Nat Hazards (2013) 67:61–76
DOI 10.1007/s11069-010-9646-y

ORIGINAL PAPER

Resilience: a capacity and a myth: findings from an in-depth case study in disaster management research

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Received: 13 January 2010 / Accepted: 12 October 2010 / Published online: 2 November 2010

Abstract The discussion surrounding resilience to natural hazards and disasters has advanced considerably within the last years. It ranges from ecological to social systems and also covers some socio-ecological spaces in-between. Yet, although the discussion is broad and multifaceted, a common theme runs through most approaches to resilience: Resilience is defined as a system's capacity to adapt to or respond to singular, unique and most often radically surprising events. This paper seeks to shed some light on a different aspect of resilience; its constructionist dimension. For doing this, it introduces the 'myth of resilience, which not only considers the functional aspects of resilience (i.e. actors capacities), but also how actors make retrospectively sense of the radically surprising discovery of something entirely unknown. The paper will argue that the 'myth of resilience' may become a powerful worldview that enables actors to define what is 'right' and what is 'wrong', as it may be used as a very intriguing way of changing, creating and consolidating power relations; at least this is the insight a study on disaster management reveals. The case study was conducted in a municipality of a city located in the State of Saxony Germany, which was severely affected by the 2002 August flood. The paper ends with outlining implications for the discussion on resilience.

Keywords Resilience · Myths · Nescience · Flood · In-depth case study · Qualitative research

1 Introduction: scope of the study

This special issue gives testimony that the notion of 'resilience' has gained considerable attention within the last years in the discourse on natural hazards and disasters (e.g. Klein et al. 2003; Berkes 2007; Zhou et al. 2009; Bohle 2008). At the same time, it underlines the

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multiplicity and diversity of meaning the notion implies. The discussion ranges from ecological to social systems (Adger 2000; Handmer and Dovers 1996) and also covers some socio-ecological spaces in-between (for example Folke 2006). It is concerned with different imaginations about the stability and/or instability of systems (Holling 1973; Pimm 1984), with concrete empirical case studies (e.g. Walker et al. 2006) as well as with prescriptive formulations outlining a "way of thinking" (Berkes 2007).

Although the discussion is diverse and polymorphic, there is one common theme in most arguments: In current literature, resilience is often defined as a system's *capacity* to adapt to or respond to singular, unique and most often radically surprising events. The overall orientation of the discourse is hence, how the concept of resilience might be useful for risk and disaster management in order to enhance, build or develop capacities in organizations, communities and entire systems to come to terms with new and unexpected events.

Underlying this orientation is a strong normative, sometimes even prescriptive conceptualization of resilience. As will be argued, this has advantages as well as some drawbacks: An advantage is that the notion of resilience takes into account the fundamental uncertainties associated with the occurrence of natural hazards and disasters and its inherent dynamics. Its shortcomings relate to the blending of empirical descriptions with normative arguments as well as to the negligence of questions of power and diverging interests between actors (Brand and Jax 2007).

The central aim of this paper is to develop a constructivist view on resilience that allows integrating a dimension that so far has been mostly negleted in the discussion on resilience: that is diverging interests and social and political conflicts arising from these interests (Cannon and Müller-Mahn 2010). In doing this, the paper develops a descriptive understanding of resilience, which considers the capacities of actors to deal with unforeseen and unanticipated events as well as their retrospective sense-making of the discovery of such events.

The motivation for developing the argument is grounded in a case study, which I conducted in a municipality of a city. I was puzzled about how the city's municipality dealt with the consequences of the flood. It developed, quite spontaneously, a considerable capacity to adapt to a quickly and radically changing environment, a capacity that one might describe with the term resilience. However, this is only half of the picture. The handling of the immediate but also the long-term consequences of the flood was not simply a managerial task; it was also a highly contingent process during which relations between people and positions within the municipality were newly negotiated. A thorough analysis of the empirical material will reveal that some actors connected their action with a powerful worldview enabling them to sanction alternative opinions and actions as well as to consolidate a position of superiority within the municipality. They explained and rationalized their actions by referring to what will be elaborated as the 'myth of resilience'.

In the first part of the paper, it is discussed how resilience is predominantly conceptualized in recent natural hazard and disaster research. Its advantages as well as its shortcomings are outlined. In a second step, a definition of resilience is elaborated that allows capturing both its constructionist dimension as well as its implication for actors' action. In the third part of the paper, the argument is grounded empirically. A study on disaster management is introduced for substantiating the theoretical argument, and to illustrate the kind of insights, a constructionist understanding of resilience is able to develop. Based on the conceptual reflections and the empirical findings, the paper ends with outlining some more general implications for the discussion on resilience.

