Most of the breathless media attention being paid to self-driving, or autonomous vehicles, has focused on the technology involved. And for good reason. The advances in hardware and software are quite astonishing. They’ve given us trucks and cars that can sense impending danger and then do something about it to either completely avoid or greatly mitigate disastrous outcomes. And the technology promises to do even more, much more actually, as it extends in the relatively near future into active control of complex vehicle operations like autonomous steering, navigation and full braking.

Without a doubt, we are looking at what should be a major leap forward in automotive safety. But all that technology will be wasted if we let the gee-whiz factor blind us to the role of the driver as these systems make their way into our cars and trucks.

The term “ghost in the machine” was created by philosophers to describe the fallacy of dividing mind and body, of treating a person’s mind as if it existed separately and independently from their body. Maybe I’m torturing the analogy a bit to apply it to a driver and a self-driving truck, yet somehow it seems to fit. If we try to turn that driver into a ghost inhabiting an independent machine, we will be making a major mistake, one with far more serious implications than a philosophical argument.

I’m not a Luddite. I firmly believe that technology in general has greatly improved our lives. And, specifically, advanced vehicle safety systems have been among the most valuable fruits of technological development. I just believe we shouldn’t use them to discount experience, the skill that comes with that experience, and the up to now uniquely human capacity to anticipate, also based on that experience.

We all accept that to err is human, so no matter how skilled a driver is, there can be a momentary distraction or a brief lapse in judgment that in unlucky moments can lead to serious consequences. That’s where safety technology shines—it never takes its attention off of its job, and it reliably makes the right decision for the immediate conditions far faster than human reaction times. And as sensors continue to improve and onboard processors get more powerful, the range of suitable safety responsibilities for these systems will expand greatly. The end game envisioned by engineers is the elimination of most, if not all, driver-related accidents, which today account for up to 90% of all vehicle incidents.

If the autonomous truck brings us to that point, then why worry about the driver? Won’t they simply become excess baggage, holdovers from an older age?

Today a modern jet can operate on autopilot from departure gate and take-off to final destination, landing and arrival gate. Would you get on a plane that didn’t have a pilot in that seat upfront? Why not?

The answer to that question is the same reason we need to carefully consider the truck driver’s place as we near the self-driving truck. As good as sensors and processors may become, they can’t think, which means they can’t anticipate except in very limited situations. And they certainly can’t improvise or be programmed to deal with all of the billions of possible permutations created by traffic, other drivers and the sheer mass of a truck.

So cheers for the technological marvel of a self-driving truck, but let’s not forget that it’s there to help our drivers be better, not to replace them.