



Shared Space

High motor-vehicle speeds require a free roadway: space for pedestrians on separate paths, quasi-standardised street environments with clear lane markings, traffic signs and traffic lights. However, such street environments no longer satisfy the requirements placed on cities, towns and villages as living spaces in today's world.

To what extent can the various types of road users 'share space' at low speeds of 20 to 30 km/h (12 to 18 mph)? Can the limited street space be put to a wider range of uses if not every mode of travel has its own lane? Which street design concepts encourage the intuitive interaction of road users by eye contact? And are such conditions not ideal for cyclists, if all vehicles are travelling at approximately cycling speed?

Different terms, different practices

Today, new street environments designed on the basis of the mixed-use principle are generally referred to as shared spaces. This term was coined by British architect Ben Hamilton-Baillie in reference to the shared street environment. He became known in professional circles through an EU project in the North Sea region that ended in 2008. As part of this project, the centres of certain towns and cities in Germany, including the municipality of Bohmte in Lower Saxony, were completely transformed. The definitions of shared space, however, have always been inconsistent. Hamilton-Baillie uses this term for street environments in which the relationship between road users is not controlled by a central system

including traffic lights and signs, but 'negotiated' in independent interaction through eye contact. The self-organisation of the traffic is reinforced by a traffic-calmed design, and the use of any road element that accelerates motor vehicle traffic is deliberately avoided.

Until about 80 years ago, mixed traffic was the usual practice on most streets, both in Germany and other countries. Streets and public spaces in the old towns functioned according to this principle well into the 20th century, i.e. until high-speed motor-vehicle traffic became a mass phenomenon. Even in many younger residential areas, there are often traffic-calmed areas with a mix of road users. The speed is limited to 20 to 30 km/h (12 to 18 mph) or less, and motor vehicles are only allowed to park in specially marked areas. Otherwise the public space would not be accessible to a variety of users, and the parked vehicles would hinder the eye contact required for effective user-interaction.

Photo, top left: Transitional area for the pedestrian zones in Hannover. Top right: 'Encounter zone' sign in Metz, France.

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Under the name 'Begegnungszone', literally 'encounter zone', this type of shared street environment has been anchored in the Swiss road traffic regulations for many years now with a new traffic sign. Since then 'encounter zones' have also been developed in shopping streets with moderate motor-vehicle traffic, as well as in the areas in front of schools and train stations. Pedestrians are allowed to move freely over the entire street but not to obstruct other road users. The speed limit for all vehicles is 20 km/h (12 mph); in addition there are strict parking-space regulations for motor vehicles. The number of 'encounter zones' in Switzerland has since reached the triple digits; they can be found in all parts of the country, especially in the centres of rural towns, where in the past one might have created a pedestrian-only area.

There are also more than 20 shared-space projects in the Dutch province of Friesland. These projects are often associated with the re-structuring of a through road following the completion of a bypass route. Belgium and France have followed the Swiss example; in other European countries the adoption of this flexible form of interaction in the road traffic laws is being discussed. After all, in several countries, §1 of the regulations requires road users to show consideration for others; a street environment designed in accordance with the principles of shared space represents a structural implementation of §1.

Ranges of application

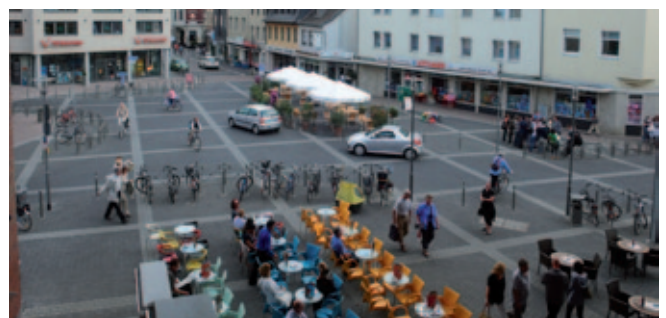
The German Road and Transport Research Association (FGSV) published its first expert recommendations on shared-space design in 2010. A systematic impact study in Germany cannot be expected until 2012. However, the wealth of experience from the numerous implemented projects already allows for quite reliable assessments.

Germany has been implementing traffic-calming measures for roads with heavy motor-vehicle traffic since the 1980s. In this work, traffic planners also learned from examples in other countries, above all in Switzerland

Examples from Germany. From top to bottom:

1. One of six shared-space projects in Duisburg, Hamborner Markt
2. Opernplatz, Duisburg with approx. 13,000 motor vehicles/day – the most prominent of now six shared-space projects in the city
3. Memmingen, Bavaria. Central square with bus stops
4. New town square, Brühl, Rhineland: attractive connection with new public-space areas between pedestrian zone and entrance to a new shopping centre.

and the Netherlands. Innovative street-design concepts, which would be categorised as shared space today, have been tested for more than 20 years now under other names: e.g. the through road of Hennef, near Bonn, or the city centre of Ingolstadt in Bavaria. Through the shared-space discussion, even shopping streets with heavier motor-vehicle traffic are being considered.



Sources

Interreg-Project „Shared Space“
(www.shared-space.org)

Hamilton-Baillie, Ben (2008): Shared Spaces. Reconciling People, Places and Traffic, in: Build Environment. Bd. 34, Nr. 2, S. 161-181, ISSN 0263-7960, 5/2008

DfT (2011): Local Transport Note 1/11 - Shared Space
(<http://assets.dft.gov.uk/publications/ltn-01-11/ltn-1-11.pdf>)

Selection of Swiss „Encounter Zones“ from Swiss Pedestrians Association
(www.begegnungszonen.ch) [German and French]

City spaces with a high frequency of pedestrian crossings represent one of the main application areas for shared space. In many places these areas include the central spaces of the city and the shopping streets, as well as station forecourts used as bus/coach stations and tram stations. The aim of such projects is to make the necessary motor-vehicle traffic so tolerable that the quality of public space for the pedestrians does not suffer.



