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## Roads Gone Wild

**No street signs. No crosswalks. No accidents. Surprise: Making driving seem more dangerous could make it safer.**

By Tom McNichol

**Hans Monderman** **Feature:**

is a traffic engineer who hates traffic

[Roads Gone Wild](#)

signs. Oh, he can put **Plus:**

up with the well-placed speed limit

[How to Build a Better Intersection: Chaos = Cooperation](#)

placard or a dangerous curve warning on a major highway, but Monderman considers most signs to be not only annoying but downright dangerous. To him, they are an admission of failure, a sign - literally - that a road designer somewhere hasn't done his job. "The trouble with traffic engineers is that when there's a problem with a road, they always try to add something," Monderman says. "To my mind, it's much better to remove things."

Monderman is one of the leaders of a new breed of traffic engineer - equal parts urban designer, social scientist, civil engineer, and psychologist. The approach is radically counterintuitive: Build roads that seem dangerous, and they'll be safer.

Monderman and I are tooling around the rural two-lane roads of northern Holland, where he works as a road designer. He wants to show me a favorite intersection he designed. It's a busy junction that doesn't contain a single traffic signal, road sign, or directional marker, an approach that turns eight decades of traditional traffic thinking on its head.

Wearing a striped tie and crisp blue blazer with shiny gold buttons, Monderman looks like the sort of stout, reliable fellow you'd see on a package of pipe tobacco. He's worked as a civil engineer and traffic specialist for more than 30 years and, for a time, ran his own driving school. Droll and reserved, he's easy to underestimate - but his ideas on road design, safety, and city planning are being adopted from Scandinavia to the Sunshine State.

Riding in his green Saab, we glide into Drachten, a 17th-century village that has grown into a bustling town of more than 40,000. We pass by the performing arts center, and suddenly, there it is: the Intersection. It's the confluence of two busy two-lane roads that handle 20,000 cars a day, plus thousands of bicyclists and pedestrians. Several years ago, Monderman ripped out all the traditional instruments used by traffic engineers to influence driver behavior - traffic lights, road markings, and some pedestrian crossings - and in their place created a

signs or signals telling drivers how fast to go, who has the right-of-way, or how to behave. There are no lane markers or curbs separating street and sidewalk, so it's unclear exactly where the car zone ends and the pedestrian zone begins. To an approaching driver, the intersection is utterly ambiguous - and that's the point.

Monderman and I stand in silence by the side of the road a few minutes, watching the stream of motorists, cyclists, and pedestrians make their way through the circle, a giant concrete mixing bowl of transport. Somehow it all works. The drivers slow to gauge the intentions of crossing bicyclists and walkers. Negotiations over right-of-way are made through fleeting eye contact. Remarkably, traffic moves smoothly around the circle with hardly a brake screeching, horn honking, or obscene gesture. "I love it!" Monderman says at last. "Pedestrians and cyclists used to avoid this place, but now, as you see, the cars look out for the cyclists, the cyclists look out for the pedestrians, and everyone looks out for each other. You can't expect traffic signs and street markings to encourage that sort of behavior. You have to build it into the design of the road."

It's no surprise that the Dutch, a people renowned for social experimentation in practically every facet of life, have embraced new ideas in traffic management. But variations of Monderman's less-is-more approach to traffic engineering are spreading around the globe, showing up in Austria, Denmark, France, Germany, Spain, Sweden, the UK, and the US.

In Denmark, the town of Christianfield stripped the traffic signs and signals from its major intersection and cut the number of serious or fatal accidents a year from three to zero. In England, towns in Suffolk and Wiltshire have removed lane lines from secondary roads in an effort to slow traffic - experts call it "psychological traffic calming." A dozen other towns in the UK are looking to do the same. A study of center-line removal in Wiltshire, conducted by the Transport Research Laboratory, a UK transportation consultancy, found that drivers with no center line to guide them drove more safely and had a 35 percent decrease in the number of accidents.

In the US, traffic engineers are beginning to rethink the dictum that the car is king and pedestrians are well advised to get the hell off the road. In West Palm Beach, Florida, planners have redesigned several major streets, removing traffic signals and turn lanes, narrowing the roadbed, and bringing people and cars into much closer contact. The result: slower traffic, fewer accidents, shorter trip times. "I think the future of transportation in our cities is slowing down the roads," says Ian Lockwood, the transportation manager for West Palm Beach during the project and now a transportation and design consultant. "When you try to speed things up, the system tends to fail, and then you're stuck with a design that moves traffic inefficiently and is hostile to pedestrians and human exchange."

The common thread in the new approach to traffic engineering is a recognition that the way you build a road affects far more than the movement of vehicles. It determines how drivers behave on it, whether pedestrians feel safe to walk alongside it, what kinds of businesses and housing spring up along it. "A wide road with a lot of signs is telling a story," Monderman says. "It's saying, go ahead, don't worry, go as fast as you want, there's no need to pay attention to your surroundings. And that's a very dangerous message."

We drive on to another project Monderman designed, this one in the nearby village

been turned into something resembling a public square that mixes cars, pedestrians, and cyclists. About 5,000 cars pass through the square each day, with no serious accidents since the redesign in 1999. "To my mind, there is one crucial test of a design such as this," Monderman says. "Here, I will show you."

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