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Generation forward and tomorrow's cars

By Jonathan Michaels

There once existed a time when automobiles were the embodiment of society's love of freedom. Cars represented more than ordinary utility. For many, they were the fundamental expression of personal choice, where personality reveled in the freedom to pick up and go. Few can forget James Dean's love of Porsches or Elvis Presley's collection of Cadillacs, making the cars nearly as famous as the celebrities who drove them.

We used to be a society where little boys day-dreamed about what kind of car they wanted to own, igniting neighborhood arguments about which car was the coolest. At the time, budding teenagers waited with angst for the day they could get their driver's license, transgressing through their first true right of passage.

But those days have given way to a new generation of drivers who are increasingly indifferent about what the automobile has to offer. With instant access to so much data, gaming and communication, teenagers have found freedom in their smartphones, leaving little room for excitement about daily transportation.

The automobile's place in society has dramatically changed. To be sure, the automobile is still a necessity and has many passionate enthusiasts, but the attitude toward cars has experienced a fundamental shift. Schoolyard debates over whose car is fastest have given way to exchanges over whose phone is coolest. And gone are the days when the family car was ritualistically handed down to the first born — no one keeps a car for that long anymore. Now, cars are becoming short-term holds, thanks in large part to the modern-day automobile lease, with cars increasingly being kept for only two or three years. With 28 percent of all new cars being leased, frictionless car ownership has never been higher.

Confounding the issue is the proliferation of a new breed of cars that converse in a language many have never considered. Electric, hybrid and hydrogen technology have gained on market



The New York Times

Google's self-driving car in Mountain View

share once controlled exclusively by the internal combustion engine.

All of this raises the question of what is the future of the automobile? Many pundits opine that autonomous vehicles are the wave of the future. But considering the state of the technology, the regulatory framework that would need to be erected, and the dotted network of self-driving and consumer-driven vehicles, it may be optimistic to believe that autonomous vehicles are right around the corner. It is also worthwhile to note that manufacturers have been talking about self-driving cars since General Motors first introduced the concept at the 1939 World's Fair, with the conclusion always being the same: They're about 20 years out.

The car of our future is much more likely to be the "connected car" — a natural and fluid extension of the personal data devices to which we've become accustomed. Apple chief executive Tim Cook recently noted that the automotive industry is in for a "massive change," and he could not have been more right. The industry is at an inflection point, where discussions of horsepower are being replaced with discussions of connectivity.

Apple is currently launching CarPlay, a system that connects iPhones to car interfaces, but expect this to be the beginning of the conversation. As consumers experience seamless transition between their computers, their phones and their televisions with more and more frequency, we should expect manufacturers to cater to this demand in a way that Adam Smith never could have imagined when he advanced the theory of the invisible hand.

In truth, improvements in technology have diminished the relative benefits of car ownership. We have seen this with the firestorm Uber has created, as consumers clamor for rideshare benefits, maximizing the use of vehicles in opera-

tion, while at the same time reducing the need for individual car ownership. We are advancing toward a world where car ownership is a choice — not a requirement.

Manufacturers can only combat this by introducing cars that are as advanced in terms of their connectivity as their drivability. Syncing your phone with your car will become passé, as cars begin to offer a host of new features such as real-time vehicle tracking, active window displays, remote vehicle shutdown and active health monitoring.

Consider a car that gives you the ability to track your teenager's whereabouts at all times, or a car that can be shutdown in the event of a theft or a high speed police pursuit. Or consider a vehicle that can monitor your health and call the paramedics in the event of a heart attack or seizure, while at the same time slowing you to a stop. Imagine the benefits for fatigued driving alone. The National Sleep Foundation reports that 4 percent of all drivers have had an accident because of fatigue, resulting in 1,550 annual deaths and \$12.5 billion in monetary losses.

In a joint study conducted by the University of Michigan and the U.S. Department of Transportation, vehicle-to-vehicle communications systems are being tested. These "V2V" systems emit a short-range safety signal 10 times per second, and detect signals from other vehicles to determine when a potential accident is imminent. Federal transportation officials estimate that V2V technology could prevent 76 percent of the crashes on U.S. roads, saving some 25,000 lives per year.

As manufacturers begin to roll out this new breed of automobiles, enthusiasm will return to the marketplace for this new embodiment of freedom. Luxury, fuel economy, safety and performance by themselves are no longer enough. Consumers have come to expect that of the modern day automobile — a statement in itself about how well manufacturers have addressed consumer demand. But the game has now changed, with the market shifting toward keeping the consumer connected with all that is familiar.

Privacy rights over user data will undoubtedly be a concern, as automakers and telecommunication providers will have access to an unprecedented amount of valuable information. In this regard, federal legislation is certain to become hotly debated, with consumers ultimately winning out — as the connected car will change the way we approach daily life in the years to come.



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