Social world

The car in the city: from host to guest [1]

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You will probably agree that the main drawbacks of being a pedestrian or cyclist in city are security and comfort, both of which are affected by the presence of cars in the city. We should highlight that it is not just the mere presence of the car that creates insecurity and inconvenience for non-motorised city users, but also our current perception of cars.

For this reason, we can define the current role of the car in the city – in a simplified way – as the *host* of public space. In other words, the car is the main user of public space; the one that predominates and for which the streets were originally designed. And this role that has been given to the car is the reason behind the danger and lack of comfort created in the urban environment.

On the other hand, we can give the car the role of *guest*. Making the car a guest means that public spaces will be designed primarily for uses that define what is urban (a space for meeting and exchange, for recreation and walking, etc.) and for particularly urban means of transport (pedestrians and cyclists). Once these priorities are set, car traffic will have to adapt to the space built under these premises. As a guest it will always be welcome as long as it does not impose its needs and alter the natural balance.

Therefore, our aim is not to kick the car out of the urban environment and turn streets into areas exclusively reserved for pedestrians and cyclists, but rather to

1. The title is inspired by David Engwicht's book, *Mental Speed Bumps*.

properly integrate this emblematic, 20th-century invention. Actually, this objective can be a point of reference for almost all urban areas, with the only exceptions to such integration being the pedestrian streets of historic centres (essentially not for motorised travel) and beltways (designed for motorised travel). While these are both extreme cases and have little significance in the overall percentage compared to urban areas, the remaining urban area, much wider, needs to be designed to integrate both non-motorised and motorised traffic appropriately. In other words, those urban areas lying between the historic centre and beltways are precisely where the car needs to stop being a host and start being a guest.

Now, how can we achieve turning the car into a mere guest? The proposal in this article is simple (which does not mean it is easy to do): to simply look to the past and discover what people did in their day that allowed the car to go from guest to host, then challenge ourselves to take the opposite route.

Public spaces are a rare and limited resource; everything that is devoted to means of transport or uses often takes away from the rest of the means of transport or uses. This is why all the actions that cities have undertaken to ease car traffic and comfort have been detrimental to classic urban activities, like walking and cycling, children playing and neighbours getting together. If we look at the actions taken in the past, they can serve as a good guide for taking the opposite course, and return the car to its original status in the city as a guest.

Along these lines, **Table 1** on page 154 presents 13 actions that have historically favoured the circulation of private vehicles. Sure-

ly more could be added or these could be organised in a different manner, but the aim of the table is to give a quick peak at the process of this historical transformation. Specifically, the table is split to cover three types of actions with regard to the concept of the city model, street management and street design. Therefore, I have considered different levels of action that range from the most generic and conceptual to the most concrete, with direct physical translation.

Each of the aspects shown in **Table 1** will be developed below, with an emphasis on the benefits bestowed upon the car and the prejudice this has brought and still brings for non-motorised forms of transportation.

Changes in the concept of the urban model

Preponderance of the role of movement, especially in private vehicles

Urban centres provide most of the public space for car traffic and parking. In fact, in most of the streets in our towns and cities, the percentage of space devoted to the use of cars is between 60% and 80% of all the available space between façade and façade.

Of course, while this model has translated into more ability to travel and park cars in urban centres, it has also meant a loss of space for other urban uses and means of transport. So we have seen the space devoted to pedestrians and cyclists significantly reduced, and in some cases completely eliminated.

Increased predictability of the urban environment

Transit engineering has aimed for streets to be predictable and has wanted to assimilate inter-

urban streets. However, this design ignores the inherently unpredictable nature of the urban environment, where changes are not easy to foresee because they come about spontaneously. In other words, although you would agree that a child should not appear chasing a ball on an urban road, or a cyclist should not stop to talk or greet someone, both situations must occur in the city, and not exceptionally. On the contrary, pretending that the urban environment is predictable like a highway is to miss the richness that comes from real urban life.

The predictability that has been forced upon urban centres (for example, the expulsion of urban uses, like children playing, to confined space in parks and squares) has allowed cars to travel at increased speeds, since drivers feel that they are in a space that has been designed for them. Similarly, as cars speed up in predictable spaces (feeling comfortable in their space), pedestrians and cyclists feel threatened by the speeding cars. Moreover, non-motorised travellers do not fit in to this falsely transformed environment due to their very nature as urban travellers, meaning that they are highly unpredictable. Who can say what pedestrians will do, since they are (fortunately) not obligated to signal their movements with blinkers and reverse lights?

Establishing the language of signposting for communication between users

Closely related to this last point, signs are the main tool used by transit engineers to bring predictability to public spaces. With signs, people stop behaving according to social codes (managed through verbal and visual communication) and start following those established by signs: right turn only, no access beyond this point, yield, stop, slow down, etc.

While signs have positive affects on interurban highways, as they anticipate events, in the urban environment the anticipation of events simply erodes the need for verbal and visual communication between users, which can only be done at reduced distances and speeds. Essentially, drivers that can predict what will come next can somewhat disconnect themselves from the environments they pass through, even allowing them to maintain high speeds along stretches where that would not be possible without signs.

So, cars have imposed on the urban environment a system that benefits increased predictability and avoids a lot of braking, while at the same time eroding social codes and verbal and visual communication meant for non-motorised speeds.

