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# The Notion of Resilience: Trajectories and Social Science Perspective

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The keyword of resilience has gained a tremendous trajectory within the last years. If you search for resilience in Google Ngram Viewer, a program which allows you to monitor the use of specific terms within books, it shows, that this term was not used in German-speaking countries (except for a short period between 1942 and 1950) until the 1970s.<sup>2</sup> This changed, slowly after 1990 and significantly after 2000. Since then, the use of this term within the German-speaking literature has doubled.<sup>3</sup> Media coverage of political discussions and research proposals on the topic of resilience are increasing too. Almost everywhere, a growing use of the term resilience is apparent. The term has also been transferred to several new problem areas without making it clear, what resilience stands for in general or in the specific field of the problem.

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- 1 Revised version of an originally in German published article (Bonß, W. 2015. Karriere und sozialwissenschaftliche Potentiale des Resilienzbegriffs, pp. 15-31 in: Endreß, M. and A. Maurer (ed.), 2015: Resilienz im Sozialen. Wiesbaden: Springer VS.). The article is translated into English by Janosch Stolle, Andrea Maurer, and Laura Lehto.
  - 2 See: [https://books.google.com/ngrams/graph?content=Resilienz&year\\_start=1900&year\\_end=2010&corpus=20&smoothing=3&share=&direct\\_url=t1%3B%2CResilienz%3B%2Cc0](https://books.google.com/ngrams/graph?content=Resilienz&year_start=1900&year_end=2010&corpus=20&smoothing=3&share=&direct_url=t1%3B%2CResilienz%3B%2Cc0) (Access: April 18<sup>th</sup>, 2014).
  - 3 Within the English-speaking literature the term is already in common for a longer period of time, but even here the use more than doubled since 1990 (cf. [https://books.google.com/ngrams/graph?content=resilience&year\\_start=1950&year\\_end=2014&corpus=15&smoothing=3&share=&direct\\_url=t1%3B%2Cresilience%3B%2Cc0](https://books.google.com/ngrams/graph?content=resilience&year_start=1950&year_end=2014&corpus=15&smoothing=3&share=&direct_url=t1%3B%2Cresilience%3B%2Cc0) (Access: 18. April 2014).

A Google search shows that from a quantitative perspective, the growth is interrupted. The search for the term on December 1, 2013 provides about 9.280.000 results, on April 15, 2014 it had increased already to 10.100.000. Although, the number of Google results does not tell anything about the quality or relevance, it does tell us that social attention to it is increasing.

In this paper I will discuss how the notion of resilience gains new perspectives in the context of new developments in society and the theories. Furthermore, I am going to introduce resilience as a new way of dealing with the question of uncertainty. For this, the notion of resilience can help sociologists to overcome classical views on uncertainty and provide a better understanding that does not highlight avoidance of but the identification of risk potential. So, through the reconstruction of the resilience discourse, some new insights will be offered.

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## 1 Traditional lines of resilience

The Oxford English Dictionary<sup>4</sup> defines resilience in two ways. On the one hand it stands for “the ability of a substance or object to spring back into shape; elasticity”. This is a more scientific oriented definition that refers to the elasticity of raw materials. On the other hand, resilience is defined as “the capacity to recover quickly from difficulties; toughness”. Hereafter resilience will be understood in the ability of technical and/or social systems to be tough when facing disturbances, regardless of their kind. This highly general definition, with the commonly known keyword of “toughness”, encompasses nearly all possible varieties of the term of resilience, which indeed could be formulated highly diverse in detail. If you temporarily omit the scientific- or raw material oriented definitions, three traditional lines of the social-scientific definition can be separated from each other.

