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Resilience Unwanted: Between Control and Cooperation in Disaster Response

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Abstract
This article conceptualises resilience as an emergent and contingent practice that shapes societal relationships in unexpected ways. It focuses on the case of the 2013 floods in Dresden, a city that witnessed three major floods within eleven years. Emergent volunteer activities on-the-ground and on social media played a significant role during the flood emergency response efforts. Drawing on Philippe Bourbeau’s definition of resilience as a process of patterned adjustment, we regard these emergent structures as incidents of resilience. In the case of Dresden, resilience was neither called for nor comprehensively wanted by the state. While most of the volunteering activities arising from social media platforms intended to support the disaster management authorities, the case shows how subversive forms of resilience were mobilised to resist official plans and finally urged authorities to adapt to a new social and technological reality in order to render unaffiliated volunteering governable. Resilience thus emerges as an adaptive process that shapes and is shaped by societal relations, since resilient activities on part of the volunteers in turn catalysed changes on part of state actors. The article thus seeks to add another facet to the debate on resilience multiple by demonstrating how resilience helps us to make sense of complex and interdependent adaptation processes.

Keywords: resilience, adaptation, disaster, governance, complexity, volunteering

Introduction
The 2013 Central European floods caused widespread inundation across the region. One of the hardest affected areas were the Elbe river valley, where the Saxon capital of Dresden is located. Floods are however not a new phenomenon in this part of Germany. Between 2002 and 2013, the city of Dresden witnessed three major flood events from the river Elbe within roughly one decade. The 2002 flood event was the first one to occur in over half a century. It surprised the relatively unprepared disaster management authorities and caused casualties as well as severe economic losses. Although the floods in 2013 almost equalled the 2002 events in many regards, it caused significantly less damages.

Disasters often induce policy changes (Birkland, 2006) and so did the first two floods in 2002 and 2006, significantly increasing the capacity of the municipal authorities to fend off inundation risks to the city. The 2013 floods, however, presented new challenges in the form of an increased number of self-organised emerging volunteer activities, amplified by the use of social media platforms on which volunteers organised themselves. While politicians striving for public support praised the multiple citizen-driven initiatives, professional agencies engaged in flood response efforts tried to demarcate themselves from the unaffiliated volunteers. The agencies have been rather engaged in exploring ways to render this new phenomenon governable.

During the floods and in their aftermath, the adaptive processes of different actors shaped the relations between authorities, aid organisations and citizens in ways that were both unexpected, uncalled for, and unwanted. While being generally supportive of the official disaster management, some self-organised volunteers in Dresden criticised the official flood risk management plans that stipulate which residential areas were to be protected, and designated others as floodplains. Using social media platforms as a means of self-organisation can be understood as a contingent yet patterned adjustment to either a perceived overload of capacities within state disaster management entities or even as resistance or even a lack of support. On another note, state authorities on different administrative levels, ranging from the local to the national, as well as aid organisations equally initiated an adjustment process to the witnessed phenomenon of emergent volunteering structures at scale. Moreover, the case of Dresden sparked a debate about changes to disaster management systems in the light of new technological and social trends.
Although the term *resilience* was absent in the case in Dresden, in the sense of being explicitly used by actors, we argue in this article that the resilience debate helps us to understand the complex and interdependent adaptation processes at play. Resilience and bottom-up approaches to emergency response only play a minor role in German disaster management systems and policies. Dresden is a prime example of what Joseph (2018: 99) describes as the German approach to infrastructure protection, which places a “central role to government and the state with little or no emphasis on building resilience within communities.” We do claim, however, that the case of the Dresden floods contributes to the resilience debate, precisely because resilience was neither mentioned as a strategy nor a requirement by any state actor. Drawing on Philippe Bourbeau (2018b: 6), who describes resilience as “the process of patterned adjustments in the face of endogenous or exogenous shocks”, we identify these adaptive processes from below as an instantiation of resilience. More specifically, we argue that the autonomous activities by unaffiliated volunteers are examples of what Kevin Grove (2013: 196) calls “subversive resilience”, a form of adaptivity detached from the imaginaries of the powerful that flourishes in the possible rather than in the wanted. This form of civil-society grassroots-level resilience does not necessarily obey the behavioural expectations of public resilience policies, but questions, counteracts and eventually shapes them. Resilience in the case of Dresden was neither technocratically initiated nor managed and might thus constitute something that Grove (2014: 253) calls “mutant rules” of resilience. Although emerging volunteer structures are in many cases supporting professional disaster relief structures, the case of Dresden represents an example of what we refer to as *resilience unwanted*, since the adaptive processes of volunteering citizens were uncalled for and to some extent also unwanted by the local authorities.

