Sweden.
- Johnston-Anumonwo, I. 1997. Race, gender, and constrained work trips in Buffalo, NY, 1990. *The Professional Geographer* 49, no. 3: 306–17.
- Kates, R.W., and W.C. Clark. 1999. *Our common journey*. Washington, DC: National Academy Press.
- Kern, L. 2005. In place and at home in the city: Connecting privilege, safety, and belonging for women in Toronto. *Gender, Place, and Culture* 12, no. 3: 357–77.
- Koskela, H. 1999. 'Gendered exclusions': Women's fear of violence and changing relations to space. *Geografiska Annaler* 81B: 111–24.

- Kwan, M.-P. 1999. Gender and individual access to urban opportunities: A study using space–time measures. *The Professional Geographer* 51, no. 2: 210–27.
- . 2004. GIS methods in time-geographic research: Geocomputation and geovisualization of human activity patterns. *Geografiska Annaler* 84B, no. 4: 267–80.
- Law, R. 1999. Beyond ‘women and transport’: towards new geographies of gender and daily mobility. *Progress in Human Geography* 23, no. 4: 567–88.
- Loukaitou-Sideris, A., and C. Fink. 2009. Addressing women’s fear of victimization in transportation environments: A survey of US transit agencies. *Urban Affairs Review* 44, no. 4: 554–87.
- Lucas, K., G. Marsden, M. Brooks, and M. Kimble. 2007. Assessment of capabilities for examining long-term social sustainability of transport and land use strategies. *Transportation Research Record*, no. 2013: 30–7.
- Mandel, J. 2004. Mobility matters: Women’s livelihood strategies in Porto Novo, Benin. *Gender, Place, and Culture* 11, no. 2: 257–87.
- Marion, B., and M. Horner. 2007. Comparison of socioeconomic and demographic profiles of extreme commuters in several U.S. metropolitan statistical areas. *Transportation Research Record*, no. 2013: 38–45.
- Massey, D. 1993. Power-geometry and a progressive sense of place. In *Mapping the futures: local cultures, global change*, ed. J. Bird, B. Curtis, T. Putnam, G. Robertson, and L. Tickner, 60–9. New York: Routledge.
- McDowell, L. 2004. Masculinity, identity, and labour market change. *Geografiska Annaler* 86: 45–56.
- McGuckin, N., and Y. Nakamoto. 2005. Differences in trip chaining by men and women. In *Research in women’s issues in transportation, Volume 2: Technical papers*, 49–56. Washington, DC: Transportation Research Board.
- McLafferty, S., and V. Preston. 1991. Gender, race, and commuting among service sector workers. *The Professional Geographer* 43: 1–14.
- Murakami, E., and J. Young. 1997. Daily travel by persons with low income. Paper presented at NPTS Nationwide Personal Transportation Symposium, October 29–31, Bethesda Maryland.
- Nightingale, A. 2006. The nature of gender: Work, gender, and environment. *Environment and Planning D: Society and Space* 24: 165–85.
- O’Brien, M., D. Jones, and D. Sloan. 2000. Children’s independent spatial mobility in the urban public realm. *Childhood* 7, no. 3: 257–77.
- Plaut, P. 2004. Non-commuters: The people who walk to work or work at home. *Transportation* 31: 229–55.
- Polk, M. 2003. Are women potentially more accommodating than men to a sustainable transport system? *Transportation Research Part D* 8: 75–95.
- . 2004. The influence of gender on daily car use and on willingness to reduce car use in Sweden. *Journal of Transport Geography* 12: 185–95.
- Pratt, G., and S. Hanson. 1994. Geography and the construction of difference. *Gender, Place and Culture* 1, no. 1: 5–29.
- Presser, H., and J. Hermsen. 1996. Gender differences in the determinants of work-related overnight travel among employed Americans. *Work and Occupations* 23, no. 1: 87–115.
- Pucher, J., and R. Buehler. 2008. Making cycling irresistible: Lessons from the Netherlands, Denmark, and Germany. *Transport Reviews* 28, no. 4: 495–528.
- Ragin, C. 1987. *The comparative method: Moving beyond qualitative and quantitative strategies*. Berkeley: University of California Press.
- Raju, S. 2005. Gender and empowerment: Creating ‘thus far and no further’ supportive structures, A case from India. In *A companion to feminist geography*, ed. L. Nelson and J. Seager, 194–207. Malden, MA: Blackwell.
- Root, A. 2000. Women, travel, and the idea of ‘sustainable transport’. *Transport Reviews* 20, no. 3: 369–83.
- Rosenbloom, S. 2006. Understanding women’s and men’s travel patterns: The research challenge. In *Research on women’s issues in transportation: Volume 1 Conference overview and plenary papers, Conference proceedings* 35, 7–28. Washington, DC: National Research Council.
- Saegert, S. 1980. Masculine cities and feminine suburbs: Polarized ideas, contradictory realities. *Signs* 5 (Supplement, Women and the American city): S96–S111.