1. The oldest variant represents the psychological research for resilience, which was founded by Emmy Werner (cf. Gabriel 2005, p. 209ff.; Mergenthaler 2012, p. 60ff.). The developmental psychologist, Emmy Werner, started her long-term study with research into the development conditions and possibilities of 698 children who were born in the 1950s and tracked their development over decades (cf. Werner; Werner & Smith 1982, 2001). About one-third of the children were in a situation of high developmental risk beforehand, because they had been born into chronic poverty, exposed to birth-conditional complications

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4 See <http://www.oxforddictionaries.com/definition/english/resilience> (Access: April 18th, 2014).

and grew up in difficult social constellations. However, the developmental risks have not fully determined their behavior. Indeed, the majority of the children with biological, medical or social risk factors developed less to social standards than the children without such risk factors. Contrasting with the second group the children of the first were less healthy, less successful, and more delinquent. On the other hand – and this is equally remarkable – about one-third of the children in situations of high risk did not present any problems, but rather developed successful, stable personalities. Indeed, it is possible to discuss in detail, whether or and why it has been this way, and Emmy Werner did not provide an explicit answer to this. However, she did open up a new perspective and changed focus from the unsuccessful to the successful children. The latter were obviously resilient in terms of resistance against negative initiative conditions. This aspect attracted special attention in psychological research during the period that followed (cf. Wunsch 2013, p. 24ff.).

2. Quite another line and from the psychological research mostly independent traditional line, is the ecological resilience discourse (cf. Brand et al. 2011; Günther 2009, p. 28ff., 117ff.). Furthermore there are meanwhile approximately 2.000 contributions within the English and German language area.<sup>5</sup> Crawford Stanley Holling is hailed as the founding father for the ecological discourse of resilience. He published his epochal essay in 1973 about “Resilience and stability of ecological systems” (Holling 1973). From this early work a book about “adaptive environmental assessment and management” (Holling 1978) arose and also a release about “panarchy” (Gunderson & Holling 2002; see figure 3) and recently a collection about “Foundations of ecological resilience” (Gunderson et al. 2010) were published. In connection to Holling ecological resilience is mostly defined as the “ability of systems to absorb changes of state variables, driving variables and parameters and still persist” (Holling 1973, p. 18). To say it in other words: “Resilience is the capacity of a system to absorb and reorganize while undergoing change in order to retain essentially the same function, structure, identity, and feedback” (Walker et al. 2004). From this definition an important point is already becoming clear: Resilience is a power of resistance within the area of conflict of persistence and change, whereas persistence is in the foreground. Regardless of the changes, the functions, structures and identities of an (eco-)system shall be preserved within such resilient systems. Here

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5 For the English-speaking discourse cf. <http://www.resalliance.org> and also <http://www.resalliance.org/bibliography/list.php> with actual about [05/06/2014] 1.658 entries; the additional German-speaking entries are estimated against the background of specific inquiry.

the power of resistance is referred on the one hand to socially constructed factors and on the other hand to prior ecologic aspects. Nevertheless, the ecological discourse of resilience is predominately focused on physical surroundings. Thus, even if the ecological problems are caused by humans, the notion is still about natural resilience. In this context physical forces or nature itself are regarded as important to keep resilient.

3. Since the turn of the millennium an additional third line has come to the psychological and ecological concepts of resilience, namely the “discourse of vulnerability” (cf. Bankoff 2003). Bankoff had already started in the 1970s. This new perspective urged in the foreground after growing ecological calamities (storms, flooding and earthquakes) and especially since the attack on the World Trade Center on the 11<sup>th</sup> of September in 2001. Through 9/11 the discourse about security has gained an entirely new frame. As it had previously been security and resistance, especially under the perspective of a potential internal system failure (systems do not work as planned), which had been discussed, it is now another aspect that is put into perspective, namely the vulnerability of systems. Vulnerability refers systems that can be hurt or destroyed through external forces. In contrast to vulnerability resilience means that systems does not get into trouble due to internal reasons (construction faults, wear e.g.), but rather through a specific external attack. Hereby the spectrum of attention shifts almost inevitably from a technical to social and normative aspects. For though technical systems can be vulnerable, vulnerability is not a technical affair, but rather “a complex characteristic produced by a combination of factors derived especially (but not entirely) from class, gender and ethnicity” (Cannon 1994, quoted after Bankhoff 2003, p. 6).

