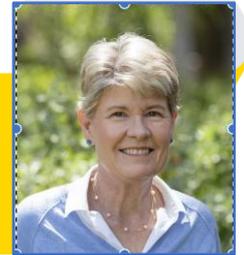


Beyond Whisper Networks: How Community Communication Ecologies Evolve During Disasters



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Mapping Communication Evolution: From Individual Actions to Sustainable Community Systems in Disaster Response

As climate change intensifies disasters, understanding multi-level communication becomes crucial. While official emergency agencies develop protocols, communities create their own information-sharing networks that evolve from individual actions to group coordination and eventually to community-wide systems. This research investigates how these communication ecologies develop, persist, and interface with official systems.

Multilevel info-sharing networks

Emergency services organisations are not necessarily the primary sources of information for people in a disaster. The public often takes an active role when disaster strikes, and affected individuals and groups are sharing information and creating their own informal and formal networks, thus creating multiple levels of information sharing.

Theoretical Framework

Communication Infrastructure Theory (CIT)*
Social Capital Theory

This research integrates Communication Infrastructure Theory (CIT) and Social Capital Theory to examine how community communication systems evolve during disasters:

- CIT examines how neighbourhood storytelling networks and communication resources enable information flow; Individual information-seeking and sharing behaviours
- Social Capital Theory explores how bonding (within groups), bridging (between groups), and linking (with authorities) relationships facilitate community resilience;
- Together, these frameworks explain both the structural and relational aspects of disaster communication.

Methodology

- A qualitative approach, 'grounded theory informed' with 19 interviews across 3 disaster-affected sites
- Purposive sampling of those with visible community response roles

Analysis conducted across three levels:

- Individual information-seeking and sharing behaviours
- Group formation and information co-creation
- Community-level communication infrastructure and integration with official systems

Key Findings

Individual Level: Information intermediaries emerge as critical nodes, combining multiple technologies and trusted sources to navigate complex information landscapes.

Group Level: Information-sharing groups form through crisis-triggered, experience-driven, or hybrid processes, developing multi-channel communication strategies.

Key Findings (cont.)

Community Level: Sustainable communication systems develop through information hubs, physical/digital infrastructure, and evolving trust networks.
Interface Challenges: Community systems struggle to integrate with official emergency management despite demonstrated capabilities.

Implications

1. Need for inclusive crisis communication planning
2. Map community communication assets and leverage information intermediaries
3. Foster collaboration between official agencies and community capacities
4. Integrate top-down expertise and bottom-up perspectives
5. Recognise and support the natural evolution of communication systems from individual to community level
6. Develop policies that formally acknowledge community communication capabilities during emergencies

* Kim, Y.C., & Ball-Rokeach, S.J. (2006). Civic Engagement from a Communication Infrastructure Perspective. *Communication Theory* 16 (2006) pp. 173-197



Further information

For additional information scan the QR code or contact:

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