As a concept and idea, resilience has invoked a paradigmatic change in discourse across several fields of research and policy. James Brassett et al. (2013: 222) even attest resilience to be “the organising principle in contemporary political life”. Despite its prominence (Dunn Cavelty et al., 2015), the term resilience lacks conceptual clarity and embraces multiple meanings across different domains and contexts (Simon and Randalls, 2016). Jonathan Joseph (2018: 26) even doubts that “the notion of resilience is developed enough to enjoy the status of a concept”. In this reading, resilience can be seen as a
“boundary object” (Kaufmann 2012) which is flexible enough to be transferable to several fields while deriving its concrete meaning from the respective context of a particular case. In fact, the debate on the assessment of resilience is lively and controversial. While some authors consider it a means of neoliberal rule that devolves collective responsibility to non-state actors and therewith legitimises the withdrawal of the state (Evans and Reid, 2014; Neocleous, 2013; Joseph, 2013, 2016), others emphasise the potential of resilience (Bourbeau, 2015; Schmidt, 2015, 2017). However, the resilience discourse goes beyond a simple dichotomy. The ontological and analytical status of resilience that is fundamentally contested. But the positions are manifold. While Joseph (2016: 370) doubts the sheer possibility of a precise definition of resilience and Zebrowski (2016: 148) claims that there is nothing natural about resilience, disaster sociologist Kathleen Tierney (2019: 214) claims that indeed “resilience does exist”. Nonetheless, even within the context of disasters, the semantic meaning of resilience in the way it is used by practitioners as well as academics is evolving and often confusing (Olwig, 2009; Alexander, 2013). Moreover, several disaster researchers have voiced a series of critiques of the deployment of resilience in development discourse, and has questioned its ethical efficacy (Barrios 2014; Benadusi 2013; Dombrowsky 2012; Tierney 2019: 210-214).

Our aim in this article is to propose an additional reading of resilience, neither as an inherent ontological feature of societal entities nor as a governmental (neoliberal) strategy, but rather as an adaptive process that is shaped and equally shapes societal relations. Resilience can thus be understood as an adaptational process in societal relationships that emerges and exists between governance, obedience and resistance.

To unfold our argument, we subsequently introduce the case of the flood that hit Dresden in May and June 2013. The empirical analysis draws on extensive fieldwork and data collection, consisting of a body of more than 50 interviews and ethnographic observations in the greater Dresden region conducted by the authors between 2013 and 2016 on similar but independent research projects. Building on the case analysis, we then turn to the discussion of resilience in the domains of security studies and disaster studies. We conclude by proposing resilience as an adaptive process that emerges from societal relationships and subsequently shapes them. Calling these adaptive strategies resilience
implies opening up a space for talking about subversive resilience and resilience as resistance, in short: of unwanted resilience.

The 2013 Dresden floods
Towards the end of May 2013, a series of low-pressure systems created the highest amount of precipitation in many parts of Central Europe since 1881 (Freistaat Sachsen, 2013a: 2). Massive amounts of water filled up the major catchments of the Elbe River basin, and as the Elbe rose above the seven-meter mark at the measuring station in Dresden’s city centre, the final alarm level and consequently the disaster preparedness plans were activated on 3 June (Freistaat Sachsen, 2013a: 6).

Additional fire department teams, the technical emergency agency (THW), the police and the Bundeswehr (army) were brought in to help fight the rising water masses during the following days. Extra personnel and machinery from Hamburg and other German cities were deployed to support local agencies. Evacuation procedures commenced, mobile floodwall defences were put in place, and areas at risk of flooding were closed off to the public. 13,300 persons were evacuated within Dresden’s municipal borders and power supply was cut off for 8,500 houses (Sächsische Staatskanzlei, 2013: 49). Several public schools, bridges and central roads were closed. Some areas, such as Laubegast to the east of Dresden, turned into isolated islands. Boat transportation corridors organized by the authorities provided the only access to these areas (Dresden Brand- und Katastrophenschutzamt, 2013). Hundreds of homes were flooded. Yet, the 2013 flood was, albeit almost the same intensity in terms of water masses, by far less damaging than the one eleven years before.

In an independent official evaluation of the event (Sächsische Staatskanzlei, 2013), the response efforts were deemed successful, and the report praised risk reduction measures taken by the city authorities since 2002. Resistance to evacuation measures were in fact limited to very few incidents in which people refused to leave their homes (Interview 6; Sächsische Staatskanzlei, 2013: 49). This evaluation, the so called “Kirchbach Report”, goes so far as to state that “[i]n contrast to 2002, no relevant problems in rescue and evacuation occurred” (Sächsische Staatskanzlei, 2013: 22). The increased awareness of what major flood events entail had seemingly made its mark on
the ability of the professional agencies to respond in a timelier manner in 2013 compared to the floods in 2002. Yet the response and relief actions of unaffiliated volunteers and flood-affected peoples themselves also played a substantial role. In contrast to the Kirchbach Report, our and other scholars’ findings (e.g. Kuhlicke et al. 2016), indicate that although there were no substantial problems with regards to evacuation, multiple problems with respect to decision-making processes, citizen participation and coordination were evident.

We argue that these problems rest upon a shift in the quality of volunteering. More precisely, two emergent patterns regarding the role of unaffiliated volunteers occurred that rendered volunteer efforts more organised and intense compared to previous floods. First, both volunteers and homeowners at risk of flooding were less surprised by the event, better prepared, and thus able to respond and collectively organise in a quicker and more systematic manner. Second, social media platforms, provided a novel and unprecedented way of self-organisation for volunteers to take part in the response and relief efforts.

During the first days, hordes of volunteers participated in the race against time to prevent the rising Elbe from flooding Dresden. People provided sand and bags and used them to build contingency floodwalls. 1.6 million sandbags were distributed in rows along the Elbe (Dresden Umweltamt, 2014), the majority of them by citizen volunteers. Some volunteers also provided food and drink to flood victims, homeowners and other volunteers. Families opened up their homes to those without a roof over their head, and neighbours stepped in to aid others in need with resources and time in the attempt to fend off the water masses. This civil participation occurred alongside and in cooperation with professional agencies and aid organisations such as the Red Cross or the Workers’ Samaritan Foundation Germany.

