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Does PAPAS Know Best? A Continuation and Call for Discussion

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Abstract:

In this paper, we consider the insights and ideas that the four responses to our original paper titled "Five Ethical Issues in the Big Data Analytics Age" provided. We discuss the opportunity we have as scholars to view ethics as an ongoing conversation and encourage other scholars to continue the discourse related to ethics as we consider advances in information systems.

Keywords: Big Data Analytics, Ethics, PAPA, Information Systems.

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1 A Confessional Account on the Origins of this Debate

Toward the end of AMCIS 2016, we sat together in the hotel bar discussing the day's events—colleagues we had bumped into, sessions we had attended, and conversations we had overheard in communal spaces. We recounted how, during the conference, we had each heard the trope that “behavioral research was dead”. We realized that many sessions we attended—and an increasing number of colleagues—lauded the promise of big data analytics for information systems (IS) research. Furthermore, and what we find most concerning, we realized that many conversations and sessions suggested that big data would render theory unnecessary. We had heard scholars promote big data research at previous conferences but, at AMCIS 2016, we sensed a considerable shift in tone. As we relayed our conversations and communicated our own opinions, we acknowledged that we did not share some colleagues' faith in numbers' neutrality or in big data's potential to resolve the perennial “rigor vs. relevance” debate in IS research.

During that conversation and in many conversations on the topic that followed, we discussed our concern that the IS discipline was chasing after a new shiny object; that is, big data analytics (BDA). We feared the IS discipline would follow industry practices rather than observing, generating, and leading discussions regarding BDA's ethical implications. Based on these conversations, we developed a strong belief that the discipline should keep in mind how thought around using and applying BDA has evolved. As Leonelli (2014, p. 7) has pointed out:

Big data that is made available through databases for future analysis turns out to represent highly selected phenomena... What is worse, this selection is not the result of scientific choices.... it is the serendipitous result of social, political, economic, and technical factors, which determines which data get to travel in ways that are non-transparent and hard to reconstruct.

We thought then, and still do, that IS researchers should engage in lively debate about the ethical consequences that arise from using BDA in IS research and teaching and its broader societal implications. What better way to start the debate, we thought, than to write an essay and encourage responses from IS scholars who have more experience and knowledge related to ethics and/or the role of big data analytics than we do. Indeed, we consider ourselves fortunate to have such leading scholars as Claudia Loebbecke, Lynne Markus, Bob Galliers, Michael Myers, and Bernd Carsten Stahl respond to our paper “Five Ethical Issues in the Big Data Analytics Age”. We were pleased that, in their responses, Loebbecke, Markus, Galliers, Myers, and Stahl, found something positive in our framing. They agreed on the debate's importance and timeliness and offered additional insights and ideas to continue this conversation. In responding to their thoughtful rejoinders, we continue the conversation and encourage ongoing discourse on ethics, big data analytics, and the IS discipline.

2 Ethics as a Conversation

We wrote our original essay to raise thought-provoking questions about the IS discipline's engagement with big data analytics (BDA) and, in doing so, start a conversation about ethical issues in IS more broadly. We expressed growing concern about BDA's rapid proliferation in research and practice and discussed its consequences for individuals, groups, and society. We noted the IS discipline's unique position “to observe, inform, and protect” (Richardson, Petter, & Carter, 2021, p. 5) against BDA's potential perils and invited the discipline to engage in a dialogue about its ethical implications.

Ethical norms reflect shared knowledge about a phenomenon at a moment in time. Ethics constitutes an ongoing conversation, a gradual process of living with, testing, and experiencing new ideas and noticing things that we had not noticed before (Hinman, 2013). As we revisit familiar concepts, we develop new ideas and test them through our experiences as we notice impacts that we did not before. Through this process, we develop deeper insights into ideas and the impacts that those ideas have on our society and others around us and our understanding about what is ethical changes with that deeper thought.

Ethics in IS, as in society at large, evolve through a continual process of engaging with ideas. As Loebbecke and Galliers (2021) point out, for example, many IS scholars have written papers that address various ethical issues related to topics such as privacy, big data analytics, artificial intelligence, societal issues, among others. However, we agree with Stahl (2021) that researchers often view these discussions on ethical issues as a “fringe topic” (p. 29). In our personal conversations, we have expressed concerns that only a subset of scholars write about and discuss ethical issues in the IS discipline. As for why, we

have wondered if only a small number of scholars have an interest in writing about these topics or whether structural barriers exist in the IS discipline that hinder them from authoring journal publications on ethics-related topics. As an example, despite our deep interest in the ethics of BDA, when we began our conversations, we wondered if we had sufficient authority to engage the discipline in an ethical conversation about it since we do not have a reputation for publishing in this area.

We recognize the need for a fine-grained understanding when prescribing recommendations (Markus, 2021) and equally understand the concern that about our cautiousness (Myers, 2021). Any cautiousness in our part is an acknowledgement that we do not understand issues surrounding ethics, BDA, and the IS discipline to the necessary extent to be prescriptive. However, BDA's proliferation together with a lack of ethical norms surrounding its use indicates that we cannot wait to become experts before initiating the conversation. Consequently, to understand more deeply BDA's nature and implications and provide a basis for dialogue, we turned to Mason's (1986) PAPA framework. Others have also found the framework useful to describe ethical issues in the big data context (e.g., Young, Smith, & Zhang, 2020).

