CONVERGE COVID-19 Working Groups for Public Health and Social Sciences Research

Research Agenda-Setting Paper

This paper was written to help advance convergence-oriented research in the hazards and disaster field. It highlights areas where additional research could contribute new knowledge to the response to and recovery from the pandemic and other disasters yet to come. Questions about the research topics and ethical and methodological issues highlighted here should be directed to the authors who contributed to this paper.

Working Group Name:

Social Ties, Mobility, and COVID-19 Spread Rates

Working Group Description:

Why have some communities seen greater COVID-19 infection and mortality rates than others? Immediate research is needed on how networks of social connections and information channels, population mobility, and health care capacities and vulnerabilities correlate with infection and death rates. Daily data on social ties, attitudes, and policy interventions could soon be lost. This Working Group will conduct rapid qualitative and quantitative data collection through surveys, interviews, focus groups, and mobility and social media data from affected communities.

Priority Research Topics and Specific Research Questions:

Priority Research Topics	Potential Research Questions
1. Information Access	• <u>Research Question 1</u>: How do people get information about COVID-19? • <u>Research Question 2</u>: What media are the most common sources of information—e.g., print newspapers, TV news, social media? • <u>Research Question 3</u>: What types of information do friends and family or network members provide during crises?
2. Trust in Authorities	• <u>Research Question 1</u>: To what degree are local, regional, and national government officials trusted to provide accurate information on COVID-19? • <u>Research Question 2</u>: To what degree do residents see local, regional, or national government agencies as trustworthy? • <u>Research Question 3</u>: What role do universities, NGOs, and neighbors play in providing trusted information?

3. Changing Behaviors	• <u>Research Question 1</u>: What kinds of new behaviors have people undertaken during the pandemic?
	• <u>Research Question 2</u>: To what degree have new behaviors—like mask wearing and physical distancing—become commonplace?
	• <u>Research Question 3</u>: To what degree are social tie building activities being curtailed across all demographics?
4. Social Ties	• <u>Research Question 1</u>: How do bonding, bridging, and linking social ties correlate with behavioral change and trust in institutions?
	• <u>Research Question 2</u>: Do social ties facilitate information access?
5. Mobility	• <u>Research Question 1</u>: Using GPS data from personal devices, can we find patterns in physical distancing by neighborhoods?
	• <u>Research Question 2</u>: Are certain communities, cities, and countries physical distancing more than others?

Ethical / Methodological Considerations:

During this ongoing pandemic we face a number of ethical challenges, including ensuring that our data collection harms neither our investigators nor our informants. Further, many people may already be feeling stressed or anxious because of the loss of a loved one, the loss of a job, or the loss of normalcy. Our team has already applied for and receiving IRB approval for our extensive quantitative survey at the individual level which seeks to understand how social networks, trust in governance structures, and neighborhood connections alter COVID-19 responses and behaviors (NEU IRB #: 20-04-31). Beyond institutional approval, our lab has extensive research experience working in crisis environments, including Japan, North America, India, Israel, and China. Our core approach: we will not put our subjects or ourselves at risk mentally or physically, and will continue to use teleconferencing tools with security measures enabled—such as Skype and Bluejeans, which are more secure than the popular program of Zoom. Further, our data collection does not collect names or other personally identifiable information and all of our data is stored on cloud based, password protected servers.

Other Frameworks, Considerations for Collaboration, and/or Resources:

Our team takes public engagement very seriously. We have already participated in a number of public-facing exhibitions on the potential role of social ties during COVID-19, including a Harvard Graduate School of Design (Harvard GSD) annual symposium, titled Quarantined: The Role of Design Research in Measuring Urgency and Reimagining Agency, along with a United Nations Disaster Risk Reduction (DRR) blog on social ties in the age of COVID-19 and a forthcoming issue of Cell: One World on the role of social ties in disasters. Further, we plan on continuing both our dissemination to larger audiences through university websites and platforms such as The Conversation (where earlier posts on disasters and networks have received more than 80,000 views), Medium, Twitter, and LinkedIn. We will also continue to publish peer reviewed articles in academic journals, such as Natural Hazards, Social Science and Medicine, Disasters, and more comparative journals such as World Politics. If possible, we would like to publish a monograph on COVID-19 taking this multi-level approach across multiple countries.

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