

# Shared Space - the alternative approach to calming traffic

*It is 30 years since **Hans Monderman** took the first steps towards creating an alternative approach to traffic calming. Today, the Shared Space concept is gaining acceptance across the globe. **Emma Clarke** talks to **Hans Monderman** and to **Ben Hamilton Baillie**, an urban design and movement specialist leading the development of the concept in the UK.*

Ever since the publication of the *Buchanan Report Traffic in Towns* in 1963, engineers have worked to segregate traffic from the public realm. Underpasses and bridges, road crossings and warning signs have become the vocabulary of the street giving traffic clear domination of the carriageway.

But not, perhaps, for much longer. There is growing evidence that, rather than improve safety, this separation can actually increase the risk to pedestrians and cyclists, and that the removal of kerbs, barriers, signs and road

markings not only makes a more pleasant urban environment but slower, more careful and less congested traffic.

This concept of 'shared space' was first conceived over thirty years ago by Hans Monderman a traffic engineer from the Netherlands, who has helped bring what was first seen as an oddball movement into a mainstream approach to traffic engineering. Shared space schemes started in the Netherlands, spread to mainland Europe, UK and more recently Monderman's work is being picked up as far afield as USA

and Russia. The national press across the globe is also showing a growing interest in the philosophy that recognises the ability of people to resolve potential conflicts if treated as intelligent citizens.

Back in the late 1970s, Monderman was tasked with reducing the speed of traffic in a village in north Holland. Budget cuts at the time prevented him using traditional traffic calming instruments such as chicanes and red and white fences, so with no other options, he decided to follow a hunch. He had recently undertaken some accident analysis that had looked at the human factor in the traffic system instead of the technical factors of roads and cars. Using ideas from these findings, he decided to take everything away from the street: the speed measurements, chicanes, fences and lines, leaving what looked like a simple, pretty village. And to his surprise when he (nervously) came back months later, speeds of traffic had reduced by 50%. 'That was such a strange experience,' recalls Monderman, 'because up until then traffic calming was only achieving around 10-20% reductions. I didn't expect that that it could work, but it did.'

This 'strange experience' was the beginning of a long campaign into the study of the synthesis between traffic and its surroundings, that along the way has brought him into contact with a number of academics and practitioners in the worlds of traffic engineering and urban design.

Monderman argues that while traditional tools of separation are necessary on motorways and busy highways



In de Brinkgood in the Netherlands, the idea is that the driver in the shared space becomes an integral part of the social and cultural context.

where the single purpose is the movement of traffic, in the complex world of the public realm with its multitude of functions, they become redundant.

In fact, the less you see highway clutter, the more you can influence behaviour. This, he says, is because environmental context has a stronger influence on behaviour than legislation and formal rules. 'Our behaviour in a theatre or a church differs from a pub or in a football stadium as we understand the signs and signals through years of cultural immersion. Likewise if we see children playing in the street, we are more likely to slow down than if we saw a sign saying "Danger Children!".

'Wherever you have the freedom in making your own choices without government interfering you learn what it means to be a free civilian in a free country. But whenever government takes over your decision, you can't develop your own evaluations anymore,' says Monderman.

The driver in shared space becomes an integral part of the social and cultural context. As a result, behaviour is controlled by everyday norms of behaviour which means drivers slow down, take more care and start to rely on eye contact and human interaction.

An important foundation stone of Monderman's work is the research into risk and safety of John Adams, professor of geography at University College London. The change of behaviour in a shared space context is related to what Adams describes as risk compensation effect, or how humans shift the balance of risk according to their environment. If protected from hazards, argues Adams, humans readjust the risk threshold. 'You fit a car with better brakes, people don't drive the same way as before and enjoy an extra of safety, they drive faster and start braking later. The potential safety benefit of better brakes in fact becomes a performance benefit.'

Similarly, traffic management tools can actually increase the risk of accidents by absolving drivers from having to use their intelligence and engage with their surroundings. 'Traditional highway engineering has been based on the theory that we are completely oblivious to dangers in the environment around us,' Adams points out. 'But that is manifestly not so. Once the tools are taken away and you put some uncertainty into the street in terms of who has right of way, drivers and pedestrians naturally become more attentive and engaged, prompting drivers to reduce speeds and drive more safely. You redistribute the burden of risk, giving pedestrians more control.'



An extreme example of this, 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.

Likewise at a junction in Drachten in Holland that is used by over 20,000 vehicles a day as well cyclists and pedestrians, Monderman took away all the lights, lines, and road markings and as a result people's perception of risk has changed, encouraging them to use junctions with more care.