2 'Resilience' in natural hazard and disaster research

In recent debates about natural hazards and disasters, it is acknowledged that purely technical or structural solutions along with the demand for an "absolute protection" against the negative impacts of natural hazards are "unachievable and unsustainable because of high costs and inherent uncertainties" (Schanze et al. 2008, 1). In this vein, the understanding of risk itself appears to be changing with greater appreciation of the limitations of science and predictive models and acknowledgement of the intrinsic uncertainties of knowledge (Walker et al. 2010). Flood risk assessments, for instance, have been traditionally calculated based on historically observed flood frequency statistics and return periods (Merz and Thieken 2005), following what might be termed a 'classical' approach to risk analysis. However, as catastrophic events prove again and again, the data on probabilities and consequences are approximate at best. Furthermore, in the face of climate change, the past is no longer a reliable guide to the future, and flood risk assessment, like natural hazards and disaster management, more generally, can no longer be based on the classical assumption of stationarity (cf. also Milly et al. 2008), as both the natural and the social sphere are perceived as more dynamic. The introduction of the concept of resilience to the discourse on natural hazards and disasters may be understood as an attempt to meet the outlined challenges by considering the uncertainties as inherent for any management strategy (Berkes 2007; Klein et al. 2003; Allenby and Fink 2005; de Bruijn 2004; Kuhlicke and Kruse 2009; Merz et al. 2010).

Berkes argues, for instance, that resilience helps to provide a holistic, all-hazards approach focusing on coupled human-environment systems, taking into account uncertainties and dynamics and would contribute a comprehensive vulnerability analysis (Berkes 2007). From the outset, he follows the concept as it has been elaborated by the Resilience Alliance, which defines resilience by considering three distinct dimensions: (1) the amount of disturbance a system can absorb and still remain within the same state of domain of attraction, (2) the degree to which the system is capable of self-organization and (3) the degree to which the system can build and increase the capacity for learning and adaptation (Carpenter et al. 2001; Klein et al. 2003). This understanding of resilience goes considerably beyond Holling's (1973) initial definition, which understood resilience as a "measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state variables" (ibid. 14). Holling laid the focus on ecosystem populations or communities and how they correspond to "both the overall area and the height of the lowest point of a population's domain of attraction" (Brand and Jax 2007, 2).

Definitions in line with Resilience Alliance extend the scope of resilience by focusing not only on ecological systems but rather on coupled socio-ecological systems (cf. Folke 2006). Apart from that, they also introduce the self-organization of the system as well as the adaptive and learning capacities as important characteristics of the resilience of a system. More specifically, Berkes identifies four critical factors contributing to building resilience in socio-ecological systems confronted with natural hazards: (1) learning to live with change and uncertainties, (2) nurturing diversity in its various forms, (3) combining different types of knowledge for learning and (4) creating opportunity for self-organization and cross-scale linkages (Berkes 2007, 287–288).

Yet, Berkes understanding dilutes the original descriptive and ecological meaning of resilience with normative aspects, as resilience is understood as a "way of thinking, a perspective or even a paradigm" (Brand and Jax 2007, 8). It not only describes and analyses socio-ecological systems but also makes suggestions of how the system should be

transformed to become more resilient. There are clear advantages of such a broadened understanding. First, it is a forward-looking concept that helps to explore policy options for dealing with uncertainties and change (Berkes 2007). Second, it may become a "boundary object" that helps to facilitate communication between and across different disciplines (Brand and Jax 2007, 8) and hence contributes to the stimulation of discussions between different communities (e.g. between climate change and the natural hazards community) (cf. also Klein et al. 2003).

At the same time, this understanding runs the risk that different groups seem to agree on the need for building resilience when indeed their understanding of resilience is diverging (Brand and Jax 2007). Additionally, some authors blame 'resilience-thinking' for pursuing a rather reductionist view on the complexity at stake. Since resilience stems from the natural and/or physical sciences, it would be "inadequate and even false when it is being uncritically transferred to social phenomena, precisely because human systems embody power relations" (Cannon and Müller-Mahn 2010, 3). As a consequence, the resilience approach would have the tendency to understand necessary interventions as a rather neutral process that neglects the political dimension of the issue at stake and "depoliticises the causal process inherent in putting people at risk" (2010, 13). This relates to a more general observation in the discourse on natural hazards and disasters: There is a tendency to interpret the challenges people are facing predominantly in "functionalist-technocratic terms" with a strong orientation towards how to change practices and policies (t'Hart 1993, 37) neglecting that risk and disaster management are very complex and most often politically controversial issues.

The following section elaborates a working definition of the 'myth of resilience' attempting to go beyond a pure functionalist understanding of resilience (although it still contains functionalist aspects) and that allows considering the controversial dimension quite often characteristic for crisis phenomena.

