The Facebook-Cambridge Analytica Scandal: An Analysis of Care

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-related Assignments

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Introduction and Background

In 2018, Christopher Wylie, former research director at political consulting firm Cambridge Analytica, shocked the world by releasing documents to British newspaper the Observer which revealed that millions of Facebook profiles had been unethically harvested by his company in a worldwide violation of user privacy. In a statement to the Observer, Wylie admitted, "We exploited Facebook to harvest millions of people's profiles. And built models to exploit what we knew about them and target their inner demons" (Cadwalladr & Graham-Harrison, 2018). The data was harvested through a third-party application called "this is your digital life," developed by University of Cambridge academic Aleksandr Kogan. Kogan's application paid Facebook users to complete a survey which would be used for "academic use." Kogan, however, had an agreement to sell the data he collected to Cambridge Analytica, whose CEO at the time was Alexander Nix (Cadwalladr & Graham-Harrison, 2018). Nix and his firm then used the harvested data to provide political messages to Facebook users through microtargeted advertisements. These microtargeted advertisements were problematic because Nix's intentions were to influence presidential elections. Specifically, the political messages were meant to sway voters in the 2016 U.S. presidential election. Nix was even caught claiming credit for President Donald J. Trump's election, saying "We did all the research, all the data, all the analytics, all the targeting. We ran all the digital campaign, the television campaign and our data informed all the strategy" (McKee, 2018). Nix directly admitted to using the harvested data to micro target Facebook users while also attesting that his firm's work did influence the election results.

This incident, which later became known as the Facebook-Cambridge Analytica scandal, has raised concerns about user privacy violations in an age where technology platforms have

access to loads of personal information. In this paper, I will investigate the responsibilities of developers and technology platforms in handling user data through an examination of the scandal. Specifically, I will analyze the roles that Facebook, Aleksandr Kogan, and Alexander Nix played through the lens of duty ethics and ethics of care. My analysis will show that all three parties have a duty of care towards their users in handling their personal data and that each individual party failed in that duty. Furthermore, my analysis will show that failures in duties of care in the digital world can result in violations of user privacy.

Analysis

I. Facebook

Technology companies handle vast amounts of personal data and therefore possess a duty of care towards the users whose data they are handling. Facebook, one of the largest technology platforms in the world that handles the personal data of hundreds of millions of users, is no exception to this duty. Duty of care, in the context of technology platforms, refers to the responsibility to protect users from harm that can result from usage, exposure, or exploitation of their personal data. In the Facebook-Cambridge Analytica scandal, Facebook failed in their duty of care towards their users. In this section, I will examine how Facebook failed to provide a protective technology platform, adequate user consent mechanisms, and transparency to its users.

Facebook's responsibility to protect users from harm includes a duty to develop technology that protects user data and does not leave user data vulnerable. However, an analysis of an API version that Facebook released in 2010 demonstrates that Facebook failed in this duty. In 2010, Facebook updated its platform by adding Graph API v.1.0, an open graph tool. Through this API, third-party developers and applications could retrieve the personal data of all of a user's

Facebook “friends” by gaining consent from an individual user (Mitra, 2018). This open graph API exploit was how Kogan was able to harvest the data of so many Facebook profiles through his application. While this may not be a violation of privacy to the individual user, this is a clear violation of privacy to all of the user’s connections because the user’s connections did not give consent to the third-party application for their data to be accessed and used. Facebook failed to properly manage access levels in this API release. In other words, the platform failed to control who has access to what and what can be done with the data. Proper access level management is necessary for any technology platform to protect user data. This flaw in the technology that Facebook released left users and their data vulnerable. Since Facebook did not have control over who could access their data, Facebook users were not protected from harm that could result from their data. Overall, through the release of their open graph API, Facebook failed to fulfill their duty of care towards their users.