- Schwanen, T., M. Dijst, and F. Dieleman. 2002. A microlevel analysis of residential context and travel time. *Environment and Planning A* 34: 1487–507.
- Schwanen, T., and M.-P. Kwan. 2008. The Internet, mobile phone, and space-time constraints. *Geoforum* 39: 1362–77.
- Scott, J. 1986. Gender: A useful category of historical analysis. *American Historical Review* 91: 1053–75.
- Serageldin, I. 1995. *Sustainability and the wealth of nations: First steps in an ongoing journey*. Washington, DC: World Bank.
- Shearmur, R. 2006. Travel from home: An economic geography of commuting distances in Montreal. *Urban Geography* 27, no. 4: 330–59.
- Silvey, R., and R. Elmhirst. 2003. Engendering social capital: Women workers and rural-urban networks in Indonesia's crisis. *World Development* 31, no. 5: 865–79.
- Song Lee, B., and J. McDonald. 2003. Determinants of commuting time and distance for Seoul residents: The impact of family status on the commuting of women. *Urban Studies* 40, no. 7: 1283–302.
- Sperling, D., and D. Gordon. 2009. *Two billion cars: Driving toward sustainability*. Oxford: Oxford University Press.
- Srinivasan, S. 2008. A spatial exploration of the accessibility of low-income women: Chengdu, China and Chennai, India. In *Gendered mobilities*, ed. T. Cresswell and T.P. Uteng, 143–58. Burlington, VT: Ashgate Publishing Co.
- Sundberg, J. 2004. Identities in the making: Conservation, gender, and race in the Maya Biosphere Reserve, Guatemala. *Gender, Place, and Culture* 11, no. 1: 43–66.
- Tanzarn, N. 2008. Gendered mobilities in developing countries: The case of (urban) Uganda. In *Gendered mobilities*, ed. T. Cresswell and T.P. Uteng, 159–71. Burlington, VT: Ashgate Publishing Company.
- Valentine, G. 1989. The geography of women's fear. *Area* 21, no. 4: 385–90.
- Van Vliet, W. 1983. Children's travel behaviour. *Ekistics* 50: 61–5.
- Vance, C., and R. Iovanna. 2007. Gender and the automobile: Analysis of nonwork service trips. *Transportation Research Record*, no. 2013: 54–61.
- Vandermissen, M., M. Theriault, and P. Villeneuve. 2006. Work trip: Are there still gender differences? The case of the Quebec metropolitan area. Paper presented at the Transportation Research Board Annual Meeting, January 22–26, Washington, DC.
- Vasconcellos, E. 1997. The demand for cars in developing countries. *Transportation Research Part A* 31: 245–58.
- Wekerle, G. 2005. Gender planning in public transit. In *Gender and planning: A reader*, ed. S. Fainstein and L. Servonlods, 275–95. New Brunswick, NJ: Rutgers University Press.
- Whitelegg, J. 1993. *Transport for a sustainable future: The case for Europe*. London: Bellhaven Press.
- Willard, F. 1895. *A wheel within a wheel: How I learned to ride the bicycle, with some reflections by the way*. Bedford, MA: Applewood Books (originally published by Fleming H. Revell Co).
- Wright, M. 2005. Paradoxes, protests, and the *Mujeres de Negro* of Northern Mexico. *Gender, Place, and Culture* 12, no. 3: 277–92.
- Young, I.M. 1990. *Throwing like a girl and other essays in feminist philosophy and social theory*. Bloomington, IN: Indiana University Press.
- Zauke, G., and M. Spitzner. 1997. Freedom of movement for women: Feminist approaches to traffic reduction and a more ecological transport science. *World Transport Policy and Practice* 3, no. 2: 17–23.