2.1 A working definition of the 'myth of resilience'

Myths have a structuring and ordering character. As Lévi-Strauss states: Myths bring some "kind of order to what was previously chaos" (1963, 202). They help actors to understand and organize complex and often chaotic structures and processes (Hilderbrand et al. 2005) and may be understood as "simple but elegant 'stories' through which mankind captures part of the essence of experience and wisdom. Myths provide guidance for man's action and protect him from the reality of the frightening unknown" (Holling 1978, 96). In this sense, they are based on past collective experiences that appear as relevant and that are stored in a collective memory.

Myths give actions generally understandable meanings, structure and guide them (Meyer et al. 2005). They institutionalize rules, here understood as recipes that usually guide actions, that both legitimate and explain the institutional order by ascribing "cognitive validity to its objectivated meanings" (Berger and Luckmann 1967, 93). More specifically, institutionalized rules are "classifications built into society as reciprocated typifications or interpretations" (Meyer and Rowan 1978, 341). They may become very powerful, since such rules are most of the time simply taken for granted and appear as objectively given. They control and direct human life, whereas their controlling character is inherent. It is prior to or apart from any mechanisms that are based on sanctions. Their controlling character is hence given by their very existence (Berger and Luckmann 1967).

Furthermore, myths refer to a specific institutionalized segment of reality and provide a comprehensive frame of reference for this very segment. They may take the form of quiet

complex and elaborated constructions such as "there is a God" or rather narrow and more straight-forward as "the free market model will correct all inequities (Holling 1978, 98). There is hence no 'right' or 'wrong' myth. Different myths have been successfully applied to certain problems, and each has failed in other cases (Kates and Clark 1996). In the field of ecosystem management, Holling (1978) identified, for example, four different myths. They are *Nature Benign, Nature Ephemeral*, *Nature Perverse/Tolerant* and *Resilient Nature*. These different myths have implications for how policies are structured ranging from simply ignoring threats (Nature Benign), to developing a rather fail-safe policy design (Nature Ephemeral), policies that are "safe in failure" (Nature Perverse/Tolerant) to policies that even try to benefit from change (Resilient Nature) (ibid. 97). It is hence a matter of empirical research to reconstruct, first, how people reflect about and at the same time constantly reproduce such myths, and, second, which goals they possibly pursue by constructing myths in a specific manner.

The most relevant myth for this article is 'Resilient Nature'. According to Holling, this myth describes a perspective on reality that takes rapid changes into account and "explicitly recognizes the unknown and the ability to survive and benefit from 'failures'"; it is a "property that allows a system to absorb and utilize (or even benefit from) change" (1978, 104). To be sure, Holling did not reduce this myth simply to the ability or property of the system (the functional dimension); he also relates it to the meanings attributed to those actions. Timmermann argues that Holling introduced the concept of 'myth' to the discussion on ecosystem management "to bridge […] the gap between some event or functional response of a system and the interpretation of that event or system by observers or managers" (Timmerman 1986, 436). In this understanding, myths touch both concrete, observable actions as well as socially constructed meanings attributed to and influencing those actions.

To emphasize the constructionist dimension of Holling's definition, the 'myth of resilience' is defined here *as a way of retrospectively making sense of the radically surprising discovery of something entirely unknown (nescience) by explicitly referring to the capacity to deal with rapid and radical change as well as having the capacity to survive and even benefit from this change*. This definition implies, first, that the analysis puts less emphasis on the capacity of actors (although it is still relevant), but rather on how narrators construct a relationship between their capacity to deal with rapid and radical changes as well as their subsequent sense-making of this capacity.

Secondly, the definition specifies, what exactly the unknown is. Holling's argument is somewhat vague with this regard. The definition outlined above proposes a narrow understanding, suggesting that it refers to the discovery of something entirely unknown, or to something not recognizable by actors a priori. This form of the unknown is defined here as nescience (Gross 2007). Nescience belongs to a different epistemic class than other forms of the known or unknown, since it is exactly not part of any conscious reflections. This implies that resilience is only recognizable in retrospect, since it refers to actors capacities to deal with an event that was by no means anticipated, to the discovery of something entirely unknown and radically surprising (Kuhlicke 2010).

Thirdly, this definition underlines that the discovery of nescience may be connected with radical and rapid changes (Clausen 1983), which is experienced as a massive disturbance of everyday life, and which stands in sharp contrast to the reality of everyday life. The radically is constituted by the connectedness of disasters (Perrow 1999) and the extreme acceleration of occurrences and events (Clausen 1983), since the physical, built and the social environment usually undergoes foundational alterations, at least in the short term. Yet, in line of the definition outlined above, actors who experience this change

underline in their interpretation that they are not overwhelmed by it; on the contrary, within their sense-making processes, they develop the capacity to survive and even benefit from this change.

