Toward an ethics of digital government

A first discussion

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DOI
10.1145/3209281.3209322

Publication date
2018

Document Version
Final published version

Published in
Proceedings of the 19th Annual International Conference on Digital Government Research

Toward an Ethics of Digital Government: A First Discussion

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ABSTRACT

In this panel, scholars discuss involving data, computational analysis, and information technology that has the potential to present ethical quandaries in the course of decision making related to digital government. More specifically, the presentations focus on algorithm-based decision making, personally identifiable information, and the manipulation of public opinion in social media channels. Discussion following the presentations will focus on how ethical guidelines should be formulated or what their specific content should be.

CCS CONCEPTS

• Applied Computing~E-government Social and professional topics→Computing/technology policy • Government technology policy

KEYWORDS

Ethics, algorithms, privacy, social media, digitized service delivery

dg.o '18, May 30-June 1, 2018, Delft, Netherlands

ACM ISBN 978-1-4503-6526-0/18/05.
https://doi.org/10.1145/3209281.3209322

ACM Reference format:

Domanski, R., Estevez, E., Styrin, E., Alfano, M., & Harrison, T. Towards an ethics of digital government: A first discussion. In *Proceedings of the 19th International Conference of the Digital Government Society.* Delft, Netherlands, June 2018. 4 pages. DOI: 10.1145/3209281.3209322

1 INTRODUCTION

Most digital government researchers would reject the brand of technological determinism that assumes that new technologies inevitably bring about improvements in government efficiency, effectiveness, and the quality of decision-making. We would readily acknowledge that the capabilities of digital technology are intrinsically dual in nature, as de Broglie [2] has noted, making it possible to achieve great benefits, while at the same time enabling great abuses. However, few of us have undertaken the kind of thinking that goes beyond a limited appreciation for some of the dangers of digitization of government and politics. Instead, our research programs focus on modeling conditions to produce improvements in government performance, often at the risk of incurring the potential for abuse. But as we accomplish a nearly world-wide transition to digitized government, the likelihood of encountering, or causing, complex ethical social problems moves from the theoretically possible to the increasingly probable.

Scholars across the disciplines that focus on data, computational analysis, and information technology now regularly call our attention to the potential ethical quandaries that data-driven decision-making and increasing digitization of the social world may entail. Digital government scholars need to pay attention since the processes and practices of digital government regularly employ all of the data-fication strategies and techniques that these warnings target, such as big data, publicly available data, and

algorithm-based decision-making as well as the progressive technologizing of access to public services and of citizen´s participation in political affairs. Below we provide a few illustrations of technology trajectories that bear the potential for injustice and/or mishandling.

Privacy and Personally Identifiable Information. Concerns about privacy, long associated with the growth of e-government, have been recently ignited by worries about the volumes of data users produce in interacting with devices that generate trails of potentially identifiable data. Reverse engineering strategies can undermine efforts to strip data of personally identifiable information in social media channels [9]. In the smart cities context, Kitchin [6] describes the value of geospatial data, for example, for drawing inferences about a user's travel, activities, and lifestyle and the potential for such data to be inappropriately accessed by police and other government agents and shared with third parties for commercial or other governmental purposes. Kitchin [6] calls upon city managers to consider the "potential pernicious" effects of smart cities technologies and take a proactive role in creating ways to safeguard the privacy of citizens. However, it's not clear what principles or suggestions are available to guide municipal government employees in designing their technologies.

Digitized Access to Services. Government services have become increasingly available through digital portals that were once viewed as options, but more recently have become required modes of access. Eligibility certification processes required to be conducted via the web should immediately raise questions about who will be left out and denied services for which they are eligible. The OECD [7] recently called attention to the potential for this problem with older and disabled citizens who need to interact with government services in welfare contexts but who may be otherwise indisposed or undisposed. Eubanks [5] has described the graphic example of a disabled client who was unable to use the prescribed technologies and then requested, but was denied, human assistance to complete eligibility procedures; she was later denied recertification because she had not "cooperated." This example illustrates the kind of abuse that can take place once we assume that government services can ***only*** be delivered through digitized processes. In addition, digital literacy still constitutes one main barrier for accessing digitized services in many societies and those who face it are persons who usually are most in need of government welfare services

Data Science and Algorithmic Decision Making. Data produced through interactions with our computerized devices is routinely collected, tracked, analyzed, and ultimately used to enable decision-making driven by data science as a strategy for policy creation, evaluation, and execution. Having pursued this strategy, there is clearly significant potential for computerized algorithms to produce solutions that, inadvertently or by design, can stigmatize, discriminate, and threaten due process rules [5]. There are several problems here, beginning with taking data out of its original context of production and applying it to decision making in other related, but potentially quite different contexts. Beyond this is a more telling problem of transparency in that, from the outside, citizens are limited in their ability to understand how data in such decision-making processes is treated and what rules produce particular kinds of outcomes. Scholars worry that algorithms designed to achieve efficiency, effectiveness, and expediency will sacrifice other important goals, such as fairness and inclusiveness [8]. The corollary to transparency is accountability; that is, requiring government to be able to explain to policy consumers how decisions about their lives are made and what criteria have guided them. However, as Diakopoulos [4] has explained, the options available for citizens to use in compelling disclosure about the information and methods that government uses in data driven decision making are limited. He proposes a new "freedom of information processing act" to "allow the public to submit benchmark datasets to the government that it would be required to process through its systems and provide the output results."