Many volunteers from Dresden and other German cities who converged on the Elbe sought information on how to participate by consulting different Facebook groups that had been created by individual citizens, including the groups “Fluthilfe Dresden”, “Hochwasser Dresden” and “Elbpegel”. These Facebook groups acted as platforms to communicate help offers and needs. Group administrators could direct potential volunteers towards areas in need of help, whereby supply and demand of volunteer help
could be organised and distributed at an unprecedented scale and speed (Albris, 2018). The massive mobilisation of helpers resulted in widespread flood response activities in and around the Dresden city area that seemingly superseded volunteer activities in 2002 in quantity and certainly differed significantly in quality. As an administrator of one of the Facebook groups described it in an interview, “An army of citizens suddenly formed out of nowhere” (Interview 10). The administrator had started the Facebook group mostly as a way to raise awareness among locals. But the scale of activities took him completely by surprise:

“It was crazy! By the second day, I was receiving about 60 emails a minute. I got two of my friends to help me because it became too much to handle. Most of the people who wrote were offering help because they felt they needed to do something. They offered food, clothes, anything to help. But this quickly became impossible for us to respond to. I decided that we would only answer those who requested help, not those who offered. The help must find the people, and that was what the Facebook page was able to do. We connected people who needed help with those who offered by posting where people needed to go on the group’s page.”

That social media platforms were used to this extent came as a surprise to local authorities, such as the fire department, and to aid organisations alike. This was the first time a large-scale emergency event had happened in the area since the widespread adaptation of online platforms such as Facebook. During the flood response, the local disaster management authorities were constantly urged to react to the ever-changing situation caused by self-organising unaffiliated volunteers. A high-ranked disaster relief manager even stated in an interview that “[t]his was a new situation which concerned us most – especially with regard to how to deal with this in public relations work” (Interview 2). The importance of social media platforms such as the aforementioned Facebook groups and a crowd sourced Google Map of the flooded areas is illustrated by the hundreds of thousands of online interactions during the flood emergency (Albris, 2017, 2018). Taken together, the Facebook groups that focused on flood-related issues in
Dresden had significantly more than 100,000 supporters who initiated and coordinated a range of collective actions. Yet the online interactions sought to serve on-the-ground volunteer activities, which also seemed to be of a more intense character than during previous flood events. Indeed, the increased scale of volunteer activities is evidenced by reports of an almost carnival-like social atmosphere along the river. Newspapers reported scenes of people drinking and dancing to loud music as the threat of the Elbe waned (Kailitz, 2013). Civil society came alive in a way that only comes about during certain moments of crisis (Solnit, 2009). The looming disaster had turned into a social spectacle, and the emergency into a celebration of society. This was not to everyone’s liking however, as the examples provided in the next section illustrate.

The Critique of Volunteers

Like many other hazards, flood emergencies often cover a wide territory in which response and relief capacities are stretched to their limit. In several cases, volunteers orchestrated response efforts by themselves, since professional entities such as the fire department could not see to all the affected areas in time. Yet in some places, the convergences of volunteers became a problem in itself. Several interviewers stated that in some cases there were too many volunteers relative to the needs of the flood response efforts, which at times hindered the work of the professionals (e.g., Interviews 1; 3; 4). Moreover, in other cases, volunteer work would set back the progress of securing certain areas. For example, professional response workers had to replace sandbag dikes built by unaffiliated volunteers due to them either being stacked in the wrong way, or the dike itself being placed at a wrong spot (Interview 8). At a sandbag filling station, the sheer number of incoming volunteers initially overwhelmed the authorities and impaired working processes (Interview 7). One interviewee stated that a large number of helpers followed the call of a bar owner on Facebook, whose pub was situated directly by the river in Dresden (Interview 4). The helpers tried to protect the bar from the rising water level, which turned out to be a hopeless endeavour, given its proximity to the riverbanks. In an interview, an official from the Dresden disaster management authority subsequently complained about the unwillingness of the bar owner to follow the official advice of
installing flood protection measures. Referring to the fact that the bar owner had been previously instructed to deal with the question of flood risk, the official stated that:

“They were urged to get consultancy assistance, since the bar owner needs to do something, given his situation. And these protection measures would have costed only 10,000 euros. He refused. Instead, he organised a flash mob, sandbags and sand and tried with the help of people to set up a dike. It lasted for two days, and on day three, the bar was flooded.” (Interview 4)

While even high-ranking disaster management officials attest that “social media is an important topic” (Interview 7), its implications are assessed with ambivalence. As the case of the bar owner illustrates, the swift mobilisation of self-organised volunteers, which was intensified by social media use, catalysed a number of subsequent critiques and controversies regarding the role of volunteers. Specifically, the debate has revolved around the question to what extent volunteers should be allowed to participate in tasks and activities that are the mandate of professionals. Local authorities struggled with coming to terms with the unwanted groups of self-organised volunteers, as they appeared to put into question established hierarchies and the responsibilities of the professional agencies. Somewhat emblematic for this attitude, one interviewee from the local authorities argued:

“The municipality is not in charge of every kind of emergency response, only the public one. And public emergency response cannot be explained after the event, but needs to be clear prior to the disaster. And this is what the city did with its plan “Hochwasservorsorge Dresden” (Flood Preparedness Dresden). There, it is stated which districts are protected until this and that benchmark. And what districts are not protected. If I do not like it, I need to go to my city representatives and let them make another decision that will cost millions and millions of euros. There is no other way in Dresden.” (Interview 4)
This quote shows that the enactment of disaster protection depends on political decisions and is thus contingent. Furthermore, it stresses that the distribution of responsibility is key to understanding the expected roles and tasks of professionals vis-a-vis ordinary citizens and volunteers, even when there is no call for resilience as a policy goal in official emergency plans. While the responsibility for the protection of one’s own property is delegated to the individual, ordinary citizens’ capacity to self-organise collective actions were seen with scepticism by the Dresden Fire Department or linked to acts of dilettantism on part of citizens. Or, like a city official laconically stated: “Just because you can fill sandbags and put them somewhere doesn’t mean you have to” (Interview 8).

