Exploring Big Data Footprints and Ethics: An Undergraduate Student Focus

Virginia M. Miori, Saint Joseph’s University, Philadelphia, USA
Richard T. Herschel, Saint Joseph’s University, Philadelphia, USA

ABSTRACT

Big Data is collected via engagement in online activity and undergraduate students tend to be particularly heavy users of digital media. This article explores their online activity to assess their participation and usage patterns as well as their ethical perspectives. The research finds that these students have a somewhat substantial Big Data footprint since they actively engage in social media, use smart devices, shop online, use streaming services, and employ digital tools. Social connectedness necessitates the potential for their privacy being compromised and the findings suggest that introverts are more concerned about this issue than extroverts are. However, people of both types are concerned about conveying a positive image online. The majority of those surveyed primarily identified with the values expressed by the Utilitarian and Kantian ethical perspectives and less so with those expressed by Social Contract Theory and Virtue Ethics. However, study participants did not consistently ground their moral values in any one of these ethical theories.

KEYWORDS
Big Data, Data Usage, Ethics, Extrovert/Introvert, Privacy, Social Media, Social Networking

1. INTRODUCTION

The determination of an individual’s Big Data digital footprint is derived from a number of different factors. These factors include one’s use of social media accounts, streaming services, loyalty cards, Internet subscriptions, and digital tools. Since data about a person’s online activities can be readily captured, manipulated and analyzed, the real utility of these factors is rooted in the fact that they oftentimes provide a surrogate for describing a person’s sense of connectedness. Moreover, this data affords a mechanism for estimating the potential value to be realized by capturing and analyzing peoples’ information.

In the last decade, people have observed a decrease in the premium set on privacy and an apparent reduction in the appreciation for the value of delaying one’s need for immediate gratification. Today, what seems to drive a lot of behavior is the demand for instant feedback and/or payback, both of which are enabled by the ease and speed of online communication.

Research into factors affecting the Big Data footprint is varied. Little has been published on privacy expectations and ethics in streaming, loyalty programs, internet subscriptions, and digital

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tools. Instead, research has been primarily focused on their value and usage. Social media, on the other hand, has been the subject of extensive research.

Social networking sites are basically online applications that enable users to connect. Subscribers create personal information profiles at these sites and then they invite their friends and colleagues to share information with them. They do this by exchanging e-mails and by sending instant messages to each other. Personal profiles can include any type of information, including photos, video, audio files, and blogs (Kaplan & Haenlein, 2010).

Hendricks (2013) notes that the first social media site, Six Degrees, was created in 1997. It enabled users to upload a profile and make friends with other users. This innovation was followed by the introduction of blogging in 1999. Myspace, LinkedIn, Photobucket, and Flickr were subsequently introduced and all of them gained prominence in the early 2000s. YouTube was introduced in 2005, providing an entirely new way for people to communicate with each other over great distances. By 2006, both Facebook and Twitter became available to subscribers throughout the world.

Kallas (2018) reports that Facebook has become the dominant social media site today. He finds that they are growing at a rate of 20 million active users per month (for a total projected user base of 1.69 billion users at the end of 2020).

Aaron Smith and Monica Anderson (2018) state that Facebook and YouTube dominate the social media landscape, especially for adults. That said, their analysis also reveals that younger Americans, especially those who are 18-24 years old, are embracing a variety of other platforms and that they are using them more frequently than Facebook or YouTube. They share findings from a 2018 Pew Research Center survey of social media usage by U.S. adults that indicates that 78% of younger Americans use Snapchat, 71% use Instagram, and 45% are Twitter users.

Jay Baer (2018) reports that a study conducted by Edison Research and Triton Digital, confirms that younger Americans are actively embracing messaging platforms like WhatsApp, Facebook Messenger, Snapchat and others, while using the traditional core social networks less. Data supporting these conclusions shows that Facebook and Twitter usage has declined among Americans 12 to 34 years of age, while Snapchat has become their favorite social network. Baer also reports that among the top six social media destinations, only three saw an increase in usage in the past year: Instagram, Pinterest, and Snapchat. The Edison Research and Triton Digital findings cited by Baer agree with the those reported by the Pew Research Center.

Statistica (2018) provides a timeline showing the percentage of the U.S. population who used any social media from 2008 to 2017. They report that in 2017, 81 percent of the population in the United States had a social networking profile, representing a three percent growth compared to the previous year. They also note that, according to estimates, the number of worldwide social media users reached 2.34 billion and is expected to grow to some 2.95 billion by 2020.

2. ETHICAL ISSUES IN SOCIAL MEDIA

This extensive use of social media is not without issues. Recently, British and US lawyers have launched a joint class action against Facebook, Cambridge Analytica and two other companies for allegedly misusing the personal data of more than 71 million people. The lawsuit claims that these firms obtained their users’ private information from the social media network to develop “political propaganda campaigns” in the UK and the US. It is asserts that Facebook failed to act responsibly to protect the data of 1 million British users and 70.6 million people in America. The data, it contends, was first used in the British EU referendum and then in the US during the 2016 presidential election (Bowcott & Hern, 2018).

While social media companies argue that their goal is to make the world more open and connected, the process of actually doing this while protecting individual privacy has shown to be problematic. Harris (2018) notes that the actions of social networking site have raised questions about their potential to facilitate deception, social grooming, and the creation of defamatory content, amongst others. He
Subjective Information Quality in Data Integration: Evaluation and Principles
Ahmed AbuHalimeh and M. Eduard Tudoreanu (2014). *Information Quality and Governance for Business Intelligence* (pp. 44-65).
www.igi-global.com/chapter/subjective-information-quality-in-data-integration/96144?camid=4v1a

Competing With BI and Analytics at Monster Worldwide
Alex Schick, Mark Frolick and Thilini Ariyachandra (2012). *International Journal of Business Intelligence Research* (pp. 29-41).
www.igi-global.com/article/competing-analytics-monster-worldwide/69967?camid=4v1a