Communication through Social Media. Politicians and researchers using social media have become increasingly interested in using these channels to engage citizens in political affairs [1]. Sentiment analysis or opinion mining, machine learning, statistical analysis of demographic patterns, and the identification of other regularities are used to facilitate engagement and to integrate citizens' opinions into government-decision making processes. However, at the same time, these analytic techniques are also combined with political online trolling, framing, and the use of hate speech in social media to negatively manipulate public opinion, and polarize society. Citizens have little awareness of how their opinions are manipulated and used.

2 TOWARD AN ETHICS OF DIGITAL GOVERNMENT

While legislation to safeguard citizen's rights in transactions related to digital government is clearly warranted, it is unlikely to be the court of first resort when it comes to the myriad daily decisions that are made in designing the digitized service provision and data driven policy execution that will increasingly structure our lives. Many of us may prefer that such decisions be made by responsible administrators who are educated in the ways that digital government may violate our fundamental values of fairness and equitability. As numerous scholars have pointed out, ethics goes beyond existing laws (see e.g., [3]. Ethics is instead a set of moral compass points that make concrete the values and social expectations that we hope will guide decision-making practice in digital contexts. However, it is not obvious how such ethical touchstones should be formulated or what their specific content should be. Should we develop codes of conduct for government practitioners and incorporate knowledge of them in formal education and training as Zook et al. [9] suggest? Any such definitive codes are likely to be eclipsed by fast-paced changes in hardware and software. Are there alternatives to codes that might better guide public servants in how to think through the tradeoffs, complexities, and uncertainties associated with creating complex systems for decision making and service delivery?

In this panel discussion, we feature several speakers who have undertaken the task of sorting through one or more issues related to an ethics of digital government. Three speakers will present positions on their particular topics. We ask that speakers' positions be expressed both in writing, so that they can be circulated and other panel members can review them in advance, as well as in brief oral presentation in the panel discussion.

A scholar of ethics will serve as a respondent to the positions expressed by the panel members.

A moderator will preserve time in the panel for panel members to respond to comments and questions from the audience and from each other.

3 SPEAKERS:

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Presentation Title: The Ethics of Algorithmic Governance

Algorithms drive our modern world. They determine the news we consume, influence who we're likely to vote for, and affect decision-making on a range of issues from college admissions to criminal sentencing to who will be the recipients of organ transplants. But what new politics do algorithms create? A number of recent cases have surfaced where algorithms were responsible for amplifying existing socio-political biases and stereotypes, some even proving to be overtly discriminatory, such as how Google Ads displays far more higher paying and executive-level jobs to male users than female, and excludes older users almost completely; how Facebook enabled advertisers to purposefully target self-identifying white supremacists and anti-Semites; how modern facial recognition technology has been shown to favor lighter skin in its understanding of "beauty", and more. From the government context, bills such as the "Pretrial Integrity and Safety Act", co-sponsored with rare bipartisan support in the U.S. Senate, have been proposed to address bias in the criminal justice system by replacing the current system of money bail with one that is algorithmically-base and generating a "prediction score" related to a defendant's flight risk or their odds of recidivism.

While algorithms like these increasingly permeate both the public and private sectors, counter-efforts have also begun to reign in their worst excesses while still acknowledging their positive potential. Numerous public calls have been made for transparency and accountability, even calling on algorithmic auditing as a necessary function of government, as embodied in New York City's new Algorithm-Monitoring Task Force.

This presentation will seek to provide a high-level overview of issues, ripped from the headlines, that illustrate the prevalence and complexities of algorithms as a force in the American political system today. It will seek to analyze what political values are embedded within specific algorithmic designs, and how that might inform theories on democratic governance, particularly from a rights-based perspective. Finally, I will argue that a new ethical framework is necessary to address this rapidly growing phenomenon for both academics as well as practitioners.

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Presentation Title: Ethics for Citizen Engagement through Social Media.

Parallel to the ample adoption and appropriation of social media by citizens, there was an increased interest of communication specialists, politicians and researchers on using social media to positively engage citizens in political affairs. Thus, new technologies and algorithms able to conduct sentiment analysis or opinion mining, machine learning, statistical analysis about demographic patterns, and others are being studied to make such engagement possible and bring citizen´s opinions into government-decision making processes. However, all such efforts are also combined with political online trolling, framing and the use of hate speech in social media to negatively manipulate public opinion, and polarize the society with hidden benefits. Unfortunately, in many of such situations, citizens engage but are completely unaware of how their opinions are manipulated and used.

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Presentation Title: Managing Citizens' Privacy: Government Ethics Challenges.

Government remains a key actor protecting citizens' privacy while interacting with them through social networks and providing digital public services. Still citizens experience personal data loss and consequent harm while governments accumulate enormous volumes of data. Governments need to clearly explain to the citizens the goals of personal data usage. One of the most promising goals is to provide high quality proactive digital public services by means of effective utilization of citizens' personal data. Another priority for governments, researchers and interested experts is to promote citizens' legal consciousness when they grant access to their private data to the third party. Citizens don't always fully understand who, how, and in what volume gains access to their private data. Both governments and commercial companies by means of machine learning and big data algorithms can completely identify user without his/her official permission by knowing only fragments from user's data profile. Thus public data usage together with complete identification of the user brings an unanswered ethical challenge. The situation becomes even harder when the algorithms working with personal data predict future steps for the user though he or she may not know or even think about possible future of this kind.

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