In other cases, e.g. in the transitional areas between the pedestrian zone and the surrounding city ring, but also in the shopping areas of through roads, such projects focus on safe and comfortable crossing opportunities for pedestrians and cyclists with somewhat heavier motor-vehicle traffic.

Even a pedestrian street, considering the many exemptions made for buses, taxis, delivery and access to the old town, can be described overall as a 'soft pedestrian zone'. In terms of vehicle density, they differ only slightly from through roads and function according to the same shared-space principles.

In such places the redesign of street environments is often motivated less by road safety than by the creation of an attractive and distinctive cityscape with more freedom of movement for pedestrians and cyclists – partly in order to keep the spending purchasing power in the city's own centre. After all, a departure from standardised speed limits and car-centred design frees up space for a distinctive streetscape with local character that – according to Dutch traffic engineer Hans Monderman, a pioneer in the field of Shared Space – 'tells a story about the place and the people who live there.'

For very heavily trafficked streets with well over 10,000 motor vehicles per day, there are good examples all over Europe of how a peaceful coexistence can be created in the street environment at low driving speeds: in Switzerland (e.g. in Köniz near Berne), in the Netherlands (e.g. Haren near Groningen), in Sweden (Norrköping), England (Ashford) and also in Germany (see photos).

Current points for discussion

Applications with low pedestrian traffic

Without a sufficient number of pedestrian road-users, there is no need to create a shared space. Nevertheless, an increasing number of projects for areas around schools are being discussed only temporary pedestrian and cycling traffic, but with road users in particular need of protection. In the Dutch province of Friesland,

From top to bottom:

5. 'Soft pedestrian zone' in the centre of Hamburg
6. Forecourt of the Speyer Cathedral
7. High street of Göppingen, Swabia
8. Neue Straße, Ulm: through new construction in the centre of the street, a wide thoroughfare through the old town has been replaced by two well-proportioned street spaces: the high street (foreground) and the parallel bus street (background).

Bechtler, C., u.a. (2010): Shared Space. Beispiele und Argumente für lebendige öffentliche Räume, Bielefeld [Comprehensive Book, in German language only]

FGSV e.V. (2011): Hinweise zu Straßenräumen mit hohem Aufenthalts- und Überquerungsbedarf – Shared Space und andere Ansätze, Köln [Design Manual in German language only]

More Information on "Shared Space" can be found in the following edition
A-8 Road Safety Risks while Cycling
I-14 Pedestrians and Cyclists on Promenades and Pedestrian Zones

more and more projects are applying elements of the shared-space approach outside of cities and towns.

Adoption of shared-space areas by pedestrians

Shared space goes against – for good reason – the norms for behaviour in the automobile-centred street environment that we learned over many decades. In order to establish new patterns of behaviour, also amongst apprehensive road users, an intensive communication, consultation and participation is needed in the planning phase. An additional task for many traffic planners will be the training of children and senior citizens – ideally soon after the new street design has been adopted.

Phasing-out heavy motor-vehicle traffic

Mixed-traffic areas have been tested extensively with up to approx. 4,000 motor vehicles per day. Recommendations do not rule out traffic situations with up to approx. 18,000 motor vehicles per day. For larger intersections a roundabout at the edge of the shared-space with the main pedestrian crossing can direct some traffic away from the pedestrian traffic. For streets with a high motor-vehicle density, a central island allows pedestrians to cross in two stages. A special metering light can be used for controlling the number of cars that enter certain sensitive areas.



'Encounter zone' of the station forecourt in Baar, Switzerland

Replacing speed limits with design solutions

A street design that encourages road-users to drive slowly is often more effective than a formal speed limit. For a reasonable and clear reduction of speed upon entry

to the area, it is especially helpful to avoid the use of all speed-increasing elements, such as corners rounded to improve driving dynamics, road markings and traffic lights.

Car parking

In certain European countries, severe sanctions are given for illegal parking, or there is a general attitude of respect for the street environment and the needs of others. A reasonable street layout, the very sparing use of physical barriers against illegal parking and, in any case, intensive monitoring in the introduction phase are more effective in promoting respect for the limited availability of parking spaces.

Consideration of blind and partially sighted people

Many of the projects implemented to date have been satisfactory for people with physical disabilities (no more high kerbs as barriers, low driving speeds). However, the need for edges that can be felt (blind people) or a clear visual contrast to the traffic lane (partially sighted people) is not being met. More recent designs, especially in the Netherlands, take these needs into consideration with an easy-to-understand overall design and the use of colour to designate the driving lane through a change of surfaces as 'soft separation'.

Conclusion

The numerous innovative street designs that follow the shared-space approach, which is even anchored in the road traffic laws of some countries, are based on mutual respect between the road-users who share the street environment. Sophisticated street layouts encourage drivers to reduce their speeds, similar to the driving behaviour in pedestrian zones. In such environments large areas of road surface can be won for public space and other uses. The freedom of movement for cyclists is optimal. An important condition, however, is the limitation of parking spaces for cars in order to ensure that eye contact can be made between road users. For a future mobility structure, a flexible street design is the right investment, already today.



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