It needs to be emphasized that the understanding of resilience just outlined is already an outcome of the empirical research process. It is based on and it is inspired by the occurrences and interpretations, which I was able to observe during my field research.

3 Case study and methodology

The flood of August 2002 was the single most expensive flood in German history. Large parts of the catchments of the Elbe River experienced heavy rainfall between the 6th and 13th of August 2002. Within a few hours, the situation along the tributaries of the Elbe was out of control, and the existing flood protection system collapsed in many places during this exceptional 'flood of the century'. I conducted a case study in a city severely inundated in 2002 and that is named Rivertown here. The real name of the city is not important for the significance of the finding, all the more since the analysis contains controversial and still disputed interpretations of what occurred in 2002.

3.1 An in-depth case-study approach

The study followed an in-depth case-study approach (Flyvberg 2006) and proceeded inductively by following the procedure as proposed by Grounded Theory. This means the research was, at its beginning, designed to be explorative and open; there was neither a defined research focus nor determined theoretical presumptions (Strauss and Corbin 1996). The author conducted eight in-depth interviews with employees of the municipality of Rivertown as well as with employees of organizations closely associated or even cooperating with the municipality. Most of the interviews were conducted approximately 3 years after the flood (Table 1).

The interviews were conducted in accordance with what Witzel (2000) termed a "problem-centred interview". This means a mix of open questions were asked that would allow the narrators to develop their subjective view on the happening relating to the flood and more specific questions that would allow focusing on specific issues I was interested in. The interviews were conducted in 2005 and 2006, taped and transcribed verbatim.

Table 1 Interview partners and the type of organization they represent

INT	Date	Responsibility and type of organization	Scale
0	08.2005	Head of section/municipality	Local
I	08.2005	Head of section/municipality	Local
II	08.2005	Head of section/municipality	Local
III	01.2005	Management/building and housing corporation	Local
IV	01.2005	Head of section/municipality	Local
V	01.2006	Management/sanitary district	Local/regional
VI	01.2006	Head of section/public utility	Local
VII	01.2006	Head of department/municipality	Local

When passages from interviews are quoted, the number of the interview (i.e. INT X) is provided. The questions focused, above all, on the following aspects:

- The position and function within the respective organization as well as the interviewee's daily duties and responsibilities;
- The immediate event of the 2002 flood, i.e. how they experienced the flood when they recognized that an enormous flood might come, how they were personally and professionally prepared for such a flood, which mistakes were made in the context of the flood;
- The aftermath of the flood, mainly to what extent the interviewees still have to deal with the event, what they learned from the flood and which knowledge they gained during the entire process.

When it became obvious that a specific topic was not of interest, it was not further considered in the interview.

3.2 How to observe the interrelation of actions and interpretations?

The interviews offer a retrospection of what happened during and after the flood. I examined the observations that people made in regards to the 2002 flood; more specifically, I observed how the narrators constructed a relationship between their previous experiences during the flood and their subsequent interpretation of these experiences. As a consequence, and also in line with my understanding of resilience, narrations about the past are not to be understood as a realistic representation of this past. They rather need to be interpreted against the background of subsequent and present experiences. The reason therefore is that narrations about past occurrences are defined by a specific timely configuration: The narrator knows the 'end of the tale' at the moment he or she is telling the story; a configuration Brockmeier (1999) refers to as "retrospective teleology".

When I conducted the interviews, people were still trying to make sense of what occurred during 2002. However, this sense-making process is strongly related to diverging interpretations and even to struggles over the interpretational sovereignty about what occurred in 2002. I was confronted with two very different views about what happed during the flood. One group's narrations were much more dominant than the interpretation of a second group. It became quickly apparent that the actors representing what is labelled below as the 'dominant view' mostly profited personally from the flood, as they often replaced their superiors and made a career within the municipality. It needs to be stated that in the aftermath of the flood, the structure of the municipality changed considerably: About 50% of the command personnel were replaced. As a consequence, their narrations are more prominently presented in the analysis; they gained the interpretational sovereignty within the municipality by not only occupying the higher ranked positions but also by being numerically predominant in the interviews.

It was much more difficult to talk to people who have developed a different view on what occurred during and after the flood. The reason being; people were sometimes demoted or at least lost interpretational ground in the aftermath of the flood. Some of them even had to leave the municipality. The people who were replaced often did not share the 'dominant view'. Two long interviews with one person having such an 'alternative view' and who still is employed in the municipality were conducted. To conduct more interviews with other actors was not possible because people were either not present or not willing to talk about what happened.

Despite differences in the interpretation of the flood, both perspectives share a common theme; that is how to prepare for something that is not known in advance and how to handle the surprising discovery of the unknown. Embedded in this debate is a wider context that deals with the tension between formally institutionalized structures on the one hand and rather "pragmatic" patterns of action on the other hand resembling the 'myth of resilience'.

