

Staking a Claim in Data: Expertise and Participation in a Rural Open Government Data Initiative

Rebecca M. Jonas
Kaitlyn Timm
Norman Makoto Su



Citizen involvement in open government data

- Open government data initiatives (Dove et al., 2023)
 - Making government data accessible to citizens
- Can achieve benefits of transparency and public empowerment
- Lacking understanding of citizen perspectives (Gooch et al., 2018)



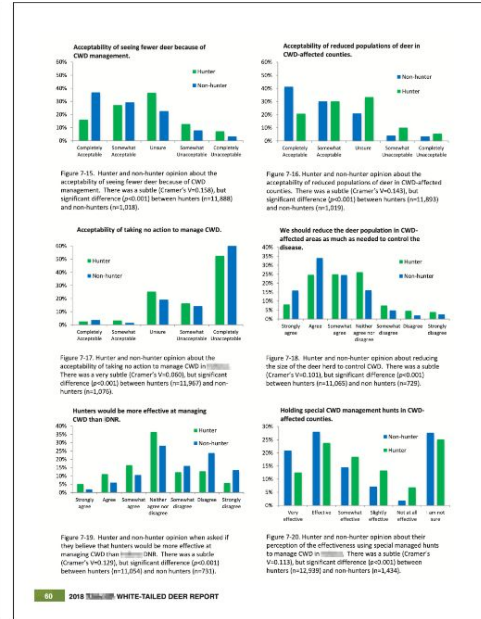
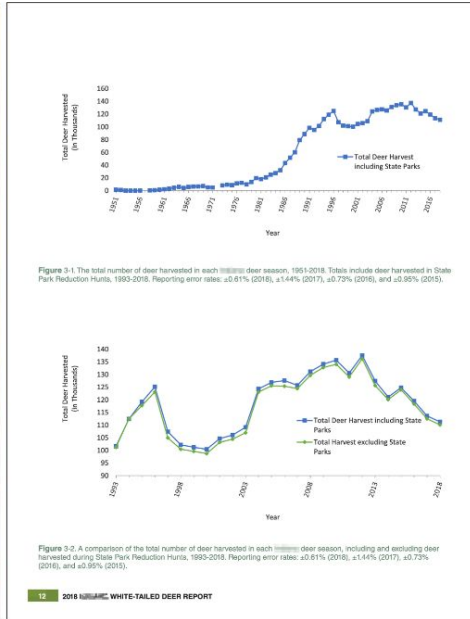
Challenges with open data

- Simply making data available is not enough
- Skill barriers can prevent effective access
- Lack of context can diminish value (Loukissas & Ntabathia, 2021)



Rural hunters as data reporters for the DNR

- Open data case study involved rural hunters as data collectors and consumers for the state Department of Natural Resources (DNR)



Rural hunters as data reporters for the DNR

- Hunters collect data on their hunting experience and environmental observations

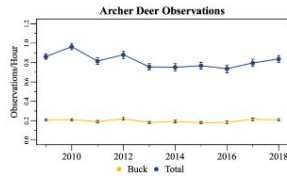


Figure 8-2. Statewide observations of bucks and total deer reported in the 2018-19 deer hunting season.

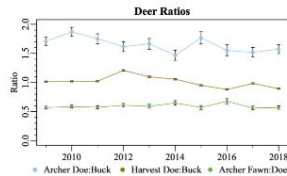


Figure 8-3. Statewide observation of doe:buck and fawn:doe ratios reported in the 2018-19 deer hunting season and the reported doe:buck harvest ratio from the 2018-19 deer hunting season.

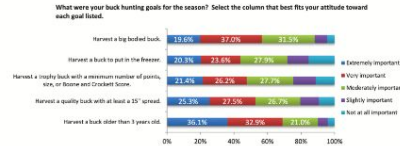


Figure 7-68. Hunters who indicated that harvesting a buck was important to them were asked to rank the importance of various goals for harvesting a buck.

population and their relative effectiveness, costs, and impact to the local and statewide deer population. There was strong objection to taking no action to manage CWD (Figure 7-15). This informs managers that we should be taking actions to manage CWD in order to align agency objectives with the desires of the public.

However, it is important to note that a small percentage of hunters (2.6%) and non-hunters (3.7%) believed

that taking no action was completely acceptable. While individuals opposed to any action may account for a high number of individual phone calls or complaints that agencies may receive, they represent a minority. Agency administrators should make sure they are aware of this fact.