Another responsibility that technology companies possess is the provision of adequate user consent mechanisms. This must be accomplished in order to respect each user’s autonomy, a key component in the fulfillment of the duty of care. Facebook’s main failure in providing adequate user consent mechanisms was allowing third-party developers and applications to access the personal data of the connections of an individual Facebook user. The consent of a Facebook user who is a Facebook friend of another user is not adequate consent to access personal data. Aleksandr Kogan, the developer of the “this is your digital life” application, claimed in a statement to CNBC: “Each user who authorized the app was presented with both a list of exact data we would be collecting, and also a Terms of Service detailing the commercial nature of the project and the rights they gave us as far as the data” (Aiello, 2018). If Kogan’s third-party application provided adequate user consent mechanisms, then Facebook’s platform

was inherently flawed in its ability to protect users. The API functionality was too easy to exploit and left users vulnerable, as shown by the fact that millions of users had their data harvested without their consent.

Finally, as a part of its duty of care towards users, Facebook has a responsibility of transparency. Specifically, in the aftermath of the scandal, Facebook had a responsibility to inform its users of the outcomes of the scandal, what caused those outcomes, and actions being taken. Five days after Wylie blew the whistle on Cambridge Analytica, Facebook CEO Mark Zuckerberg released a statement on his own platform. Part of his statement read:

> "In 2013, a Cambridge University researcher named Aleksandr Kogan created a personality quiz app. It was installed by around 300,000 people who shared their data as well as some of their friends' data. Given the way our platform worked at the time this meant Kogan was able to access tens of millions of their friends' data." (Zuckerberg, 2018, p. 1)

Zuckerberg simply states that Kogan was able to harvest data because of "the way our platform worked." He fails to inform his users of the cause of the incident, namely the inherent flaw in his platform which allowed for the harvesting of so much data. As a part of the duty of care, it is necessary to inform users of this cause so that users can be able to make informed choices on what steps they can take to protect their own data. Furthermore, if the cause is not revealed, users will be put in a place of mistrust towards the company. While Zuckerberg did provide measures that Facebook will take to protect privacy in the future in his post, analysis of Facebook actions one year after the scandal reveals that no actions were taken on these promised measures. According to Wong (2019), Facebook had not yet pursued a forensic audit of Cambridge Analytica and had not investigated "all apps that had access to large amounts of information" as

of 2019. Also, Zuckerberg had promised a "clear history" tool for Facebook users, but the tool was not available and had no timeline for release in 2019. Facebook had also not provided any updates on these promises as of 2019. These failures to inform users of the cause of the scandal and updates on actions demonstrate a lack of transparency by Facebook in the aftermath of the scandal. Technology companies have a responsibility to reveal such information when their users and their personal data are left vulnerable.

Overall, Facebook, one of the major players in the Facebook-Cambridge Analytica scandal, failed in its duty of care towards Facebook users and should be held morally responsible for the breach of data privacy that occurred. Facebook failed in its responsibilities of providing a protective platform, adequate user consent mechanisms, and transparency in the aftermath of the scandal.

II. Aleksandr Kogan

Technology companies are not the only entity that possesses this duty of care. Each individual developer and engineer also has the responsibility to protect users from harm by developing technology that protects user data and does not leave user data vulnerable. It is necessary for individuals to hold this responsibility on top of companies and platforms for two reasons. First, companies are often influenced by money and will choose to do what is financially best over what is best for their users. Individual developers must mitigate this by choosing to do what is best for users. Second, company platform policies are not always reliable, as they are often not written by technical experts, so developers cannot blindly follow them when they can be dangerous for users. For these two reasons, developers hold a duty of care towards users and their data. In this section, I will examine how Aleksandr Kogan, developer of the "this

is your digital life" application failed in his duty of care by taking advantage of a loophole in Facebook's platform policy, and by selling harvested data to Cambridge Analytica.