The various traditional lines of resilience discourse refer to diverse benchmarks and conceptions of “ability for resistance,” which come together at one point though. It does not matter whether resilience is recognized as psychological, ecological or social, in most cases it is described as an antecedent, an already existing ability. This can be supported and enhanced, but in general it cannot be created entirely new. In fact the research on resilience has changed a lot. At its beginning it was a common assumption, that resilience is somehow “hereditary” (cf. Fröhlich-Gidlhoff & Rönna-Böse 2014, p. 9), but cannot be arbitrarily produced. At this point a difference between the concepts of prevention and precaution become clear: While (crisis-)prevention focuses on fighting threatening system changes, through preventive arrangements and the elimination of them if possible, resilience is rather reactive or defensive. It can be expressed in another way: The discourse about resilience no longer assumes, that catastrophes can be avoided through pre-

ventive planning but rather that negative developments (regardless of all private and governmental promises for safety) can occur at any time. Therefore the ability of keeping resilient today is connected with existing potentials of resistance, which allow a system returning into a normal state – however this state is defined.

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## **2 Between shock and creeping threat – Benchmarks of resilience**

The USA National Research Council (2012, p. 18, 33) defines resilience as “the ability to prepare and plan for, absorb, recover from, and more successfully adapt to adverse events”. Thus, it is about the ability to parry adverse events, to prepare one’s self for them, to take them into account, to bear them, to recover and to adapt oneself for them in an increasingly better way. The USA Research Council in 2012 especially thought about increasing ecological disasters in the USA such as hurricane Betsy (1965), Andrew (1982) or Katrina (2005) or potential earthquakes, especially in California. One also has to think about socially produced ecological disasters, such as the Exxon Valdez tanker accident, which destroyed unique sanctuary for birds and sea otters on Alaska’s coast. Last but not least, terrorist attacks play an increasing role. Terrorism gains more and more attention through “9/11”. Terrorism likes radiologic weapons, dirty bombs” and the like cause more and more uncertainty (cf. Geiger 2003).

It has to be clear, that Katrina, a potential earthquake in California or a possible volcanic eruption could not have been prevented, especially because these events are not socially produced. That is why resilience or capability of resistance is gaining more and more attention in the public and political perception. If adverse events, for whatever reasons, cannot be definitely avoided, then the ability to react to such circumstances and create normality, has to be fostered – whatever that means in each case.

However, some results show that events like Katrina, disregarding all rhetorical efforts, are unequally distributed and even are hard to support in ex post. Specific population groups are per definition more resilient than others. It just may be true, because they live in better residential neighborhoods. Katrina refers to further characteristics of the resilience’s debate, which goes beyond the psychological resilience discourse.

It is always about large-scale damages and these should emerge mostly suddenly or abruptly in general. From the perspective of psychological research on resilience both attributes can be confusing, because resilient children who cope with poor initial situations, do not have something to do with large-scale damages and

they do not suffer from abrupt events in most cases, but rather from impairments which creep in. However psychological research for resilience is no longer in the spotlight (even if it dominates specific Google-inquiries). If one searches for what resilience is about, the following statement is more typical: “Resilience thinking [...] anticipates change and understands that major shocks are inevitable in a world that is facing huge challenges like climate change, resource scarcity, biodiversity loss, economic instability, and social unrest.”<sup>6</sup>

