



Tailgating

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It's one of the average driver's most frequent complaints – tailgaters.

Tailgating is not just a safety problem, it's also a social problem. We drivers are very social creatures, and along with that comes a territorial element of our very being that makes us respond to space around us in ways that vary from individual to individual and from culture to culture.

That means that when you or I look in the rear view mirror and see that car behind within inches of our rear bumper, our reactions can vary depending on individual mental state, circumstances, and what we perceive to be accepted norms and rules.

In other words, when it comes to tailgating and whether other vehicles are too close or being too aggressive, there are no absolute fixed rules, at least not as far as individual perceptions are concerned.

Following too close, in addition to being a social problem, is regarded as a major traffic safety issue. That being said, over the years, safety experts and driver educators have worked out various rules.

The first of these was the car length rule. This was a rule of thumb, stating that for every 10 mph of speed, the following distance should be one car length. At 20 mph, following distance would be two car lengths, and at 60 mph, six car lengths, and so on.

Later, this gave way to the more scientific two-second rule. This means that being two seconds behind the car ahead and it was applicable to any speed. The two-second rule is loosely based on perception and reaction time. If the driver ahead slams on the brakes, it will take a certain amount of time to see it's happening, and then some more time to react (foot from gas pedal to brake). If you don't begin braking before you reach the point at which the driver in front began (assuming both sets of brakes are equally effective), then in theory at least, you hit the car ahead.

As simple as it sounded, principles of the two-second rule were not always clear to either student drivers or their instructors. Some driving school instructors say they will test students by asking them how many seconds following distance they have, but they want the answer immediately. In other words, the student should not start counting but make a practiced guess, based on previous counting.

Tailgating motivations

You're in the "passing" lane and you're passing, but the driver behind wants you to pass faster, so you've got a tailgater on your rear bumper. You're in the middle lane with space on both sides and still you've got a tailgater. This one is probably just absent-minded, or just lazily following your rear fender. Later, you're in busy multi-lane traffic and everybody is tailgating, but maybe in this case, they're just defending their territory, not wanting anyone to get into the lane ahead of them.

One of the most foolish and extreme reasons for tail-gating is the "slipstreaming" argument. Somehow the driver behind thinks it's worth the extra risk of tailgating to save a little fuel. Automobile drivers have been known to do this behind large trucks. The problem is, aside from the risk of a collision, reduced visibility for the car driver normally means far less ability to anticipate any exposures ahead.

These examples just offer a sense of the scope of the problem. The reality of driving is the full range of human emotions exist and rationalizations are involved; you could have an angry tailgater be simply someone who doesn't understand the dynamics of following closely.

The physics of tailgating

- It takes time to see what you need to see, and if you need to see more, then you need more time, and that means more space.
- We know now that drivers are not looking where they are going all the time. In fact that's just not possible. Instead, our eyes dart about to wherever we think is most important in our visual field, pulling in bits of information, evaluating them and darting about again.
- There's a huge psychological element to this, based on each driver's experience and abilities. We know, as well, not every driver's eyes are the same physically. Individuals have to deal with everything from short-sightedness to color blindness, and even visual styles that determine what we are likely to see and what we are not.
- In the real world of following distance, the farther back you are determines how much your eyes can move around, how much information you can pull in, and what level of driving tactics you can achieve.

Situational awareness

Situational awareness has become a hot term in driving circles in recent years. You could say that in driving there are three levels of situational awareness.

At the most immediate level, the driver is aware of little more than those objects or events that directly affect them – the car they're following, for example.

At the next level, the driver has awareness of what's affecting those objects or events that are most immediate – for example, what problems are affecting the driver ahead.

At the top level, a level of much expanded awareness similar to aspects of “zen,” the driver is sensitive to what's affecting the first two levels.

The third level of driver, or “zen driver,” if we want to call it that, is a super sensitive, super skilled, very relaxed and controlled state in which the driver is using high levels of techniques, tactics, and strategies. It's probably not a state that can be achieved by very many drivers for anything more than short periods.

In fact, it's likely that the vast majority of drivers switch between levels one and two and never, despite years of experience, reach level three. One important reason for that is that level three requires intellectual ability, combined with education and training at a level which is rarely available.

Combat tailgating

Laws against tailgating are easy to pass, but not easy to enforce. It's not just the distance between vehicles that's the issue. There's also the length of time, and the circumstances. A driver slides into the lane ahead of you. Now, you're tailgating. Should you try to get away, slow down, and disrupt the flow of traffic? If a traffic enforcement officer spots you, should you get a ticket if you linger too long?

Obviously it's the more aggressive tailgaters that are the real issue. Establishing a case against a tailgater would require observation over time and establishing that the tailgater has shown a pattern of tailgating behavior.

Undoubtedly, the latest technologies will make this not only feasible but easy. Traffic tracking technologies already enable the tracking of speed and traffic flow, so why not following distance?

There could be all kinds of objections to using technologies in this way. However, privacy concerns notwithstanding, undoubtedly technology will play a serious role in the future of tailgating as a driving style.

The Zen driver

Imagine you're a perfect example of the “zen driver.” You know what's in front of the car ahead of you, and ahead of the one in front of that. You've taken note of the number of cars and amount of space in each lane. You're aware of that car coming up behind, and you know the driver will

probably want to get in front of you (past behavior predicts future behavior). You're also aware of a slew of other details, such as the bus that may stop, the truck that may turn into the warehouse (it's got the name on the side), and the timing of lights, road construction, etc. You're checking two or three traffic lights ahead and noted when they turned green or red.

Can you keep that up? Probably not, at least not continuously. But with training, this level of driving can be achieved to an increasing degree. With training and practice, your human brain can handle much more than you may think.

Will it be very intense, destroying your enjoyment of that pleasant commute to work with the radio as company? No reason why it should be. In fact, the high level of driving skill described above should be far more relaxing, not to mention safer.

The technological Zen driver

As you scan through the various articles on safe driving that are out there, the sections on technology and the intelligent highway system, you will find the bits and pieces of the technological world that will bring to us, at some time in the future, the driverless car.

In that, perhaps not too distant future, here's how things might work.

- Your car will know the speed and direction of nearby vehicles because vehicles will exchange information.
- It will know the location of stop signs and traffic lights because it will also be exchanging information with those.
- It will know when the traffic lights changed color, how long the red will last, and if there's a red-light-runner coming through. It will also know about traffic patterns, congestion, road construction, surface conditions.
- This technological Zen driverless vehicle will, in theory at any rate, always operate in level three. Information will stream at it from sensors in road surfaces, mobile phones, traffic managers, satellites, other vehicles, and from roadway features such as signs, signals and marking that are also equipped to communicate.
- It will know how to get to its destination by the fastest route, the most eco-friendly route, the most scenic route. It may even be able to decide whether the trip is a good idea or not.

However, a driverless car world does not necessarily mean a driverless world. We humans love our driving way too much for that to ever happen. Until the age of the driverless automobiles, please keep a safe distance from the vehicle ahead.

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