Insights from an ethnographic study of a foreign response team during the EBOLA Outbreak in Liberia

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ABSTRACT

Organizing response operations during large-scale and complex disasters requires an ability to meet and adapt to sudden changes of plans. This paper presents descriptive accounts from an ethnographic field study of the work of a foreign Ebola response team during the Ebola outbreak on location in Liberia. The findings illustrate how response work is subject to frequent and rapid changes that result in unforeseen consequences that could cause frictions and dilemmas. The findings imply tentative implications for design, suggesting a need for improved decision support for re-planning and re-designing of ongoing response operations.

Keywords

Ethnography, Coordination, Planning, Operative response work, Changing needs, Foreign response team, Ebola Outbreak.

INTRODUCTION

The outbreak of the Ebola virus disease in West-Africa has caused a large-scale health disaster in the affected region. National authorities in Liberia, Sierra Leone and Guinea have together with the international community launched large-scale response efforts to reduce the spread and impact of this deadly decease. The international community in terms of World Health Organization (WHO), the United Nations, foreign response teams from a range of countries, a web of non-governmental organizations (NGOs) and commercial companies, has provided funds, equipment and personnel to support and develop the capacity for disease control in the affected countries. The amount of coordination across such a massive network of actors is substantial as well as difficult partly due to the seemingly unpredictable interplay between the mechanisms of the spreading of the disease and the corresponding response actions.

Predicting the next phase of disasters or forecasting near-term needs is a complex challenge in disaster response work. Studies of the large-scale response work in the aftermath to the typhoon Haiyan in the Philippines indicate that the dynamic nature of the disaster shaped the structures for coordination and information management (Homberg, Meesters, & Van de Walle, 2014). The study presented in this paper attempts to further explore this interplay between the disaster

phenomena and the coordination of response operations. Specifically, the paper explores how the unpredictable nature of disaster response is materialized in the ground-level work of operative response teams. The outlined findings are based on a recent ethnographic field-study of the work of a foreign Ebola response team in Liberia.

THE ROLE OF ETHNOGRAPHY

With its roots in anthropology, ethnography has experienced a significant renewal and growth over the last decades for a variety of knowledge domains in order to describe groups and their social settings (Wacquant, 2003). An ethnography is based on an researchers ability to participate, overtly or covertly in the daily life of a particular group of people over period of time, watching what happens, listening to the conversation and asking questions about the activities (Hammersley & Atkinson, 1995) and end up with ethnographic findings that make visible (Forsythe, 1999) relevant aspects of the practice of the studied group.

Ethnography has gained increased popularity also in IS-research (Orlikowski, 1992) and associated areas such as CSCW (Heath & Luff, 1992), HCI (Suchman, 1987). A common objective for using ethnography in IS-research is its ability to generate a rich material and deep understanding of professional practices based on insights from real situations, and using such material to inform the design of information systems (Hughes et al, 1994; Wasson, 2000). Ethnographic field work is however not unproblematic since the researcher is embedding herself near the phenomena of interest with consequences in terms of ethical, relational and identity dilemmas (Van Manen, 1988; Schultze 2000).

The insights from the ethnographic field work of the Ebola response work in Liberia, presented in this paper, follow the ethnographic tradition in terms of its dedication to study real response work when it happens in order to better understand how it happens.

RESEARCH APPROACH

The study, briefly outlined in this paper, is based on an ethnographic study (Hammersley et al 1995) of the work on organizing response operations. The unit of analysis is a foreign response team during the Ebola outbreak in Liberia. The context is the response operations that took place in Liberia from November 2014 and January 2015 with Monrovia and Greenville (in the Sinoe county in south of Liberia) as the two geographical settings.

Ethnographic fieldwork was conducted during the twelve days at the end of December 2014 and beginning of January 2015 on site in Liberia. The study was designed along the principles of radical research (Landgren, 2010), having the author embedded in a foreign response team with the explicit and overt task of conducting a research study of the work.