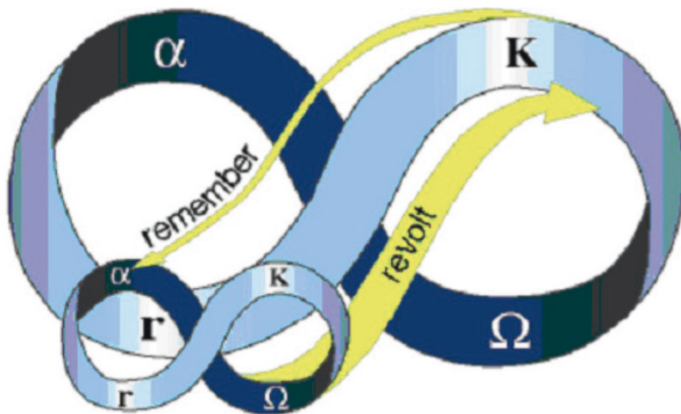
This wording highlights two things: On the one hand the actual resilience thinking refers to a whole range of phenomena which reaches from climate change over to resource scarcity up to economic and social uncertainty. These uncertainties are noticed as unexpected events in a world that is organized in an uncertain way, where one cannot rely on anything. This perception explicitly disagrees with the planning optimism of the 1960s and 1970s. If one thought back then, scientific progress was meant to eliminate all future problems. In a world that is affected by climate change, growing scarcity of resources, economic crises and growing social inequality, not only are fantasies of doom becoming more and more popular but also the scenarios for stability. At the same time diverse disturbances, regardless of which system they occur in, are increasingly noticed as unexpected (because they have not been anticipated before) and as a shock (due to their extent and abruptness). This empirical funded change of perspective refers to a crisis of the former understanding of scientific progress. Indeed, this lead to a new perspective on scientific progress that does not mean uncertainty could be regulated in general. Furthermore, systems are to be considered as vulnerable, at times disturbing, crises or in terms of violations. Against this backdrop, the question for antecedent resilience potentials becomes more important as well as factors of resilience which are connected to private responsibility. In other words as Charlie Edwards, in his book about the resilient nation states (Edwards 2009, p. 1) next generations rely on “citizen and communities, not the institutions of state”.

How do we have to understand the aim of this resistance? On the one hand resilience means that a normal condition, as it has existed before the break, is restored. On the other hand, resilience activities become just necessary, because there is a need for change to exist. The question if and what has to be changed remains: Does return to a normal condition mean that former parameters will be reconstructed again? Or does return to a normal condition mean that the system parameters have to be replaced because of irrefutable changes? These questions remain unanswered. Furthermore resilience means resistance against unexpected challenges as well as survival, because of the need to adapt to a changing environment.

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6 See [http:// www.getresilient.com/whatisresilience](http://www.getresilient.com/whatisresilience) [03/26/2014].

Walker et al. (2004) outline in this context “four crucial aspects of resilience,” which grow in importance. On the one hand resilience refers to latitude namely to the scope and the capacity of a system. Within this perspective, change is in the spotlight. A system is only able to work under pressure, when it is able to bear new external challenges without losing the ability to recover. Another second aspect of resilience is the resistance, namely the resistance in times of change. While resilience does not exclude change, resistance deals with the aspect of being able to oppose new requirements and remain unchanged in its core features. As a third aspect, Walker et al. highlight the “precariousness,” which stands for the uncertainty and the system’s degree of exposure. Within this perspective, it deals with the question of where the threshold of the system’s instability is and how the threshold could be raised. As a fourth aspect Walker et al. last mentions panarchy – a keyword that Gunderson and Holling (2002) dedicated a whole book to. As a counter-concept to hierarchy, panarchy means a specific viewpoint to the structuring and changing of systems: The resilience of systems has to be considered multidimensional and indeed, in two ways. First, local systems are embedded into subordinated contexts, or as an example “external oppressive politics, invasions, market shifts, or global climate change can trigger local surprises and regime shifts” (Walker et al. 2004). Second, forces of persistence and change can be found in nearly all systems, which could be labeled as “remember” and “revolt”. Resilience means that remember and revolt are in balance, whereas Holling et al. (2002) act on the assumption that the concept of panarchy is under the frame of developmental viewpoints, some kind of adaptive cycles, which is shown in the following figure 1.