2.1 Reconsidering Mason's PAPA Framework

Stahl (2021) described how the acronym PAPA conjures imagery of a father or paternal role and explained how parental guidance can influence how we view ethics. In our response here, we ask "does PAPA know best?"¹ to encourage more conversations about using frameworks and ways to think about ethical issues. We readily acknowledge that one could use many frameworks to consider ethical issues in the IS discipline (Markus, 2021). We chose PAPA (Mason, 1986) not because it represents the only framework or the best framework but because it provided an early foundation for ethical IS design. In doing so, we recognized that the original framework did not consider that society results from use patterns across individuals and organizations. Thus, we added a new dimension, "society", to explore BDA's role in constituting the societies in which individuals and organizations are embedded. Others legitimately question if such an extension is appropriate (Loebbecke & Galliers, 2021). We believe that, given the complexities and ubiquity of information systems today, we could extend each element in PAPA(S) into its own framework. For example, Myers (2021) offers insights on expanding the discussions and ethical dilemmas associated with privacy, information accuracy, intellectual property rights, and information access/control.

One challenge in creating any ethical framework involves ensuring that the guidance matches the audience and its ability to enact change (Markus, 2021). To that end, Stahl (2021) offers a potential way forward to frame ethical discussions related to BDA. He recommends we begin by integrating social levels into PAPA as a starting point before extending it to other levels and issues. He creates a three-dimensional (3D) matrix to frame IS ethical issues along 1) ethical dimensions (i.e., PAPA, among others), 2) system-use stage (i.e., input, process, output), and 3) stakeholder perspective (i.e., individual, organizational, and society). Using such an approach would enable IS scholars to describe the ethical issues that currently exist and map them to mitigation strategies to highlight areas that require attention. While 3D matrices can be complex, Stahl's suggestion offers a research strategy or roadmap for the IS community to study and discuss ethics moving forward. Stahl's (2021) approach does not represent the only option for engaging in a dialogue with the IS community on ethical issues, but it does offer a specific recommendation that may be useful in framing conversations.

2.2 Continuing the Conversation of BDA and Ethics

As a discipline, we engage in public discourses and conversations primarily through journal publications, conference proceedings, and panel discussions. Unfortunately, the limited real estate in journals and conferences shapes that dialogue. As a result, decisions about which research and ideas will fill the limited space shape the discourse about what is important and impactful in the discipline. We encourage journal editors, journal reviewers, conference track chairs, and program chairs to recognize these roles' importance when identifying which papers to publish and which ideas to share with the IS community. The research that the individuals serving in critical gatekeeper roles select reflects ideas that our discipline

¹ Some readers may notice that the title of the response bears similarity to the American situation series called "Father Knows Best", which first began on radio in 1949. The television show ran from 1954 to 1960 and portrayed a family with a husband, wife, two daughters, and a son. When antics emerged among the children or family, the father (who Robert Young played) helped successfully resolve any crisis that emerged.

considers important and relevant to the time in much the same way that societal laws, rules, and norms reflect culture.

Other related disciplines such as computer science have embraced their responsibility to conduct ethical conversations and research. In 2018, the Association for Computing Machinery (ACM) expanded its code of ethics. Since then, expanded conversations have encouraged new opportunities for increased dialogue about technology's ethical or negative consequences. Furthermore, in 2018, a blog post on the ACM Future of Computing Academy called for scholars and the peer-review process to reveal not only technology's positive but also its negative impacts in scholarly research (ACM Future of Computing Academy, 2018). The post highlights the tendency of researchers in computing-related disciplines to focus on technological innovations' benefits rather than their downsides. This approach has an obvious problem: by the time actors feel these impacts, it may be too late to reverse the damage caused. Put simply, the authors argue that failing to consider new technologies' real-world negative impact is "analogous to the medical community only writing about the benefits of a given treatment and completely ignoring the side effects, not matter how serious they are". Similarly, as a computing-related discipline, the IS discipline has a responsibility to consider the negative implications that arise from technological innovations and from how individuals and organizations use them.

Finally, due to the nature of our conversations at AMCIS 2016, we focused on big data analytics in our initial paper; however, we agree that an opportunity exists to expand this conversation to discuss ethics around artificial intelligence (AI) or other advanced technologies (e.g., Loebbecke & Galliers, 2021; Stahl, 2021). We have seen an increasing number of concerns about AI research and applications. For example, some have argued that institutional review boards (IRB) or other ethical research review boards may need to consider AI-related research projects' long-term ethical impacts even if proposed studies do not include human subjects (Hutson, 2021). The point is that scientific and industry advances in technology have not and will not wait for IS academics to gain the necessary expertise to provide recommendations for practice. For our research insights to have meaning, IS scholars must engage in ongoing candid discussions as technology, its use, and our ethical understanding evolve.

3 Concluding Thoughts

Through ongoing dialogue will we find deeper meaning in and knowledge about the ideas that we research and teach and sustain a healthy discipline. We must be mindful of the process and engage in it, always. The ethical issues surrounding big data analytics, artificial intelligence, and other related areas in the IS discipline are ripe for further conversation. We hope that our original essay, the rejoinders, and our response encourage other scholars to engage in their own public or private conversations regarding ethical issues in our discipline. Opportunities abound to make these discourses public and encourage debate and discourse on these important topics: conference presentations, panels, workshop discussions, journal publications, and journal-led debates make it possible for a range of voices to participate in this discussion. Sharing our ideas and sharpening our positions through discourse offers important opportunities to address ethical issues that give scholars pause.

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