

1. Videos

Questioning the barbecue effect

By
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26 November 2014

The barbecue effect challenges the virtues so often attributed to dense cities in terms of mobility. Sébastien Munafò explains.

Today, I'm going to talk to you about the barbecue effect. The barbecue effect refers to a line of research that certain researchers have put forward that aims to challenge the virtues frequently attributed to dense cities with regard to mobility. What led these researchers to develop this line of research? What is the barbecue effect? What issues does it raise? These are the three questions that will structure my talk.

The origin of the hypothesis of the barbecue effect

1. Dense city, sustainable city

The barbecue effect is the result of three observations. First, people's mobility behaviours are closely linked to urban forms. A whole series of studies shows that dense residential area like city centres are associated with frequent use of public transport, walking and cycling, whereas areas of sprawl - less-dense peri-urban areas – are associated with frequent use of the car and larger daily commute distances. This link with urban form, and issues of urban density and mobility in particular, was quickly associated with the more or less sustainable nature of such mobility. We know for a fact that car travel generates many more problems than other modes of transport, and notably demands greater energy consumption. It appeared that the dense city was the urban form the most likely to generate more sustainable mobility. This link between urban form and the type of mobility generated was particularly emphasized by two Australian researchers, Newman and Kenworthy, who have linked urban density and energy consumption associated with travel, based on studies of more than 30 cities around the world. They showed that the greater the density, the lower the energy consumed for travel. However, the more spread out a city is, the greater the energy consumption. So, despite some criticism of their study, the Newman and Kenworthy curve, which highlights this link, has clearly made its mark – most notably among urban planners who, today, are advocating for more compact cities to encourage more sustainable mobility.

2. Overlooking leisure and occasional mobility

Second observation. A whole series of studies - notably that of Newman and Kenworthy - based on this link between urban form and mobility, only take into account routine mobility, i.e. mobility during the work week. These studies do not take into account leisure or occasional mobility, which is less

obligatory and also harder to grasp.

3. Leisure mobility is more energy-intensive

The third observation is that leisure mobility is quite significant today. One must admit that leisure activities play a key role in our ways of life. We have more and more free time. Today, in many countries, leisure mobility is people's number one reason for travel, both in terms of the number of trips and distance travelled. In Switzerland, for example, leisure mobility represents 37% of all trips, compared to only 23% for work and 22% for shopping. What is more, these leisure trips, which are numerous, are very often made using energy-intensive modes of transport, i.e. the car and, above all, the plane. From these three observations arose the following question. Does this connection between mobility and urban form that is often made the same when you take into account all the mobility practised by urban residents, including leisure mobility and long-distance mobility by plane?

What is the barbecue effect?

One of the answers to this question is the barbecue effect. The barbecue effect is a term that was coined in the early 2000s by two French researchers, Jean-Pierre Orfeuil and Daniel Soleyret. They were interested in the interactions between local, short-distance mobility and long-distance mobility - both during the week and at weekends - in France. In their research, they highlight the fact that residents of dense city centres do more leisure travel than those in the outlying peri-urban areas. According to them, the explanation lies in the fact that people who live in peri-urban areas have a residential environment which lends itself more to enjoying free time, either in gardens or nearby forests. On the other hand, city centre residents must compensate for this lack of green space and proximity to nature in their daily lives, and therefore must travel more frequently in order to do so. The two researchers call this the "barbecue" effect in reference to an activity that is easily done in peri-urban areas, but difficult to do in city centres. Furthermore, they also highlight the fact that - as many leisure trips are made by plane, over long distances - they challenge what was previously considered an obvious connection between urban form and mobility. According to them, were leisure mobility taken into account, the curve would look very different: the greater the urban density, the more energy-intensive the trips. These works have challenged urban density and its virtues. Is this density really as beneficial as all that if, ultimately, it drives urban dwellers to flee the city by plane in search of opportunities that aren't available, thereby consuming a great deal of energy? In my opinion, the barbecue effect raises three basic questions, all of which are interesting lines of research.

Three lines of research

1. The mechanisms of influence

First, there are the mechanisms of influence. Researchers have highlighted statistical connections, but ultimately, what drives city dwellers to travel more frequently and further? Regarding the barbecue effect, I hypothesise that city center dwellers indeed have lifestyles that involve long distance travel, but that these journeys are not all the same type. Some are undoubtedly linked to the desire for nature, fresh air, and the kind of pleasant environment they do not have access to on a daily basis. These are what we could call "compensatory" trips, because they compensate for a residential environment that people don't have on a daily basis elsewhere. But there are other types of leisure travel that are also very important. These are the trips to discover cities and urban opportunities elsewhere. For example, all the weekend trip urban dwellers take to other cities, thanks mainly to low-cost airlines. Thus, the barbecue effect identified by Orfeuil and Soleyret would only cover a portion of these trips. This is a hypothesis I'm making.

2. What is the energy impact of compensatory journeys?

Second question and second line of research. Is the barbecue effect really capable of challenging the virtues of the dense city? If we only look at one type of trips - compensatory trips - we can assume that, depending on certain characteristics of urban areas – notably their size and accessibility by public transport from hinterland – compensatory trips could be made over shorter distances, using other means of transport than the car. In which case these compensatory trips would have less of an impact on the environment and in terms of energy consumption. So, it is possible that, based on these criteria, city centres of similar densities do not create the same kind of compensatory trips. In some cases, these compensatory trips do not reverse Newman and Kenworthy's curve, and dense cities keep all their benefits in terms of mobility. This is also open question.

3. Which urban form to reduce the barbecue effect?

The final line of research, can we act on the city, build cities differently so as to generate fewer compensatory trips and reduce the barbecue effect? The question being raised is what would an urban living environment with all the benefits of a dense city as well as interesting leisure opportunities look like - so that residents of city centres no longer needed to consume great amounts of energy and travel a great deal in order to enjoy the kind of opportunities they don't have nearby? There is a fundamental question in this domain: Is it really possible to influence leisure mobility, particularly given that such trips are closely linked to social representations? For many, 'holidays' are just synonyms for getting away and mobility. This strong association is completely independent of residential context. So, ultimately, it would be pointless to challenge the dense city in order to influence these trips – since many of them cannot be reduced. Here again is an open question that would be worth exploring further. These are the three lines of research around the barbecue effect that I am endeavouring to pursue as part of my doctoral research, which focuses on the urban areas of Zurich and Geneva. This research combines both quantitative and qualitative methods. I hope to present you with the principal findings in the near future.

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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To cite this publication :

Sébastien Munafò (26 November 2014), « Questioning the barbecue effect », Préparer la transition mobilitaire. Consulté le 19 May 2024, URL: <https://forumviesmobiles.org/en/videos/2686/questioning-barbecue-effect>



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