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Communicating Disaster: Framing a New Research Program

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Introductory talk

Ms Davy! Thank you very much for your warm welcome and a big thank you also to the whole ZiF-staff for hosting us throughout the research year in such a professional, supporting and cordial way! It has been a pleasure to be here and to meet so many inspiring colleagues!

Ladies and Gentlemen, dear colleagues,

Welcome to Bielefeld - if you are here for the first time! And welcome back to Bielefeld for all the fellows of our research group "Communicating Disaster" who spent some time here at the Center for Interdisciplinary Research to work with us throughout the research year! And we are also delighted to extend the warm welcome to those who already joined us for workshops or for other activities during the last year – obviously you like to communicate about disaster communication ... ;-). Us, this is the leading team of the research group, which consists of Jörg Bergmann, Volker Wulf and myself, greatly supported by the two research assistants: Sarah Hitzler and Marén Schorch.

Today is the first day of the closing conference, our grand finale of a long year of working and discussing together and Marén Schorch and I have the honour to give the introductory talk in which we try to tie together what we consider a possible framework of a new research program dealing with disaster communication. This introductory talk will have no time for discussion afterwards but there will be lots of possibilities to refer to it, since several contributions will reflect on some of the topics we are going to mention.

I Organisational information

Before we start, we would like to provide you with some information concerning the organisation of the conference (shortened):

First, two or three words about the structure of our conference: We will have four sessions based on the major fields of research and discussions within our research year. Each session will cover half a day. Within the sessions we placed presentations by the fellows of three-quarters of an hour time slots including time for discussion. We will have shorter presentations within session 3 as there will be a panel discussion at the end of that session. We planned plenty of breaks so we can carry on dialogues also besides the sessions and plenary talks. We are very delighted – and honoured – that the geographer Valerie November (Lausanne) and the science writer and journalist Nalaka Gunawardene (Sri Lanka) accepted our invitations to give the keynotes in our conference.

II Communicating disaster: Framing a new research program

Let's start with our introductory talk on "Communicating Disaster: Framing a New Research Program". This is a joint talk by Marén Schorch and myself. We will split our presentation; Marén will take over for the second half.

Throughout the next perhaps 40 minutes we will address the following:

- First, we will point to the blind spots of disaster research concerning communication.
- Second, we will argue that for achieving a comprehensive understanding of the communicational dynamics in disastrous events it is essential to include different methods than currently usual. We suggest expanding the methodology by qualitative empirical approaches and second-order-observation.
- Third, we will evaluate the temporal heuristic, which we used to structure the now ending research year and show its pros and cons for a research program on disaster communication.
- Fourth, we will discuss the processes of "spatialisation" as a crucial part of the social and communicational dynamics of disasters.
- We will close with a summary that outlines the central arguments for the suggested new research program in disaster research.

1 “Blind spots” in disaster research concerning communication

Let's start with our first argument, the “blind spots” of established disaster research concerning communicational processes. Traditionally, disaster research focuses on the planning, management and mitigation processes of a disaster, using quantitative methods for analyses. By doing so, it is almost unavoidable to be caught in the pitfall of being too close to the logics and necessities of these practical fields and activities. By being involved into planning, management and mitigation, it is very difficult to keep a distant view that is necessary to analyse the social dynamics, which are involved in disastrous events. To our understanding it is the communicative and societal processes that characterise and even constitute disasters. And to our opinion this is the blind spot that has not really been understood to date.

Within the introductory paper of the Opening Conference to our research year about a year ago, Jörg Bergmann and I pointed out that there is a difference between working *with* disasters and doing research *on* disasters. I recollect our argument: "Before we as scientists start to interpret, discuss and clarify the concept "disaster", the question of what a disaster is, has already been answered in practical terms by people who experience, witness, report, fight or deal in some other way with a disaster. The scientific concept of disaster is - to use a phrase coined by Alfred Schütz - a "second-order concept" which relies on the first-order concept of disaster, which may be found in the views and everyday activities of people, groups or organizations. In order to develop an analysis and scientific understanding of disasters we need to get access to these activities, in and through which events become disasters." (Bergmann/Egner, 13 January 2011, manuscript p. 1f.). This is why we laid our focus on the communicative processes of disasters for the now ending research year.

