What are the ethical concerns with autonomous vehicles?

A major legal question with autonomous vehicles is the question of liability: if the autonomous vehicle causes a crash, who should be considered the liable party- the driver or the system controlling the car? Glass et. al (2016) raises the importance of the question of whether an autonomous system can be likened to an "Intelligent Agent"- generally an emotional being, believing in law, happiness and order that can record its past and accept and has a conscience (p. 416).

While Kantianism, Virtue Ethics, and Social Contract Theory have obvious applications with human beings, it is increasingly difficult to place the same judgment on autonomous systems. Glass et. al (2016) write that systems lack an ability to reflect upon mistakes, and thus, a conscience and free will (p. 420) . As they liken to those with mental illnesses, "It would make little sense to attribute culpability to a being that is incapable of recognizing its own past and evaluating its past actions in accordance with a moral reference system (p. 422)

Then, the responsibility would be placed upon the human operator. Liability and blame can be placed easily upon the driver in cases of obvious negligence. However, it can be much more difficult when the driver and system are working together yet still end up in a poor outcome. Additionally, Glass (2016) cites issues where a computer system might override poor decision making when driving. Who would be liable if the car chose the less-damaging outcome, but still ended up hurting or endangering people's lives?

An additional concern is the ethical question of data tracking within the autonomous cars themselves (relating more to the Chinese self-driving model). This may be country-by-country; as Hathaway and Lozanda (2020) discuss, China's creation of autonomous driving vehicles is running independent of western development, and may include "pervasive data collection", where data is sent to monitoring, municipal hubs that control things like traffic flow, and are reporting locations and information to the central government, in what is dubbed an "infrastructure-first" development of autonomous vehicles.

Gless, S., Silverman, E., & Weigend, T. (2016). IF ROBOTS CAUSE HARM, WHO IS TO BLAME? SELF-DRIVING CARS AND CRIMINAL LIABILITY. *New Criminal Law Review: An International and Interdisciplinary Journal, 19*(3), 412-436. doi:10.2307/26417695

Hathaway, D., & Lozada, P. (2020). *China's Uneven High-Tech Drive: Implications for the United States* (pp. 33-36, Rep.) (Kennedy S., Ed.). Center for Strategic and International Studies (CSIS). doi:10.2307/resrep22605.12

Is it morally wrong to try to construct a computer conscious of its own existence? Justify your answer.

Consciousness seems like something very difficult to define, elusive and subjective. In this case, we are very specifically thinking in-terms of the aspect of self-consciousness: as an additional layer of consciousness over awareness, "as those that are not only aware but also aware that they are aware" (1).

With animals, we test self-consciousness with the "mirror test", looking to see whether an animal understands its existence through use of a mirror. Many animals seem to pass this test, understanding that they are . However, that does not mean (or not mean) that these animals have the capacity for equivalent thought to human beings, additional measures of consciousness we might consider unique to humans, an understanding of mortality, etc. Children who are less than 2 can fail these consciousness tests, yet I would argue many people see humans as conscious beings from birth. Just like an animal, a computer consciousness would be different from a human's and would need to be treated differently from a human's. Still, we have bred livestock and domesticated animals for many generations, and they can be considered self-conscious. If acts like those are not unethical, I don't think we can consider creating a self-conscious machine to be necessarily immoral, either.

Yet, while I am not sure as to whether it is explicitly immoral, just as we ascribe some fair and ethical treatments to animals and non-human things along ethical lines, I believe that we could only justify creation of computer consciousness so long as we are willing to grant specific and relevant protections to these systems in terms of fair and equal treatment as well. Vaidya (3) discusses moral questions whether or not a computer would have a moral standing on their own. I think, in terms of the social contract theory and other ethical systems, if we could ascribe positive moral values that the artificial consciousness had to abide by, it wouldn't be immoral to create these things because there was an agreement and an exchange to fulfill some levels of these ethical contracts/theories. If we create these systems in the pure intent to treat them unethically despite an agreed-upon level of consciousness, then it would be immoral.

1. https://plato.stanford.edu/entries/consciousness/
2. https://www.sciencedaily.com/terms/mirror_test.htm#:~:text=The%20mirror%20test%20is%20a,as%20an%20image%20of%20itself.
3. https://doi.org/10.3389/fpsyg.2019.01535