User privacy should always be at the forefront of application development. In his development of the "this is your digital life" application, Aleksandr Kogan did not consider protecting personal information, resulting in widespread violations of user privacy. Aleksandr Kogan was a psychologist with a doctorate from Hong Kong University, who was working as an assistant professor at Cambridge University when he was first contacted by SCL Elections, a Cambridge Analytica entity, in 2014 (Davies et. al., 2018). Prior to being contacted by Cambridge Analytica, Kogan had developed a personality quiz application, called "this is your digital life" which he claimed was for academic research. To Kogan's users, the application was nothing more than a digital survey in which they had to first log in to their Facebook accounts to take. However, what users of the application did not realize was that by logging into their Facebook account, they were authorizing the application to collect the personal information on their account, along with the personal information of all the accounts they were Facebook "friends" with. In an interview on 60 Minutes with Lesley Stahl, Kogan admitted that he did harvest the data of each user's Facebook connections even though these users "didn't opt-in explicitly" and also acknowledged that the ability to use this was a feature of the Facebook platform (Stahl, 2018). In the same interview, Kogan also admitted to providing the harvested data to Cambridge Analytica, knowing that it would be used for microtargeting in campaign advertisements.

Kogan's actions and awareness of what he was doing demonstrate a failure in his duty of care as a developer. Kogan knew that the ability to harvest data of social connections of Facebook users was a loophole in the Facebook platform that was created by poor policy and left

user data vulnerable, but still chose to exploit that loophole. Furthermore, Kogan was aware that these social connections did not give consent for their data to be accessed, so his application did not take user privacy into consideration. Ultimately, Kogan neglected to assume any role in protecting personal data despite his duty of care towards users of his application, and along with Facebook and Alexander Nix, should be held responsible for the breach of data that occurred in the scandal.

III. Alexander Nix and Cambridge Analytica

Cambridge Analytica, as a political consulting firm that utilizes personal data, also possesses a duty of care. Specifically, companies that use personal data have a responsibility of using data that has been collected with consent and using this data in an ethical manner. Companies that use harvested data possess this duty of care for the same reasons that companies that handle data, like Facebook, have a duty of care. Namely, these companies have a responsibility to protect their users' data in order to foster a culture of trust with users. Furthermore, by using data that was unethically harvested, they are encouraging data mining practices that violate user privacy. Thus, Cambridge Analytica possesses a duty of care to use properly harvested data, and to not encourage unethical data harvesting practices. In this section, I will analyze how Cambridge Analytica, and specifically CEO Alexander Nix, engaged in unethical practices that resulted in a failure of their duty of care.

Nix was directly responsible for his company's decision to use the data Kogan had collected and for arranging for the usage of microtargeted advertisements. While being secretly recorded by Channel 4 News, Nix bragged about his company's role in the election of Donald Trump in the 2016 U.S. presidential election:

"We did all the research, all the data, all the analytics, all the targeting. We ran all the

> digital campaign, the television campaign, and our data informed all the strategy." (McKee, 2018, p. 1)

Nix acknowledges, through this statement, that he exploited Facebook users by using their data to target them with digital advertising. In an effort to gain financial profit along with a strong reputation as a political consulting firm, Nix completely neglected the users whose data he exploited and instead used them as a means for his and his company's benefit. Through this neglect, Nix broke the culture of trust between his firm and the users whose data he was handling. Furthermore, had his firm not been caught, Nix's violations in data collection would only have encouraged other developers to unethically harvest data in order to profit through companies like Cambridge Analytica. Therefore, Nix's actions demonstrate a failure in his duty of care towards the users whose data he was handling. Nix could have shown care towards these users by simply not using the data he had access to. By choosing to not use the data, the scandal would not have happened, and Nix would not have been fired. However, since he chose to use the data, he failed in his duty of care and should be held morally responsible for the data breach that occurred in the scandal, along with Facebook and Kogan. CEO's can show care towards their clients and users both by making decisions that prioritize the culture of trust that they have with their users and by forming their company with other individuals who prioritize this culture of trust.