The current disaster research does not focus explicitly on communicative processes. In the few cases the topic is covered, it often deals with “information” on prevention, mitigation or evacuation with the focus on: “what information needs to be given to whom in what time”. There are indeed procedures of exercises or crisis simulations where it is trained, for instance, who has to be involved into an information chain and what information is required to trigger particular responses in the case of a disaster. But the processes of communication itself are rarely subject of research.

However, ex post-studies of major events show that it is communication – or a lack of communication – that often causes, provokes or fuels a situation and thereby dramatizes the circumstances. One recent example, which probably everybody is still aware of is Hurricane Katrina in August 2005. The disastrous aftermath following the strike of the hurricane was object of intense investigation to find out why such a well-known and already expected natural process could lead to these enormous numbers of fatal casualties and to an abysmal dynamic within a modern and advanced society such as the U.S. A dynamic that still is not really overcome. The Katrina Report of the U.S. Senate Committee on Homeland Security and Governmental Affairs, states that different communicational aspects played a crucial role in the disastrous dynamics accompanying the hurricane. One essential aspect, for instance, refers to the technical communication equipment. With respect to this the report stated that

“the lack of survivable, interoperable communications, which Governor Haley Barbour of Mississippi said was the most critical problem in his state, occurred because of an accumulation of decisions by federal, state, and local officials that left this long-standing problem unsolved.” (Executive Summary of the report „Hurricane Katrina. A Nation still unprepared“, 2006, p. 5).

This means in more detail:

"Wide- spread communications failures in Louisiana and Mississippi were so bad that many officers (from fire and police department) reverted to either physically running messages from one person to another, or passing messages along a daisy chain of officers using radios with limited range.“ (ibidem, p. 8).

Hurricane Katrina showed in a striking manner that in a situation, when the backbone of communication, this is the technical equipment fails, all other communicational aspects concerning evacuation, mitigation and coping, for instance, will be affected. As we all know in retrospect of the whole situation, the collapsed technical equipment was only one of the many non-functioning parts in a setting where it was known that a hurricane like Katrina was more than likely to come, where it was known that the dams and levees in Greater New Orleans would not withstand and where it was known that this was more than past due to prepare for such a forceful storm. It would be interesting to get hold of all the communication that finally led to the decision *not* to prepare in the face of such a scenario.

The hurricane surge protection failures in New Orleans are considered the worst civil engineering disaster in U.S history and prompted a lawsuit against the designers and builders of the levee system, the US Army Corps of Engineers (USACE).

We all know the power of communication that can cause and fuel or prevent and stabilize a crisis from a very different setting: the financial market, a field some experts address as a “field of systemic risk” (e.g. Renn & Keil 2008: Systemische Risiken: Versuch einer Charakterisierung. In: GAIA 17 (4): 349-354). Within this introductory talk we cannot retrace even a small number of the striking dynamics during the last couple of years that were all triggered by communications which initially were supposed to be harmless but then proved to be powerful and disastrous. At present, the same can be observed with Europe, the Euro and the question whether we will have the same currency in some month. We are sure you are quite familiar with one or the other example anyhow. As you can see from these few examples, communicative processes play a crucial role in the emergence, development and progression of disastrous dynamics as well as in mitigation and remedies of disaster. However, the communicative dynamics that contribute or lead to disastrous processes still need to be scientifically understood. Having said this, let us have a closer look at communication. What do we mean when we claim that communication has to be the focus of disaster research?

Apparently, most concepts of disaster management are based on a fairly simple understanding of communication in the form of a conduit-model. It involves in general two persons (or two sides) with the very plain idea that a sender transfers some information to an addressee. The information might be disturbed, but in general it is assumed that the information given by the sender and transported through a channel will be received (and understood) by the recipient.

In contrast to that, another tradition puts communication itself in the centre and views communication as the main operating modus through which society and its sub-systems are processed. In this notion, which follows Niklas Luhmann’s understanding, communication is an autopoietic process in which the three parts of information, message and understanding are indispensable ingredients of a communication. In this perspective, neither the participants nor the information or the question of understanding can be

separated from the sequential unfolding of a communication. Participants may change their situated identities in the course of a communication, the information might be ambiguous, and how a recipient has understood a message can only be seen in his or her subsequent contribution to the communication. Thus, communication is anything but determined or clear; communication rather is contingent and its effects even more so.