In an official presentation of the Dresden Fire Department evaluating the response efforts during the floods, the volunteer participation is described as an expression of “Erlebniskultur” (event culture) (Dresden Brand- und Katastrophenschutzamt, 2013). This term can be interpreted as referring to how people seek out an experience for the sake of the experience itself rather than for the sake of solving the problem in question. In line with such a derogatory framing, the various citizen groups and social media networks became easy targets to blame. As Kuhlicke et al. (2016: 318) have argued, responsible government administrators can take advantage of these networks to “delegate responsibility and blame to those stakeholders participating in risk management in case ‘something goes wrong’”.

According to staff members of the Dresden Fire Department, unaffiliated volunteers ought to have been directed by professionals and informed by city government sources (Interview 8). Yet, the local authorities perceived the engagement of unaffiliated volunteers as a result of either blind over-ambition by volunteers and/or a public scepticism towards the ability of state institutions to manage the emergency situation (Interview 2).

The consequence of the engagement of a large number of unaffiliated volunteers were problematic in some cases while being constructive in others, which even high-ranking officials admitted. The “Kirchbach Report” attests: “The technical operation management in metropolitan areas was particularly challenged in coordinating the hundreds of volunteers appearing in short time by using social media on site to support
the filling and installations of sandbags” (Sächsische Staatskanzlei, 2013: 44). An official from the Dresden Fire Department acknowledged in an interview that the sheer number of citizens in some cases enabled more effective work than the professional firefighters could have provided on their own (Interview 8). For instance, he estimated that at one sandbag filling station set up by the fire department, automated machines could fill approximately 1,500 sandbags per hour, whereas the volunteers on site could fill approximately 5,000 sandbags per hour using shovels and their bare hands. These numbers have been supported by an interviewee who worked as unaffiliated volunteer and reported that in some cases the firefighters abandoned the filling machines in favour of the manual method using shovels, with the help of volunteers (Interview 9).

It is worth stressing that the accounts we have collected through interviews and news reports indicate that there was a larger degree of cooperation between unaffiliated volunteers and professional emergency agencies (including the Bundeswehr) than some official accounts from the authorities suggest (Dresden Brand- und Katastrophenschutzamt, 2013; Friedrich, 2013). Yet, the cooperation between citizens and professionals was mostly the result of on-site improvisational actions (Interviews 7; 9). The Facebook group “Fluthilfe Dresden” did, moreover, continuously urge volunteers to heed the advice and instructions of fire fighters and other professionals. Although the Dresden Fire Department emphasised its general sympathy for citizens’ willingness to aid their city in times of imminent collective threat, one representative of the department stressed that such good intentions posed problems for the proper execution of flood response tasks (Interview 8).

In an evaluation of the 2013 floods by the Office of Environment, Agriculture, and Geology of the Free State of Saxony (Landesamt für Umwelt, Landwirtschaft und Geologie, 2015: 112), the emergence of volunteers through social networks is initially described as an impressive phenomenon, since a large number of people was reached and activated within hours. Yet, while the report acknowledges that in some places volunteer aid was useful, it quickly turns to the downside of volunteering by pointing out that there are “great dangers” (Landesamt für Umwelt, Landwirtschaft und Geologie, 2015: 112) associated with the scale of participatory flood response activities. The main problem, the
The report suggests, is that too many volunteers can obstruct the plans of emergency management professionals and can result in misguided efforts to help.

The best-known example of how the self-organised volunteer initiatives “got it wrong” was a section between the two districts of Pieschen and Neustadt on the northwest banks of the Elbe. As people began to place sandbags along the roads beside the river, they evidently put a large number of them on the low permanent floodwalls, where mobile steel-plate extensions were supposed to fit on top. An estimated number of 10,000 sandbags that had been placed on top of the wall would thus have to be removed to accommodate the extensions. The fire department ultimately decided not to remove them because it would be too time-consuming, and the water level was not expected to exceed the height of the floodwall. Volunteers also placed sandbags just behind the wall, which perspective makes little sense from a technical. The water would overtop the sandbags very quickly once the sandstone floodwall had been overflowed, as a report by the fire department notes (Friedrich, 2013). In another example, volunteers built a wall of sandbags 1.5 meters high and 1.8 km long, even though the official emergency plans only prescribe the building of a wall 0.8 meters high and 900 meters long. The doubling-up of the proportions was, a report concludes, “completely unnecessary” (Landesamt für Umwelt, Landwirtschaft und Geologie, 2015: 112).

