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What happens to mobilities in crisis?

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What happens to mobilities in crisis?

Monika Buscher

From natural disasters to terrorist attacks, and from hurricanes to mass murders, human crises lay bare how much we depend on mobilities. Dr Monika Buscher considers the complexity of the challenge faced in a major emergency.

What happens to mobilities in crisis? The media have termed the 21st Century the “century of disasters” . Population growth and migration to cities, an increase in extreme weather events, and the interconnectedness of the modern world all accelerate global system failures such as pandemics, terrorism and financial crises.

The Financial Times (2011) lists Disaster Management among the top 10 challenges for science.
Bringing a mobilities analytical orientation to crises is very productive. Indeed, crises and their effects make visible just how complexly mobile contemporary social, political and economic systems are today, and the potential for chaotic effects cascading through these systems. Even minor crises can have far reaching consequences. Mobilities research can map, track, analyse and reveal these flows and connections. In a way crises are a perspicuous setting for the study of mobilities, blocked movement, immobilities, because they make them visible.

Coping with disaster in Japan

The gigantic triple disaster in Japan is in a different league in terms of the losses it incurred and the ripple effects it caused. It very quickly caused turbulence in the global car manufacturing industry, based on Just-In-Time logistics. Reports of shortages emerged within days and at the end of March 2011, only 17 days after the earthquake, a Morgan Stanley report explains
"The issue of potential supply shortage is a top global priority"
The effects on the car industry and the overall total economic cost of roughly $235 billion estimated by the World Bank is of course, only a very small part in the total devastating loss caused by the disaster.
But apart from ‘dissecting’ and critiquing the vulnerabilities and inequalities of today’s radically and multiply mobile systems, a mobilities analytical sensitivity and perspective and our mobile methods can help shape mobility systems to become ‘better’ – more efficient, more sustainable, more human. This is of course a huge challenge for science, to make critique constructive, to become engaged in debates over what ‘better’ might or should mean. But – at least for myself – mobilities research creates valuable opportunities for engaged research with both integrity and impact.

Improving communications in a crisis

In the Bridge project, I work with a group of about 50 computer scientists and emergency response professionals to co-design ‘better’ communication technologies, communication infrastructures and communication practices for multi-agency emergency response to major disasters.
But the massively distributed collaboration required under these circumstances raises immense challenges. Time and time again, post-disaster reflections on response

efforts across the globe highlight communication, coordination, and collaboration as problematic.

Problems in disaster response

For example, in the aftermath of Hurricane Katrina, the US Department of the Interior offered assets that were immediately available for humanitarian and emergency assistance, including 300 trucks, 300 boats, airplanes and staff. But although they repeatedly attempted to provide these resources, there were no mechanisms for efficiently integrating and deploying them.
A month earlier, during the 2005 London Bombings, it turned out that the radios used to coordinate cooperation between the emergency responders didn’t work underground, where many of those explosions had taken place. So they had to employ human runners to relay information between the agencies And post disaster reflections also showed that the emergency agencies interpreted data protection regulations overly rigidly, refusing to share names and contact details collected from victims, which meant some people fell through the net, and obstructed the provision of a continuity of care, causing much distress.
In the Bridge project, my colleagues and I carry out studies with emergency responders, trying to understand how communication, coordination, collaboration can be supported. That’s not a matter of throwing more technology or better technology at these very real problems, it’s a matter of supporting and augmenting the real world practices these people employ to communicate and collaborate. This is a big job, and I can only give you a glimpse into the kinds of things we are developing.

Public engagement in crisis response

The main backbone is an infrastructure for ‘emergent interoperability’ and ‘agile’ emergency response. Every emergency is different – people need to combine well designed and well-rehearsed emergency plans with improvising and pulling together things that might be useful in this instance.
In recent years one of the most vibrant areas of improvisation is public engagement in crisis response. In relation to the 2007 California wildfires, for example, people affected found that the information provided by the official agencies and the media was too slow, out of date and inaccurate. They started generating their own situation reports with their mobile phones, mapping how the fires spread, and research pioneered by a group around Leysia Palen at University of Colorado Boulder shows that information provided by a massively distributed and mobile public has the

potential to significantly enhance the situation awareness of professional responders. So there is real potential to dovetail the efforts of such mobile publics with the efforts of the professional responders in ways that could enable a more agile emergency response. There are also challenges.

