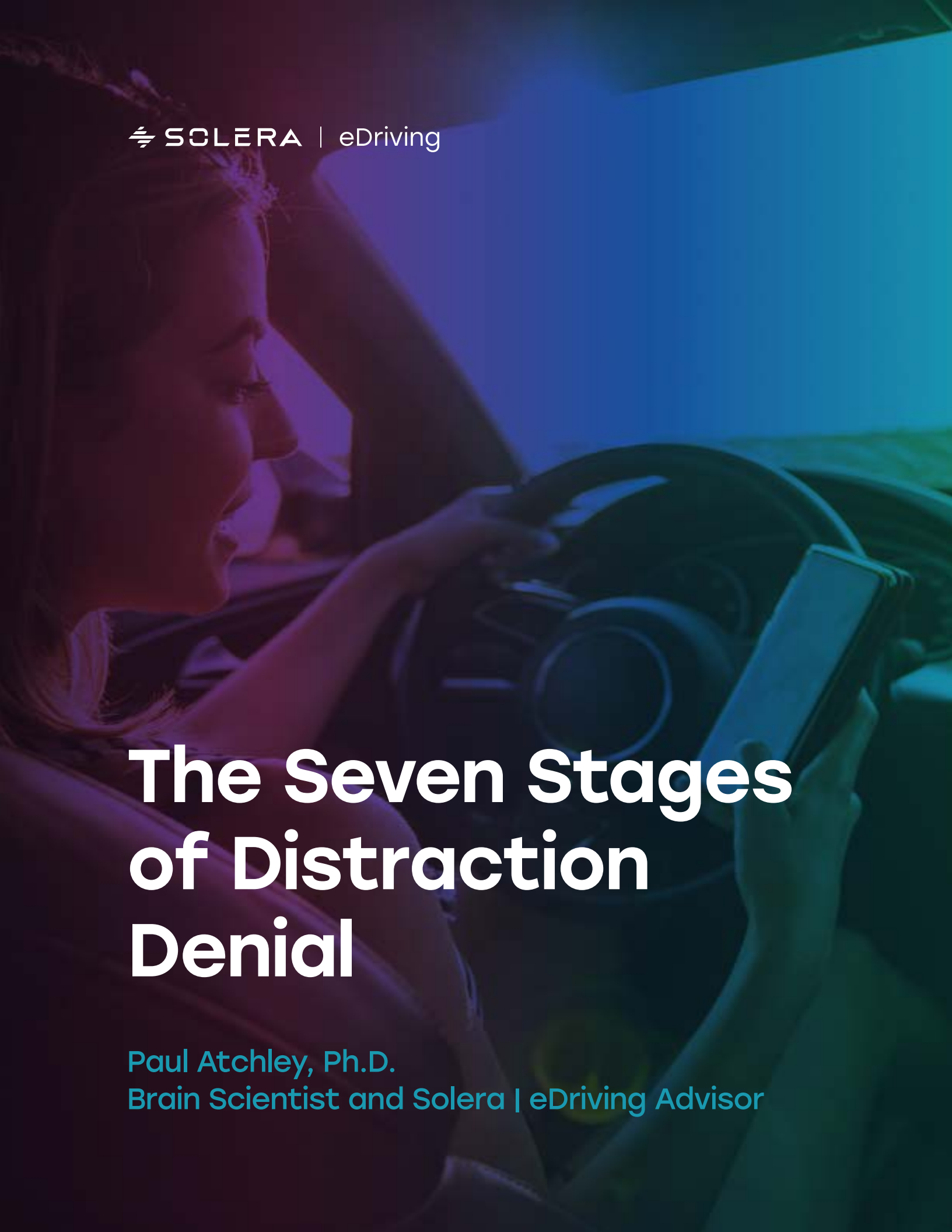


SOLERA | eDriving

The Seven Stages of Distraction Denial

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Stage 1

I am a better driver than most

Most drivers think they are good drivers or at least better than average, which statistically cannot be true. The truth is that most drivers have their "driving demons" and either know what they are and ignore them (bad) or don't know what they are (also bad). Let's assume that you ARE a better driver than most. What about the other people on the road? They are likely to be worse than you are. And they are the ones who will potentially cause the problem—THAT YOU NEED TO REACT TO.