The resources used for building several of the sandbag dikes were provided in part by volunteers, and from sources contracted by the city authorities. While disaster management authorities focused on the protection of central infrastructure and especially the heritage sites in the Dresden city centre, they designated certain residential areas as flood plains, to protect the other parts of the city. However, the inhabitants in some of those designated flooding neighbourhoods refused to obey and proved remarkably defiant in resisting the official plans and acquiring whatever sandbags they could find to protect their houses and public areas against the intentions and plans of the local authorities. One interviewee who served in the administrative municipal staff during the floods described an incident as follows:

“They [the volunteers] stopped our trucks with sandbags. They were stopped, and the drivers could not do anything and we did not blame them. […] They took
control of the vehicle and unloaded the sandbags. At a place where the sandbags were not needed at all. And they never arrived those places where I would have needed the sandbags. We, as operations management, lost the control of communication for some time.” (Interview 3)

Yet while remaining critical, the authorities also deemed it necessary to publicly praise the volunteer activities during the flood emergency, including the work of the social media networks. The then Prime Minister of Saxony, Stanislaw Tillich emphasised in a parliamentary session after the floods with reference to the online volunteer networks that “our society works” (Sächsischer Landtag 2013, 8032). The Saxon state authorities awarded thousands of flood response medals to volunteers, staging a momentous ceremony in Dresden (Freistaat Sachsen, 2013b), and putting up billboards in the city centre with the words “Thank you to all volunteers.” This presents a peculiar situation in which some authorities expressed approval of the public’s role in flood response, while other authorities expressed explicit and partly harsh critique of volunteers. This Janus-faced position did not escape the attention of some of the volunteers, and discussions raged for months after the floods on the Facebook groups that were used during the response efforts.

The professional disaster management entities have also realised this game-changing character of online self-organisation. A representative of the emergency operation staff stated: “In 2013 there was nothing like that. In the future, it is most likely that our public relations team is going to disseminate an hourly report of the situation on twitter and so on” (Interview 4). Another interviewee mentioned that another lesson learned would be to have a staff member tasked solely with social media monitoring (Interview 1). Although the exact shape of the means has not been fixed, the self-organisation of volunteers has urged the authorities to take social media more seriously. The “Kirchbach Report” seconds this by stating that “social media, currently predominantly Facebook, should rather be considered central to the crisis communication of the Federal State.” (Sächsische Staatskanzlei, 2013: 51). According to one interviewee, the founders of a Facebook group is convinced that he could mobilise a comparable number of people in case of another catastrophic event. The increased importance of
social media is made clear, when one staff member states that “we have agreed that we could bring him [the founder of the Facebook group] to the regular briefing here. That would not harm me. In case of an event, we have a briefing every two hours” (Interview 4). While the local disaster management authorities seemingly take social media seriously, they still struggle to engage with emerging structures that lack the form of hierarchy that is common in disaster management organisations.

The challenge of coordinating unaffiliated volunteers also affected other disaster relief actors, like aid organisations. The German Red Cross (DRK), as the largest aid organisation in Germany, also witnessed difficulties and evaluated their response to the massive numbers of unaffiliated volunteers in 2013 who spontaneously showed up, wanting to be incorporated into the relief operations (Interview 5). While this took away resources from the DRK in some incidents due to the above-mentioned need to coordinate these unaffiliated volunteers, the vivid volunteering structures were equally points of attraction for organised Red Cross members. For instance, some DRK relief workers doing telephone service as logistical support left their workplace during their lunch break to join the unaffiliated volunteers on site. The interviewees from the Red Cross reported that this happened due to “their perception of being not needed” (Interview 5).

The DRK used the example of Dresden as an introduction to its tripartite brochure series on the role of unaffiliated volunteers in disaster management (DRK, 2014: 11). In these brochures, the DRK identifies two emerging trends that characterised the flood relief operations in Dresden, namely the autonomous participation of unaffiliated volunteers and the importance of social media as a crucial organising tool for this group. Acknowledging that one post in a social media group had an outreach of up to three million users, the DRK states that these grass-root approaches were hard to monitor, let alone control (DRK 2014: 13-14). The brochure series advises Red Cross employees and volunteers how to engage with unaffiliated volunteers and in what fields they might be incorporated into the work of the organization. The brochures are not an attempt to disqualify unaffiliated volunteers per se, but proposes ways for their proactive incorporation (DRK, 2014, 2017).
What is evident is that both local and state authorities, as well as NGOs as exemplified by the Red Cross, acknowledge that there is a need to consider social media platforms in future crisis emergency communication. Thus, social media will most likely become encompassed into different modes of emergency governance in and around Dresden when the next flood occurs. The Dresden case echoes a range of findings from disaster research that have examined tensions between emergent forms of volunteers in disasters vis-a-vis the local state apparatus’ claim for being in control (Dynes, 1994; Scanlon et al., 2014). Indeed, the subjects acting as unaffiliated volunteers turned out to be more active and particularly autonomous than some professional rescue organisation would like them to be. In the following sections, we will discuss this point in order to show how the case study of Dresden informs current conceptual debates on resilience.

The Multiplicity of Resilience

One standard genealogical reading of resilience is to refer to its use in ecology by Crawford Holling (1973) who roots it in complexity theory and contrasts it with the then prominent maximum sustained yield approach (Walker and Cooper, 2011). The dimension of adaptation is central in ecological resilience-thinking (Walker and Salt, 2006). Yet, it is rightly criticised that Holling’s understanding of ecological resilience is regularly confused with the origin of resilience thinking (Alexander, 2013: 2707; Bourbeau, 2018a: 19-20; Tierney, 2019: 167). In their seminal conceptual discussion of resilience, Walker and Cooper (2011) trace back how this ecological reading of resilience has found its way into the domain of security studies. The authors portray it as a straightforward development, given the intellectual overlap between ecology and security studies in terms of a concern with complexity.

