A Critical Examination of Crisis Data and Information Sharing in Support of Disaster Relief

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Data Ethics and Disaster Relief

In the aftermath of natural and man-made disasters, first respondents often aggregate data from social media platforms to understand community response and to determine where help is needed. This approach is especially useful for humanitarian mapping, crisis map construction, and similar disaster relief efforts.

However, scraping public-facing platforms for crisis data presents distinct ontological, epistemological, and ethical issues.

As librarians engage in humanitarian mapping and similar disaster relief efforts, it is important to examine information-sharing and crisis data use in support of disaster relief efforts.

Critical Data Studies

Critical data studies:

- considers the ethical, legal, socio-cultural, epistemological and political aspects of big data and digital infrastructure;
- encourages deeper consideration of democratic and participatory approaches to algorithm design and responsible data management, curation and dissemination;
- offers an ethical lens for considering crisis data use and information sharing, particularly for ontological, epistemological, and ethical issues.

Ontological Issues

Tracking disasters via social media posts and hashtag analysis provide an immediate but truncated understanding of the disaster relief process. This in-the-moment focus makes it difficult to understand the precursors to a disaster event, the long-term disaster recovery process, and post-disaster implications.

How can we find the balance between the immediate, short-term benefits provided by social media and the challenges of accurately capturing the total disaster story?

Epistemological Issues

Social media helps illustrate how people communicate during disasters but is prone to bias. Older, less affluent, and vulnerable voices are often missing or underrepresented; Twitter algorithms favor tweets based on the number of followers or social networks, and people tweet in cultural-specific contexts that can be difficult for outsiders to understand.

How can we ensure that the voices of the marginalized are heard?

Ethical Issues

How can we respect privacy and consent when scraping and reusing social data that might include personal information?