Driving is one of the most complex tasks we do. It requires multiple operations to drive safely.



The SPIDER model of Strayer & Fisher (2016) summarizes the multiple components of driving safely:

Scanning the environment for hazards

Predicting where unseen hazards might occur

Identifying possible hazards when they are detected

Deciding what to do

Executing a safe **R**esponse

Stage 2

I am really good at multitasking



Our brains do not multitask. They task switch. That means when we do anything that requires attention, we focus on it and when we want to attend to something else, we switch focus. We can do this quickly, but not perfectly. No amount of training or experience eliminates the need to task switch.

Using a phone while driving leads to task switching. And this negatively impacts safe driving.

Going back to the SPIDER model, we can see how a cell phone conversation and the inherent task switching required to both talk and drive impact driving safety.

Scanning
Smalller scanning area

Predicting
Fewer anticipatory glances

Identifying
Failure to understand scanned objects

Deciding
Misjudging speed and distance of hazards

Executing Response
Slower or absent responses to hazards

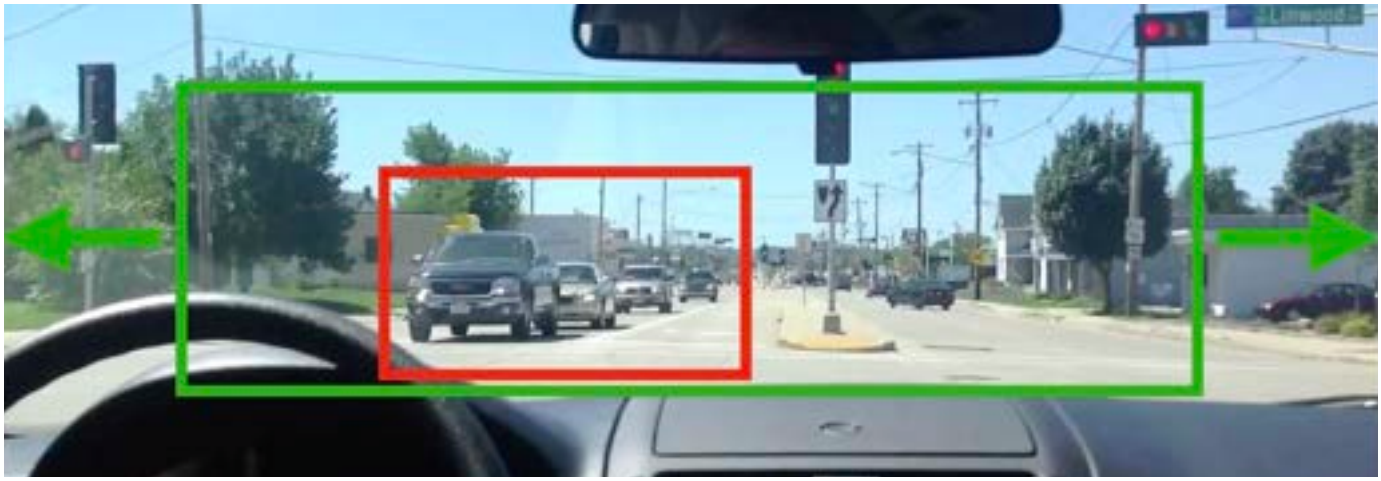
Stage 3

It's OK to text at stoplights

Both reading and sending texts take your eyes and mind off of the world around you. And an intersection is one of the most dangerous parts of the drive—and probably the most dangerous place to text.

After the light turns green, before entering the intersection, drivers need to have completed many of the operations that are necessary for safe driving, including scanning, predicting, identifying, and deciding what to do if something unexpected happens.