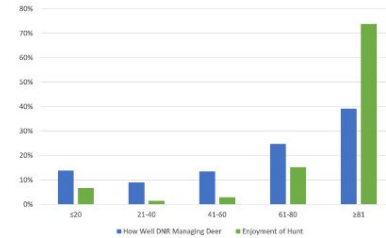


Figure 8-8. Hunter opinion about how well DNR is managing the deer in the county where they hunt and their enjoyment of the hunt during the 2018-19 deer hunting season. Scores range from 0 (poor) to 100 (excellent).

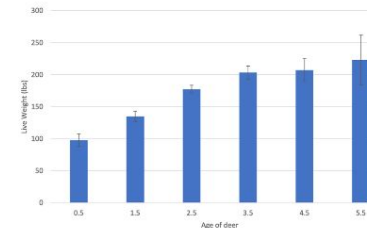
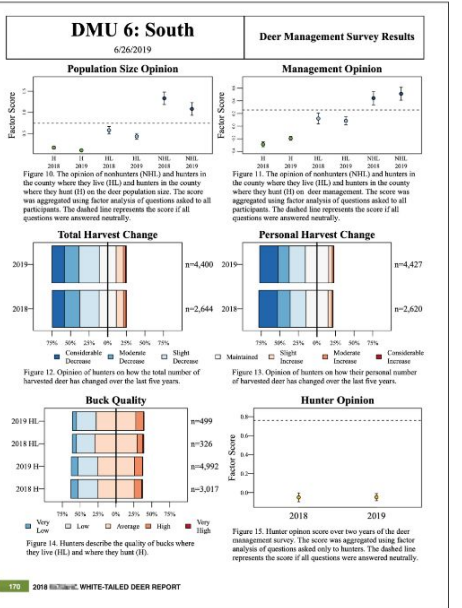
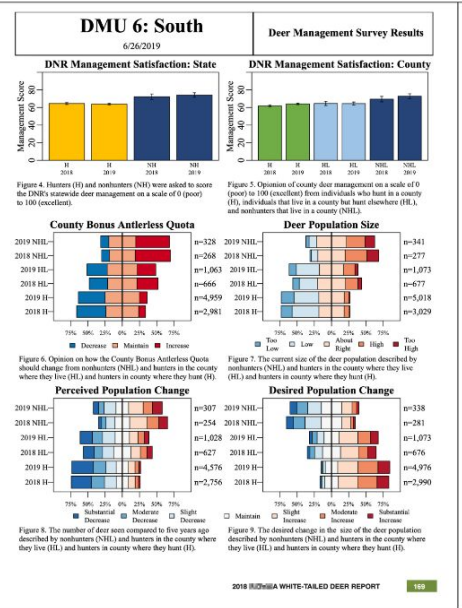
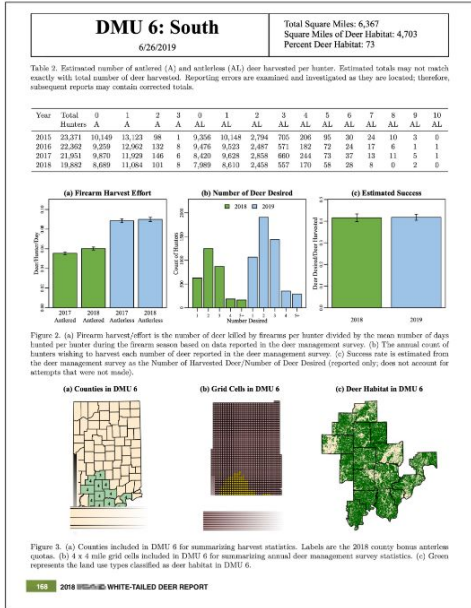


Figure 8-9. Live weights of deer by age class reported by hunters in the 2018-19 deer hunting season. Of the 494 hunters that reported a weight, only 310 of them also reported the age of their deer.