A related reading of resilience, emphasising the proximity between resilience and neoliberal thinking, has provoked various critiques (Evans and Reid, 2014; Joseph, 2013, 2016; Neocleous, 2013). One central argument is that policies promoting resilience legitimise the devolvement of collective social responsibility and thus delegates responsibility for security and well-being to the individual and/or local communities (Kaufmann, 2013, 2016). Resilience, it is argued, foster the de-politicisation of
protection, since “[r]esilient subjects, in other words, have accepted the imperative not to resist or secure themselves from the dangers they face” (Evans and Reid, 2014: 42).

Yet, being resilient is portrayed as something normatively good and desirable in a neoliberal rationality. David Chandler (2016: 15) describes the nexus between neoliberalism and resilience by stating “[t]he more adaptive capacity is enhanced, the more resilient we are as both individuals and communities. The more resilient we are, the more fully developed we are as neoliberal subjects.” Resilience is thus cast as a tool to legitimise the withdrawal of the state by shifting the responsibility to individuals.

This criticism is echoed in disaster studies and summarised by Tierney (2019: 214), who states that “resilience discourse is largely silent on issues of power”. This limits its transformative potential when it comes to scrutinising societal structures and their effects on unequal chances in disaster relief. Following this line of thought, Wolf Dombrowsky (2012: 286) concludes “that the burden of disasters and relief will be shifted onto the citizens’ shoulders” through the introduction of resilience.

In the context of disaster management, this type of critique is formulated as one in which the state retreats from investing in emergency planning and risk reduction measures, willingly delegating responsibility to local communities and volunteer networks. For example, Peer Illner (2018) argues that this was the case with respect to the Occupy Sandy volunteers during Hurricane Sandy in 2012, who were subsequently heralded as a “resilient network” by the US Department of Homeland Security (2013). Disaster anthropologists have similarly documented how post-disaster recovery programmes are quick to label some communities as resilient, while in effect ignoring underlying patterns of vulnerability (Barrios, 2014; Benadusi, 2013). From this perspective, any indication of social resilience by individuals or groups must ultimately always be interpreted as being in the political interest of the state or some other authority such as international donors to save money and retract from their mandated or democratically expected responsibilities.

However, many cases from around the world show a willingness on part of volunteers to cooperate with authorities. Some even differ substantially from the case of the 2013 Dresden floods, but many also share the same characteristics. During the 9/11 attacks, Wachtendorf and Kendra (2016) found that both citizens and professional emergency
responders, often in collaboration, acted with high degrees of improvisation and creativity, finding solutions to problems on the spot.

Many volunteers are moreover affiliated with disaster relief organizations, such as the Red Cross, in which they are obliged to follow standardised rules and procedures (Tierney 2012: 350). In some cases, there might be an argument for the fact that state interests are promoted and extended via the inclusion of volunteers, thereby affirming the view, which we criticize in this article, that resilience is imbricated in a neoliberal strategy of austerity.

Yet there are other cases than Dresden of what we have referred to as unwanted resilience, or examples of resilience as an emergent phenomena with anti-government characteristics. For example, following the 1985 earthquake in Mexico City, citizen-driven search and rescue initiatives sparked a widespread protest movement against the local and national government, contributing to the downfall of the ruling party in subsequent elections (Olson and Gawronski 2003). Similar examples of such ‘critical junctures’ have been observed in other cases, for instance after the 1972 earthquake in Nicaragua (Pelling and Dill 2010).

Disaster researcher David Alexander (2013: 2707-2710) challenges current critical readings of resilience as a contemporary concept and contrasts it with “an etymological journey” (Alexander, 2013: 2707) that leads the reader back to the opaque etymology of the Latin words “resilio” and “resilire” and to the first scientific mentioning of “resilience” by Sir Francis Bacon in the 17th century (Alexander, 2013: 2708-2709). Alexander’s anecdotic history of resilience and even more so Philippe Bourbeau’s (2018a: 27) interdisciplinary genealogy of resilience illustrate that the use of the term resilience is complex and diverse. It is thus hardly surprising that it lacks a universal consensual definition also in its deployment in disaster management (Tierney, 2019: 170). Jonathan Joseph (2018: 26) even goes so far as to argue that resilience is too vague to be a concept. Instead, he suggests that resilience’s “dominant meaning derives from its position within a broader discourse of governance – or specifically, governance from a distance – as well as wider conceptions of the social and natural worlds based on ideas of complexity and uncertainty” (Joseph, 2018: 26).
As the above discussions of resilience illustrate, there is not one reading of it, but “multiple resilienties”, as Stephanie Simon and Samuel Randalls (2016: 4) argue. They build on the work of Kay Aranda et al. (2012) who identify the three different narratives of (1) resilience found, (2) resilience made and (3) unfinished resilience. Resilience found describes those accounts that conceptualise resilience as a capacity or trait inherent to a given subject, be it an individual or a community. Such accounts are rooted in positivist thinking and cast resilience as an ontological characteristic, something that can be discovered (Aranda et al., 2012: 550-551). A lack of resilience might then be considered as an ontological deficit. This approach runs the risk of blaming the respective subject for not being resilient (enough) (Bourbeau, 2018a: 27).

