1)

       The Social Dilemma argues that social media platforms are designed to manipulating, capturing our attention. The longer we interact with it, the more data we produce, the more accurate a prediction of our behaviors can be established within the system. In *The Social Dilemma,* technological determinism is driving the narrative, it assumes that a society's technology determines the development of its social structure and cultural values. The Facebook Like button, the advent of social media commenting drives anxiety, depression, and self-harm in teenagers, because it so easily allows us to compare ourselves to one another, holding each other at unhealthy standards and expectations. The algorithmic filtering of information made people more susceptible to fake news and increased political polarization by only presenting self-reinforcing information. Our thoughts and actions are shaped by persuasive design and constantly personalized nudges. Instead of making the world better, technology is causing negative things. It's necessary to consider both the positive and negative impacts social media has imposed on our daily life, the techno-determinism plays an essential role in shaping how we see technology and its potential effects. But such a deterministic narrative also puts pressure on many problems that were rooted in society's fundamental social and economic conditions.

       The compulsive use can be accounted for by the social construction of technology in my opinion. The theory says that technology does not determine human action (aka. the compulsive uses) but rather human action shapes technology, the ways technology is used cannot be understood without understanding how technology is embedded in its social context. We need to recognize that social media is the product of public desire and needs; as users, as much as the technology itself, we share responsibility for the issues that rage online today. It is the coming together of users, designers, interfaces, and algorithms in specific social settings that co-produce the activity of compulsive use. "Technology is thus shaped not only by societal structures and power relations but also by the ingenuity and emotional commitment of individuals." *(Bijker, Weibe (1995). Toward a Theory of Sociotechnical Change. pg 4)* With this in mind, we must question how useful it is to think about social media in terms of manipulation and control on its own. Perhaps a move away from technological deterministic thinking would be beneficial. Instead of blaming filtering, commenting, information bubbles, maybe we need to think about the unmet human desires, such as isolation, social beauty standards, consumerism, etc. Therefore, neither individuals nor the design of platforms can be the single cause of social media's psychological manipulations and actions.

       I don't think addictive design is a new phenomenon that has not happened to the old technology. It's more of a by-product that had a disproportion of negative impacts on user behaviors. Social media and the internet were designed "for human enhancement, providing comfort or efficiency"; in fact, studies have shown that social media can help develop social skills and provide generous support, especially for those who experience exclusion. It's important to remember that an artifact is fluid and will be interpreted quite differently by various

social groups and change over time. The 'addictive' design is interpreted as a collective social behavior especially within US teens, because of their psychological state and specific user behaviors that made them more susceptible to these negative impacts. "The 'working' and 'nonworking' of an artifact are socially constructed assessments, rather than intrinsic properties of the artifact" *(Wiebe E. Bijker, Of Bicycles, Bakelites, and Bulbs: Toward a Theory of Sociotechnical Change, pg 75)* In the creation of TV network and the building of high-ways, Winner calls for careful attention to the rules, roles, relationships of politics, therefore, shaping social media through the lens of the "addiction narrative" holds the designer and system accountable but not taking the users' relations into consideration. For us to engage with technologies in ways that will advance, rather than hinder, it is essential not to accept the incentive to join the forces of praising its "progress" or denunciate its "impairment" at face value. Instead of insisting on holding someone accountable and regulating a system that affects people, we have to see technology as a relation. The use of social media has not reached its closure, we still have opportunities to decides how we progress and develop these technologies in harnessing its "addictive" impacts on certain user groups.

2)

Self-driving systems aim at replacing human intervention on the road that the algorithm is sophisticated enough to be reliable to avoid accidents. However, the self-trained systems have difficulty engaging with the real world's disorders. Since the decision-making in driving in accident-prone scenarios is more complicated than the industry wants to admit. Nearly every car accident involves some unforeseen circumstance. And there's no way we can have a training set big enough to capture all possible cases, let alone with the ethical debate regarding where to obtain these data sources in the first place. Therefore, without the power to generalize, self-driving cars will have to confront each of these scenarios as if for the first time. *(Brandom, Self-driving are headed to an AI roadblock, 2018)* Aside from the technology, Ann Miura-Ko, thinks part of the problem is high expectations for autonomous vehicles themselves, classifying anything less than full autonomy as a failure.

I think Ng's suggestion that we must adjust to self-driving cars by adopting law and incorporating government enforcement is a process of taking active control in adapting to the technology. Winner's theory of technological politics argues that technologies embody politics through social conditions or power structures, where "what matters is not the technology itself, but the social or economic system in which it is embedded." *(Winner, Landon (1980). Do Artifacts Have Politics? pg 122)* From this, I would think Winner would agree that for self-driving cars to progress, we need to adopt policies and incorporating government enforcement while taking social context into account. Even after an organization has decided to institute an autonomous system, controversies can still arise with regard to the public policies, program accessibility, and other specific features that the system will include. Along with that, important controversies can remain with respect to the design of the road these self-driving cars ride on. On the other hand, Fischer's user heuristic approach would align with Ng's suggestions

as well. Fischer feels modernity assumes that economic, social, and psychological changes coincide. He also views hard determinists, those who believe that technology evolves independently from social influence, as too mechanical. "The central theme states that the consumer ultimately decides which uses of technology will predominate. That social and cultural conditions largely determine people's choices." *(Fischer, Claude (1992). America Calling, pg 17)* I think we must have corresponding facilitation and education about such topics, so people can choose within the constraints imposed by the distribution system of the technology. Therefore, only having the technology is not enough for successful adoption. The supporting services must be provided in the community.

The critical thing to realize about adopting new technology is that it often goes far beyond pragmatic concerns about what medium would be best or most cost-effective for a given job, such as the autonomous commute style. It's a choice of "forms of life" since the tools embody particular possibilities more than others. The autonomous process can embody specific social arrangements and continuously reinforce those arrangements through the possibilities for action that they imply. Do people really want to give up their road control? To what extent of control is people comfortable delegate to the self-driving systems? Consciously or not, deliberately or inadvertently, it's the media, the customers, the agency of investors, and the government that collaboratively decides on how innovation develop. Other than the technology innovation, we also need to consider the social context, the distributions, and other facilitations that enable the successful adoption of autonomous systems. As users, we want to know how the decision is being made (transparency of the algorithm) while dealing with road emergencies, we also want to know who is held accountable for these decisions. Are we taking into account all user groups, includes all the edge cases, and hearing diverse user stories? Is there deprivation when somebody's lacks of knowledge or social status that might be excluded from these shared conversations? For autonomous vehicles, we are fortunate to be at an early enough stage that such a choice is available. These conversations have to happen before we go ahead and tackle the algorithmic training. Additional to the public consense, we also need a sophisticated legal framework, social supports, road assistance, distributions of resources to push the autonomous technology to progress beyond its roadblocks.

Lastly, "technologies can alter the trade-offs among people's goals and yield paradoxical results or even no evident effects at all."*(Fischer, Claude (1992). America Calling, pg. 18)* One example being the incorporation of automobiles, it may not have led to a shorter commute as people's expected but to more spacious housing and living conditions. People's current expectation and hype about autonomous driving might be limited and puts pressure on the execution of the system design, if we lift the burden on achieving the general autonomous automobile, self-driving facilitation is useful in communities that have trouble focusing on the road (ADHD drivers) and disabled community.

Citations:

Fischer, Claude (1992). *America Calling: a social history of the telephone to 1940*

Winner, Landon (1980). Do Artifacts Have Politics?

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