Right from the beginning of the conceptualization of the research year, we claimed that a communication model which underlines the dynamic, contingent and autopoietic character of communication will be much more appropriate for the complex situation of a disaster scenario. Thinking again of some of our aforementioned examples it might become clear that this understanding of communication will educe different research questions than the traditionally applied conduit-model including a sender and a recipient of the sent information. The disastrous aftermaths of Hurricane Katrina for instance were NOT the result of an extreme natural event but rather the result of societal decisions. Decisions that were taken in a certain dynamic within the political and economic situation within the U.S. and which strikingly shows that communicational processes in fact are far more than a simple sender and recipient-model in which both parts – sender and recipient – would react to a stimulus. Decisions – this can be drawn from any example in disaster history – are forceful communications that take place under certain circumstances and that are highly contingent in their effects.

With this I come to our next point:

2 Research focus: Close-ups and distant views

Taking communication as the basis for our research approach, leads to the question of how to proceed. What are the methodological needs to achieve a more comprehensive understanding of the dynamics of communications in disasters? We propose a twofold way utilizing an image from photography: We suggest to zoom in to get more detailed close-ups and at the same time to zoom out to get more distant view. What do we mean by this?

1) To analyse and understand the micro-structures of the communicative processes of disasters, qualitative methods have to be integrated into the analysis. For this, one has to zoom in to, figuratively, get more detailed close-ups. Qualitative methods are part of a

social empirical approach that is applied within various scientific disciplines and, thus, can very well contribute to an interdisciplinary discourse on disasters. Since the current disaster research is traditionally based on quantitative approaches, applying qualitative methods is quite innovative to this field. In contrast to quantitative practices, the qualitative empirical focus means to observe very detailed within the field. It takes the lived-in-a-world terms as a basis, the first-order-observations of the people who experience, witness, report, cope or deal in some ways with a disaster. This also touches an epistemological aspect that was a constant topic in the discussions within our research group: Obviously, the current interdisciplinary disaster research seems to be dominated by natural scientists, engineers and management experts representing a mostly positivist epistemological understanding. While the sociologists that formed the majority within our research group as well as most of the other members were linked by a general statement against „naturalism“, following a notion which is based on a variety of constructivist approaches.

The debate on epistemological questions is closely connected to the general questions of definitions that pervaded the whole research year such as: “What is a disaster?” or “Do we have to find *one* common definition as a basis of our cooperate work?”. Here, the positivist notion with its idea of definitions based on standardized aspects such as the amount of damage, number of victims or some other countable items found one of its grounds. On the one hand, standardization and clear and elementary definitions allow comparative research and are very useful in diverse practical fields connected to disasters, such as insurance companies, disaster management institutions or relief organisations. On the other hand, with their emphasis on countable items the approaches of standardization reduce the complexity of a disaster to a great extent, for instance by ignoring social inequalities, vulnerabilities, socio-cultural differences of assessment as well as the socio-economic context of a disaster.

To include the various understandings and interpretations of the people directly involved in disasters (that are officials, experts as well as laymen) we suggest adding a more *relativistic* definition to the well-established approaches with their clear definitions and standardized procedures. A more relativistic or more general view of disaster could go along a quite flexible definition, such as the following: “A disaster is a breakdown of the regularly expected management”. Such a definition enables and supports contextualized

research which includes the everyday-life understanding of a disaster and which could be directly connected to the life world of the people affected. Of course, with this approach we include the challenge of contextualized terminology. The definitions and understandings will differ in regard to local understanding and interpretation and this may restrict comparative research. But this is a characteristic of qualitative social research as such. Nevertheless, using contextualized terminology will enlarge our understanding of the idiosyncrasies, inherent dynamics and problems of a disaster and of the affected to a great extent. Thus, to include qualitative approaches into disaster research appears to be essential to us.

2) Besides these close-ups as a result of zooming in with our research focus, a more distant view is needed at the same time. In our first section, we argued, that disaster research mainly focuses on planning, management and mitigation processes of a disaster and by doing so, the researches are in general too close to the logics and necessities of these practical fields and activities. To distant oneself from “being too close”, second-order-observation seems to be an appropriate way. This scientific perspective provides a knowledge that is more reflexive than the one of first-order-level and sticks to a more methodological controlled setting of analysis, interpretation and production of knowledge. However, applying such a methodology is quite a challenge for the researchers, since they have to handle data based on information that is already interpreted implicitly by the people who provide the information. This is in strong contrast to the “objective” understanding of natural scientists who in general represent a positivist epistemological point of view and, thus, deal with "objects" that proof to be "just what they are". Second-order observation instead has to deal with contingencies, ambiguities and relativism on different levels.