Rural hunters as data reporters for the DNR

- DNR provides a 200+ page PDF report of processed data about wildlife populations, hunting outcomes, and environmental conditions



Citizen impacts in open government data initiatives

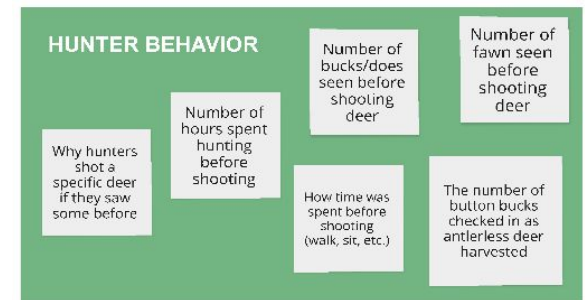
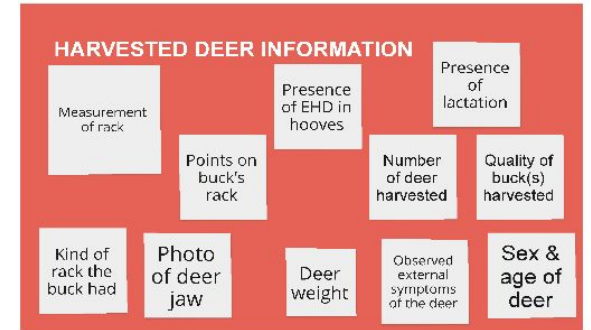
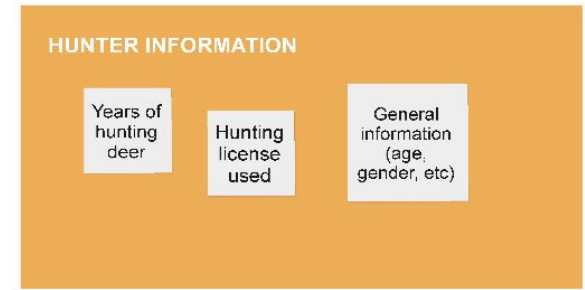
RQ1: How does participation in an open government data initiative impact citizen perceptions of government?

RQ2: What value do citizens gain from participating in an open government data initiative?

RQ3: How does participating in an open government data initiative impact citizens' relationship with data?

Card sorting interviews for folk theories

- Study designed in collaboration with DNR
- 11 hunters, 3 conservation officers (CO)
- Interviews about data collection and resulting data reports



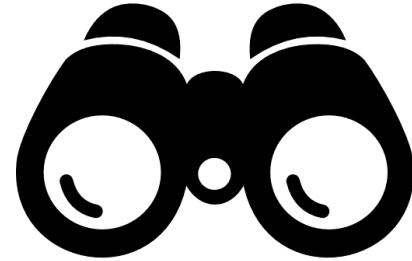
Findings: Expertise, values for data, and trust

- Being the DNR's "eyes and ears"
- Hunters developed values for data
- Open data initiative increased trust and respect



Being the DNR's “eyes and ears”

- Hunters were **invested** in hunting and saw themselves as holding **valuable expertise**
- Open data process signaled that DNR was **finally recognizing hunters expertise**, mitigating contentious relationship
- Hunters willing to go out of their way to collect data and samples for DNR when they “**feel like they care**”



“[The DNR] want us to be the eyes and ears because they haven't got time to go do that.”

- Jack, 20+ years hunting experience

Hunters developed values for data

- Hunters thought critically about what might happen to their data in other stages
- Concerned that data analysis might decontextualize data, misinterpret
- Hunters wanted more involvement and richer data collection to account for hunter diversity

“If a guy takes a buck and he checks a buck, right now, all your data knows is he checked a buck. And **you don't know that he was out there for two weeks to get that buck and that he let a dozen...walk by him before he took it or was that the first thing he saw?**”

- Chris, 10-20 years hunting experience



Open data initiative increased trust and respect

- The open data initiative made hunters feel respected by the DNR
- In return, they held greater respect and trust for DNR
- Reported data increased trust in DNR decision-making
- Some hunters even used data to defend DNR against criticism

“...in the last few years there has been this, this feeling by a lot of hunters that the deer population is just crashing and that the DNR is not managing it well. And our harvest numbers are low this year and this sort of sentiment is out there. And **I love to be able to refute that when I get that harvest summary and say, well, you know if you look at the numbers, the numbers don't really support what you're saying.**”

