Mobile Organizations for Ontological Security during Disasters

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If we understand catastrophes from an operational, action-oriented perspective, catastrophes are first of all interruptions or breakdowns of established practices and routines. When disaster strikes, established routines fail to work. Therefore first of all a catastrophe or disaster shows itself in its social impact as being an extreme form of social change. Clausen models the disaster event as an extreme form of social change that is highly rapid, radical and ritualized. In this perspective every irritation of everyday routine holds the potential to become the first step to a catastrophe. Or, to put it in the words of Erving Goffman, [our reality] *"is a delicate, fragile thing that can be shattered by very minor mishaps."* In the most extreme form, the full-scale catastrophe, every social aspect becomes interrupted and all beliefs, norms and values of a community are lost. After all, any catastrophe makes us rethink our view of the world and the way we judge our social life. And it leads to rethinking in which institutions we trust. So could the risky activities of the oil company BP put in stress our belief and trust in the capability of this particular oil company to cope with our natural resources.

This social impact of disastrous events on organizations has been looked upon by a variety of researchers such as Peter J. Denning et al (Hastily Formed Networks), Shelly Farnham (Ephemeral Groups), Karl Weick (High Reliability Organization), Gloria Mark (Resilient Communities) or Deborah Vance (Self Reliant Communities). They all unite in one central question: how do the social ties in a community become destabilized and disrupted by the social impact of a disaster?

Understood from this organizational perspective, the goal of all emergency and disaster relief efforts would be to effectively adapt the established organizational routines in the face of new challenges that arise from the disaster impact. Therefore the central question is: **What characteristics does an organization or a community have to have to be capable to cope with extreme social change and to effectively adapt to an unforeseen event?** In one way or the other organizations <u>have</u> to adapt in the face of extreme social events – if they want to survive.

In this presentation I would like to point out a particular feature of this process of adaption to a catastrophic event: mobilization.

Any disaster leads to an increased mobilization of people. Catastrophic events also lead to what I call a **double mobilization** of organizations. This mobilization can be called double, as it on one hand occurs **physically**, as relief authorities are being alarmed and dispatched and victims often have to be relocated, and on the other hand it occurs **cognitively or ontologically**, as reality conceptions and cognitive states that were viable in organizations are being irritated by the catastrophic event, often resulting in a general feeling of **ontological insecurity**.

Ontological security has been described by Ronald D. Laing as being a general feeling of being safe and secure of one's environment. Individuals that are ontologically secure know what they are up to and know what they can expect from their environment. Ontological security is build up in action as we go along living our lives and as we build up routines. Ontological secure persons are very sure of what their actions will lead to and what effects their actions will have. It thereby is also the basis for trust.

The disaster is a situation in which this feeling is being disrupted. The disaster is the situation in which this feeling of ontological security can be totally lost or lost for a certain period of time.

The notion of **mobility** is chosen here deliberately opposed to organizational flexibility, bringing in not only the flexibility of the social network and of the psychological constructs or cognitive states of individuals, therefore the process of changing beliefs, norms and cultural values in organizations, but thinking with it the spatial flexibility, therefore the ability to actually move in its physical location. So my working hypothesis would be: **physical and cognitive mobility seem to correlate to a certain extend. This is especially true for emergency relief.** Therefore I define mobility as "a tendency to move quickly, decide fast and plan on short horizons, act from ad hoc and situational challenges, and thereby avoiding strategic planning."

