

Prospectus

Technical Title

(Technical Report)

Investigation Of Socio-Political Structures' Impact On Views Regarding Data Privacy

(Thesis Report)

Computer Science Department in The School of Engineering and Applied Sciences

Zane Belkhat

Spring, 2021

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 STS papers.

Zane Belkhat

_____ Date: 12/11/2020

(Undergraduate Signature)

Aaron Bloomfield

_____ Date: 11/02/2020

(Technical Advisor Signature): Aaron Bloomfield, Department of Computer Science

_____ Date: _____

(Thesis Advisor Signature): Travis Elliot, Department of Engineering and Society

Introduction

In America, there is an inherent social belief in our right to privacy and a freedom from surveillance. However, this is not the case in all countries. The aim of this thesis is to examine how the social structures of a country influence their ideas behind data privacy and collection, specifically with regards to the internet. I plan to focus on the difference between American views on data privacy/collection methods and those of other countries. Out of all countries which could be examined, I believe America, China, Russia and one other western country such as England would be best as they all have sufficiently integrated with the internet which is necessary for examination in my project.

In a recent poll by the pew research center, it was found that Americans believe it is important to control not only who has data on them but what that data is specifically (Madden & Rainie, 2019). Clearly, there is importance to the American people on data control. However, at the moment there is little in the way of true privacy on the internet. Due to lax regulations in the legal system and other factors, data is constantly collected on internet users and profiles built. However, there is clearly a subset of the American populace which would enjoy being able to control their data better. For these people, there is currently no impactful way to do that. A technical project which fills this niche would be a good way to integrate with my thesis project. In this case, an application which either allows one to see what information is being collected about them would be suitable.

Background

Recently in the US there have been hearings on the need for federal data privacy laws. In a climate which is largely absent of directives for what data can be collected virtually and how it can be used, many companies have built vast databases of user profiles and information usually for the use of advertising purposes. This lack of regulation has understandably frightened some users, as there is an ambiguous amount of data about them out on the internet which is both difficult to find and remove (Chiavetta, 2020). In other countries the exact opposite is occurring. For example the Chinese government is planning to implement a social credit system nationwide, thus vastly expanding data collection on its citizens including their real world habits. Though this may seem wildly dystopian to an American audience, that is not the case according to the Chinese people. In fact as much as 80% of respondents to a survey indicated they agree with the implementation of a social credit system (Kostka, 2019). This vast disparity in social opinions on quite similar topics leads me to believe it is worth investigating how socio-political climates impact public opinion and policy regarding data collection.

STS Topic

In terms of STS frameworks, this thesis topic seems to be best suited for Social Construction of Technology as well as Co-production. The Social Construction of Technology on a systematic approach on how society affects the development of technology. Its various core concepts include things such as interpretive flexibility, closure, and relating the artifact back to the socio-political climate. Interpretive flexibility includes relevant social groups, design flexibility and conflict as sub-concepts as well. Interpretive flexibility will be the main focus of the paper as I explore the relevant social groups, designs of data gathering technologies, and the conflicts in each country examined. Social groups may include the government, various

technology companies, and the public at large. Designs include the technologies themselves which are used to collect data. Conflicts would be one of the main focuses of the paper as they occur due to the differing interpretations of technology. In this case, closure has not occurred yet, but potential methods of closure can be explored such as legally or through propaganda (the erasure of conflicts). Finally, relating the artifact back to the socio-political climate will be in part explored by the use of co-production. Co-production as a framework focuses on the various ways that both society and technology “co-produce” each other. Views on privacy in a culture are extremely important as they affect the laws put in place which in turn affects the actions of technology companies which are doing the data collection. However, this data collection itself impacts the public perception of privacy as it comes to light. Thus, society and technology are impacting each other in a way which is quite suitable to the Co-production framework.

Considering the current nature of the topic, and how privacy views are heavily informed by current developments both politically and technologically, most research will be done through internet articles and exploration of the laws which govern privacy in various countries. This will allow for the most up to date information in regards to my thesis topic.

