

Press release, Monday December 7, 2015

City dwellers travel more but pollute less

Statistics show that urbanites travel thousands of miles during their leisure time. Is it an urgent need for greenery? Should cities be less densely populated? Not so fast: an EPFL thesis disproves the theory of the ‘barbecue effect.’

Why do city dwellers so urgently need to get away? Statistics show that they cover a large number of kilometers in their free time, often travelling much longer distances than suburban residents. What are they after? And what is the energy cost? Research carried out at EPFL shows that, rather than making up for a supposed lack of green space, city dwellers also seek the density of other cities or the company of friends and family. And despite the distances they cover, their carbon footprint is lower than that of suburban residents. And for good reason: they use public transports more and cars less.

These conclusions contradict a hypothesis commonly advanced to explain the large number of kilometers covered by city dwellers: to enjoy nature and some quiet time, things not available at home. Under this same hypothesis, people who live in suburban areas are thought to take advantage of their surroundings and therefore do not need to get away in order to grill some sausages or build a snowman. This is referred to as the ‘barbecue effect’ or ‘offsetting effect.’ This explanation runs counter to the concept of the compact city that, from the transport perspective, should translate into lower per-capita energy use than in more sprawling cities.

Sébastien Munafò, a researcher in the Urban Sociology Laboratory, wanted to challenge the barbecue effect and made it the subject of his thesis. He took two cities, Geneva and Zurich, and divided them into three sectors: downtown, inner suburbs and outer suburbs. He then analyzed the daily and occasional comings and goings of residents, using figures from the “Mobility and Transport Microcensus” that is carried out every five years by the Swiss Federal Statistical Office. When it comes to daily commuting, no surprises: urbanites don’t go far – nearly everything is close by – while suburban dwellers rack up the kilometers.

No link with urban density

But when it comes to occasional travel, which is mainly dedicated to leisure-time activities, the reverse is true. City dwellers catch up with or even surpass suburbanites. Their numbers double, reaching 27,000 km per year and per person in Zurich and 18,500 km in Geneva. For people living in the inner and outer suburbs, these occasional trips add up to around one third of their total. This varies between 18,500 and 22,500 km per year and per person in the Zurich suburbs and between 14,000 and 18,800 km in the Geneva suburbs.

A closer look at leisure-time travel disproves the theory of the barbecue effect. The researcher identifies two types of travel: compactophile trips, for which being in a city is an advantage, and naturophile trips, in pursuit of the advantages of lower density spaces. That is where the link between urban density and the quest for nature is broken. People living in Geneva tend to fall into the compactophile camp, even

though Geneva has a higher population density than Zurich. People living in Zurich proper are in fact very naturophile. And suburbanites, especially near Zurich, commonly seek out nature.

'Urbanity effect'

"The barbecue effect implies that one does not freely choose where one lives and that city dwellers find themselves prisoners of unpleasant surroundings," said Sébastien. "But in most cases, city living is very expensive. Those who live there are thus making a choice, one that offers advantages as well." This means people decide where to live as a function of their lifestyle: the suburbs for those who like to be close to nature, or the city for those who prefer its density and diversity. And having a little patch of green nearby doesn't keep urbanites from travelling extensively, because in the end that is also part of their lifestyle. "One could say that there is an urbanity effect: the more we live in cities, the more regularly we move around, the more comfortable we are travelling, and the better access we have to reliable means of transportation," concludes the researcher.

This thesis was sponsored by Forum Vie Mobile, a SNCF think tank.

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Thesis abstracts (in French): bit.ly/1PNaKOi