In order to be accepted and embedded in the foreign response team during their work in Liberia, the researcher was required to participate in 4-days of safety-training. The training consisted of two parts, the first part consisted of background information about Liberia and the ongoing response operations. The second block consisted of two days of Ebola protection management training, including practical exercises in personal protection equipment (PPE). The training was in retrospect very valuable in order to better understand potential risks as well as the level of risk, especially since the research activities turned out to also include following the work at Ebola Treatment Units, joining community health teams in their work in Ebola affected villages and getting insights about dead-body management and burial procedures.

Data was collected in form of field notes, photos and video sequences covering the everyday work in the response team. In the evening of each day, field notes were transferred to and expanded into a research diary along with notes regarding crucial impressions from the activities during the day. During the time with the team, brief informal interviews were conducted regarding various aspects of the ongoing work. Formal interviews were conducted with the head of mission, human resources, reporting officer, chief medical officer (CMO), logistician, medical doctors and nurses in order to further explore specific aspects from the observations. Documents such as organization charts, situation reports, progress reports and operative planning documents were also collected.

The analysis of the findings presented in this paper is based on an initial thematic analysis of the research diary. The initial thematic analysis resulted in a web of

high-level categories addressing a range of important aspects of the work of the response team; *plans and organizing*, *coping with change*, *situated technology use*, *design-oriented operative work*, *distributed collaboration*, *communication protocols*, *situation reporting as an emerging practice*.

Several of these broad categories are related to the organizing dynamics faced by the team due to changed operational needs. The analysis continued with an analysis of the notes covering episodes from team meetings that addressed plans and shifts of operational needs. The research diary was examined once more to find episodes that could illustrate this phenomenon. The audio-recordings were also examined in detail in order to find stories that could be related.

Based on the analysis, two broad tentative findings are outlined in this paper. The first finding is an attempt to illustrate that response work is an activity that is frequently changing and as well as associated with a need to quickly adapt. The labeling of the second finding is an attempt to encapsulate how rapid changes of plans could have consequences that at the time of the decision are difficult to foresee.

FINDINGS

The findings in this section are tentative and is an attempt to make visible important aspects of the response work by describing the dynamics of the response work in terms of *frequent and rapid changes of plans* and present the associated challenge of *foreseeing consequences of rapid change of plans*.

Frequent and rapid changes of plans

The Ebola response team could be described as a heterogeneous group of experts from a variety of professional domains where medical-personnel, wash-experts, camp-technicians, logisticians and supply could be seen as the core-group. In addition, there were also a number of people working in support-roles such as Human Resources, Finance, Procurement, Reporting, Legal Advisor, Gender advisor, Transports, Information manager and ICT. The management of the operations was directed on a strategic level by a team of project leaders in the EU-member state, the head of mission in Monrovia was in charge for the operative

work, a Chief Medical Officer had the medical responsibility, and a team leader was in charge for a smaller group in Greenville. The heterogeneity of the team was during the operations seen as positive since the team could engage in a variety of activities due to the span of expertise among its team members.

During the period from November 2014 and until January 2015, the organizational structure and work plans was changed several times in order to comply with the dynamics of the Ebola outbreak. The organizational structure of the team consisted of a top-level structure with the Head of Mission, supported by an administration unit and a Chief medical officer. The top-level structure stayed intact over time whereas the operative units at the bottom of the structure were facing frequent changes in order to meet new needs. The table outline dates in order to illustrate key events that triggered changes in how the response work was organized.

Oct 17	Initial request from WHO	Planning begins with the objective of having responsibility to operate ETU MOD2. The need for ETU-capacity was perceived as very high.
Nov 8	The initial response team arrives to Monrovia, Liberia.	
Nov 10	Change triggered by the decreasing number of Ebola patients	Provide Medical-, warehouse-, psychosocial-, camp- and wash-support to the MOD1 in Monrovia. Transform the ETU MOD2 to an ETU training facility
Nov 27	Change triggered by request from USAID to support an ETU in Greenville	Medical-, warehouse-, psychosocial-, camp- and wash-support to the MOD1 in Monrovia. Support to training activities at ETU MOD2 Support the establishment of an ETU in Greenville
Dec 16	Change triggered by the worrying medical conditions at the local health clinic in Greenville	Medical-, warehouse-, psychosocial-, camp- and wash-support to the ETU MOD1 in Monrovia.