Ben Hamilton Baillie, an urban design and movement specialist also leading the development of shared space concept in the UK, went along to see the junction in action. Whereas before a truck and a cyclist passing each other within metres would have been seen as a risk, now this is commonplace, as road users develop new types of behaviour to accommodate each other. 'A whole set of new social protocols sprang up immediately,' says Hamilton Baillie. 'Road users seek eye contact with each other and cyclists, who rarely use hand signals in the Netherlands, started to use special finger signals.'

There have been no serious accidents in Drachten since installation of the

**Before and after in Drachten. There have been no serious accidents since the new intersection was installed in February 2004.**



In Friesland they have created a strong relationship between the street and its surroundings.

new intersection in February 2004, whereas between 1998 and 2002, when it was still an intersection with traffic lights, signs and lanes, eight accidents were registered, five of which involved injuries. That it is not to say minor accidents will be completely eradicated in shared space schemes, says Monderman. 'It is difficult to tell the difference between a positive experience and a negative one. But minor accidents, can be fairly positive experiences, as people learn and they take responsibility for their own behaviour.'

The removal of traffic lights and road markings has also prompted traffic to move more freely in Drachten. As a consequence of removing 12 of the 15 lights across town, traffic can cross the centre in rush hour within 10 minutes with minimal interruption, saving over 10 minutes from when there were lights.

'Traffic lights are no solution,' says Monderman. 'They cause people to speed like hell and break like idiots. What is the use of all that speeding when we could change the system in such a way to create a continual organic flow of traffic moving at maybe 20 km/hour instead of the average speeds of 6-12 km/hour that we see in cities.'

What's more, cities without the clutter of signs, lines, barriers and lights, also become more pleasant places to live and work, and where the public is given back access to their environment. 'Through the syntheses between traffic and public interaction we could build wonderful places that can tell the story of our past, the heritage and the cultural identity of place,' says Monderman.

And, because taking things away is always going to cost less than adding things in, creating a shared space environment will also come with a lower price tag than some other traffic calming methods.

That is not to say there aren't challenges to implementing these schemes. The biggest, says Hamilton Baillie, will be re-writing the language of separation that has been instilled in technical guidance and standards for engineering. He argues that the standard traffic manual has no use in a built environment: 'You can use standardised rules on a highway but when you get to the built environment the complete opposite requirements make it work well. It is constantly changing, it is spatial not linear, and relies on a complex way of communicating.'

He concedes that the draft *Manual for Streets* is now beginning to recognise that solutions should not be based on standards but on the context, but there is still a long way to go. 'Most of the measures are based on arbitrary assumptions, not evidence or trial. If you ask an engineer why we use centre line markings (and I have asked many) and no one will give you an answer. It dates to the time when people needed to be reminded not to drive in the middle of the road, but we know this now. Their use has become a habit, almost like a religion.'

The success of shared space relies on more than simple design techniques, however, and requires an new approach to the process of planning, designing and decision-making. 'This is a big change for traffic engineers that have not been taught urban design

skills,' says Hamilton Baillie who notes how most engineers' drawings of the high street show little reference to the buildings and context.

To make shared space work there needs to be a different relation between engineers and urban planning professions. As Monderman says, 'we need a common vision about how public space can work.' And education may not be enough. 'Bringing knowledge into each profession is too difficult. We need a new discipline to integrate skills and achieve successful public space.'

Integration between the two professions is further hampered by the structure of local government with planners and engineers not only in different department but often in different organisations in district and county councils.

Another hurdle will be gaining acceptance from groups such as the elderly and disabled. The only negative reaction from the public in Drachten came from elderly people, with 10% feeling it to be more dangerous than before. 'Elderly people feel the change in responsibility and the perception of risk the strongest. This is a big issue that we have to give attention to in our designs,' says Monderman.

Likewise the disabled, and particularly the blind, are likely to be uneasy about changes that will take away instruments such as lights, curbs and tactile surfaces at crossings that they lobbied hard to get installed.

Overcoming these hurdles, says Monderman, is more a matter of communication than design. 'If you don't bring these people in during the design stage you will get complaints. It is a matter of process and when you bring in people from scratch and learn their needs and problems you find solutions.'

Despite these hurdles, Monderman is confident that the future looks promising for shared space and feels that interest in this approach mirrors a shift in mood in the public. 'In society people are fed up with all the rules that don't fit within the world they live. We all see that rules in the traffic system don't solve the problems anymore. Problems are getting bigger and traffic congestion is getting worse. Rules diminish our opportunities to act as good citizens, so instead we get public space that is horrible and we get behaviour that is anti-social.' People, he believes, are ready for something that suggests that it can be done differently without rules and that by creating a social environment you can actually create civility.