ABSTRACT TRANSLATION

Género y movilidad: nuevos enfoques para pensar la sustentabilidad

Hace mucho tiempo que los feministas saben que el género y la movilidad son inseparables, influenciándose mutuamente de profundas y a menudo sutiles maneras. Abordar problemas complejos de la sociedad tales como la sustentabilidad, requerirá mejor comprensión de las relaciones entre género y movilidad. En este ensayo propongo nuevos enfoques para el estudio de la movilidad y el género que proveerán la base de

conocimiento necesaria para guiar las políticas sobre movilidad sustentable. Al comienzo del ensayo, repaso la gran cantidad de literatura sobre género y movilidad, separando lo que veo como dos corrientes de pensamiento diferentes que se han mantenido seriamente desconectadas entre sí. Una de estas corrientes ha hecho aportes a las formas de entender cómo la movilidad afecta al género, mientras la otra ha examinado cómo el género afecta a la movilidad. El trabajo sobre cómo la movilidad afecta al género ha puesto el énfasis en el género, descuidando la movilidad, mientras que la investigación sobre cómo el género afecta la movilidad ha abordado la movilidad en gran detalle, prestándole mucha menos atención al género. Desde este repaso de la literatura, identifiqué los vacíos que deben ser llenados en el conocimiento si la investigación feminista sobre género y movilidad pretende marcar el camino hacia una movilidad sustentable. Propongo que hay necesidad de cambiar la agenda de investigación, de manera que en el futuro ésta sintetice estas dos corrientes de pensamiento a lo largo de tres líneas: (1) a través de formas de pensar sobre género y movilidad, (2) a través de enfoques cualitativos y cuantitativos, y (3) a través de lugares. Al final del trabajo sugiero cómo lograr esta síntesis haciendo centrales en nuestro análisis los contextos geográficos, sociales y culturales.

Palabras clave: género; movilidad; movilidad sustentable; Frances Willard; contexto

性别与移动: 永续性研究的新途径

女性主义者一向认为性别与移动之间是不可分离的, 两者之间以全面且微妙的方式相互影响着。为因应永续性这类复杂的社会问题, 需要更进一步对于性别与移动之间的关系进行理解。在本文中, 我提出了新的研究途径以了解移动与性别, 为永续性移动的政策提供知识基础。首先, 我对过去的性别与移动文献进行大量检阅之后, 梳理出两股相异的思路, 却发现两者之间具有严重的不连续性。其一是对于移动如何形塑性别提供了解释, 另一股思路则检视了性别如何形塑移动。在有关于移动性如何形塑性别的研究中, 强调性别却忽略了移动性; 反之, 关于性别形塑移动性的文献中, 虽细致地处理了移动性, 却鲜少关注性别的部份。从广泛的文献回顾中, 我认为如果关于性别及移动的女性主义研究, 要有助于为永续的移动性创造出各种可能, 那么知识上的断裂必须被缝合。为了研究议程转移的需要, 未来的研究将沿着三条轴线来整合这两股思路: (1) 以交互的方式来思考性别与移动性, (2) 交错使用质化与量化的研究取径, 以及(3) 对不同的地方进行研究。在本文的最后一部份, 我提出如何将地理的, 社会的与文化的脉络汇集至我们的分析当中以达到整合的目的。

关键词: 性别; 移动性; 永续的移动性; 法兰西丝韦纳德; 脉络