4 Empirical findings: the 2002 flood and its consequences for the municipality

One of the defining characteristics of the 2002 flood was that it took most villages, cities, authorities and citizens by surprise (Steinführer and Kuhlicke 2007). This is also emphasized by all interviewees—the flood was in every respect beyond any type of anticipation. The most dominant characteristic for all interviews is that before the flood was officially heralded by the Regional District Office, no one could think of a flood of such an extent. Surely, having not been able to imagine anything close to what happened in these days in 2002 surprised the interviewed persons themselves in retrospect. In the following the ex-post interpretations about how the flood developed is presented.

4.1 The evacuation of Rivertown

In the morning, the day before the flood occurred, the 'task-force for extraordinary events' was established. The set-up of this task-force is institutionalized. It is organized as a matter of routine when a specific level of the Mulde River is reached. The situation was perceived as non-threatening. One interviewee had still anticipated a "normal flood" (INT VII) that would not exceed previous historical flood levels. Most people were sitting around and waiting. Some had their duties such as calling certain companies and farmers that were already known as endangered. Yet, everything was in accordance with the "usual procedure" (INT VII).

This radically started to change when the Regional Government officially informed the task-force for extraordinary events about the potential inundation of the city area. At this moment—it was in the middle of the night—the interviewed participants had to deal with their limits of knowledge as the Regional District Office made clear that it would be impossible to defend the city. Rivertown should be abandoned and evacuated. It was expected that the city would be inundated by a 10-m flood wave, a water level that was by no means comparable to previous floods. All persons who were present narrated that the incoming information was a great shock. Everyone was overwhelmed and overburdened and hardly believed the message. One was flabbergasted and "absolutely surprised" (INT I): "A world collapsed" (INT 1).

However, such a scenario was previously anticipated by some employees of the municipality. Although the inundation of the city was not envisioned with regard to such water levels, the decision-makers could rely on a flood map and on an evacuation plan that had been produced beforehand. Ironically, this plan was a side-effect of a conflict about the financial competence of the construction and maintenance of local flood protection walls arising in the middle of the 1990s. Reversing Vaughan's terminology, the existence of this plan may be described as 'the bright side' of the municipality (1999), as the existence of this plan is the unintended by-product of an argument with the Regional Government about the financing of the flood protection in Rivertown. In the sense of Wildawsky (1991), the existence of the map and the plan might be understood as an anticipation strategy, as such an event was previously

envisioned and the consequences were taken into account that allowed the decision-makers to quickly start to plan and prepare the evacuation of large parts of the city. In cooperation with the police, the employees of the municipality started to inform its citizens in the early morning about the approaching flood wave and began to conduct the evacuation of the city.

In retrospect, the evacuation of Rivertown is considered by most of the narrators as being conducted successfully: "The evacuation was mostly well organized, we had this plan and I think it worked well" (INT VII). These narrations, however, only form the contrast to develop narrations about an event that was by no means anticipated.

4.2 The evacuation of the municipality and its consequences

While there existed a plan about the evacuation of the city, the very plan did not take into account that the municipality could also be threatened by the river. This happened in 2002. As a consequence, the municipality, it counted at the time of the flood about 30 employees, had to evacuate itself. During this process, the municipality was separated accidentally and found itself in two different groups. Each group established an emergency camp providing shelter for the population. One was set up in the eastern and the other in the western part of the city. Both camps were spatially separated by the torrential Mulde River and both camps could not communicate with each other, since the entire power grid of the city collapsed shortly after the flood inundated the area. The telephone network was also overloaded.

During and after the flood, the western camp became the central emergency camp of the entire city. This is due to the fact that most of the supplies came from the west. As this camp was set up accidently, it was neither well-equipped nor were communication means available at the beginning. It was furthermore confronted with logistical problems in the following days, as donations and voluntary helpers poured in from all over Germany.

4.2.1 The dominant view within the municipality—the 'myth of resilience'

The narrators representing the dominant view were mostly located at the emergency camp in the western part of town; they mostly profited from the flood as they were able to establish their interpretation about the occurrences as the dominant one by connecting it to a worldview which resembles the 'myth of resilience'. In the narrations, they constantly explicates on the institutionalized order and how they increasingly vanished in a rapidly changing context. As a consequence, the established role-system lost its meaning and had to be newly negotiated and established.

Before the flood, their professional responsibility and expertise was by no means connected with disaster management. Therefore, their narrations depart from explicating how they experienced the situation as completely unknown. They had no prior knowledge about how to organize such an emergency task force let alone how to provide shelter for citizens who had been evacuated and needed a place to stay. Most of the narrators emphasize that they had to improvise for adapting to a rapidly changing environment: "It quickly became apparent that we had to improvise. We could not rely on documents. Definitely nothing existed" (INT I). The problems the actors faced could only be solved by "reacting flexibly" (INT 1) and by using "personal contacts and cleverness" (INT I). The need for improvisation is hence explained by the lack of routines and experiences as well as of previously established plans on how to handle such a situation (Cyert and March 1963).