Research has shown that if a driver is texting at the stoplight, **it takes at least 27 seconds for attention to return to normal**. One consequence of this is that drivers scan in a smaller area.

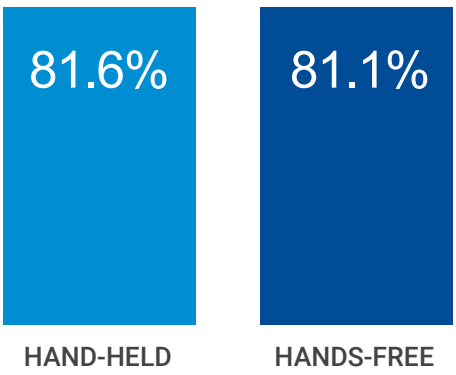


In the figure above the **larger (green) box** is where a driver would scan if they were fully attentive to the task of driving. The arrows indicate the head turns to look at possible crossing traffic.

The **smaller (red) box** is the scan area of a driver that had been paying attention to their phone while the light was red. Since that driver was visually and cognitively engaged with their phone, they scan a smaller, primarily frontal region when they start to move forward. Their ability to detect hazards is restricted to a small region of the driving environment.

Stage 4

Hands-free calls are OK & no worse than talking to a passenger



Studies show that you are **4x more likely to crash if you are using your phone** (as bad as drunk driving). There is **virtually no difference in this statistic between hands-free or hand-held.**

Have you ever turned off the radio because you were trying to do something complex while you were driving, like navigate in a new area? You could tell the radio was tapping your brain and distracting you, even though you weren't touching the radio. A conversation is worse.

Between 1969 and 2016, there have been 417 measurements of the effect of hands-free and hand-held phone use on driving performance, with thousands of drivers. A performance degradation was found 81.6% of the time for hand-held phone use and 81.1% of the time for hands-free phone use, or **a difference of only one-half of a percentage point**.

It's true that talking consumes part of your brain. Even passengers can distract us. But what happened to that conversation in the car the last time traffic became really heavy? It stopped, right? Or if kids in the back seat kept talking, you probably "encouraged" them to stop.

A passenger who is an experienced driver shares your view of the road. They know when to modulate that conversation. Plus, they may even help you see something you miss! In work in the United Kingdom, drivers on the busy London outer belt who were talking to a passenger stopped talking when traffic got heavy, but the cell phone conversations went on and on and were always more mentally demanding than the ones with a passenger.

Stage 5

My car's technology makes me safe



As the National Highway Traffic Safety Administration (NHTSA) declared, "Newer Cars are Safer Cars." NHTSA lists many of the improvements to cars that are helping to save lives: seat belts, air bags, electronic stability control, backup cameras, blind spot detection, and driver assistance technologies. There have also been numerous improvements to road design, emergency response and medical care that should be reducing traffic deaths.

However, deaths are going up on U.S. roads.

Starting in 2015, fatality rates have been increasing. In 2020, despite a record decrease in driving due to the pandemic, there was the largest increase in traffic deaths in almost a century. In the first quarter of 2022, NHTSA indicated there was a 7% increase in fatalities compared to last year, and the highest number of first-quarter fatalities since 2002.

It doesn't need to be this way. In the European Union, there was a 13% decrease in road deaths between 2019 and 2021, and a 17% decrease over the last five years.

When fatalities increase, it suggests that the severity of crashes has increased because drivers are not reacting to mitigate a crash event. One theory behind the increase in U.S. fatalities is distracted driving, because in such crashes, a driver reaction is often completely absent, resulting in a collision at full speed. This would be consistent with the U.S. data being worse than the EU data, as EU countries have much more effective distracted driving laws.

Stage 6

I can't afford to lose productivity in the car; I'll take the risk

Driving is the riskiest task you do regularly. Increasing your odds of crashing by fourfold or more is a poor choice. **Attending a meeting while driving does more than create a distracted driver. It also creates a distracted employee.**

As your brain tries to help you drive safely, it takes your attention away from the work-related phone call. This makes an employee who is:

- Less attentive to what is being said
- Less aware of the emotions of other speakers
- More forgetful regarding what was said
- Less likely to inhibit inappropriate responses

This helps explain why surveys of companies by the National Safety Council found more reports of productivity increases than productivity decreases following implementation of distracted driving bans.

