The Evolving Nature of Social Network Research: A Commentary to Gleibs (2014)

Guillaume Dumas,* David G. Serfass, Nicolas A. Brown, and Ryne A. Sherman
Florida Atlantic University

Social networking sites (SNSs) provide researchers with an unprecedented amount of user derived personal information. This wealth of information can be invaluable for research purposes. However, the privacy of the SNS user must be protected from both public and private researchers. New research capabilities raise new ethical concerns. We argue that past research regulation has largely been in reaction to questionable research practices, and therefore new innovations need to be regulated before SNS users' privacy is irreparably compromised. It is the responsibility of the academic community to start this ethical discourse.

Every year in the United States, over 138 billion taxpayer dollars are appropriated to advance scientific research, endeavors ranging from developing new cancer treatments to investigating the effects of climate change (Congressional Research Service, 2013). Because public funds sustain these projects, they are also subject to strict rules and regulations. Official regulation of public research, however, is a relatively recent phenomenon. In Europe, the Nuremberg Code was instituted in 1947 to regulate research using human subjects; the United States followed with the National Research Act in 1974. Finally, scientific research in the Pacific and Asia is regulated by the Universal Declaration on Bioethics and Human Rights (UNESCO, 2006).

Particular research areas have their own specific regulations. For instance, in biotechnology, the Asilomar ethic chart was signed in 1975, and is historically associated with "scientific self-control" (Capron & Schapiro, 2001, p. 163).

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*Correspondence concerning this article should be addressed to Guillaume Dumas, Center for Complex System Science, Florida Atlantic University, 777 Glades Road BS-12, Boca Raton, FL 33431 [e-mail: dumas@ccs.fau.edu].

Asilomar demonstrates that academia can prepare regulation in the face of technological innovation (Hanna, 1991). This should extend to the case of Internet social networking sites (SNSs), and the development of the technologies of information and communication.

Examining research regulations across the globe, two themes become apparent. First, these regulations were often instituted in reaction to overzealous scientists. For example, the Nuremberg Code was motivated in part by the atrocities committed on nonconsenting human subjects. In the United States, unethical medical experimentation on Blacks (the Tuskegee Experiment) ostensibly motivated legislators to institute formal research practices. Second, with the exception of the Declaration of Helsinki (World Medical Association, 2013), these guidelines often do not account for evolving technologies and novel data collection. Furthermore, as Gleibs (2014) notes, IRBs may not fully appreciate the ramifications of approving the use of new technologies, such as SNSs.

Public Versus Private Research Regulation

Although public research is regulated (albeit imperfectly), there are no Federal regulations that govern private research. While some industries do adhere to their own code of ethics (see Market Research Society, ICC/ESOMAR, 2007), there are no legal consequences for unethical conduct. We are not suggesting that corporations are necessarily reckless in their research practices. However, if history is any indication, research using SNS must proceed with caution. Consequently, a formal declaration of ethical research guidelines for private corporations is necessary.

For instance, as Gleibs (2014) notes, Bond et al. (2012) had to justify the omission of participant informed consent to their university's IRB (Gleibs, 2014). Facebook is not subject to similar regulation. We agree with Gliebs (2014) that there are legitimate issues with "contextual integrity" in publicly funded research; however, the ultimate goal would be to make the private sector equally accountable to these standards.

Social Media Privacy Literacy

The ethical challenges raised by social media extend beyond SNS researchers; SNS users must also be knowledgeable. While Bond et al. (2012) did not require informed consent, participants ultimately decided whether or not to use Facebook and what personal information was shared. Thus, Facebook users must assume some responsibility for their own privacy. Over one billion people have given Facebook consent to share their data for "troubleshooting, data analysis, research, and service improvement" (Vance, 2012, p. 10). These policies are written in plain English (Facebook, 2014); people, however, tend not to read them (Jones

& Soltren, 2005). Moreover, SNS users' privacy expectations rarely match their actual settings, which are usually more liberal than they prefer (Liu, Gummadi, Krishnamurthy, & Mislovel, 2011). Indeed, even publicly shared SNS data like Twitter posts can predict depression and psychopathy in users (De Choudhury, Gamon, Counts, & Horvitz, 2013; Wald, Khoshgoftaar, Napolitano, & Sumner, 2012).

However, the user should not bear the entire burden of their privacy protection, especially when SNSs dictate the terms of the agreement. For example, Facebook users can adjust their privacy settings (e.g., sharing pictures publicly or with friends), but they must first accept Facebook's data sharing policies, which includes research usage. The user faces an ultimatum: either accept the terms and conditions or do not join Facebook.

Social Media Analysis Capabilities

Furthermore, even if SNS users understand privacy settings, they may not understand the capabilities afforded by combining large datasets and processing high-level information (e.g., face recognition and geolocation). Privacy issues are becoming more important with the increasing availability of publicly shared personal information (e.g., U.S. voter records). Whereas decades ago a researcher would need to sift through voluminous piles of documents, the Internet facilitates an unprecedented level of accessibility and transparency. For example, criminal and property records are available in United States through county websites or third party research firms. The accessibility of this information decreases privacy of SNS users substantially.

However, private corporations have exclusive user information. For instance, Facebook recently patented an algorithm to predict income based on profile data and information "about users and their actions on external websites that are connected to the social networking system through the use of plug-ins" (Voskul & Vyaghrapuri, 2013; p. 8). As Voskul and colleagues (2013) note, if a user purchases tickets to a popular concert through a third-party website, Facebook may store that information for marketing purposes. Many users would be uncomfortable if they knew that SNSs tracked not only their "likes" and "friends," but also their geolocation, web-browsing history and online purchases, creating an in-depth and ever more revealing profile of the individual.

Conclusion

Just as advances in biotechnology necessitated the adoption of new ethical guidelines, advances in Big Data and digital footprint tracking merit a similar, enforceable regulatory code. Several pending concerns need to be addressed: private companies need more oversight, SNS users need to be knowledgeable of

data processing practices, and new research capabilities need to be incorporated into future regulation. This last issue will become even more critical with the large use of quantified self and health 2.0 (see Swan, 2009, 2013). We believe it is the responsibility and right of the academic community to spearhead these concerns and advocate for this change.

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GUILLAUME DUMAS is postdoctoral fellow in the Center for Complex Systems and Brain Sciences of Florida Atlantic University. He received his Ph.D. in cognitive neuroscience from the University of Paris 6 in 2011. His research focuses on coordination dynamics across neural, behavioral, and social scales.

DAVID G. SERFASS, M.A. is a doctoral student in the Experimental Psychology program at Florida Atlantic University. His past research has focused on individual differences in perceptions of situations. Present research examines the situations people experience in their daily lives. Other interests include computational modeling, Big Data, and new data collection technology.

NICOLAS A. BROWN, M.S. is a doctoral student in the Experimental Psychology program at Florida Atlantic University. His primary research is in personality psychology examining the psychological properties of situations. He is currently focusing on developing a measure of the evolutionarily important goals of situations.

RYNE A. SHERMAN is an Assistant Professor of Psychology at Florida Atlantic University. He received his Ph.D. in personality/social psychology from the University of California, Riverside in 2011. His research focuses on the assessment and consequences of the psychological characteristics of situations.