It was emphasized that not only the environment was changing rapidly; the institutional order also had to come to terms with this change. Narrators describe a highly dynamic situation where many processes that otherwise guide and direct action during normal times

were no longer valid (cf. also Holling 1973): "Well, of course law and order were still valid, but they were not at all relevant; it was the issue itself that counted, it was all about solving problems" (INT I). The previously institutionalized order was challenged, as it could not adapt quickly enough the rapid changes (Weick 1993, 642). This means that during this time, established rules usually offering a well-established "recipe for actions that are mediated by structural and organizational constraints" were clearly less established (Rerup 2001, 15–16). This is remarkable, since such rules usually come about naturally; they appear most of the time simply taken for granted and appear as objectively given enabling individuals to develop a shared definition of social reality (Berger and Luckmann 1967). Yet, during the flood, the institutionalized order was less dominant and less pronounced in its potency. What was important now was the 'issue itself', as a narrator remembers: "One had to think unconventionally and simply make decisions, without thinking about whether one needs permission or whether the municipality will approve it" (INT III).

As a consequence, the role-system representing the institutionalized order became also more fragile. Specific actors representing this order were openly questioned. The municipality, for example, fenced off the city during the first days of the flood, no one was supposed to enter the city, it was feared that citizens would be in danger because of the high water levels in the streets. However, as many citizens wanted to look after their houses and apartments, the municipality decided "entirely pragmatically to hand out credentials carrying the official seal of the city" allowing citizens to enter the fenced off parts of the city for a certain time (INT I). Some role holders understood this procedure as too pragmatic and wanted to establish the deployment of certain rules for this procedure: "There were people who thought 'We have to set up rules for this'" (INT I). People who wanted to work according to the rules were openly questioned and considered as being 'out of place'.

There are many other examples resembling the one just given. What they all share is that narrators mostly refer to actors who were *qua* role in an superior position to underline that some people turned out to be unhelpful during this time; they are regarded as "useless with regard to practical things" (INT VII), as "impractical" (INT VII), as "not very decisive" (INT III), as having been "overwhelmed with the situation" (INT III), as a "dead loss" (INT I) or as not having been able to "withstand the pressure" (INT VII). These persons were, despite their institutionalized authority, no longer regarded as authorities. They were consigned to doing any job that ensured that they were no longer able to influence events. Some were even replaced. As one person states: The "wheat separated from the chaff" (INT III).

Since the institutionalized role-system lost its meaning, face-to-face interaction became more important: "Above all, people had to trust each other for getting along with each other. Decisions were made face-to-face" (INT VII). The narrators underline that the role-system of everyday life had collapsed during these days since it could not keep up with the speed of change and was increasingly replaced by the face-to-face interaction that led to establishing a new, still "virtual role-system" (Weick 1993, 644) enabling members of the emerging group to develop common vision of what the emergent challenges are and how to respond to them. Yet, there needs to be added another dimension to the "virtual role-system": Role holders who did not share the "visions" of the emerging network and who were not able to cope with this change were replaced by others who were integrated into the new network according to their individual abilities.

Central for replying employees was the mayor. He connected the dominant legitimation of action with the highest institutional authority within the municipality. He is regarded as a pragmatic person, as a '*Macher*' who "defies everything" (INT III), a person able to work in any crisis team (INT III). He was able to not only decide which person should take over marginal roles but also to execute this decision (INT VII). The remarkable double

character of the institutionalized order in the narrations needs to be underlined: On the one hand, it is emphasized that established rules and roles were no longer valid, as they turned out not to be helpful in coping with the change. Therefore, the order had to be altered. On the other hand, this change could only be executed by relying on this very order: Downgrading people was only possible, because the most potent role—the mayor—also considered them as no longer helpful.

The process of exchanging employees was consolidated and objectified when a position was created that was responsible for "laying down a duty roster" (INT VII). After a certain normalization took place, this group started to think about how to sustain the new structure, how to cast the leading positions "to also manage to work better and this also after the flood" (INT VII).

The problem was then, when we noticed that this was working and there are people that are doing a really good job that we said: 'We have to change our structure, since we have complete losses in our top management'. I say it that brutally: 'We simply have to finish this'. These tensions were present also before the flood and during the flood this was confirmed, we could not work with them, well they are not the right persons (INT XIII).

