

Uncovering Privacy Norms In Marginalized Rural Communities

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ABSTRACT

We present a discussion of our work-in-progress on attempting to empirically understand the contextual informational norms surrounding the information-sharing and technology practices of rural communities in the Anthracite coal region of Northeastern Pennsylvania and Central Pennsylvania. In order to understand the associated entrenched informational privacy norms, we first seek to understand the technologies these communities use and encounter in their everyday lives. As such, we have developed a series of focused discussion questions to codify the experiences of community members during in-depth round-table focus groups and semi-structured interviews to help understand the technologies they encounter and elicit their consequent privacy needs and concerns, as well as their related privacy knowledge, values, and experiences. These communities provide an opportunity to investigate digital privacy needs and norms, elucidating key privacy-related values and anxieties, of a complex, multi-faceted, and increasingly multi-racial, rural community.

KEYWORDS

Contextual Integrity; Participatory Privacy; Privacy In Context; Contextual Informational Norms.

1 INTRODUCTION

Our larger project seeks to address urgent questions on data privacy in the context of rural communities in the Susquehanna River Valley region in Central Pennsylvania, including: What are key privacy-related experiences and anxieties of marginalized populations in the largely rural communities of Central and North-Eastern Pennsylvania? What are the data-centric technological contexts most relevant in their lives? What kinds of methodological frameworks can be used to elicit the privacy needs, expectations, preferences, and norms of these communities into formal specifications empowering them to articulate what they see as appropriate uses of their data? In what ways will these community-articulated privacy norms be different from norms currently assumed by policy-makers and technology designers? How can the framework of Contextual

Integrity (Nissenbaum 2009) (which characterizes privacy as "appropriate" flow of information) serve to capture and operationalize these community-generated privacy values effectively? How can we engineer sociotechnical systems, including accompanying human-computer interfaces, that are capable of expressing these norms, and enforcing them computationally across "information flow" platforms?

In the symposium, we focus on addressing the first two of this set of related questions using Contextual Integrity as an analytical tool. Our research questions are the following:

- How do participants define privacy?
- What kinds of information flows do participants articulate their personal information being subject to? Which of these do they deem "appropriate" or not, and for what reasons?
- How do they articulate their concerns or lack thereof regarding sharing of information and who they believe is responsible for safe guarding their information?
- What do they perceive to be the most consequential social and technological contexts and values?

To address these questions, we have developed a deliberately ordered line of inquiry for use in the context of focused group discussions and one-on-one interviews, with further potential probing questions outlined parenthetically. The focus group questions are listed in Section ???. After transcribing and depersonalizing the recordings of each focus group and interview, we will employ a grounded theory method, contextually generating sociolinguistic codes from the data, utilizing an inductive reasoning methodology to establish the salient categories present and deemed relevant by these communities.

2 RELATED WORK

Experiences around data privacy and resultant privacy harms range from individuals experiencing discrimination in credit or employment opportunities, to biased targeted advertising for financial or housing options, and marginalized groups being disparately hyper-visible to regulatory and punitive processes [2, 4–7, 11, 14].

Furthermore, privacy harms associated with unfettered collection and use of data are often disparately felt by marginalized populations, and heighten anxieties around being constantly under surveillance [9, 11]. We use the term privacy disparities to capture these adverse effects of the loss of privacy on groups of people who are already marginalized in society owing to systematic exclusion. Work on identifying these privacy disparities is beginning to emerge [1, 10?]. However, there is very little existing literature on whether marginalized communities' concerns are being translated into protective practices, whether they are informed about their privacy rights, or how these communities attempt to mitigate privacy risks, and essentially no research on how these concerns could inform privacy policies and the design of privacy engineering systems. Furthermore, we know little about technology concerns in rural populations, where digital technology use is growing, as most of the existing literature draws from urban and suburban populations [8]. This investigation is intended to fill a void in current academic literature and applicable design methodologies to enable an understanding of the privacy needs of marginalized rural communities, and lead to an empirical excavation of the norms and values that address these needs.

3 ONGOING AND FUTURE WORK

We are currently conducting focused group discussions and interviews with members of the communities in the Anthracite Coal Region of Pennsylvania. At the time of writing, we have held five focus group sessions with a total of 36 participants. A preliminary analysis indicates that participants in the aforementioned focus groups overwhelmingly expressed high levels of concern for the value of privacy both for the flow of information within their community and when engaging with technological systems. Concurrently, they vocalized a significant lack of privacy self-efficacy and privacy literacy apropos these frequent data exchanges, perceiving them as necessary for normative functions in civic society or outside of their hands entirely. Subjects rarely expressed apathy toward privacy-related values; such apathy was limited to the context of lost agency over the flow of their personal information. Without prompting, participants eagerly discussed the possibility of educating themselves on privacy and information flow beyond the scope and setting of the group, citing both a necessity to employ such literacy in modern civic engagement as well as a desire to understand how they can manage and govern the appropriate flow of their personal data. In the long term, we intend to use the resultant sociolinguistic codes and normative evaluations derived from these focus groups and interviews to co-design educational materials for these communities to help them to better understand privacy value exchanges and the flow of information within their community and the technologies with which they engage actively and passively. Following this, we will re-evaluate the community's values, norms, and codes. Our long-term intentions are to develop a participatory design framework so questions of appropriateness and governance of information flows (as per the "Privacy as Commons" framework [13] which articulates privacy as the governance of appropriate information flows) surface up in conceptualizations of privacy. This is particularly important in the conceptualization and design of technologies which impact marginalized communities.

