Peter Jackson Link, III

Professor Henderson

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     I believe the greatest ethical issue I will face in my field of web application development is unnecessary collection and use of user data. In a survey conducted by DuckDuckGo, it was found that 69.55% of people in the US strongly or somewhat favor privacy amendments in their state constitutions ("Call for Change"). Additionally, the survey found that 64.21% of people in the US strongly or somewhat favor adding those amendments to the federal constitution ("Call for Change"). These are not statistics for the number of people who care about digital privacy; these statistics show the number of people who care enough to consider amending state or federal constitutions to fix the issue. With this in mind, it is clear that this is a present issue on the minds of the public. An even greater plurality in the survey supports legislation protecting user data from misuse, both from corporate and government interests.

     Earlier research funded by the same technology company showed that the popular Google search engine employed user data to create a "filter bubble" that skewed search results based on user interests, being able to do so even when logged out or using private browsing ("Measuring the Filter Bubble"). In that article's background, they note that earlier research showed that this "filter bubble" may have helped influence the 2012 presidential election ("Measuring the Filter Bubble"). With this control, advertisers are able to "target ads based on sensitive information, discriminate against users, or even manipulate users' purchasing intentions" (Melicher). This

ability to automate selective manipulation has a great potential for misuse. All of this data shows that the misuse of user data is a present issue that must be addressed in the technology industry.

This issue is larger than just internet tracker networks. Sleep tracking applications have been said to misuse sleep data by presenting irrelevant statistics as important (Müller). Specifically, they present data that is only important for those struggling with insomnia as if it was an important sleep metric for normal people (Müller). Misusing this user data can cause users to obsess over numbers that do not lead to actual health benefits (Müller). Due to the widespread use and abuse of user information, I conclude that this is the most pressing issue of my industry.

To handle these dilemmas, a developer must be careful to architect solutions that require the bare minimum of data, and only use said data for applications that directly benefit the user. A program should be a tool for the user. If a feature does not help the user, it is a very good candidate for the chopping block. It is also important to explain these ethical issues to those in management so that they are aware of the impacts that this sort of technology can have. If I get to become an entrepreneur or gain a more managerial role, it will be important to educate my underlings about the ethics of utilizing user data. I feel that I am personally quite prepared to defend my more minimalist approach to user data collection. Besides expressing my arguments here, I can also go into more depth with arguments from philosophy, history, political science, and theology. Thus, being prepared to communicate the ethics of data collection is necessary and proper for working in internet software development.

This concern parallels Section 1.2 of the ACM Code of ethics, "Avoid harm" (Association for Computing Machinery). This piece of the ACM code of ethics is consistent with

the latter part of the Ten Commandments, "Honor your father and your mother so that you may have a long life in the land that the LORD your God is giving you. Do not murder. Do not commit adultery. Do not steal. Do not give false testimony against your neighbor. Do not covet your neighbor's house. Do not covet your neighbor's wife, his male or female servant, his ox or donkey, or anything that belongs to your neighbor" (Exodus 20:12-17 CSB). All of these commandments are about how to take care of others. This stems from the fact that all people are created in the image of God and are thus valuable to him (Genesis 1). Thus, the "Avoid harm" principle of the ACM code of ethics is consistent with scriptural principles.

"ACM Code of Ethics and Professional Conduct." ACM Ethics, Association for Computing Machinery, https://ethics.acm.org/.

"Call for Change: People Want Stronger Privacy Laws." Spread Privacy, DuckDuckGo, 18 June 2019, https://spreadprivacy.com/privacy-legislation-survey/.

"Measuring the Filter Bubble: How Google Is Influencing What You Click." Spread Privacy, DuckDuckGo, 4 Dec 2018, https://spreadprivacy.com/google-filter-bubble-study/.

Melicher, William, et al. "(Do Not) Track Me Sometimes: Users' Contextual Preferences for Web Tracking." Proceedings on Privacy Enhancing Technologies, vol. 2016, no. 2, 2016, pp. 135–54, https://doi.org/10.1515/popets-2016-0009.

Müller, Regina, et al. "Ethics of Sleep Tracking: Techno-Ethical Particularities of Consumer-Led Sleep-Tracking with a Focus on Medicalization, Vulnerability, and Relationality." Ethics and Information Technology, vol. 25, no. 1, 2023, p. 4–, https://doi.org/10.1007/s10676-023-09677-y.