**Figure 1** Adaptive Cycle

Source: <http://www.resalliance.org/index.php/panarchy>

It is a bit of a stretch to explain the adaptive cycle in detail, but what is interesting is that the power of change (revolt) is definitely more distinctive than the moments of persistence (remember). There is an ambivalence behind it, which is not entirely discussed in the previous discussions. Indeed, resilience stands for a defense against changes in principle and the recreation of previous states of normality, but it can also mean that a system has to change itself to survive and that new states of normality have to be found. It is possible to discuss the statement through current examples, such as examples of flood damages. Is it just those resilient people who raise their dikes and encapsulate their homes more and more? Or are people resilient who leave their homes in face of the annual flood damages and built new homes, because they do not want to renovate every year? This question is hard to answer. In general it assumes that resilience does not have to result in the defense of what exists, it could rather refer to an irreversible and changed basic condition, whereas it is hard to draw the line between resistance and adaption in particular.

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### **3 Disaster-Management, resilience cycle and the question about resilience's core**

It is possible to differentiate between two directions of the research concerning resilience in general. While the psychological and the economic research on resilience is primarily focused on the question of how a successful handling of previous or creeping handicaps could be ensured, recent social-scientific resilience research is nowadays deals mostly with threatening and sudden events with catastrophic effects that have to be handled in some way. Thus, since the middle of the 20<sup>th</sup> century there have emerged a variety of approaches to the disaster-research in the USA (Quarantelli 1978, 1998; Meyer 2010). These have been borrowed by the “sociology of catastrophes” and pursued in Germany (cf. Dombrowsky 1989; Clausen 1994; Clausen et al. 2003; Voss 2006). Within the disaster-research there have already been several models put forth for handling catastrophes for over six years. One of the oldest is the disaster-management-cycle which was proposed by John Powell and Jeanette Rayner in 1952 (cf. Coetzee 2009, p. 64ff.).

Powell and Rayner distinguished disaster-handling into eight stages which move from pre-disaster conditions stage (everything is still stable) up to warning stage, threat and impact (event of the disaster) to the point of determining stages inventory stage, rescue phase, remedy stage and recovery phase (handling the disaster). Already in this model, someone implied that catastrophes do not happen fully unexpected, but rather take place somewhat predictably. Again, the handling of catastrophes proceeds in multiple stages, starting with the immediate reaction



up to the recovery phase and stabilization. The following illustration is a little bit easier to follow and is more logical. It makes it clear that catastrophes are neither unique nor ultimately unable to be handled:

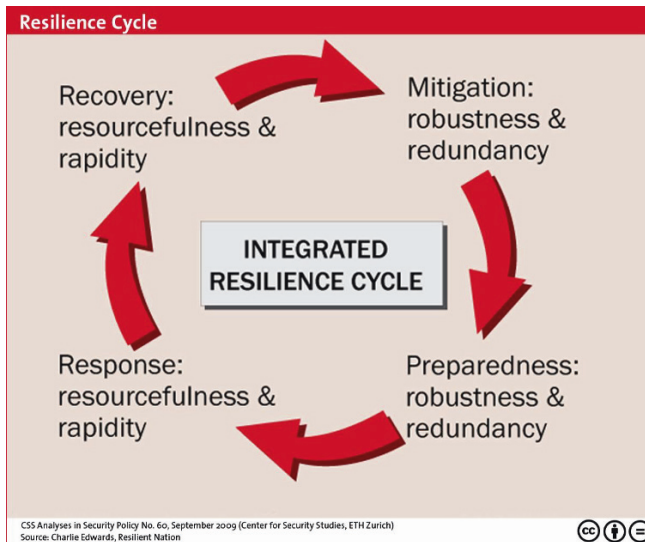


**Figure 2** Disaster Management Cycle<sup>7</sup>

Source: <http://www.careermagic.in/2012/02/normal-0-false-false-false-en-us-x-none.html> [05/20/2014]

Regarding this, in diverse variants shown and meanwhile even certified model (cf. peck 2008, p. 8ff.), the current ideas of the resilience cycle have been constructed (see figure 3).

