

COPING WITH CONGESTION: SHARED SPACES

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Abstract

The paper aims to present the shared space concept and different methods of application in European cities. There are also presented practical lessons learned from shared space experience to be applied in Romanian cities and also next steps for learning and advancing shared space.

Keywords: shared space, safety, energy, environment, community.

1. INTRODUCTION

Living in cities and traffic congestion go usually hand in hand. Everybody is complaining about being stuck in traffic but things seem to remain the same. In particular, traffic engineers, transportation planners, and public officials responsible for transportation systems are frequently criticized for failing to make a dent in congestion. In response to these issues, many different methods have been developed and implemented, resulting in a variety of benefits or potential solutions. These include traffic calming methods such as roundabouts, speed bumps, chicanes and raised crosswalks, as well as several others. One of these methods in particular is shared space, which has begun to be an inspiration for different cities at international level.

2. DEFINITION

Shared space is a street or place designed to improve pedestrian movement and comfort by reducing the dominance of motor vehicles and enabling all users to share the space rather than follow the clearly defined rules implied by more conventional designs. Shared space is a design approach that seeks to

change the way streets operate by reducing the dominance of motor vehicles, primarily through lower speeds and encouraging drivers to behave more accommodatingly towards pedestrians.

3. ORIGINS OF SHARED SPACE

Historically, cities' public spaces were places where people met each other, merchandised and moved around (Gehl, 2003). The increased motorisation modified deeply the shape of urban spaces, whose design was progressively re-defined according to transport and traffic objectives, often against the quality in the public realm and the living environment of people. The accumulation of street signs, markings, signals, bollards and barriers associated with traffic engineering was developed to regulate and control movements, but in the same time form a source of growing concern as they lead to a decline in visual and spatial quality in the "public realm" (Hamilton-Baillie, 2006). The concept of Shared Space was introduced by the Dutch traffic engineer Hans Monderman, whose main idea was to regulate traffic flows on the basis of human activities and social rules, instead of through the use of traffic control measures (Methorst et al., 2007). Monderman recognized that, at an appropriate speed, drivers and pedestrians are able to establish eye contact and anticipate each other's behavior using their intuition. In many places, the Monderman strategy has been shown to reduce accidents and injuries.

4. DESCRIPTION

Shared Space can be considered as an approach attempting to redress the relationships between motorised and non-motorised transport modes in public realms, so as to balance the two objectives of mobility and civility. In that sense, Shared Space embraces the principle that people should share public space as a place that rather facilitates than discourages a variety of activities.

Shared Space has the potential to deliver a high quality urban environment and this quality can be viewed in terms of increased road safety, which is possible by putting users on the same "playing field", namely by reducing car speeding. But also this is possible in terms of a broader quality of life where significant benefits are included: energy (fuel efficiency by cars and modal shift towards slow modes), environment (reduced air and noise pollution), health (reduced obesity and injury), and community (social inclusion and cohesion). Importantly, energy emerges as a key domain where Shared Space can secure a valuable contribution.

- By making traffic flows more fluent, Shared Space schemes reduce travel times increasing the positive effects in terms of reduced fuel consumption and consequently in terms of greenhouse gas emissions and other pollutants.

- Additionally, increased safety conditions facilitate human-powered movement (walking and cycling), which has important implications not only in energy terms (tackling climate change through a reduction of GHG emissions and other air pollutants), but also for reasons of obesity and traffic safety.
- Moreover, by delivering urban places that are pleasant to live, people are further encouraged to make a greater use of active transportation modes. In turn, all these can lead to a significant change in transport modal usage and to a reduction of the carbon footprint of peoples' daily lives.



FIGURE 1 - SHARED SPACE CONCEPT
 Source: Ben Hamilton-Baillie



FIGURE 2 - AMSTERDAM ROAD
 Source: Joel Mann

Besides the direct effect of decreasing accident risk, there is an interesting indirect effect: with safer pedestrian environments, the more sustainable modes such as walking and cycling for daily purposes can increase. Shared Space has the potential to improve the urban fabric, the traffic environment and consequently to improve the willingness to use these more sustainable modes of transport. Shared Space may then be regarded as a suitable approach in order to identify those elements of behaviour and urban planning that may be integrated for elaborating solutions that are capable to remove barriers for the use of sustainable (environmental-friendly) mobility.

The peculiarity of Shared Space has a large emphasis on voluntary behavioural change in the relationships between road users in public spaces, which is adequately backed by the design and layout of public space. The role played by behaviour is central to Shared Space schemes. Informal (social and cultural) rules replace more traditional traffic rules and engineering components; for instance, traffic lights and road markings are fully removed to ensure a clear and open design of public space.