This resulted in a considerable replacement of employees within the municipality. Aim was "to preserve this enthusiastic spirit and this great team also in everyday life" (INT VII) on the one hand, on the other hand there is also asserted distorted feeling of "mutual trust" as well as principal doubts about the "skills" of these persons (INT 1). Furthermore, these persons are blamed for having misbehaved (INT XIII). In the aftermath of the flood, this resulted in legal consequences because of "blatant misbehavior" (INT XIII).

In retrospect, this time is constructed by this group in a positive manner and is contrasted with the reconsolidation of the institutionalized order in the aftermath of the flood: "Now everything has to be organized nicely, at that time one really could tackle things" (INT III) and "cooperation was very uncomplicated" (INT III). The time during and after the flood is presented as a window when "everything was achievable" (Diss 1, S8/Z31).

After having presented the 'dominant view', a second perspective is now introduced, that is the one defined as an 'alternative interpretation'.

4.2.2 An alternative interpretation within the municipality

The narrator representing an alternative interpretation departs from a different basis. The person neither emphasize lacking knowledge—the person was familiar with the organization of disaster management efforts—nor the limitations of the institutionalized order; the person rather pleas for the 'right to malfunction':

People who act and decide in such a situation, and by this I mean at all levels, in such a situation everyone is able and allowed to malfunction. One is not able to know beforehand what will happen. One may practice this a hundred times and we did not even practice it once. Nevertheless if such a situation occurs one may fail (INT IV).

While the previous view underlined that the discovery of the unknown needs to be faced by acting pragmatically, this narrator argued that every person has the right to fail when dealing with something that had neither been planned nor practiced beforehand. He proceeded by outlining that he did an apprenticeship with the military and concludes: "We were a little bit used to crises. We were trained admittedly for a different case—but that is quite similar" (INT IV).

This training is important in his narrations, as he learned that people who do not fit into the structure because they do not understand or execute commands should be sent home, "but only for a certain period of time" (INT IV). What happened in 2002 is that employees

were not sent home temporarily; they were sent home permanently. In the narrator's opinion, one had used the opportunity of the flood "to wash dirty lines" and to get rid of employees one had problems with before the flood (INT IV). He therefore considers this decision as unfair. The narrator underlines that he knew such situations from training and pleads for the abidance of fair manners in situations that exceed people's collective capacities and underlines the necessity to consider some rules, i.e. fair form of interaction, as further valid.

4.2.3 The 'myth of resilience': a short summary

The empirical reconstruction of how a municipality dealt with the 2002 flood reveals that within the municipality two fundamentally different views on the happenings during the flood developed. Both interpretations share hardly any common ground. The sense-making of the situation between both groups seemed to have collapsed. Yet, the very differences of both views underline how the interpretation of the occurrences is not simply dependent on the event per se but rather on underlying norms and values.

The dominant view develops an understanding of the occurrences that resembles what was previously defined as the 'myth of resilience'. Actors producing and reproducing this view made retrospectively sense of surprising discovery of something entirely unknown by explicitly referring to their own capacity to improvise and to adapt to radical and rapid changes. The other group did not share this interpretation and therefore not only lost interpretational ground but was also increasingly repressed. This group therefore underlines that also in situations that exceed institutionalized capacities the 'right to malfunction' should keep its validity.

Following both interpretations, it is possible to identify central characteristics contributing to the resilience of the municipality and that support conceptions of resilience that are found in the literature. Yet, it also reveals some patterns that diverge, especially with regard to the establishment of positions of potency by relying on the 'myth of resilience'.

(1) The discovery of nescience and the need for improvisation: The situation during the first hours and days of the flood was entirely unknown for most of the employees of the municipality. While the possibility of the flooding of the city as well as its evacuation was anticipated, the question of how to deal with the separation of the municipality as well as with the secondary consequences of the flood (e.g. set-up of emergency camps, etc.) was by no means envisioned. Therefore, a need for improvisation rose (Rerup 2001). Many employees developed the willingness but also the ability to not simply rely on their past experiences and routines but to rather find news ways and solutions to come to terms with the entirely unknown situation.
(2) The fading of rules, the ambivalent function of roles and the increasing relevance of face-to-face interaction: A second prominent topic in the narrations is the decreasing omnipotence of rules, here understood as recipes that usually guide actions. This was experienced predominantly by the diminishing authority of roles representing the institutionalized order. Employees who could not adapt to the rapidity of change as they still wanted to work according to the 'old' rules were considered as being out of place, as not very helpful during this highly dynamic situation. They were increasingly replaced: However, the process of replacing people could only be executed since the mayor, still representing the institutionalized order on the one hand but also embodying the newly emerging demand for improvisation, had both the institutionalized authority and personal credibility to implement this replacement.