4 FOCUS GROUP QUESTIONS

1. Who do you consider to be your community? When it comes to your relationships with others in your community, what do you value in these relationships?
2. Think back to situations in which you share personal information about yourself or your family with others. Can you describe this situation in detail? (This could include sharing information to get access to a service, etc.) How do you think the information you share is used?
3. What kinds of risks could you imagine happening if you shared things about yourself? (Have you ever felt like your personal information made you a target or made you vulnerable? i.e. when applying for jobs, housing, benefits; cyberbullying; when trying to get a loan.)
4. How does information spread in your community? Do you trust the media? (i.e., Local vs. national? Traditional vs. new media? Corporate vs. third party? Print, Radio, Television, Internet, etc.)
5. Describe a time when you or a relative had to make a decision about how to share your personal information. What kinds of personal information would you be cautious about sharing within your community? (How does this compare or contrast with how you would share this with other people outside your community? Online?)
6. What kinds of personal information do you feel you, your family, or members of your community HAVE to share to get access to something? (What kinds of personal information do you feel you HAVE to share with your family or community?)
7. Describe an experience where you have felt you were being watched. When do you think it is appropriate or inappropriate for people's activities to be watched? (e.g. child protective services, drug testing people who receive government benefits, etc.)
8. Who do you trust with your personal information? (Do you trust companies with your personal information? What about the government? Can you explain your thoughts and reasoning? Can you give me an example?)
9. How and where do you access the internet? (What is your primary mode of accessing the Internet?)
10. What kinds of activities do you do online? (If social media comes up: What kinds of social media? What kinds of personal information are you sharing on social media?)
11. How is technology different today than when you were growing up, for better or for worse? How has it changed your life?
12. What kinds of risks do you think you take when you share things about yourself using technology? (Have you ever felt like your personal information made you a target or made you vulnerable? i.e. when applying for jobs, housing, benefits; cyberbullying; when trying to get a loan.)
13. Walk me through the last time you used technology. Tell us about the experience. (Alternate Phrasing: Tell me about a time you engaged with technology that you felt was meaningful or significant. Probes: What kinds of technologies do you use in your daily life? What reasons do you use them for? [i.e., work related, entertainment, social media, welfare, government assistance, etc.]
14. Would you ever stop using the technologies you've described earlier or avoid using these technologies? If so, do you feel you lose something by not using them? (Has there ever been a time when

you wanted to disconnect from the digital world but didn't think it was feasible? If so, tell us about this time and how it made you feel.)

15. Are there any technology concerns that you think your community shares? (Looking back at the topics we've discussed in our conversation together, how do your views and values compare and contrast with that of your community?)

16. Has your perspective with regards the topics we've discussed changed or been reaffirmed in any way, and have you learned anything new that you'll take away from this session?

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REFERENCES

- [1] Anthony, Denise, Celeste Campos-Castillo, and Christine Horne. 2017. "Toward a Sociology of Privacy." *Annual Review of Sociology* 43 (1). Annual Reviews: 249-69.
- [2] Brayne, S. 2017. "Big Data Surveillance: The Case of Policing." *American Sociological Review*. journals.sagepub.com. <http://journals.sagepub.com/doi/abs/10.1177/0003122417725865>.
- [3] Cargo, Margaret, and Shawna L. Mercer. 2008. "The Value and Challenges of Participatory Research: Strengthening Its Practice." *Annual Review of Public Health* 29: 325-50.
- [4] Custers, Bart, Toon Calders, Bart Schermer, and Tal Zarsky. 2012. *Discrimination and Privacy in the Information Society: Data Mining and Profiling in Large Databases*. Springer Science & Business Media.
- [5] Eubanks, V. 2018. "Automating Inequality: How High-Tech Tools Profile, Police and Punish the Poor." New York, NY: St. Martin's Press. Google Scholar.
- [6] Executive Office of. 2016. "Big Data: A Report on Algorithmic Systems, Opportunity, and Civil Rights."
- [7] Executive Office of the President. 2014. *Big Data: Seizing Opportunities, Preserving Values*. White House.
- [8] Hamby, Sherry, Elizabeth Taylor, Alli Smith, Kimberly Mitchell, and Lisa Jones. n.d. "Technology in Rural Appalachia: Cultural Strategies of Resistance and Navigation." *International Journal of Communication*.
- [9] Lyon, and David. 2001. *Surveillance Society: Monitoring Everyday Life*. McGraw-Hill Education (UK).
- [10] Madden, Mary, Michele Gilman, Karen Levy, and Alice Marwick. 2017. "Privacy, Poverty, and Big Data: A Matrix of Vulnerabilities for Poor Americans." *Wash. UL Rev.* 95. HeinOnline: 53.
- [11] Marwick, Alice, Claire Fontaine, and Danah Boyd. 2017. "Nobody Sees It, Nobody Gets Mad": Social Media, Privacy, and Personal Responsibility Among Low-SES Youth." *Social Media + Society* 3 (2). SAGE Publications Ltd: 2056305117710455.
- [12] Nissenbaum, Helen. 2009. *Privacy in Context: Technology, Policy, and the Integrity of Social Life*. Stanford University Press.
- [13] Sanfilippo, M, B. Frischmann, and K. Standburg. 2018. "Privacy as Commons: Case Evaluation Through the Governing Knowledge Commons Framework." *Journal of Information Policy*, vol. 8, pp. 116-166, 2018.
- [14] Sweeney, Latanya. 2013. "Discrimination in Online Ad Delivery, 2013."
- [15] Wallerstein, Nina, Bonnie Duran, John G. Oetzel, and Meredith Minkler. 2017. *Community-Based Participatory Research for Health: Advancing Social and Health Equity*. John Wiley & Sons.