Technical Project

In the case of an application for viewing all the data collected on a person, there are many ways to view all the information sites collect on you, however that is precisely the problem. There is no way for a person to find all the information collected on them in one area or opt out of it quickly without paying a substantial service fee. An application could easily fill this niche by automating the process for popular websites/data brokers. This could include Facebook,

Instagram, Twitter and companies like Acxiom which is one of the largest data broker companies.

One current service which conducts personal data scrubbing is PrivacyDuck. For a 499\$ fee, it will remove your data from 92 of the largest data brokers on the internet for the next 12 months. For an additional 500\$ totalling 999\$ it will scrub your data from an additional 99 data brokers (Skyheart, 2019). However for many of these data brokers the process for opting out of data collection can take only a few minutes of a user's time, including that of Acxiom, one of the largest. For opting out of Acxiom there is a single form that needs to be filled out and submitted containing no more than 10 fields. Clearly, the process can be automated but current services purporting to do so have massively inflated prices. As a starting point, these services will be used as a model of what is possible for the application, though aiming to provide this same service for free.

Working with Professor Bloomfield, the first step will be a contextual inquiry during the software development process. As part of this, a survey may be released to possible users, asking them for feedback on a model for the data scrubbing application. Success here will be measured by the number of user stories which can be generated from the data gathered during contextual inquiry. Ideally somewhere around 10-15 actionable goals should be developed in the form of user stories.

From here, an alpha build will be generated. Utilizing the user stories I will develop a barebones working model demonstrating the capabilities of automation for at least one data broker, likely Acxiom. From here, further data brokers/other websites which collect user data will be added to the automated process. Ideally a fully functional prototype before release would

have somewhere from 10-20 databases/websites in the scrubbing automation process. After this point would be considered the beta build.

A potential way to go about the automation would be after providing personal information such as name and email address, the application would trawl through these websites for data which matches either. In cases where it's possible, the application would also allow a user to remove their data by automating the process. While some companies and websites may not allow removal of data, the vast majority do.

Finally, after making sure the automation process is well designed and implemented, the actual UI of the application will come into consideration. Ideally, the final build of the application will be intuitive for the user while having a minimalistic aesthetic. Upon completion of all user stories and satisfaction surveys with potential users, the application will be considered complete, with the possibility of being released publicly on a publishing platform.

Conclusion

In conclusion, I will be exploring the differences between various countries for data collection and attitudes towards it through the frameworks of STS. The main frameworks I will be using include Social Construction of Technology and Co-production. As a complementary technical project I will be creating a data trawling application which upon being supplied some personal information, will search popular sites and data brokers for data collections associated with that info. Secondarily it will provide ease of access in removing that data where possible.

Bibliography

Chiavetta, R. (2020, September 24). *US Senate hearing covers COVID-19, the need for a federal privacy law and familiar roadblocks*. The Privacy Advisor.

<https://iapp.org/news/a/senate-hearing-covers-covid-19-the-need-for-a-federal-us-privacy-law-and-familiar-roadblocks/>

Kostka, G. (2019, March 22). *Analysis | What do people in China think about 'social credit' monitoring?* The Washington Post.

<https://www.washingtonpost.com/politics/2019/03/21/what-do-people-china-think-about-social-credit-monitoring/>

Madden, M., & Rainie, L. (2019, December 31). *Americans' Views About Data Collection and Security*. Pew Research Center. Retrieved October 10, 2020, from

<https://www.pewresearch.org/internet/2015/05/20/americans-views-about-data-collection-and-security/>

Skyheart, A. (2019, December 02). *Services*. Retrieved December 11, 2020, from

<https://www.privacyduck.com/services/>

Yang, W. (2018, December 04). *How much do Chinese people care about privacy?* Retrieved December 11, 2020, from

<https://www.dw.com/en/how-much-do-chinese-people-care-about-privacy/a-43358120>

Gratchner, A. (2015, September 30). The New Russian Data Protection Law. Retrieved

December 11, 2020, from

<https://www.navexglobal.com/blog/article/new-russian-data-protection-law-five-important-things-know/>