Conclusion

In the aftermath of the scandal, Facebook removed the open graph API tool from its platform that opened the door for the scandal. CEO Mark Zuckerburg also promised to investigate other third-party applications with access to large amounts of user data and to place greater restrictions on developers' access to data. However, as mentioned in my analysis of

Facebook's role in the scandal, the company has made no updates to these promises as of 2019. Kogan was accused by the Federal Trade Commission (FTC) of misleading his survey takers and reached a settlement in 2019 in which he was required to destroy the data he harvested from Facebook (Federal Trade Commission, 2019). He was not required to confirm or deny the allegations against him. Nix faced similar allegations by the FTC and was also not required to confirm or deny the allegations against him (Federal Trade Commission, 2019). Nix was immediately suspended by the board of Cambridge Analytica, which later declared bankruptcy (McKee, 2018). No single entity faced punishment after the scandal, leaving many questioning the safety and security of their information in the digital world. More research is needed on how responsibility can be assigned and what actions should be taken to punish responsible parties. Furthermore, more research is needed on how companies and individual developers can be kept accountable by the public and the users whose privacy is dependent on them.

Overall, Facebook, Aleksandr Kogan, and Alexander Nix failed in their duties of care that they each owed to their users. Facebook failed to provide a technology platform that adequately protected users, while Kogan exploited weaknesses in Facebook's platform and provided data to Nix, who unethically used the data to influence an election. Through my analysis, it is apparent that the failures of technology platforms and developers in their duty of care towards users can result in violations of user privacy. Had one of these three parties acted ethically in their care for their users, this scandal could have been entirely avoided.

References

Aiello, C. (2018, March 21). *Developer behind the App at the Center of the Data Scandal Disputes Facebook's Story*. CNBC. https://www.cnbc.com/2018/03/21/aleksander-kogan-facebook-shouldve-known-how-app-data-was-being-used.html

Cadwalladr, C. & Graham-Harrison, E. (2018, March 17). *Revealed: 50 Million Facebook Profiles Harvested for Cambridge Analytica in Major Data Breach*. The Guardian. https://www.theguardian.com/news/2018/mar/17/cambridge-analytica-facebook-influence-us-election

Davies, H. et. al. (2018, April 24). *How Academic at Centre of Facebook Scandal Tried – and Failed – to Spin Personal Data into Gold*. The Guardian. https://www.theguardian.com/news/2018/apr/24/aleksandr-kogan-cambridge-analytica-facebook-data-business-ventures

Detrow, S. (2018, March 20). *What Did Cambridge Analytica Do During the 2016 Election?* NPR. https://www.npr.org/2018/03/20/595338116/what-did-cambridge-analytica-do-during-the-2016-election

Federal Trade Commission (2019, July 24). *FTC Sues Cambridge Analytica, Settles with Former CEO and App Developer*. https://www.ftc.gov/news-events/news/press-releases/2019/07/ftc-sues-cambridge-analytica-settles-former-ceo-app-developer

Fernekes, C. & Harbath, K. (2023, March 16). *History of the Cambridge Analytica Controversy*. Bipartisan Policy Center. https://bipartisanpolicy.org/blog/cambridge-analytica-controversy/

Hanna, M.J. & Isaak, J. (2018). *User Data Privacy: Facebook, Cambridge Analytica, and*

Privacy Protection. IEEE. https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8436400

Mckee, R. (2018, March 20). *Alexander Nix, Cambridge Analytica CEO, Suspended after Data Scandal*. The Guardian. https://www.theguardian.com/uk-news/2018/mar/20/cambridge-analytica-suspends-ceo-alexander-nix

Mitra, R. (2018, June 15). *How the Facebook API Led to the Cambridge Analytica Fiasco*. APIacademy. https://apiacademy.co/2018/06/how-the-facebook-api-led-to-the-cambridge-analytica-fiasco/

Stahl, L. (2018, April 22). *Aleksandr Kogan: The Link Between Cambridge Analytica and Facebook*. CBS News. https://www.cbsnews.com/news/aleksandr-kogan-the-link-between-cambridge-analytica-and-facebook/

Wong, J.C. (2019, March 18). *The Cambridge Analytica Scandal Changed the World - But it Didn't Change Facebook*. The Guardian. https://www.theguardian.com/technology/2019/mar/17/the-cambridge-analytica-scandal-changed-the-world-but-it-didnt-change-facebook

Zuckerberg, M. (2018, March 21). Facebook. https://www.facebook.com/zuck/posts/10104712037900071