Shootings in Norway

Let me give you an example:
On the 22nd of July last year I was driving home from work. On the BBC news there were reports about a bomb in Oslo.
Many of my colleagues on the Bridge project work in Oslo. I stopped the car, called Jan Harvard, one of my colleagues, and asked if they were alright. When he said ‘yes’, I said ‘can you collect the social media communications about this?’ He did and we analysed around 220,000 tweets.
One particularly interesting thing we noticed was that there were a significant number of tweets asking for resources or offering resources, people distributed hospital phone numbers, they called for blood donations, they requested that people opened their Wifi networks because the mobile phone networks were jamming.
Then, if you remember, the attacker moved to the island of Utøya, some 35 km northeast of Oslo and shot 69 young people gathered there for a youth meeting of the Labour party.
Shortly after the shooting on Utøya began, ‘NilsPetter’ received the following tweet from one of the people on the island:
cpltee @NilsPetter We are sitting by the lake. A man dressed in police uniform is shooting. Help us regarding when the police will arrive. [5:58 PM July 22nd, 2011 from Twitter for iphone]
At the point this tweet was sent, the police had already arrived on the opposite shore, which is only 1,500 meters from the pier on the island. But they didn’t actually get to the island until half an hour later, because there was difficulty in understanding the situation and the danger – there could have been another bomb.

So, on Twitter, NilsPetter’s gets more updates from the island. If you read that Figure from the bottom up.
You see details about injuries and what the situation was like. Imagine yourself reading this, and imagine you have a friend on the island. Maybe you wouldn’t, but many people did this – they called them.
And NilsPetter’s response then reveals that it was crucial to stop people from doing

that. With some urgency, he tweets ‘DO NOT CALL acquaintances on Utøya’, explaining that ‘It can put them in danger’: The sound of a mobile ringing would have alerted the shooter. Nilspetter is a volunteer emergency operator mediating between those on the island and the concerned public and friends and relatives.

Boats come to the rescue

At the same time, some of the people nearby the island heard shots and cries for helpand used their boats to pick up people from Utøya and the surrounding waters. We don’t actually know whether Tweets prompted people to do that, or not. But in parallel, numerous tweets and retweets encouraged residents and tourists near Utøya to use their private boats to rescue people:
Boats on Utøya are recommended to pick up people from the water... The temperature is low... High risk of drownings... Rescue boat is on the way. [Via Twitter]
RT @elisefang: do you have a boat close to #Utøya? Pick up swimming children around Utøya! #osloexpl #norwayterror # bombeoslo [via Twitter]
Much of this was happening while the official emergency responders were still trying to figure out how to organise themselves and get to the island. You can find more discussion of this kind of online and offline public engagement in crisis response and the possibilities and dilemmas it creates for agile emergency response in a paper we wrote on ‘Peripheral Response’.

The issues of data protection

But I’d like to end by returning to a remark I made earlier about emergency response agencies interpreting data protection regulation in an overly rigid manner. Because there is a really serious challenge - momentous in my view - arising around the processing of personal data in relation to crises. From all these mobile phones that people have, their position would be available if you wanted it – even if the phone’s turned off, it’s possible to determine its location. The kinds of systems for ‘emergent interoperability’ that we are designing in the Bridge project make data sharing practically easier for the parties involved in an emergency response. And of course, when it’s about life and death, you want people to know where you are and to find you fast and to give you a personalised service based on your medical history, for example. But can you also expect the gates opened between those agencies to shut again after the emergency is over? When is a crisis over? Who decides? What does this do to the separation of powers that’s critical to democratic societies? What kinds of mobilities are we creating here?

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