		Support to training activities at the ETU MOD2 Support to the establishment of an ETU in Greenville Rapid response operation with the objective to build and operate a temporary ETU in Greenville.
Dec 29	Change triggered by the low amounts of Ebola patients at the temporary ETU in Greenville	Medical-, warehouse-, psychosocial-, camp- and wash-support to the ETU MOD1 in Monrovia. Support to training activities at the ETU MOD2 Support to the establishment of an ETU in Greenville Operation of a temporary ETU in Greenville. Community outreach with local health teams in Greenville.

Table 1: List of dates and triggers for change of plans

The table 1 illustrates as well as provides an indication of the organizational dynamics, in terms of changes, expansions as well as re-orientation of operational focus and responsibilities. These changes were a consequence of the unpredictable dynamics of the Ebola outbreak. In each of the changes, personnel were assigned to new tasks and had to quickly refocus their activities to the new upcoming needs and requests. The gradual expansion of operational responsibilities also meant that new formal and informal management levels were implemented.

Foreseeing consequences of change of plans

Organizing response work is never simple and the response work accomplished by the Ebola response team confronted many challenges. A recurring challenge was related to the difficulties in foreseeing the consequences of the changes of plans for the ongoing operations. The following episode illustrates that rapid changes of plans are a natural ingredient in response work, but also that such changes have consequences that sometimes are difficult to foresee.

On the 11th of December, the Ebola response team in Greenville reported that the local conditions for Ebola-patients at the local health clinic were unacceptable and there is an immediate need for improved facilities due to worrying epidemiological development in the region. The Ebola patients were at the time isolated in a simple temporary facility outside one of the health center buildings in Greenville.

These worrying news are forwarded to the head of mission in Monrovia that calls for a meeting on the 12th of December to explore possible actions. Up until this point in time, the response teams focus in Greenville has been to support the work on the construction of a large ETU that due to several delays at this moment was scheduled to open in a few weeks time. After discussions with the project leaders in the EU-member state, a decision was made to re-orient the team's resources in terms of man-power and send a rapid response team to Greenville to build a temporary ETU to be operational in one week time, but still comply to a good level of sanitation requirements and safety. This decision triggered a range of activities in terms of finding tents, water- and sanitation equipment, camp equipment, generators and medical equipment. The next morning, a convoy of three jeeps was sent by road to Greenville with personnel and equipment. Helicopters were also inbound during the following days with equipment.

During the next few days, a small scale ETU was built on a football field outside of Greenville. Local workers was contracted to do necessary construction work, local health workers were recruited. Based on an intense collaboration among the involved parties, the Ebola response team ensured that eight days after the rapid response was initiated, the first Ebola patients could arrive to the temporary but fully-functional ETU.

Organizing this type of rapid response was a major effort for the Ebola response team. The plans for this particular period of the Ebola-response project did not

include an operation of this scale and neither were the costs, nor the re-allocation of people from Monrovia to Greenville included in the original plan. The decision to meet this opportunity and initiate the rapid response work resulted in a major revision of the plans for this time period of the Ebola-response project.

Despite the successful opening of the temporary ETU in Greenville, it presented soon tensions related to decision compliance regarding staff safety. Having team-personnel working in an ETU is risky and if someone in the team would show symptoms of Ebola, that person must then be quickly evacuated back to the EU-member state. The problem was that in contrast to the medical personnel working at the ETU in Monrovia, a medical evacuation from Greenville by air was not easily arranged.

