It's off to work we go

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In a large city like Montreal, public transit provides us with options for getting to work or school and back home again. In deciding to choose traffic jams over metro delays, or to pay for parking rather than buy a monthly pass, you weigh the pros, cons and costs of your options, and your mental calculations are more complicated than they may appear at first glance.

In a paper recently published in *The Journal of Transportation and Land Use*, Zachary Patterson, an assistant professor in Concordia University's Department of Geography, Planning, and Environment, discovered that decisions about where to live and how to get from home to work happen simultaneously. What's more, your commuting choices depend not only on cost and travel time, but also on who you are and where you live.

With the help of colleagues at McGill University and Université Laval, Patterson crunched the numbers to determine which Montrealers are most likely to take public transit and which are more likely to drive. Previous studies have shown that people who live in neighbourhoods with a high population density and a mix of residential and commercial land use prefer public transit.

It's also clear that when the cost of parking increases, fewer people drive. But Patterson's study is the first to analyze how these factors interact with residential self-selection – the fact that individuals choose their neighbourhoods because they prefer one commuting option over another.

Patterson and his co-authors believe that "household location and transit mode choice are intimately linked," and the findings of their study support this hypothesis. A commuter living closer to downtown—in a part of the city with higher population density, a mix of residential and commercial land use, and good access to public transit—is 13 to 14% more likely to use public transit than someone living further away who is the same gender and age and has the same income.

Patterson's research proves that Montrealers under 35 are more likely to live where public transit is most accessible. What's more, the study also reveals that women are more than twice as likely to choose public transit than men.

The conclusions drawn from Patterson's study are readily applicable: when urban planners know more about who chooses public transit and why, they can make decisions that will encourage more people to leave their cars at home. The results suggest that increasing the cost of parking in downtown Montreal would appear to be one option, but decreasing public transit fares or travel times might work equally well. On a larger scale, says Patterson, "strategies that promote densification, increase land use mix, and improve transit accessibility would have a positive influence on downtown transit commuting."

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