

Dangers of distracted drivers: the science explained

Written by Shawn M. Galloway
Tuesday, 20 July 2010 08:39



In last month's article, *Multitasking myths and misconceptions*, I discussed how, over time, we all have contributed to a global cultural norm of driving while distracted and the unfortunate perception that it is okay, or accepted to do so. This article explains the science behind how we learn, and how it is impossible to safely perform other tasks while driving.

Education vs. habituation

Driving requires a constant focus on what you are doing: the other drivers, and the foreseeable future path ahead. Unfortunately, with the experience one obtains from driving over time, we create inaccurate perceptions that trick us into thinking it is acceptable to split our focus. Yet, when we examine how humans learn, we realize that this perception is dangerously false. This is discussed in a multi-level model often referred to as The Conscious Competency Learning Model.

Level 1 – Unconscious Incompetence

When an individual has no knowledge of the details necessary to perform a task, nor has ever actually performed the task, they are in a state called, unconscious incompetence. They often lack both the knowledge and skills to perform the task in an exceptional manner. Moreover, they might not recognize that this knowledge/skill deficit exists, as described in the popular phrase, "You don't know what you don't know." This is similar to an individual who has never been instructed to drive or has never sat behind the wheel of a vehicle.

Level 2 – Conscious Incompetence

Once this individual is provided with new information, education occurs. The individual obtains information relevant to the new skill and gains the ability to recognize the previously unseen deficit. This new information fills the previous gap in knowledge. This takes them to a state called Conscious Incompetence. While the individual now has new information, they do not have the skills necessary to make the change. They have not yet applied this newly acquired information. Similar to a new driver receiving driver's education, they should not yet sit behind the wheel of a vehicle.

Level 3 – Conscious Competence

Proper training can help develop the skills necessary for progression. If this is accomplished, the individual moves to a state called Conscious Competence. If an individual concentrates on the task, they can demonstrate or perform it with little assistance. This is similar to receiving training behind the wheel of a vehicle. Unfortunately, most safety efforts stop at the second or third level. Education or training is entrusted with making the change permanent and successfully accomplishing the performance needs. Neither is sufficient enough to ensure permanence. At this stage, the individual has not yet performed the task with sufficient frequency, nor acquired enough varying experiences, to develop habitual templates. This stage still requires continuous concentration.

Level 4 – Unconscious Competence

There is a common principle in training: “Training is only as effective as the reinforcement that follows it.” One sustainability mechanism of humans is habit. Many would argue that the most lasting change is the change that becomes habit. Once a task is performed multiple times, experiential templates are formed and the thinking occurs in the subconscious. Consider: when was the last time you had to consciously think about walking?

If you are of healthy body and mind, you have established the ability to walk without much thought. Once an individual has practiced driving for multiple years, experiencing both positive and negative consequences, many drivers are able to move to the level of Unconscious Competence. This is due to the development of experiences that allow for the tasks to be performed without purposeful thinking. We call this “Driving on Autopilot.” New drivers have not yet developed enough experiences to obtain this level. Their habits are not yet formed to allow for safe task-switching while operating a motor vehicle.

Level 5 And Beyond

As a result of this finding and others, many researchers have suggested a fifth level to this model. Most of these proposals persuade us that just because we can perform a task without thinking does not mean it has been completely mastered. Have you ever driven somewhere and recognize that you do not have a complete turn-by-turn memory of the entire event? To do something without realizing what, or even why, it is occurring can lead to complacency or a lack of a sense of vulnerability; both contributing factors of many accidents.

□ Is it worth the risk?

When we are driving distracted, the behaviours necessary to safely operate the vehicle are directed within the subconscious. The distracting behaviours we are performing (i.e., talking on the phone, texting, adjusting the radio, eating, etc.) are being directed by deliberate thought. If something unexpected happens while doing this (i.e., car pulls out in front of you, a child appears near the road, etc.), the brain switches the focus of attention towards the driving behaviours. It is physiologically impossible to perform two tasks that require deliberate thinking.

When one of these tasks directs attention away from operating a vehicle at a high rate of speed, and can easily claim your life and the lives of others, this begs the following questions: “Is that the safest thing to do?” and “Is it worth it?”

I hope you think not.

Passionate plea

To the parents and grandparents I hope this article reaches, I implore you to join others who have committed to leading by example and who reinforce this message with their families. Share these ideas with others, your co-workers, family, friends and neighbours. In starting such a discussion, I predict you will meet other caring, like-minded individuals.

The journey to a complete, global culture change will take time and the efforts of a collective many. The reward of safer lives for our family members is an exceptional motivator.

Dangers of distracted drivers: the science explained

Written by Shawn M. Galloway
Tuesday, 20 July 2010 08:39

Shawn M. Galloway is the president of ProAct Safety, an international safety excellence consulting firm. As an author, speaker, and expert strategist, he has assisted hundreds of organizations to achieve and sustain excellence in safety, culture, and operational performance. Shawn is the host of [COS's Culture Shock](#), a regular video segment on how to achieve safety culture excellence in your organization, and the weekly podcast series, [Safety Culture Excellence](#).

He can be reached at 936-273-8700 or info@ProActSafety.com