The second approach, resilience made, rests upon the assumption that resilience is a social practice: “Thus, an important consequence of understanding resilience as ‘made’ is to question the power to define what becomes a risk, or a protective factor or a resilient outcome” (Aranda et al., 2012: 552). These often imposed or at least demanded forms of resilience can be found in several governmental resilience policies (e.g., Joseph, 2018; Walker and Cooper, 2011).

Aranda et al. (2012: 553-554) describe the third form, resilience unfinished, as subject oriented and premised upon poststructuralist thinking. The resilient subject is “ambiguously conceived, being imbued with agency, but equally constrained, subjected to broader discourses or forces from elsewhere” (Aranda et al., 2012: 554). The latter two approaches have in common that they do not perceive resilience as a pre-existing property or characteristic, but is always becoming. By following such a reasoning, resilience is conceptually de-naturalised and could be perceived as a “security value” (Zebrowski, 2016: 148), or “an ideal type” (Chandler, 2016: 14).

Building on Aranda et al., Simon and Randalls (2016: 9) argue that “resilience can be found, made and unfinished all at once”. As a methodological anchoring, they propose to analyse incidents of resilience through two different axes, namely sitings and interventions (Randalls and Simon, 2017). Sitings tell us where resilience is articulated. These specific spatial ontologies “offer moments of specificity for nailing down the ontological politics, demands and promises of resilience” (Randalls and Simon, 2017: 43). In other words, analysing the respective spatial ontology of the utilisation of
resilience is to encounter the very concrete meaning of the otherwise fuzzy boundary object. *Interventions* are the second axis to examine resilience in its specific context. The examination of the practices, that have been established to foster resilience, reveals how resilience is understood in a certain context and what to what degree resilience is demanded by whom (Randalls and Simon, 2017: 46).

All three forms of resilience and both proposed axes for analyses, as well as the empirical accounts pursued for example by Jonathan Joseph (2018), require that resilience is identified in one or another way. However, this reduces resilience to those instances in which someone calls a certain practice or policy “resilience”. But how do we know resilience if we are to abstain from putting a label on it or if we encounter empirical cases where there is no explicit reference to resilience, such as in the case of the Dresden floods? Bourbeau (2018b: 6) proposes the following definition of resilience “as the *process of patterned adjustments adopted in the face of endogenous or exogenous shocks, to maintain, to marginally modify, or to transform a referent object*”. This definition refers to adaptation as the common core of most understandings of resilience. However, it seemingly excludes those instances of *resilience found*, in which resilience is understood as a singular pre-existing capacity (Randalls and Simon, 2017: 42), by referring to resilience as a process. Resilience as an adjustment process might still embrace all three narratives of resilience, since it draws on pre-existing capacities (*resilience found*), such as economic and social capital or bodily abilities (Krüger, 2019), can be fostered by practices (*resilience made*) and affects the *unfinished resilient* subject. Thus, it does not foreclose the opportunity to analyse a wide spectrum of resilience accounts, from post-structural ones that associate it with neoliberal governmentality (Joseph, 2013) to those that link resilience to material capacities (Krüger, 2019). Moreover, it allows us to see resilience as process of patterned adjustment also in those incidents in which no one calls a certain practice “resilient”.

**Resilience in the absence of resilience policies**

In Dresden, and as has been shown to be the case in disasters for over half a century (Drabek and McEntire, 2003; Fritz and Williams, 1957), people coordinated, orchestrated and planned activities in the midst of urgency, confusion, and disorder. The case thus
highlights a common tension in disaster response situations, namely the conflicts that arise from the convergence of first responders and volunteers offering their help on the one hand, and the command-and-control logics imposed by state institutions on the other (Scanlon et al., 2014). However, the classical literature on emergent behaviour in disasters has primarily focused on examining and comparing individual disaster cases in order to establish typologies (Dynes and Aguirre, 1979; Quarantelli, 1988). Only recently, scholars have tried to merge the literature on emergent societal structures with that of disaster resilience (Tierney, 2014, 2019) and to further adapt early typologies of group behaviour during disasters to new forms of disaster communication such as social media (Albris, 2018; Schmidt et al., 2017).

In line with these attempts, we argue that the multiple theoretical foci and the controversial debate on resilience, that have emerged in recent years, help us to understand the complex interplay between volunteers and official state structures in emergency and disaster response. In fact, the decentral, spontaneous and situational emergence of unaffiliated volunteering as well as the adaptive behaviour of disaster authorities is a prime example of the social enactment of a patterned adjustment process. Following Bourbeau (2018b), such a process is resilience. Unaffiliated volunteering is determined neither by certain memberships, such as in major disaster relief organisations, nor by state structures. The role that social media platforms played during the floods, testify to this. The membership on a Facebook group requires merely a click on the ‘like’ button. Such volunteering is the result of the spontaneous and adaptive choices taken by individuals, local groups and communities that face a disruptive shock, reverberating scholars like Tierney (2014, 2019: 214) who stress the adaptive and dynamically changing features of what might be termed adaptive resilience. It also represents an example of what James Brassett and Nick Vaughan-Williams (2015: 38) have termed a “performative approach to resilience”, since the resilience of some actors, i.e. the volunteers, emerged as a response to state regulations and subsequently seem to be shaping future emergency governance plans in Dresden and beyond. This kind of unwanted resilience is both found and made. It is found by officials from the state and aid organisations alike within the society. And it is made through civil-societal engagement, which parallels and at times hampers official plans for disaster relief. In fact, the
occurrence of emergent volunteering structures has urged professional disaster management bodies, such as the Red Cross, the municipal and even the national authorities to rethink and partly reshape their structural modus operandi.