So the question is what is the best way to cope with disasters? If we look at the relation between mobility and the efficiency of disaster relief we can distinguish two extreme forms of strategies.
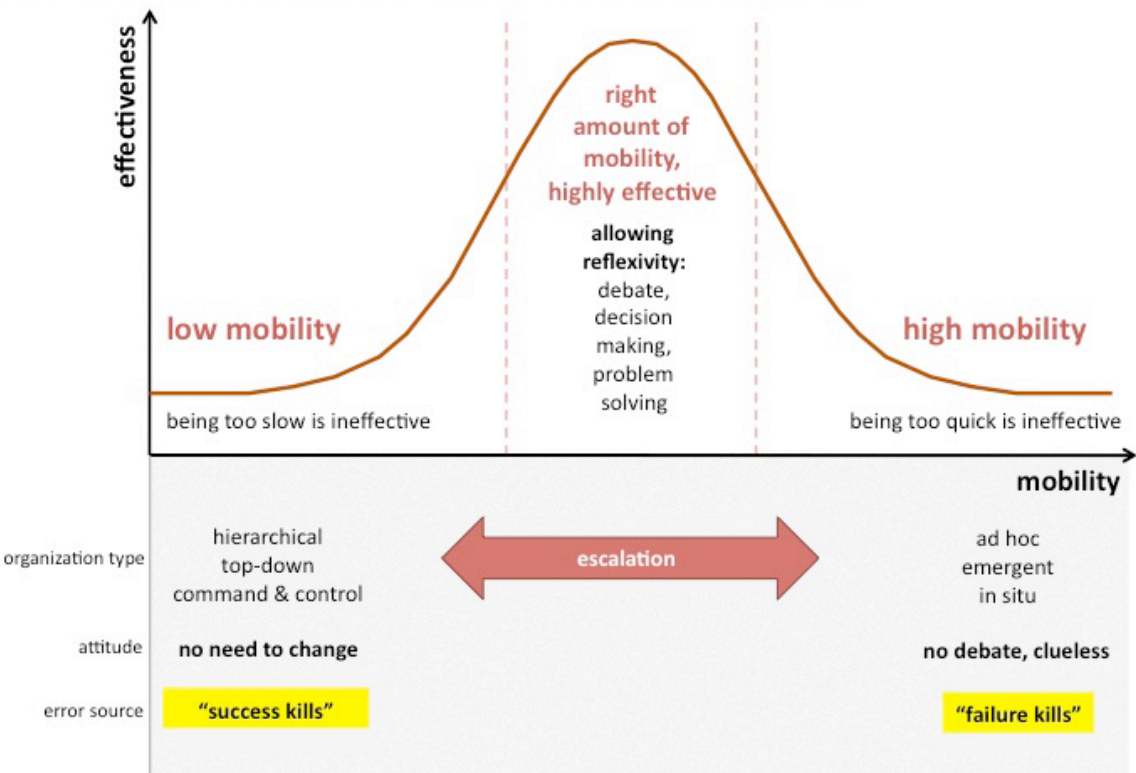

Fig 1: Mobility over Effectiveness

On the left side we have organizations that are very slow, and on the far right side there are the highly dynamic, quick organizations. It shows that neither the very slow organizations nor the highly mobile organizations can efficiently cope with disastrous events. So, more mobility is not always good. In fact there is a certain amount of mobility we try to achieve to efficiently cope with a disaster event.

So on the left extreme we have **static, top-dow, hierarchical, command and control structures**. They show a very low mobility and therefore are often ineffective to react to highly dynamic situations. The organization is very confident in its routines and sees no need to change plans or adapt. This concept leads to "success kills", which are caused by highly improbable errors with a very high effect that lead to a disaster because they were not foreseen. It is highly static and not able to adapt to new situations.

The other extreme is formed by **highly mobile organizations**. These have a tendency to form and decide ad hoc and form as emergent communities. The have a very high mobility, but are ineffective in decision-making. This strategy often leads to "failure kills". People know there

is an error and they start looking for it, but they do not find it and in the end they see errors everywhere and cannot decide on where to look for the real error. It is highly mobile but not very good in making the right decision and the organization has a strong tendency to panic.

Both extreme forms lead to what Dörner calls a "horizontal escape": people and organizations do what they can, and not what they should do.

Therefore effective emergency response lies somewhere in the middle range of mobility.

Next let us look at the relation between mobility and time (Fig 2). In a normal everyday life we have a more or less continuous flow of action and mobility, which is amplified by social routines. A routine shows a typical flow and amount of spatial and cognitive mobility. However, during a crisis or a catastrophe, the mobility increases, and it does so not in a continuous level.
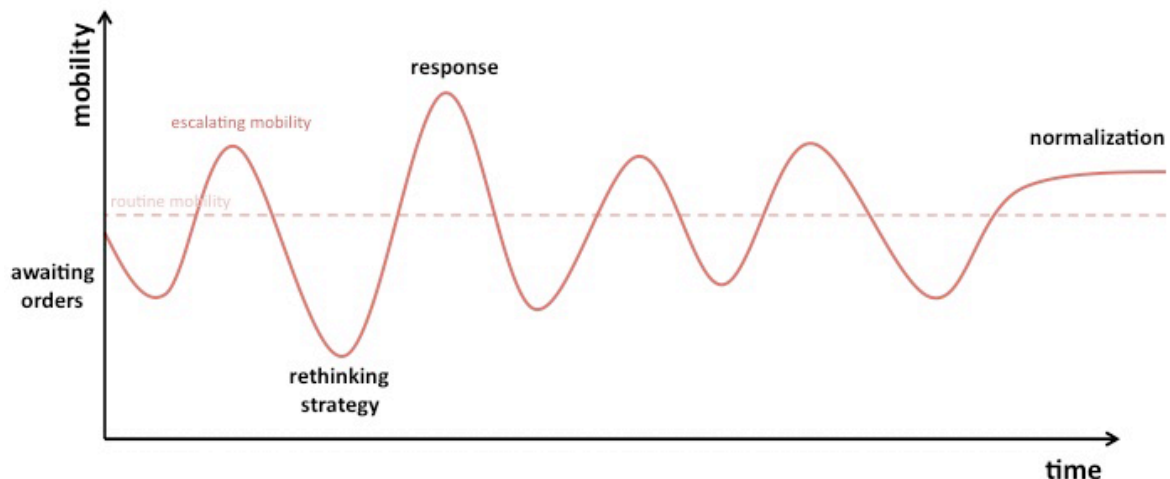