By including these aspects, second-order-observation seems to be an appropriate method for meta-observation of social and communicational practices. Following Heinz von Foerster and Niklas Luhmann, observation is the entity of the twofold action of distinction and denomination at the same time. Observation can be distinguished in two levels: First-order observation refers to any observation one can make - mechanically or intentionally. An observer who distinguishes it from all other things, and simultaneously names it picks out some ‘thing’. This observed ‘thing’ can be anything - from material objects to phenomena, or ideas; it can be a table, a landscape or a social process such as a disaster,

to give a few examples. The observer distinguishes on the level of 'what' is being observed. The crucial point is that the distinction that has been used to distinguish the object or phenomenon from all other possibilities cannot be seen on this level. To observe the distinction of the observation on the first order level, one has to switch to second-order observation. It takes the first-order observation as a starting point from which to observe the distinction that has built the base for the first-order observation, because it can take all the other possibilities into account. With second-order observation the observer distinguishes on the level of 'how' (how did the first-order distinction come about?). Second-order observation does not necessarily mean seeing more or 'better', but it is an appropriate method to tackle different dimensions of observation and to analyse the underlying differentiations that lead to a specific proposition.

Adopting observation theory to disaster communication and disaster research allows a deeper insight into the social practices related to disasters as well as the dynamics and processes of the social constructions of disasters. It is obvious that other questions come into focus, when observation theory is combined with the more complex understanding of communication as an autopoietic and dynamic process rather than a simple two-way-conduit-model. We are convinced that this analytical concept builds a good basis for identifying and understanding who defines what, when, how, in which context and with what consequences in the processes and dynamics of disaster related communication.

Observation theory proves also to be very valuable in the analysis of media communication. This is an important aspect, since news media as well as the different forms of new social media play an increasing role in disaster communication. Already 1989 Enrico Quarantelli pointed to the fact that disasters are to some extent created by the media. Reiner Keller (2004) as well as other studies approved these findings several times in the following years. The understanding of the role of media communication in the context and dynamics of disasters is still a very open field in disaster research. We will have some contributions to that topic and we are honoured that the renowned science writer and journalist Nalaka Gunawardene from Sri Lanka will give us a Keynote on the difficult interrelation between media and disasters tomorrow.

With this we come to our next part and for this, I hand over to Marén.

3 Evaluation of the temporal heuristic

Looking back to the beginning of our research cooperation, we paid much attention to the *temporal* aspects connected with different types of disasters: On the one hand, we referred to Lars Clausen (1983) who defined a disaster as an extreme social change characterized by the three dimensions “rapidity”, “radicality” and “rituality”. The first one – rapidity – is not always the case (for instance, not in disasters caused by environmental load such as the smoke pollution of industrial Britain as we will hear later from Stephen Mosley), but it implies pressure to react as fast as possible which turns it into a potential communicative problem.

We also used Reiner Kellers distinction of types of disasters in regard to the speed in which they occur. Following Keller, one can distinguish slow-motion disasters from so-called fast-forward-disasters. The first one are more or less foreseeable and developing slowly, like the growing ozone hole and the pending climate collapse, for instance, (2008: 289f.) that are the contrary: Fast-forward-disasters are indeed rapid extreme events that invalidate every-day-routines and normalities, unsettle or even destroy our belief in the control of technical processes and even deeper, the trust in the very belief in the world-as-taken-for-granted. Earthquakes and tsunamis would be examples for this type of disastrous events, but also nuclear disasters like Chernobyl and Fukushima Daiichi.

To structure our research year we used a temporal differentiation, since dividing a complex setting in parts based on an assumed chronology has already proved to be quite useful in disaster related approaches such as the risk management cycle or the disaster life cycle. The disaster life cycle is applied in most emergency management strategies and names central functions for the management activities. These are: preparation, response, recovery, mitigation, reduction and prevention. The risk management cycle identifies just four different phases. Here the phases are called alarming, coping, evaluation and defining risks. Each phase requires and at the same time generates different strategies and communicative practices.

These distinctions that are in use in the practical field of disaster management inspired us to apply a temporal heuristic in order to structure the research year. So, to analyse the communicative processes and dynamics before, during and after an extreme event, we settled the broader defined working phases “alarm communication”, “communications for

coping with disasters” and “communications on risk and evaluation”. It was clear right from the beginning of our work that this temporal heuristic was not to be understood as an image (or representation) of a linear process, but was meant as a heuristic typology. One advantage of this structure is the fact that the temporal dimension of "before" - "during" - and "after" can be identified for every disastrous event, despite their diversity in cultural setting, type, length and degrees of the events.