This example also underlines that ambivalent function of leadership during times of disasters: While it is in a normative sense the typical role of a leader to define "the visions and goals and […] initiate action" during such times, (Walker et al. 2006, 6); leaders may also have the capacity to put through their interests against the will of others. However, during such times, the trustful interaction among those sharing the understanding of the challenges and how to cope with them became relevant for the actors in their narrations. It is hence not only a single 'leader' that was helpful to deal with the situation; it was rather a group of actors who had a shared understanding about visions, goals and necessary actions.

(3) The 'myth of resilience'—The establishment and consolidation of new power relations within the municipality: During the process of replacing people, the newly emerging group that eventually gained the sovereignty started to establish a powerful interpretation about the occurrences. At this stage, the empirical analysis leaves the normative setting of most resilience approaches, as it becomes apparent that resilience is not necessarily based on "trustful interaction" (Weick 1993, 642); it is also a way of legitimating actions allowing a group to enforce their interests. Interestingly, the alternative view exactly emphasizes the importance of a trustful interaction not only among those who have an intersubjectively shared understanding of the situation but also among those who might have a different interpretation. Yet, as the previous analysis reveals, the interaction has never become trustful among all employees of the municipality again. There is a deep seated feeling of mistrust dividing actors representing the dominant view from those having an alternative view. Furthermore, the alternative view hardly plays any role in the municipality anymore; as the dominant group asserted itself and their view on the occurrences as the legitimate one. Why did it become the only letimitate view allowing actors to set through quite drastic consequences within the municipality?

The potency of this view is not simply grounded in some strategic interest that were set up and eventually enforced by some actors within the municipality; its potency is above all grounded in its 'natural' appearance. Although narrators explicate that the flood was used to degrade employees with whom cooperation is characterized as having been difficult already before the flood; such a drastic change of the personal of the municipality was only possible since within the municipality the 'myth of resilience' was established as the only appropriate way of how the municipality dealt with the consequences of the flood. It offered a consistent and comprehensive frame of interpretation for this highly institutionalized segment of reality (i.e. the municipality), enabling actors to connect their actions and interpretations with an overarching and unquestionable given set of principles on how to behave and act, on what is a 'right' way of making sense of past collective experiences and what is 'wrong' interpretation. This taken-for-grantedness allows actors who produced and reproduced the dominant view in their daily lives to enforce themselves as the 'legitimate' actors, while those representing an alternative could be discriminated as illegitimate and eventually downgraded.

5 Conclusion and some implications for the discussion on resilience

The notion of resilience is generally understood as a concept that points towards the question of how to deal with rapid, mostly unanticipated, and therefore radically surprising alterations. The basic argument of this paper is to not only understand resilience as a

concrete and observable capacity that is in a normative sense desirable, but to also take into account how actors make sense of their capacity to deal with rapid and radical changes. More specifically, 'myth of resilience' is defined *as a way of retrospectively making sense of the radically surprising discovery of something entirely unknown (nescience) by explicitly referring to the capacity to deal with rapid and radical change as well as having the capacity to survive and even benefit from this change*. In this vein, actual behaviours before, during and after a crisis are not the core of the analysis as it is proposed here; it is of greater interest to scrutinize how narrators construct a relationship between their experiences and their subsequent sense-making of these experiences. By means of a case study, it was demonstrated that these sense-making processes are important for coming to an empirically grounded understanding of resilience that goes beyond prescriptive conceptualizations of resilience highlighting a 'positive vision' of how things *should* be.

Although the definition of resilience proposed highlights the process of sense-making, it needs to be stressed that it does not denounce the importance of the capacities of actors. The simple juxtaposition of a functionalist understanding of resilience focusing on actors' capability versus a constructionist understanding of resilience focusing on the production of the 'myth of resilience' would be misleading. Actors developed a quite enormous capacity to deal with the discovery of a previously entirely unanticipated situation. Yet, the case study was also able to demonstrate that many employees of the municipality transformed this capacity in a master narration allowing to them to capitalize their capacity to cope with the discovery of the unknown, more specifically with the challenges of having to deal with a radically and rapidly changing environment. In this sense, a thorough analysis of resilience should not exclusively concentrate on people's capacities but also consider the broader socio-political implications and how they are connected with the enforcement of interests and with the establishment and consolidation of power.

This allows a somewhat different perspective on resilience: Instead of asking "Resilience of what to what?" (Carpenter et al. 2001), it could also be fruitful to address the question: "Who is benefiting from the 'myth of resilience' and to what end?" In this sense, the perspective developed within this paper allows opening the discussion on resilience to questions of "interest, power and social conflict" (cf. also Clarke and Short 1993, 379)—topics that have been—strangely enough—neglected in the discourse so far (Cannon and Müller-Mahn 2010). To be sure, the argument pursued here is just a first attempt to shade some light on some aspects that have not been at the core of resilience analysis so far. Further theoretically elaborated and empirically grounded studies are surely necessary.

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