Drawing on this first point, resilience appears as an emergent phenomenon to be governed and as a governance strategy in the making. The structures of emerging volunteering can be interpreted as a social phenomenon beyond the scope of individual decision-making, and as part of a set of not yet materialised top-down governmental policies. State bodies, like disaster management authorities on various governmental levels and the local fire department in Dresden, hold their own expectations of how members of the public should act, engage and take responsibility for their own property. Yet, this was thoroughly counteracted by the actual manifestations of resilience, i.e., in the form of online self-organisation and unaffiliated volunteering. The emergence of resilience in the case of the 2013 Dresden floods was neither the decision of a state body nor of a single individual or an organised group, but a complex social phenomenon from a myriad of societal interactions. Even if some digital media infrastructures facilitated the process, the existence of these social media platforms merely served to mediate the manifestation of resilience as an emergent phenomenon. The example of Dresden ties into resilience-thinking in which “complexity is understood to be a reality against which power is powerless” (Chandler, 2014: 66).

Emerging new forms of governance in the aftermath of the flood are the product of organisational adaptation processes that has been spurred under the impression of the difficulties with unaffiliated volunteers. State bodies as well as aid organisations have developed strategies and plans for how to govern resilience as a social phenomenon. As an example, the DRK brochures (DRK, 2014, 2017) represent a way of rendering emerging structures of unaffiliated volunteers governable by “integrating the different groups of helpers according to their respective capacities and to the requirements of the relief work reasonably into the operations” (DRK, 2015: 13). The Dresden disaster management entities have also dealt with the same issues and expressed their willingness to implement social media monitoring in their local staff work and even to consult the initiators of central social media groups and activities. This is presumed to enable staff members to anticipate and direct gatherings of unaffiliated volunteers. The recruitment of
a staff member responsible for social-media monitoring, we argue, can be seen as an adaptive process on part of the disaster management authorities. The highly adaptive behaviour of unaffiliated volunteers thus results in the pressure on state authorities to be likewise adaptive in order to render this emerging phenomenon governable.

Conclusion

In this article, we attempted to make sense of the complex and interdependent adaptation processes that were observable during the management of the 2013 floods in Dresden. By describing the case of unaffiliated volunteers and the ensuing critiques, we portray resilience as a patterned performative praxis that shapes societal relationships in mutually influencing adaptation processes. Therefore, we have argued for an approach to resilience which is in line with the three-pronged approach proposed by Simon and Randalls (2016), in which resilience can be seen as found, made and unfinished all at once.

The case of the 2013 floods in Dresden is not a typical case of disaster resilience in which a local, regional or central authority would call for the resilience of the population vis-à-vis a potential or present calamity. Therefore, we cannot and do not want to state what resilience actually is. Rather, the more modest aim of this article is to make sense of empirically observable phenomena, namely diverging expectations on responsibilities between the professional emergency management entities and the population as well as emerging structures of unaffiliated volunteers. In Dresden, authorities responsibilised the population to conduct self-help and to adapt to their respective living situation. The active devolvement of responsibility did however not result in questioning the primacy of the state in disaster management. As Joseph (2018: 189) states in his analysis of resilience policies, it is responsibility, not power, which is delegated to individuals and local communities.

However, Joseph (2018: 189) further concludes: “In fact it is by shifting responsibility that the power of the state is strategically enhanced”. The dialectical process of delegating responsibility while upholding the primacy of the state has sparked self-initiatives by citizens as well as resistance to official flood management plans. Thus, it is not a given that the delegation of responsibility strategically increases state power.
Rather, aid organisations and state bureaucracies were urged to adapt their structures to the emerging patterns of volunteering that organised via social media and challenged taken for granted assumptions about disaster management.

**Resilience appears as an adjustment process of the population and the authorities in Dresden alike.** On the side of the population, volunteering was an adaptation to support the authorities in their disaster relief efforts but also to fight the potential devastation caused by the water masses in opposition to official plans. The authorities adapted to the changes in communication via social media, the huge number of unaffiliated volunteers and the resistance they partly witnessed by trying to incorporate this new phenomenon into their working routines. As such, resilience appears as a societal process that shapes governance on various levels, from the individual to the municipality and finally the national level. Referring to the events in 2013, the Federal Office for Civil Protection and Disaster Assistance has taken this topic up for consideration and has formulated guidelines to enable local authorities to deal with unaffiliated volunteers via social media (BBK, 2017). As demonstrated, the German Red Cross equally formulated guidelines to support their local branches in dealing with this phenomenon.

Finally, the case of Dresden is an example of what Kevin Grove (2013: 204) calls “subversive resilience”. This form of resilience uses the well-known and often discussed features of resilience such as responsibility or empowerment, but not for the sake of assuring a smooth governance but to mobilise capacities to create “‘mutant rules’ of resilience” (Grove, 2014: 253) that challenge authority and lend resistance the means to persist (Bourbeau and Ryan, 2017). The emerging volunteering structures in the case of Dresden depicts what Zebrowski phrases as “the force of resilience to disrupt identity and coherence” (2016: 152). The case thus serves as an instance of a subversive facet of the resilience multiple that has come to shape disaster emergency governance.

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\(^{1}\) The interviews were conducted in German language and translated by the authors.