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WRTG3030
Research Proposal
10/20/2017

Social Media and Surveillance: An Investigation of the Effects of Technology on a Changing World

Introduction

The Internet and social media play an ever-increasing role in a technological 21st century world. This is, in large part, due to the amount of versatility and power that the Internet offers to those that utilize it. It's possible to communicate with individuals the world over in almost no time, and to collaborate on a scale that was unfathomable some time ago. The adoption rate of the Internet is also unprecedented; recent figures cite that almost half of the world's population is able to make use of the Internet (ITU 2017). Such a technology, and such a connection of individuals, is something that's never before been achieved.

There have been numerous achievements, accomplishments, and improvements that have come about as a result of the increase of Internet adoption. One such occurrence is the digitization of government, which has been shown to be effective in reducing governmental corruption. (Elbahnasawy 2014) Social media has also functioned as a platform for protest and rebellion when e-government and similar methods have failed, giving individuals a manner of organizing themselves in countries where this might not otherwise be possible due to abusive and restrictive governmental oversight. The Internet has also worked for its own preservation against numerous bills that would have damaged freedom of speech and collaboration on the Internet.

However, the advent of the Internet has also caused some disquieting issues. First and foremost among them is the issue of privacy and surveillance, which is almost constantly infringed upon by parties both governmental and private. Private parties are wont to inspect the Internet traffic of those individuals that they may have access to for the purpose of serving targeted advertisements, and governments the world over - most notably the United States and a few of its allies, acting as "Five Eyes" - collect Internet traffic *en masse* with the given justification of national security. (Verble 2014)

This poses numerous problems for the future of the Internet and the so-called "era of privacy". Foremost among them is the fact that the surveillance is never made transparent to the end user; that is to say, the average person making use of the Internet has no idea that their data might be used for purposes that they did not intend it for, such as serving advertisements or building a database of information about individuals. Even if the surveillance were made transparent, it's still difficult to justify surveillance on such a gargantuan scale, and it's almost impossible to disrupt it. An average individual holds almost no control over their data, no matter how personal it may be.

Another major issue is the exploitation of Internet services by major corporations for the purposes of profit. This forms the crux of the debate over the sometimes esoteric issue of “net neutrality”, which is commonly discussed, yet rarely defined and frequently misdefined. True net neutrality is beneficial to the consumer, but denies the Internet service provider (ISP) some monetization opportunities, because it prevents the ISP from slowing down Internet traffic based on its content or origin - hence “neutrality”. However, a lack of strong definition of this term has resulted in general confusion in the public sphere when the concept is discussed, as well as opening up opportunities for various ISPs to perform astroturfing or unethical lobbying to try and pass bills abolishing net neutrality regulations in the United States. This debate is also largely confined to circles that are likely to already care about Internet-related issues, such as software engineering and digital content producers.

A closely related issue is the issue of censorship on the Internet. This issue is most prevalent in countries where the Internet is used or is likely to be used as a tool of dissent or rebellion. Most frequently, this set includes Middle Eastern countries that are likely to be undergoing periods of turmoil, but has also included Asian countries such as China for a thoroughly extended period of time. The “Great Firewall of China” is an often-discussed phenomenon on the Internet that prevents individuals residing in China from accessing a swath of services that are not based in China, such as Google and YouTube, as well as sites related to philosophy that the Chinese government deems treasonous. (Ensafi et al. 2015)

Additionally, there is exceedingly little data on the effects of social media on the human mind psychologically. Some studies have suggested that social media, particularly the constant interaction with phones and technology that is common in the modern 21st century world, is likely to be harmful to the human attention span. (Phogat & Sharma 2015) However, since this technology is relatively new, and most major social media sites have only been around for a handful of years, it’s difficult for anyone to make long-term statements about the effects of social media on the human psyche. This is a major issue because it puts the consumer of social media in a position where they must make an uninformed decision about what they are doing, and may not fully understand the consequences of using or not using social media.

