Integrated Summary on Self-Driving Cars

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Automobiles are everywhere. They have become essential part of human society. Currently, corporations are doing research on developing self-driving cars. In fact, self-driving technology is already available for some cars. Studies say that commercialization of self-driving cars will reduce traffic accidents. However, self-driving cars must overcome many problems including decision making before they can go on streets. Some of these decisions involve ethical dilemmas which makes them hard to give specific answers. So, solutions for these problems must be agreed and accepted among people before they can be programmed into self-driving cars.

Corporations are working hard to make self-driving cars, because they have many advantages over standard human driven cars. LaFrance (2016) think that self-driving cars can reduce significant number of death from car accidents. Also, according to Shariff, Rahwan, and Bonnefon (2016), self-driving cars will increase transportation efficiency, public safety, and personal well-beings. Bailey (2014) explains that these predictions are likely to be true because self-driving cars are much safer than cars controlled by unfocused and mistakable human drivers. He also mentions that the self-driving cars will increase the mobility for minors that can’t drive. In fact, self-driving cars have financial advantage by decreasing fuel usage and parking space, which are good for environment, too (Bailey, 2014). Most importantly, self-driving cars will make more pragmatic and ethical decision than humans because they are preprogrammed (Bailey, 2014).

However, development of self-driving cars is facing various problems. There is no system that is perfectly safe, so there is responsibility problem in case of accidents (Bailey, 2014). Another problem is technological difficulty, like failing to detect small objects which can lead to other bigger problems (Lin, 2016). Furthermore, LaFrance (2016) mentions about the trust and communication problems with other drivers and pedestrians. He also refers about unpredictable actions of people that are likely to cause troubles. Out of all the difficulty that self-driving cars are facing, solving issue of ethical and practical decision making problem is the biggest challenge. Although Shariff, Rahwan, and Bonnefon (2016) mention that development to eliminate accidents, rather than focusing on accidents that are rare, should be the first priority, they believe self-driving cars must overcome ethical dilemmas to gain trust by people. So, serious debates are going on about what to sacrifice, in case accidents are unavoidable and self-driving must decide on targets.

There are diverse views and solutions for ethical dilemmas self-driving cars are facing. According to Lin (2015), the Institute of Electrical and Electronics Engineers states not to discriminate people on any factors. So, some of the solution he suggested, in case system have to choose between two victims, are to choose randomly or refuse to make decision and hit both. But these solutions don’t seem right since there are some possible reasons to choose one over the other and choosing both is even worse. There are also solutions to choose cheaper target, in case targets are not living things, to minimize the cost loss (Lin, 2015). Lin (2015) also mentions one solution that focusses on passengers’ safety, over environmental factors, and choose to collide with lightest target possible. In the situation where many victims are expected, self-driving cars must decide whether to self-sacrifice or self-protect (Lin, 2015; Shariff, Rahwan, and Bonnefon, 2016). Choosing path to self-sacrifice and minimizing the overall casualties seems reasonable and also ethically make sense (Shariff, Rahwan, and Bonnefon, 2016). However, even people who believe that this is better way than self-protecting will hesitate to ride when they are part of the passenger and become sacrificed if accidents happen (Shariff, Rahwan, and Bonnefon, 2016). Also, because drivers making their own decision to self-sacrifice is very different from systems doing it for them, there must be agreement by the passengers (Lin, 2015).

Development of self-driving cars will enhance human society for sure. It will decrease overall losses by reducing accidents and increase benefit with more efficiency. Self-driving system will always be in progress. It will soon be able to overcome technological difficulties and physical problems. However, it will never become perfect. New problems will arise as environment change and some of the accidents are just physically unavoidable. Due to these rare cases, people must choose how the system will be preprogrammed to react. People have been debating on this utilitarian ethical dilemma for long period of time. However, all solutions seem reasonable but also somewhat undesirable. As system for self-driving cars become ready to go, after choosing some solutions to this dilemma, and as amount of usage of self-driving cars increase, accidents will also increase. And as accident increase, new problems will constantly rise to issue with no specific answers at the end. However, these process of new problems arising and debating for solutions are what make systems and humans improve and step forward for the future.