Did you know?

Worldwide, every year, distracted drivers are responsible for ≈ 2.5 million car crashes.

Source: Car Insurance 2020

The risk is greater than the risk to you alone. You are creating risk for your company.

If you are in a crash while on company business or while using a company phone while driving, you have exposed your company to the possibility of large, punitive damages. Attorneys search carefully for this type of exposure because they know these damages have been as much as **1 billion dollars** in lawsuits against drivers and their employers.

Company policies that ban distracted driving DO work when those policies are accompanied by education, monitoring and enforcement.

When the Network of Employers for Traffic Safety (NETS) surveyed its member companies, it found crashes were about **two-thirds lower than average in companies that had distracted driving bans accompanied by education, monitoring and enforcement.**

Juries know that distracted driving by employees is highly risky and preventable. Don't take the risk.



Stage 7

Accepting the facts

Really, the only thing you will lose by changing your risky habits behind the wheel is almost any chance of being in a crash. Literally.

94% of crashes are linked to driver behavior and attitude - the many choices we make every time we get behind the wheel.

Failing to make better choices means we keep causing roughly the same number of road deaths as if 15 planes crashed each month in the U.S. Or the number of breast cancer deaths each year. Multiply those numbers by over 100 to add in the number of people injured.

We don't need to do really hard stuff to fix this. **We just need to lose our bad habits**. And our arrogance about being better than everyone else. And our fear of missing out.

Do it...

- for yourself
- for your family
- for your kids who are watching and learning from you in the backseat
- for your employer
- for the other people on the road whom you put at risk each moment you choose to be distracted.

Did you know?

Reading a text while driving is like driving the length of a football field while blindfolded.

When a person reads a text while driving, his or her eyes are off the road for an average of 5 seconds. At 55 MPH / 89 KPH, that is like driving the entire length of a football field while blindfolded.

About eDriving

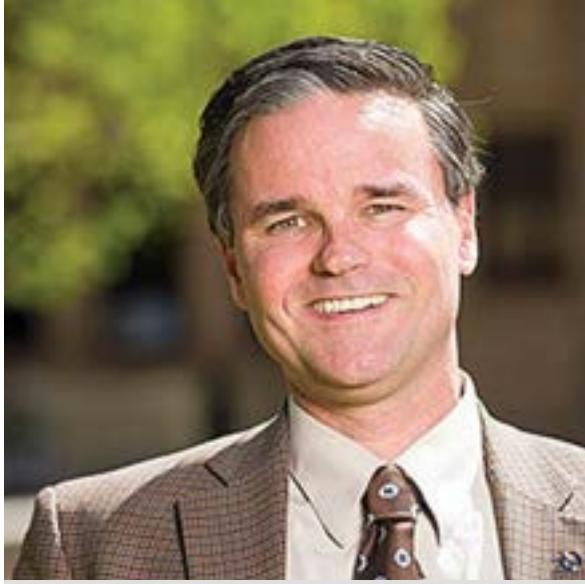
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For more information, visit **www.edriving.com**.



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About Paul Atchley, Ph.D.

Paul Atchley is eDriving's award-winning Brain Science Advisor. Dr. Atchley has been conducting research and teaching about cognitive factors related to driving for over 30 years. As a Professor of Psychology, he specializes in research on the real-world implications of multitasking, with decades of experience in the classroom and the laboratory and an impressive 60+ publications on cognitive processes.

Dr. Atchley wears multiple hats as a University of South Florida faculty member, brain scientist and a highly respected, publicly recognized industry expert. He addresses distracted driving from multiple perspectives and is working to communicate this expertise publicly so that it can accelerate positive change. His work efforts to reduce distracted driving have been highlighted by national and international press such as the BBC, NPR and the New York Times.