Fig 2: Mobility over Time

Cognitive and spatial mobility occur in characteristic waves. So there are certain periods and spatio-temporal contexts where mobility is very high, where a lot of action is going on, and some periods and situations where mobility is quite low, where people have to rethink their strategy or simply do not know what to do.

To get an better understanding of the effects of double mobilization in organizations we used a **GPS-camera tracking prototype** consisting of eleven portable cameras and eleven GPS devices, which we used to observe cognitive and spatial mobilities in emergency organizations. We tracked emergency exercises of firefighters, emergency rescue services and technical relief organizations to understand spatial and cognitive mobility in organizations.

Let me quickly show you one slide with some findings (Fig 3). It shows the spatial mobility captured by the tracking devices during one of the emergency exercises. It supports the argument, that there are typical situations and rhythms of mobility in organizations. Furthermore the eleven video devices that were carried by the emergency personnel in the field allowed us to capture audio and video to get an understanding of communication and cognitive mobility. In the bottom you see some screenshots of the video materials to give an impression of the work.
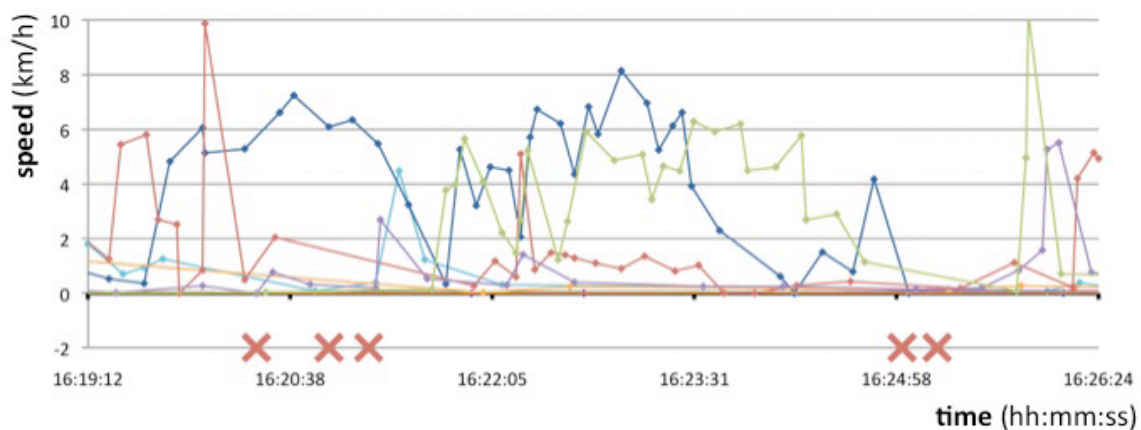

Fig 3: Extracts from the GPS and Camera Tracking

The video material gathered showed that in face of insecurity or ontological insecurity there were two typical reactions:

1) Reassuring of the situation via personal or radio communications, therefore a reconstruction of a common sense in the community. This can be seen as form of cognitive mobilization.

2) Starting to move away from the situation, thinking, "nothing can be done here" or "I am of no use in this place right now". This leads to spatial mobilization.

Communication in mobile contexts therefore allows coordination and stabilization of mobilization in organizations. With mobile media it becomes possible to communicate and coordinate on the fly, in the process, which – to a certain extend – makes it for organizations easier to adapt to new situational challenges.

My observations lead to the following conclusions: mobility is an organizational feature, which becomes vital in the face of a disaster. An organization that wants to effectively cope with disaster events has to allow spatial as well as cognitive mobilities.

In this process of double mobilization, mobile media and mobile social networking play a significant role for security communication strategies and disaster management. Communication here supports finding the right amount of mobility. In fact it is first of all communicative practice and media technology that can help to stabilize the mobility in organizations to find a strategy that is right in face of disaster.

Thank you for your attention!