However, the differentiation of the research year and the activities in research phases on the basis of this temporal structure turned out to have its downsides: The different phases are difficult to separate from each other, since they all show a circular and overlapping dynamic. In discussing and analysing communications that are related to the phase of coping with a disaster, for instance, you often have to go back to different aspects of alarm communication – not just the first alarms, but also the following warning and alarm communicating in a disaster site. Even more obvious is the circularity when you talk about evaluations of coping strategies, effective warning etc. and transfer this to a basis for an understanding and the defining of future risks. Communications concerning evaluation, blaming, wrong or failed alarming quite often start immediately after being aware of the onset of a disastrous event – and therefore effect also other phases of the temporal heuristic.

To put it in a nutshell and to summarize our evaluation of the pros and cons of the applied heuristic typology: It worked quite well for a first structuring of the thematic field and – even more and straight forward – for the planning and management of our research year. However, the somehow artificial separation in three distinct phases doesn't really meet with our understanding of the complex communicative processes that are more interweaving than this temporal typology suggests. The fellows involved also have their analytical priorities concentrating on material from one or the other temporal stage, which is also due to their methodological background and the kind of data they use. At the end, this fact proved to be also unsuitable for structuring disaster research cooperation in such a way. Furthermore, after nine month of intensive working and discussing together, we recognized that there is another dimension that took the centre stage – the one of “*space*” that could also function as a potential heuristic to structure the analysis of the social and communicational dynamics of disasters. It might be not very surprising to hear that space matters in the analysis of the social and communicational dynamics in disastrous events –

at least as long as you remember the Kantian assumption of time and space as an a priori notion to the possibility to comprehend sense experiences at all. However, it was an important insight for us realizing that space is also a powerful structure of ordering for the dynamics of the social and communicational processes in disasters. With this we come to our next point, the processes of spatialisations in disasters. In our talk, we will address only some key aspects since the relevance of time and space for disasters is also the topic of our first session and we will hear about this later on this afternoon.

4 "Spatialisations" in disasters

Most processes connected to disasters generate spatial effects that create differences that in fact produce a difference - for the people affected, the disaster managers, for the bystanders and observers, the media etc. Concepts of space are created within a wide variety of processes throughout disasters:

- Extreme events that lead to a disaster always happen *somewhere*. As soon as some incident is reported to the police, the fire department or another relevant crisis institution, the call taker of the emergency call requires space-related information. One of the first questions will definitely refer to the "where" like "Where did it happen?". After the report, a whole set of space-related communications starts to manage the prevention, evacuation or mitigation activities.
- In general, dangers, risks or disasters are not spread equally in terms of space. By localising a disastrous event, new social spaces are created with the possible result of a new social order. At least, two very basal forms of spaces can be distinguished: The space of those affected and the space of those non-affected. This is a fundamental distinction of spaces that, in fact, makes a difference for the people affected, since it might imply that you cannot go on with your life in the way you wanted to. For example: One of the first reactions to the nuclear event in Fukushima Daiichi in the wake of the major earthquake and huge tsunami in March 2011 was the installation of a 10-km-evacuation-zone around the nuclear power plant of Fukushima Daiichi. The zone of 10 km was based on guessing rather than on "exact knowledge" on measurable radiation. Nevertheless, the borderline was drawn and had concrete and in many cases existential consequences for the people living or staying within this zone.