This issue was not solved during the coming weeks and meanwhile the issue became more and more profound. The Chief Medical Officer informed the project management in the EU-member state about the problem, but no quick solutions were available. The work at the temporary ETU continued without a medevac-plan that included helicopter transportation, only road transport. The medical personnel expressed that from a formal point of view, the work at the temporary ETU should be stopped since previous decisions have clearly expressed that a solid medical evacuation plan must exist. Nevertheless, the medical personnel also knew that closing down the operations would have very negative consequences for the capacity to treat Ebola patients in the southern part of Liberia. The personnel were in a sense trapped in a dilemma where personal safety was in conflict with their professional identity of providing medical care.

The workload for the medical personnel of the team at the temporary ETU in Greenville, decreased during a period of time when few new patients arrived. The medical personnel had since they arrived to Greenville, established good connections to the medical personnel at the local health center. This resulted in small-scale initiatives where the team started to assess how they could contribute with their specific expertise. One of the medical doctors in the team, followed local health teams to rural villages in order to support in the work with community outreach and health facility assessment. Another group of medical personnel explored the possibilities of how to support the local health clinic in Greenville with improved medical standards. During almost a week these initiatives were informally sanctioned, reported as ongoing activities in the situation reports and described in the organizational charts.

Despite the benefit of these initiatives, they were at the same time not complying with the plans and agreements of the overall Ebola-response project. The medical personnel engaged in these opportunities had long conversations with the chief-medical officer (CMO) of the team to promote the necessity of the initiatives. Even if the CMO did acknowledge the importance of these initiatives, it was made clear that the team should only engage in activities that are directly related to the Ebola outbreak. The CMO, with long experience of international work, had to emphasize that the teams mission is to fight Ebola and that general support to local health care might not be within that scope. The activities with the local health team were thereafter put on hold. Just before the end of the field study in Liberia, a few of the medical personnel from Greenville started to be rotated to Sierra Leone where the Ebola situation at the time still was not under control.

DISCUSSION

The results presented in this paper illustrate a fundamental challenge in organizing response work, namely that rapid changes of plans could result in consequences that sometimes are difficult to foresee, which in turn faces the risk of resulting in dilemmas for the personnel. The findings indicate that the changes of plans are caused by an inter-play of a set of aspects; *the dynamics of the disaster phenomena*, *local conditions*, *support needs from other organizations*, and a *willingness to expand the organizations operational responsibilities*.

These findings are tentative and more analysis is necessary to further explore how rapid changes of plans and its consequences could be conceptualized. Such conceptualization is important since sudden changes of plans are a general characteristic of many types of disasters and crises response operations. Based on the personal experiences and direct observations conducted during the field study in Liberia, it would not be unfair to suggest that there seems to be a need for improved decision support for real-time re-design of ongoing response operations. The tentative findings indicate that such re-design must be able to make visible and support the exploration of possible consequences when such changes are

about to be decided. Such support should not only focus on the leader roles, but also provide improved interconnectedness between field operative units, head of mission and project management, since response work tends to become increasingly collaboratively organized.

It must however be emphasized that the tentative findings outlined in this paper, should not be interpreted as an evaluation of the studied response operation. Instead, the findings should be seen as an attempt to make visible some of the fundamental complexities of international response operations. The insights of this paper should therefore be seen as a small contribution to an empirically based body of knowledge to be used when advancing methodologies and technological support for such work.

CONCLUSION

This paper presents descriptive accounts from an ethnographic field study of the work of a foreign Ebola response team during the Ebola outbreak on location in Liberia. The findings illustrate how response work is subject to frequent and rapid changes that result in unforeseen consequences that could cause friction and dilemmas. The findings indicate tentative implications for design, suggesting a need for improved decision support for re-planning and re-designing of ongoing response operations. The findings presented in this paper might seem obvious. Such impressions are far from uncommon when presenting ethnographic accounts. This is related to the role of ethnography to make visible important aspects of work. When work is made visible, stereotypes and myths about such work will be eliminated and open up for a focus on the more mundane aspects, such as on how rapid changes of plans could result in unforeseen consequences. Hopefully, when work is made visible it might in the long run have a small and positive impact on future technology design.

ACKNOWLEDGMENTS

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