- Jim, 20+ years hunting experience

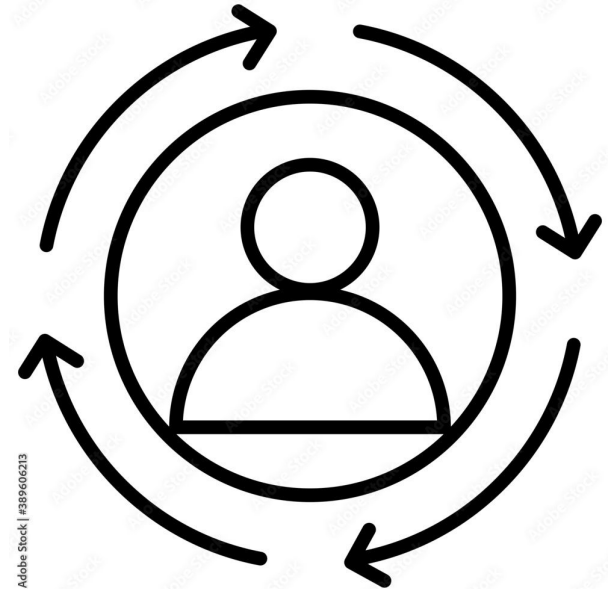
Implications for open data

- Involve citizens throughout data cycle
- Reframe citizens as experts
- Prioritize citizen utility



Involve citizens throughout data cycle

- Open data increased trust, respect, and data literacy
- Could have achieved greater benefit through greater citizen involvement
- Hunters had concerns about data analysis collapsing context
- Greater involvement could mitigate concerns and increase benefits



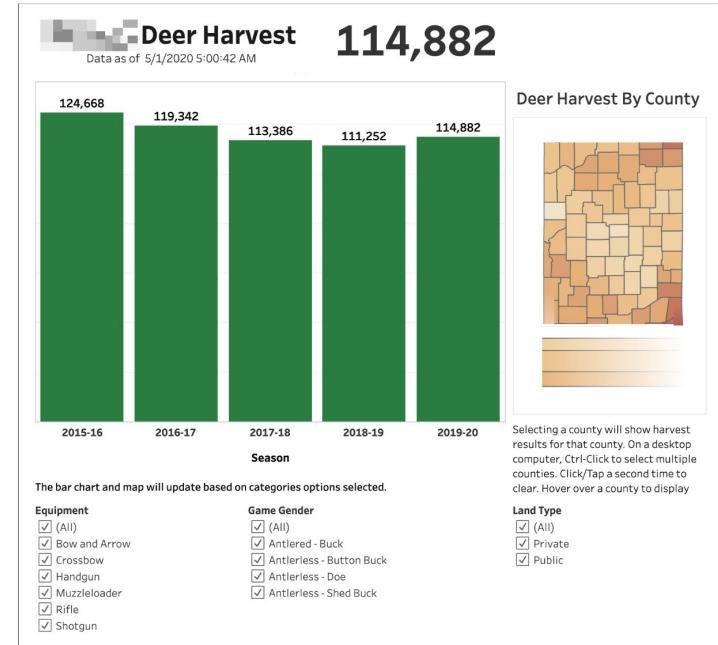
Reframe citizens as experts

- Specific context of DNR open data highlighted citizen expertise
- Promotes mutual respect
- Respecting citizens as experts can increase resulting benefits and data quality



Prioritize citizen utility

- Some open data frameworks claim data is only open if raw
- Processed data was more accessible to citizens
- Context (e.g., data by locale) made data meaningful to citizens
- Open data initiatives should balance access and utility



Thank you!

Loukissas, Y. A., & Ntabathia, J. M. (2021). Open data settings: A conceptual framework explored through the map room project. *Proceedings of the ACM on Human-Computer Interaction*, 5(CSCW2), 1-24.

Gooch, D., Barker, M., Hudson, L., Kelly, R., Kortuem, G., Linden, J. V. D., ... & Walton, C. (2018). Amplifying quiet voices: Challenges and opportunities for participatory design at an urban scale. *ACM Transactions on Computer-Human Interaction (TOCHI)*, 25(1), 1-34.

Dove, G., Shanley, J., Matuk, C., & Nov, O. (2023). Open data intermediaries: Motivations, barriers and facilitators to engagement. *Proceedings of the ACM on Human-Computer Interaction*, 7(CSCW1), 1-22.

Thank you!

- Involve citizens throughout data cycle
- Reframe citizens as experts
- Prioritize citizen utility

I am on the job market seeking a tenure-track faculty position

rejonas@ucsc.edu

rebeccajonas.com