- Often, disasters lead to the creation of “precarious topographies”, as Katharina Inhetveen marks the spaces for evacuations and refugee movements. Actually planned as ephemeral spaces, they often stay for years, contributing to the manifestation of new social structures in an area. Examples such as refugee camps in Sudan clearly illustrate these transformations. Bram Jansen labelled them as ‘accidental cities’, „denoting how the humanitarian structure of protracted refugee camps has outgrown the temporary and minimalistic emergency environment to encompass a more settled human environment with its own, specific dynamics“ (Jansen 2011: The accidental city: violence, economy and humanitarianism in Kakuma refugee camp, Abstract).
- Spatial borders between risky or safe areas with their consequences for social activities do play a major role not only in the case of a disastrous event, but also in our daily life. Risk maps, for instance, are intended to be an instrument to enhance the safety of a community or a region. Michael Bründl will show us some examples of this aspect in his presentation. However, in some cases risk maps might prove to create new risks instead of minimizing the original.
- It’s a whole bunch of research questions that is interlinked with the process of negotiating the borders of these spaces, for example: Who are the relevant actors of these processes? Who makes such decisions? Experts, crisis committees, local authorities, people affected? What is the reasoning and what are the “facts” that are used in the debate about the separation in different spaces? Are there any arguments at all or is the creation of new borders arbitrary to enforce special interests?
- Space-related terminology or so-called *geo-semiotics* is used in many fields of our daily life, for instance on information signs, to enable us to come along and find orientation. Geo-semiotics are meant to help not only in extreme situations but to support the functional requirements of managing a crowd, for instance at an airport or at a music festival. Stephan Habscheid will go into detail with geo-semiotics in regard to risk and space in his talk tomorrow.
- Space also refers indirectly to another dimension: to the distance between those who are affected and those who only perceive information about an extreme event through all kinds of media. Mass media as well as the social media produce statements and information collected from different sources like people affected, rescue organisations, politicians, experts committees, other media etc. Additionally, a large part of the media coverage about disasters consists of un-commented visual snippets such as videos or

pictures taken by mobile phones or other devices. By doing so, media coverage very quickly brings assumed “live” information to the media consumers sometimes with the effect that the recipient will have the feeling to be involved into the setting – whilst sitting in front of their TV set or computer. This feeling of involvement is a prerequisite for raising funds for the relief organisations, for example. However, the involvement is limited, since at the same time the recipients are well aware of the distance between themselves and the disaster. In this sense, disasters are always the disaster of other. With the choice of the title of our conference – Dealing with the Disasters of Others – we wanted to point to such communicational relations. We were inspired by Susan Sontag's book “Regarding the pain of others” (2004) and the work of Lilie Chouliaraki. In her outstanding book “the Spectatorship of Suffering” (2006) she took a closer look at the interconnection between the distant spectators in the western industrialised countries and the people affected – in “suffering countries” such as Somalia, Bangladesh or Indonesia. The title of our conference may elicit many and very different associations. We will have time throughout the conference to explore different interpretations and understandings since some of contributions will relate to the title.

We want to leave it at that, since Valerie November will give us more insight into the question of the interrelation of risk, disaster and space in a moment. We conclude this part with one statement of Heike Egner and Andreas Pott who pointed out in one of our workshops that: "space and spatial or space-related semantics, just as risks, can be conceived as media of communication that fulfil the function of contributing to social structuring and order formation". (Egner/Pott 2010: 231).

5 Conclusio

Let's shortly summarise: In contrast to every-day-life-situations and their communicative requirements, disasters are by definition “extraordinary” since they create a situation where communication is much more complex. Following Lars Clausen (1983) we state that the inherent complexity of every-day-life-situations, which is usually covered by practices of categorisation and reduction of complexity, becomes more obvious after an extreme event. As basis of our research program we use first-order-definitions of disasters that evolve from the people who are concerned with disaster, that is the people who are affected as

well as the people whose work is connected with disasters since they try to prevent, manage or mitigate disastrous events.

The past research year here at the ZiF supported our notion that disasters are a perfect subject for interdisciplinary scientific discourse. The focus on the diverse communicative processes in the context of disasters opens new perspectives and raises research questions that had not or could not be addressed so far. Focussing on communication, as the crucial element that can provoke and fuel or hinder, but also mitigate and stabilize disastrous dynamics, presupposes epistemological and methodological approaches which are different to those that are applied in the established disaster research so far.

Constructivist notions combined with qualitative methods seem to be more appropriate in handling the contingencies, ambiguities and randomness that go along with communication.

Even though we use first-order-definitions that emerged through the communications and practices of the people involved in disasters as a basis for our research program, we apply second-order-concepts - for instance second-order-observation and qualitative methodology - that include the observation of the observer to get a comprehensive scientific understanding of the social and communicative dynamics in the context of disasters.

Structuring disasters and the communicational processes associated along temporal and spatial dimensions proved to be reasonable for our research year. And we did have the pleasure to work together with a group of fellows whose works inspired and enhanced our above-mentioned concepts. But more research is needed to get a better scientific understanding of the communicative disaster dynamics that meets the requirements of such complex situations.

With this talk we hope to contribute to establishing a new research program in disaster research.

Thank you.