<sup>7</sup> There are several presentations of the Disaster Management Cycle (in the same or similar form); but this precise presentation to my mind, one of the most demonstrative. Unfortunately its original author is unknown to me.



**Figure 3** Resilience cycle

Source: Jakubowski 2013, p. 376, after Leismann, Fraunhofer EMI 2012

From a bifocal perspective two things are conspicuous. First, there is not any kind of cutting event anymore. The focus is no longer on the catastrophe, but rather on the resilience cycle, which is a steady desire for better crisis management. By this crises become a permanent phenomenon. Second, the question of the potentials of resistance, as mentioned in the earlier resilience debate, is missed in the presentation of the resilience cycle. In fact, the topic of resilience disappears in some aspects. Thus, there is no independent force of resilience in these cycles. Instead, the handling of catastrophes is reduced to classical disaster models, in which the event catastrophe is faded out.

The change of perspective is only partly convincing, and that is why one has to return to the question of what resilience accounts for in its core. Does it stand for an antecedent power of effect, or acquirable ability? Authors like Emmy Werner (1977) or Paul Willis (1979) do not agree with this point. While Willis did research on the refusal of lower class youngsters against official requirement of normality, he explained the amusement of resistance and relocated it to class positions. Werner argues differently. Indeed, she sees social reasons why a part of the Kauai's' children have failed. However, the reasons are not explicit in any way and she, with the more successful children, acts on the assumption that resilience is some kind of natural power which is or is not available to the subjects.

This is far too general and not fully satisfactory. The question of resilience responds to the individual and to the social level. Even if, against all social influences, there is some kind of non-explicable natural power, it is different if one is looking at social resilience, or the resistance of social communities. In contrast to the psychological or ecological resilience, social resilience refers to the threat of the particular living conditions, and the reaction is generally non-antecedent potential set by nature, but rather a social achievement or effect of social characteristics of a community. The resistance, for example, against a threat to democratic living conditions does not create itself, but rather has to be practiced, and is only possible against the background of an appropriate democratic practice. Preconditions of "social" resilience would be, in this case, the relationship between law, democracy and, what is mentioned as "civil society" (cf. Adloff 2005, Gosewinkel et. al 2004). Indeed, the basic conditions of civil society (and the resilience that is referred to it) are not clarified in any way. However the fact that social resilience in modern societies is connected to civil society is still undisputed. So far, psychological or ecological resilience debate, do insufficiently discuss the phenomenon of social resilience by means of a social system against internal disturbances and, as well, against adverse environmental influences. These could make themselves noticeable as abrupt and/or creeping events. In addition, at this point, one can differentiate between shock and shifted irritation. Against this background, Adger (2000, p. 347) defines social resilience as "ability of groups or communities to cope with external stresses and disturbances as a result of social, political or environmental change." More specifically it is about the "ability of communities to withstand external shocks to their social infrastructure" (Adger 2000, p. 361).

Social resilience means the ability to tolerate stress and to keep the existing "social infrastructure" alive (cf. Adger 2000, p. 361). The problem, as Adger says, intensifies especially in developed societies which are more likely to be vulnerable to stress, because of their complexity. Indeed, this stress is not a psychological or ecological kind, but rather a social one that should be explained, based on Durkheim, through social factors. As a matter of fact, it is possible to argue this, especially if the suggested linkage of stress and shock is convincing. Indeed, it is hardly disputable that catastrophes, such as the world economic crisis of 1929 or the (incomparably weaker) financial crisis of 1990 have occurred abruptly and cracks have not been expected. These cracks have already been being prepared through structural aberrations over a long period of time. That is why it seems to be legitimate to prepare more powerfully for these structural aberrations than the early resilience debate.