At the crux of all of this is the fact that the average individual is unlikely to be aware of the things that are occurring on the Internet on a broader scale, despite the high likelihood of everyday, frequent usage of it. Net neutrality, surveillance, encryption, security, and the impacts of social media are not exactly popular topics, nor is the average individual likely to be particularly concerned with them. Thus, the majority of Internet users - which, due to the scale of the Internet, represents a sizable subset of the world’s population - are not likely to be informed of the consequences of such casual yet all-encompassing immersion into the Internet. This, fundamentally, is what this study looks to remedy; to inform its participants about the ongoings of the Internet and its infrastructure on a higher level, to study their incoming level of information and knowledge, to study patterns of their current Internet usage to find trends in how social media and Internet usage affects humans, and to effectively disseminate the resulting information to the general public.

This study itself looks to investigate four fundamental topics: surveillance and data privacy, corporate abuse of the Internet, censorship of the Internet, and the effects of social media usage and constant Internet connectivity on humans. This goal will be accomplished

through use of a survey, detailed below. Important potential trends are how the topics are correlated with one another (f.e. are individuals who are more concerned about the effects of social media overexposure also concerned about the lack of government oversight of corporate abuse?) and with the demographics of the surveyed population (i.e. is there a real relationship between whether or not someone is in a computing-centered career and how much they know and care about the issues surrounding the Internet?) These topics are not well researched, but our understanding of them may prove key in an evolving digital era.

Objective/Methods

Data gathering for this research project will be accomplished via a questionnaire which will cover the level of awareness that the participants have of the topics discussed in the introduction. The survey will begin with a section that establishes the basic demographics of the participants and determines which participants are likely to have prior knowledge of the subject matter. From there, the survey will aim to establish how much time the participants spend using a computer on average, as well as a breakdown of how that time is spent amongst various common activities (streaming video, word processing, social media, etc.) These questions will be asked with the aim of establishing any other possible trends in the data set. For example, people who play video games might be more likely to have heard more about net neutrality.

The following section will be a brief glossary of terms related to various internet issues, such as “net neutrality” and so forth. The scale for responses will be a slightly modified 5-point Likert scale, with the options “never heard of”, “heard once or twice”, “heard a few times”, “familiar with”, and “can easily define”. This should do a fairly good job of establishing the familiarity of a given participant with various related terms. This will then be followed with statements about various issues, which the participant will be asked to rate their level of agreement with on a standard 5-point Likert scale. This establishes a strong quantitative data set related to the level of awareness that the participants have of the issues, regardless of their major or time spent with a computer/online.

After the participants’ familiarity with the topic has been established using the above questions, there will be another set of questions that deals with how strongly the participants feel about the topics. There will be a set of statements such as “It is important to me that my data is secure and private on the Internet,” which the participants can then rate on a 5-point Likert scale from “strongly disagree” to “strongly agree.” Additionally, to gather information about the enthusiasm of the participants towards these issues, there will be a set of statements such as “I am invested in seeing Internet access become a worldwide right,” and “I think that global collaboration through the Internet is important,” which the participants can then rate on a similar scale from “couldn’t care less” to “extremely passionate.”

Once the data set has been gathered, it will be analyzed first to see if the main hypothesis of the survey - that is, a correlation between a computer-related profession and a knowledge of/enthusiasm regarding issues pertinent to the Internet - can be said to be valid. The data set will also be analyzed to see if there is any meaningful link between the distribution of time spent with a computer and knowledge of Internet issues. Additional exploratory data analysis will be performed to see if there are any other relevant trends that can be drawn from

the available data. A paper summarizing the data set and the relevant conclusions drawn from it will then be drawn up.

As the overall goal of this survey is to examine the magnitude of various hypothesized phenomena, it cannot do much about the effects themselves of those phenomena. However, the goal is to lay the groundwork for future research and movements. If completed, this study will provide valuable data about how much people really care about the Internet, as well as how aware they are about how much of an impact it has on their day-to-day lives. Such data will give us a good idea of how effective our current computer-related education is for both those who are intensely involved in computing and those who are not. However, it is crucial that this study be performed, as it will provide valuable insight into how humans can better coexist with the computers that make up more and more of our lives.

Timeline

Start drafting survey	October 23
Survey sent out and opened	October 27
Survey closes	November 3
Start analyzing data	November 4
Start writing paper	November 9
Paper drafted	November 14
Start revising paper	November 17
Paper completed	November 26

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