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Anticipating transport needs based on a comparative analysis of men's and women's mobility

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Why is the study of men's and women's mobility essential for anticipating public transport needs? Catherine Morency explains.

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Today I'm going to talk about the comparative mobility of men and women. Mobility is the study of daily travel behaviours. Much research has been done to try to understand the difference between men and women in this respect, as well as the effects of demography and the structure of households on behaviour, and that's what we are going to look at together. We're going to examine these daily behaviours as measured by mobility studies conducted in France, Quebec and many other places. I'm going to use Montreal as a case in point because that's the region I study, and where most of my research is based.

Gendered immobility

In mobility analyses, we have to be sure that both age and sex have been taken into account. We speak of gendered demographic analyses: that's the concept we use, and it should be at the heart of all studies on transport. Now, getting to the heart of the matter as regards changing certain behaviours, one of the basic indicators is the percentage of people who don't move. Obviously that is extremely important when looking at the use of transport infrastructures. If we compare men and women, we can see that the changes are quite similar according to age group: the percentages of mobile people are much lower when they are young, but those figures evolve with time. When you enter the workforce, your mobility is obviously greater, so we find lower percentages of people who make no journeys at all for days at a time, typically a fortnight and with age we see growth of up to as many as 80% of people who don't travel at all on average over two-week periods. This figure is slightly higher among women than men. Statistical tools allow us to see if these differences between men and women are actually significant. We can note that in the – 0-24 age group, there is no significant difference between men and women: they show the same percentage of non-mobility. However, with age, women move much less, and so we see much higher rates of non-mobility. Moving on to a second indicator, a classic mobility-rate indicator for transport the number of journeys per person per day, we see a significant decrease in this rate with age that is much more marked in women than men.

Mobility rates that change according to age and gender

However, what we are seeing is that, with time and improved health, there has been an increase in average mobility rates in the population as a whole over the past years. The elderly move less, but nevertheless move more than their own parents did. This really has an impact on the amount of travel in different regions.

Gender: a key factor in the travel chain

The types of activities have changed, but there is also a big difference here between men and women. Men have a higher proportion of work-related travel, whereas women travel more for shopping for the family and driving family members, especially their children. Managing the family activities schedule is thus one of the reasons for which trips are made. If we look at another concept in the travel chain, the number of journeys in a chain that has the home as a starting point, or all of the journeys we make from home until we return home. We see that there are real behavioural differences between men and women. In particular we note the fact that women make much more complex chains combining more trips before returning home: taking the children to childcare, doing the shopping before going to work, etc. This is much less common among men. In terms of the number of chains, those who have the most daily chains and who thus have more complex journey patterns are women aged between 30 and 45. They are the ones who manage the multiple activities of the family's schedule. So in terms of complexity, meaning the number of complex journey chains per day, or the number of trips made from the home, these figures are also much higher among women aged between 30 and 45 and in the job market. Here, there is a very substantial difference between men and women.

A difference reflected in modal choice

What we have observed in recent years is that there has been a decline: women have adopted more masculine behaviours and are using public transport less. This is due to several factors, the first being that women now have access to the job market, which results in an increased level of wealth, which in turn results in a rise in car ownership. Women drive cars, have more regular activities and make obligatory trips, like going to work, which means that the proportion of women using public transport has greatly diminished. In terms of mileage, figures show that men travel much greater distances. They travel more in a typical day. Women travel fewer kilometres to get to their different activities. This is mainly due to the kind of work they do, which are often less concentrated in city centres, as they are able to live nearer their place of work. However, while average trips are shorter in distance and duration, they are much more numerous.

Beyond gender, the influence of the structure of households

What happens if we try to observe the impact of household structures? We have also studied the behaviours of single people living on their own. What we see is that many differences disappear completely. Men and women behave almost identically when they live alone: the household effect disappears. Many family tasks are no longer taken into consideration. Actually, single men and women have to manage all of their tasks by themselves, and therefore the differences are much less pronounced. If we look at men and women in adult couples, the differences there, too, are much less noticeable; while women make slightly fewer trips than men, all things considered, the differences are much smaller than when we look at family-type households. Once children arrive in a household, we start seeing differences; we see mobility rates that increase for both men and women. Also, differences start to appear; women, again, make many more journeys to escort their children. Therefore, the structure of households explains some of the differences between men and women's behaviours, but not all of them.

Anticipating mobility patterns to organise public transport

Why is this analysis so interesting for transport providers? When we forecast a demand, when we want to focus on travel as it will occur in the future, so as to be able to organise transport systems, we must be able to understand the different movements at work in a society and the changes occurring in terms of activities. This demands that we understand trends among men and women, as well as those linked to changes in the structure of households, because all of these variables have different effects on the scope of mobility and the spatio-temporal structure of mobility, which we are going to have to manage in our future transport systems.

Mobility

For the Mobile Lives Forum, mobility is understood as the process of how individuals travel across distances in order to deploy through time and space the activities that make up their lifestyles. These travel practices are embedded in socio-technical systems, produced by transport and communication industries and techniques, and by normative discourses on these practices, with considerable social, environmental and spatial impacts.

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