Changes in street management

The establishment of predetermined priorities at intersections

Closely tied to the last point, one of the social codes that has been eliminated by signs is whoever arrives at an intersection first, goes first. The setting of priorities (through the use of both horizontal and vertical traffic signals) allows those cars that have priority at intersections to travel at speeds much faster than they would if the priorities had not already been decided. It may even be true that they pay more attention to signs (for example, the amber light of the traffic signal) than what is happening in their surroundings and to being attentive to reducing the risk of dangerous situation that may occur.

Intersections are the most dangerous points on the street network, and the truth is that inhibiting drivers from braking because of established priorities does not help improve safety at intersections, but actually hinders it. As

we know, this danger affects the weaker modes of transport, like pedestrians and cyclists.

Controlling intersections with traffic lights

Traffic lights were introduced into cities at the beginning of the 20th century and were exclusively designed to regulate intersections where high-speed vehicles circulated. At reduced speeds, it is obvious that intersections occur spontaneously and do not need to be regulated by coloured lights.

Therefore, at the same time that traffic lights sustain and allow for high speeds within the urban centre (30-50 km/h), they impose rules on pedestrians and cyclists that are not appropriate or necessary by nature. Not only are they improper; they actual lengthen travel times by foot and bicycle due to the time lost waiting for green traffic lights.

Weak road hierarchy

The absence of a clear hierarchy on the urban street network allows cars to circulate on all the streets in the city. This situation is contrary to everything that promotes moderation in traffic and theories of "environmental cells" or "super-islands", which plan for a reduced number of streets used primarily by motorised traffic and gives priority to other uses and forms of transportation on the majority of streets.

While a weak road hierarchy opens the door to numerous routes and short-cuts for drivers, it also eliminates the possibility of creating roads and areas characterised by safety and comfort for non-motorised travellers.

The creation of one-way streets

I am sure you would agree that pedestrians and cyclists, as human transport users, always try to take the shortest route. For this reason, streets should not have a

set direction of traffic, given that one-way streets lengthen trips.

Therefore, if one-way streets promote and ease cars travelling at high speeds, then are widened to make more parking space at the same time, they become a true obstacle for cyclists.

The introduction of zebra crossings to reduce interaction between cars and pedestrians

In the same way, pedestrians are always looking for the shortest route to their destination, yet with the need to use zebra crossings they often walk even farther. This situation especially affects people with reduced mobility, who need to cross the street at specific points on the pavement. So we can see that while zebra crossings improve the circulation of motorised traffic (as they greatly reduce the number of points where cars cross with pedestrians), they also make those travelling on foot go longer distances.

The introduction of lights for cars to travel at night

While not a true street management action, obligating cars to travel with headlights at night complements street lighting. Street lighting is sufficient to move around at the slow speeds of non-motorised travel without risk of accident, but it is insufficient for high-speed circulation (50 km/h). Thus, vehicles are obligated to have a complementary lighting system for clear visibility at long distances in urban environments.

Though this complementary lighting allows cars to circulate at night, it only increases insecurity for non-motorised travellers, especially cyclists that also use the streets, but without high-powered headlights like the other vehicles. We could say that having lights on cars makes bikes "invisible", since motorists think they do not have to slow down while driving at night.

Changes in street design

Expansion of the turning radius at intersections

The generous turning radius was designed to allow motorised vehicles to take corners at higher speeds without having to shift down to first or second gear. This option, while increasing danger at intersections, either entails expanding the section of the street where pedestrians cross or lengthening and restructuring the routes used by residents and moving zebra crossings away from the intersections.

Clear separation between street and sidewalk

Perception studies that support many traffic calming theories and experiences have made it quite clear that the availability of a space of their own and a sense of safety causes drivers to step on the gas pedal, while the opposite situation acts as an inhibitor. For this reason, pedestrian walkways – which aim to blur this differentiation – tend to be safer than conventional streets.

This clear line of separation does not only favour the flow and high-speeds of cars (and increase the level of danger in public spaces), it also confines residents to the edges on the sides, called sidewalks. The rest of the space between façade and façade is prohibited to residents (and for other urban uses) and is clearly designed for cars.

Increased width and straightness of lanes for motorised vehicles

It is well know that more width and straightness of lanes encourages increased driving speeds, while narrowing lanes and breaking up the route slows vehicles down. So in the name of security in public spaces, the traditional street design needs to be questioned in this regard.

Managing intersections with roundabouts

While roundabouts ease the flow of motorised vehicles, they are obviously black holes of comfort and safety for pedestrians and cyclists. This is not just because the distance to cross them is greater (especially for pedestrians and cyclists that not using the street), but also because of the insecurity created by high-speed vehicles and because drivers do not expect to see a pedestrian or cyclist coming out of a roundabout.

In brief, this article has not revealed anything new that has not already been demonstrated by the work experience of Woonerf, Shared Spaces[2] or Naked Streets. In any case, the aim of the article is to give an overview of what needs to be done to redefine the role of the car in urban centres, from the detailed scale of urban design to the conceptual level of city models.

In any regard, I do not want to advocate the complete elimination of the aspects mentioned here. On the contrary, the act of explicitly recognising the changes that have taken place helps us to decide which streets are to keep these features, and especially to design them in favour of particular motorised vehicles: those of overland public transport.

In conclusion, the change from a city where the car is the host to one where it is a guest needs to be taken seriously to enrich the complex urban environment and improve the travel conditions of pedestrians and cyclists. But above all, we need to remember that redefining the role of cars as hosts of the city is a move towards an era in which the car brings more advantages to society than disadvantages.

Visit <**http://www.shared-space.org/**>.