Luddite horses and self-driving cars.

Pawel I. Paton

Calvijn Business School

Author Note

[Include any grant/funding information and a complete correspondence address.]

Abstract

Image a pair of horses in the 19th century talking about the new-fangled machines. One horse worries all these new machines will make horses unnecessary.

The other horse reminds him that everything so far has made their lives easier. That all the newer city jobs are easy, and with the increasing urbanization there will be more jobs for horses than ever. Even if machines take off there will be new jobs for horses we can't imagine, he says.

We, in the twenty-first century know what happened. There are still working horses, of course, but nothing like before. Their population peaked only went down from the 19th century onwards. As machines pushed horses out of the spotlight, artificial intelligence will do the same to humans. Not straight away, and certainly not everywhere, but in fairly large amounts and soon. Just like a car was the beginning of the end for the horse, cars show us how artificial intelligence will push us out of the economy.

# Automobiles

Driverless cars aren’t something for the far future. They’re here, and they work. A self-driven car rode 370 km from Bedfordshire to Sunderland, all without human intervention.[[1]](#footnote-1)

The question we must ask ourselves is not if we’re going to get replaced by self-driving cars, but when will we be replaced by self-driving cars. Self-driving cars don’t need to be perfect, not by a long shot. They just need to be better than humans. Let me remind you that 1.35 million traffic-related deaths happen each year. Computers don’t sleep, don’t slack off, and don’t get tired. But that’s not their only advantage.

# The fundamental problem of traffic

When you’re stuck at an intersection, you observe the fundamental problem of traffic. The light turns, and the first car accelerates, and then the next one, and then the next one, and finally when you can accelerate, the light turns red.

Had all the cars accelerated simultaneously, you would’ve made it through. You just observed the fundamental problem of traffic, humans. Humans can’t coordinate because we are animals with slow reaction times and short attention spans. This dis-coordination limits the number of cars can get through an intersection, and when one backs up to the next, citywide gridlocks happen, taking forever to finally clear up. But even without intersections, there is still traffic. We can observe this happen on a highway. A driver crossing quickly with cars too close is enough to cause a phantom intersection, as the driver behind it brakes, causing the one behind him to break as well. If all of them wouldn’t break, but accelerate, this wouldn’t be a problem.

But humans aren’t perfect. They can also only use rudimentary measures like blinking lights to communicate with each-other. Computers don’t have that problem. They can use

1. Partridge, J. (2020, 5 februari). Nissan Leaf breaks UK record for longest self-driving car journey. The Guardian. https://www.theguardian.com/business/2020/feb/05/nissan-self-driving-car-leaf-longest-journey [↑](#footnote-ref-1)