

Are Cars Becoming Big Brother on Wheels?

Cars today have become sophisticated listening posts on wheels. They can track phone calls and texts, record what radio stations you listen to, monitor the speed at which you drive and your braking actions, and even tell when you are breaking the speed limit, often without your knowledge.

Tens of millions of drivers in the United States are currently being monitored, with that number rising every time a new vehicle is sold or leased. There are 78 million cars on the road with an embedded cyber connection that can be used for monitoring drivers. According to research firm Gartner Inc., 98 percent of new cars sold in the United States and Europe will be connected by 2021.

Since 2014, every new car in the United States comes with an event data recorder (EDR), which records and stores over a dozen data points, including vehicle speed, seat belt use, and braking activation. EDR data are available to any auto maker as well as to insurance companies, which use these stored EDR data to help establish responsibility for an accident or to detect fraud.

EDRs are mandated and regulated by the U.S. government, but other data-gathering software in today's cars is not. Such software underlies numerous sensors, diagnostic systems, in-dash navigation systems, and built-in cellular connections, as well as driver-assistance systems to help drivers park, stay in their lane, avoid rear-ending another car, and steer for short time periods. All of this software keeps track of what drivers are doing. Newer cars may record driver eye movements, the weight of people in the front seats, and whether the driver's hands are on the wheel. Smartphones, whether connected to the car or not, can also track your activities, including any texting while driving. Auto makers are able to mine all this information, as are app developers and companies such as Google or Spotify.



With the exception of medical information, the United States has few regulations governing what data companies can gather and how they can use the data. Companies generally are not required to conceal names or other personal details. In most cases the driver must consent to allowing his or her personal information to be tracked or monitored. Many people unwittingly provide this consent when they check off a box on one of the lengthy service agreement forms required to register a car's in-dash system or navigation app.

Collecting such large amounts of personal data generated by drivers has raised concerns about whether automakers and others are doing enough to protect people's privacy. Drivers may welcome the use of information to relay helpful diagnostic information or updates on nearby traffic jams. But they do not necessarily endorse other uses, and automakers have refrained from commenting on future data collection plans and policies.

Automakers argue that the data are valuable for improving vehicle performance and vehicle safety and soon will be able to reduce traffic accidents and fatalities. Amassing detailed data about human driving behavior is also essential for the development of self-driving cars. But privacy experts believe the practice is dangerous. With enough data about driver behavior, individual profiles as unique as fingerprints could be developed. Trips to businesses reveal buying habits and relationships that could be valuable to corporations, government agencies, or law enforcement. For example, frequent visits to a liquor store or mental health clinic could reveal information about someone's drinking habits or health problems. People obviously would not want such confidential data shared with others.

Sources: Peter Holley, "Big Brother on Wheels: Why Your Car Company May Know More About You Than Your Spouse," *Washington Post*, January 15, 2018; Christina Rogers, "What Your Car Knows about You," *Wall Street Journal*, August 18, 2018; John R. Quain, "Cars Suck Up Data About You. Where Does It All Go?" *New York Times*, July 27, 2017; and Russ Heaps, "Data Collection for Self-Driving Cars Could Be Risking Your Privacy," *Autotrader*, September 2016.



The challenges that connected vehicles and big data pose to privacy, described in the chapter-opening case, show that technology can be a double-edged sword. It can be the source of many benefits, including the capability to make driving safer and more efficient. At the same time, digital technology creates new opportunities for invading privacy and using information that could cause harm.

The chapter-opening diagram calls attention to important points this case and this chapter raise. Developments in data management technology, the Internet of Things (IoT), and analytics have created opportunities for organizations to use big data to improve operations and decision making. Big data analytics are now being applied to all the data generated by motor vehicles, especially those with Internet connections. The auto makers and other organizations described here are benefiting from using big data to monitor vehicle performance and driver behavior and to provide drivers with helpful tools for driving safely and caring for their cars. However, the use of big data from motor vehicles is also taking benefits away from individuals. Individuals might be subject to job discrimination or higher insurance rates because organizations have new tools to assemble and analyze huge quantities of data about their driving behavior. There are very few privacy protections for all the personal data gathered from car driving. New privacy protection laws and policies need to be developed to keep up with the technologies for assembling and analyzing big data.

This case illustrates an ethical dilemma because it shows two sets of interests at work, the interests of organizations that have raised profits or even helped many people with the data generated by connected vehicles and those who fervently believe that businesses and public organizations should not use big data analysis to invade privacy or harm individuals. As a manager, you will need to be sensitive to both the positive and negative impacts of information systems for your firm, employees, and customers. You will need to learn how to resolve ethical dilemmas involving information systems.

Here are some questions to think about: Does analyzing big data from motor vehicles create an ethical dilemma? Why or why not? Should there be new privacy laws to protect personal data

