Gearing towards an advanced future

Do you want to drive a spaceship? A self-moving, futuristic vehicle that travels so smoothly it barely produces a noise. This is possible with the new feature of today's modern cars, the auto-pilot system that allows drivers to drive with assistance, free of the responsibility regarding safe driving. The introduction of the autonomous vehicle technology can be beneficial by decreasing accidents, cost and time efficiency and lastly, give aid to specific individuals. However, this is not without its challenges. This include requirement of large funding, a decrease in the employment industry, and susceptibility to technological issues and road conditions. Ultimately, though there may be advantages to having these feature, it may still be overwhelmed by its flaws and thus, may not be ready for the population.

Compared to humans, autopilot vehicles as computers are capable of focusing on programmed tasks without the burden of distractions, either environment or physical, thus, decreasing accidents. Often times, accidents are caused by human failures, whether intentional or not. Intentional mistakes include drunk driving or texting. In addition, some individuals may push through driving despite being tired. On the other hand, computers are incapable of making these mistakes, decreasing about "81% of car crashes [that are due to] human errors," (Johnson, 2014). They are designed to have a one-track focus and can run continuously without fatigue.

Secondly, self-driving cars can be cost and time efficient. Similar to the cruising feature of today's vehicle, an autopilot can similarly run on the same speed without stepping on gas pedal constantly, saving people gas money. Also, based on the idea that automated vehicles can decrease car accidents, this would indirectly lower medical and insurance costs. For example, in 2016, there was 34,439 car crashes in a year in the US. If society were to use automated cars and about 10,000 deaths occurred, this would still prevent 20,000 accidents (Ozimek, 2014), a big difference in which the costs can otherwise be placed on infrastructures or increase employment rate. Another way automated cars can be beneficial is the time allowance it gives people. An example would be letting drivers socialize with their friends, free of the responsibility for their safety. People can also use this time catch up on work, school or news. It may also neutralize the bad habits of human beings such as drunk driving, speeding or even using phones while driving.

Thirdly, an automated system will be a great source of transportation for specific individuals, specifically, those with disabilities or are elderly. These are people who, crippled by physical or mental limitations, are often dependent on the government to provide the transportation they need to get around. Revolutionizing autonomous vehicles will surely allow these individuals to rid themselves of any future dilemma in traveling. Another group this could be used for our children. Children may be transported to their school or to their parents without the physical presence of their parents; thus, removing any predicaments of working parents. In addition, this may be of real use to travelers in long road trips, who can be obstructed by drowsiness throughout the trip.

Though the advantages of an autonomous vehicle seem insurmountable, there are still roadblocks to their production, challenges that need to look into with caution and overcome.

Producing self-driving cars, though possibly an ally to the society, it may also be an adversary to its company. The cost of producing a regular car costs between $35,000 to $78,000 (Bakewell & Kharif, 2018) while the creating “the first generation of truly autonomous cars could cost $300,000 to $400,000 a piece,” (Edelstein, 2017). To truly ensure a reliable and safe independent automobile, companies may have to focus on optimizing the functions of a self-driving. This may include automatic collision braking, automatic parking, or sign recognition. Hence, to support their production, the selling price would also increase, making a self-driving car accessible only to those who can afford.

Besides the funding costs, there may also be a detriment to the employment industry. Utilizing autopilot cars would result in substantial job losses. This ultimately affects drivers who depend on the transportation industry as their main source of income, especially since it is a “significant source of work for those with lower levels of education,” (Simpson, 2017). Based on a Goldman Sachs Economic Research, truck drivers, compared to others, will be greatly impacted if the autonomous vehicles were to populate the countries (Balakrishnan, 2017). Companies, like Uber, are now beginning to employ autonomous vehicles, launching Uber Freight (Balakrishnan, 2017). The possible outcome of generating these vehicles requires changes in policies or thought in order to counteract the possibility of a job loss.

Another important thing to keep in mind is the security issues high-tech vehicles bring with them. As an advanced technology, they are susceptible to electronic complication such as hackers. “For cars to be able to self-drive, they have to be able to [...] recognize each other [...] and exchange information,” (Hern, 2014). Exchanging information can help self-driving cars communicate without interference from passengers but it can also be used to tap into others’ security information or privacy. Even a regular vehicle was shown to vulnerable to hacking attacks, as demonstrated “on a Ford SUV and Toyota Prius which enabled them to slam on the brakes, jerk the steering wheel or accelerated the car using a laptop,” (Hern, 2014). This illustrates a single but important risk that society must think about.

Furthermore, the electronic feature of the car is its high dependency on the road conditions. Without the watchful eye of a driver, the autonomous vehicle might face challenges in weather changes. Icy roads decreased visibility due to fog, rain or snow, or the lack of road surface marking all forge a roadblock to this advancing technology. Likewise, it can also be disturbed by road conditions such as potholes or reckless pedestrians (Dutton, 2014). Most importantly, opponents of generating self-driving cars have begun to increase, voicing concerns and questions on its security. In May 2016, a car crash occurred as a self-driving Tesla car was unable to detect a truck that came onto its path due to the “brightly lit sky,” (Thompson, 2017).

An autonomous vehicle can provide numerous benefits by decreasing risks and gas costs, increase time efficiency and give help to unfit drivers. Still, there are drawbacks to the industry, the economy, and the car itself. It is in its premature stages and its imperfection, specifically where a life is at risk, results in its uncountable to be introduced to the society.