An important idea that comes out from using Shared Space is the attempt to regain a balance between traffic and living activities, on the one side, and spatial functions, on the other side. The main purpose is not banishing or restricting motorised traffic from entering a public space, but rather to slow it down in such way that it may co-exist with the peoples' right of free movement in the built-environment. Shared Space can be described as a street or place accessible to both pedestrians and vehicles that is designed to enable pedestrians to move more freely by reducing traffic management features that tend to encourage users of vehicles to assume priority.

5. EXPERIENCE IN USING SHARED SPACE

In several European countries there is extensive experience with the Shared Space concept or similar concepts with another name. The first European wide application of the Shared Space concept was undertaken with the INTERREG NSR (2004-2008) project, where 7 local authorities from 5 countries (Netherlands, Germany, Denmark, United Kingdom, Belgium) presented shared space projects, which allowed for the testing of consistency and validity of the Shared Space concept under different local conditions.

In the Netherlands the shared space concept is widely used due to this INTERREG project. Some cities, such as Opsterland use the concept in habitual urban planning. Through several successes within the area, the residents understood that shared space is a desired and effective solution to the problems experienced in the locations.



FIGURE 3 - ROAD SIGNS
Source: ecolocalizer.com

For instance the Friesche Palen center is currently dominated by the use of individual vehicles (approximately 74%), and is an area that entirely separates the different modes of traffic. Cycling (10%) and walking (10%) rates are rather low comparatively, and as this location is in a historical area, this can cause big concerns. This location provides the local people with many types of services such as green space, public space, restaurants/ cafés, residences, and schools and could greatly benefit from a re-routing of motorized traffic (including freight which currently accounts for 5% of the traffic in the area). This is especially seen as important as the area is currently rated as moderately dangerous, and there are problems with motor vehicle speeding through the area, even though a speed limit of 30 km/h has been implemented. In this way, it seems that residents have come to realize the benefits of shared space, and see that it may provide a solution to these problems where previous speed reductions have been unsuccessful. The main goal in this specific location is not to change the rates of the different methods, but reducing the speed of these automobiles and allowing people to experience better safety on the street could provide many benefits. Another main concern with the area is the level of attractiveness, which is understandable due to the dominance of the automobile. The resulting desire for change to the area in this regard, is also seen to have positive effects on the level of social cohesion

experienced by people using the area, as they would be able to spend more time on the street, rather than just pass through.

An extreme example of shared space, is a village in the Netherlands that had a problem with speeding traffic passing a primary school. Instead of building a bigger wall or stronger fence, they decided to extend the playground across the street. This created a strong relationship between the street and its surroundings and consequently drivers were alerted to hazards and prompted to drive at slower speeds (Hamilton Baillie website).

In Germany there is experience with Shared Space because of the positive effects in Bohmte (participated in INTERREG project).



FIGURE – 5, 6 SHARED SPACE IN BOHMTE
Internet sources; Wikipedia

The Shared Space concept is not only limited to the countries that participated to the INTERREG project. Indeed, urban design techniques that are similar to Shared Space have been promoted across various European countries. Spanish cities like Bilbao, Barcelona, Madrid and Donostia-San Sebastian for example, have streets that are designed in order to enable the local context to influence driving behaviour. A Spanish study (Porto Schettino et al, 2008) states that implementation in Spain could

work, but the concept has to be adapted to typical local circumstances including the small but increasing amount of cycle traffic, and the scarcity of space in urban centres.

In France, Shared Space ideas developed under the name of Ville plus Sûres (Safer Towns), a programme that was launched in 1984 and which, since 2008, has been associated to a new initiative called Zone de rencontres (meeting points) where the speed limit is 20 km/h and pedestrians are given priority so they do not have to walk on footpaths. Such concepts are also applied in other European countries like, for instance, Switzerland, where it is called Begegnungszone, since 2002. Denmark and Sweden are two further countries where Shared Space principles knew important applications, whilst in the United Kingdom the experience on Shared Space is also notable. Though it matured later than in the other European countries, the introduction of Shared Space principle has been taking an increasing pace as compared to the rest of the mainland of Europe (Hamilton-Baillie, 2008). It seems that the UK is developing Shared Space projects without a need to do this in international projects: a matured situation that can be an example for other countries.

6. PRACTICAL LESSONS LEARNED FROM SHARED SPACE

Shared Space does not offer a panacea or a uniform formula, because every site requires specific solutions. Every site is unique and requires a tailor-made layout. However Shared Space does offer important practical starting points for the design of a public space, lessons learned from the attempts of other countries to help implement in Romania the concept of Shared Space.

6.1. Lesson 1 : *The road tells the story*

An important premise of Shared Space is that behaviour on roads in areas with a public character is influenced more by the expression of the environment than by the usual tools of the traffic profession. Over the past decades roads and their immediate surroundings have been turned into uniform spaces that command uniform behaviour. People spaces that are open to interpretation have been displayed by uniform traffic spaces without room for interpretation. Because the spaces themselves are no longer open to interpretation, everything needs to be explained with signs and text. Shared Space allows public spaces to tell their own story with road layouts that use the information given by the space. The layout supports rather than negates or suppresses the story.

The road user must be able to tell from the space, the road and its surroundings, which behaviour is appropriate and required.

6.2. Lesson 2: Make room for people

Many accidents are due to a lack of interaction between traffic participants. Consider the number of right of way incidents in the accident statistics – 60 to 70% of all accidents are so-called 'right-of-way accidents'. People take right of way, but are not given it. By restoring interaction in those sites where social behaviour is obvious, the number of accidents can be reduced considerably. In the Shared Space approach, the design of a public space must encourage social behaviour. In the Shared Space approach the car should become an equal of the other road users in residential areas. They should respect each other. But if you ask respect from the driver, then you must respect him. Many traffic measures give drivers the feeling that they are put upon. This leads to irritations and induces antisocial behaviour. Drivers must feel they are taken seriously; this is a precondition for their social behaviour.

Encourage interaction, facilitate eye contact. If you ask respect from the driver, then you must respect him!

6.3. Lesson 3: The users have a say

Shared Space implies an interactive process with an active input of knowledge from the relevant citizens and their lobby organisations. Civil servants and political representatives from governments, experts, citizens and their lobby groups work together to prepare and realize policy and to manage the results of that policy. However, the crucial aspect is that governments must meet the needs and the wishes of the 'end users' and must make better use of their knowledge and expertise. People want to, have to and must make their own choices more and more. So the government must ensure that decision making and implementation are organised on a appropriate scale.

6.4. Lesson 4: Details can make or break the design

The selected materials, e.g. the colour and the type of surfacing, may emphasize and enhance the characteristics of the environment. Look for materials that suit the character of the particular context. Furthermore, placement of materials and furniture is equally important. Consider, for example the sitting and height of lamp posts, because they must ensure that it is still possible 'to read' the site in the dark. When you use different types of surfacing you must ensure that the road still feels calm. It is also important to be careful with fashionable solutions that look dated in five years time. Look for materials that suit the buildings and the landscape.

6.5. Lesson 5: Better chaotic than pseudo-safe

What feels safe is not necessarily safe. And conversely what feels unsafe may actually be quite safe. Shared Space is successful because the perception of risk may be a means or even a prerequisite for increasing objective safety. Because when a situation feels unsafe, people are more alert and there are fewer accidents. Separating traffic flows often increases the feeling of safety, but in practice it appears to be counterproductive – the number of accidents with injuries increases. Separating traffic flows blinkers people and causes an increase in speed. Because everyone has their own lane, people take less account of other road users.

6.6. Next steps for learning and advancing shared space

- Design Standards are not enough as even if you follow all of them, it doesn't guarantee that the space will work as a place;
- There is need to focus more on learning how places are created and learning from the projects that have been implemented in terms of their success or failure in creating a place and why or why not;
- There is need for real scientific research that shows the value of Streets as Places/Shared Spaces in order to give credibility to the ideas which may be perceived as intuitive. But this research needs to be "action research" and we need to develop methods for evaluating spaces that add to just establishing standards. We need to do economic research for land use. Data that is needed relates to: noise, fuel used, dust, economic impact and safety;
- Shared space is not only a transportation concept, it is a political concept and placemaking is the process to accomplish it politically. They say that with Shared space, the road is just a part of the space;
- With Shared Spaces there must be short term experiments!

7. CONCLUSIONS

Shared Space defines a set of integrated ideas about people, movement and public space. It is an idea that seems particularly relevant to its time. The role of cities, towns and villages is changing rapidly. We no longer require urban centers for obtaining goods and services, or for information and exchange. Out-of-town stores, the internet and other developments mean that town centers are no longer an essential

part of life. Instead, urban and rural places fulfill deeper human needs as means to interact, to form social bonds, and to express civic values and beliefs.

This change has profound implications for public space. It means it is no longer sufficient to merely rely on the functional capacity of roads and streets as a means to transport goods and people. Streets and public spaces have assumed a critical economic and social role in attracting people and investment. This change requires us to rethink the way in which we design, manage and maintain the public realm, and how to ensure wider control and responsibility for the local community.

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