There is again the question remaining, does resilience means that the old infrastructure stays and nothing will change or does resilience refer to learning pro-

cesses with structural change? The answer often attempts to show that, next to the appropriate discussions, “remember” and “revolt” are mostly mentioned. There are two other keywords which are mentioned, namely “adopt” and “adapt.” While “adopt” stands for retaining the old infrastructure and only marginal changes. “Adapt” means the need for and also forced change to the old infrastructure because of new frame conditions. In fact, this is also where the line between persistence and change remains open, because the question can only be decided under empirical viewpoints, not in general.

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#### **4 “Simple” versus “reflexive resilience” – Variants of social resilience**

From a sociological point of view these results remain not convincing because they do not offer a sufficient answer to the question of whether resilience as ability of resistance exists mainly natural or antecedent. Furthermore, the question needs to be discussed whether the notion of resilience should be regarded as socially constructed socially and by that becomes changeable and constructible. Beyond this it is possible to formulate several other questions about resilience. First of all it needs to be discussed whether it is psychological, ecological or social-scientific research about resilience. Secondly, the question needs to be discussed, how the relationships between antecedent and socially produced or constructible resilience potentials is just rarely discussed. Besides, it is only operated from a simple understanding of resilience potentials in relevant analysis. So there is no practical differentiation between different kinds of resilience concepts. This is much more astonishing as if one could differentiate between “simple” and “reflexive” variants of resilience all the time, but none have done it so far.

In this context I will suggest to highlight simple concepts of resilience that refer to an immediate reaction on large-scale damages. What have to be done if, for example a large-scale power blackout happens, what should be advised reactive to the people concerned (e.g. the accumulation of food provisions and/or the acquisition of emergency backup generators – whereat latter is often not possible in overcrowded areas). In contrast to reactive or simple resilience a concept of “reflexive” resilience can be seen somehow more active or proactive. “Reflexive resilience” is not about post-reactions, but rather about, how the event of a large-scale damage could be prevented. Simple resilience means (by all means of preventive thinking) the reaction on not preventable accidents; whereas “reflexive” resilience ties refers to the thought of preventing uncertainty and risk. Simply resilient in this setting could be all efforts to qualify something, which aims at ensuring the recreation of

a power supply in cases of black outs, for example.. “Reflexively resilient” would be, in contrast, all actions to prevent a power outage in advance or trying to reduce energy consumption through specific actions for example in better local anchoring.

This consideration about a selection between simple and “reflexive” resilience may appear unnecessary on first glance, especially since no specific line could be drawn between them. However, in practice, the difference between simple and “reflexive” resilience (even if it is not mentioned) has already existed for a long period of time. This could be studied within the example of the forecasting earthquakes. Chances of earthquakes worldwide are as unequally distributed as earthquake prevention is. Turkey, California, and Japan are considered as high risk places for earthquakes. Indeed, all regions react differently to this kind of threaten. In Turkey, there is hardly any systematical earthquake prevention within the area of Istanbul. Whereas in California one finds more simple resilience. In fact, the building codes there are much more restrict than in Turkey, but in everyday life people there satisfy themselves with so called survival kits. These kits should ensure survival for one- or more days in destroyed regions, which are especially fostered through the growing “prepper” movement.<sup>8</sup> Japan, in contrast, is the most reflexive oriented country. Against the backdrop of recurrent earthquake experiences, there are several prescriptions for earthquake proofed buildings which have been successful, since the damages from the last earthquakes were minor.

What do these examples imply for the difference between simple and reflexive resilience? Firstly, this means social resilience is not an antecedent asset, but rather has to be learned individually or socially. Such learning processes have to be supported for reaching a state which could be referred to as “reflexive resilience”. Reflexive resilience” means a power of resistance, which does not fear change and offers reflexive justifiable innovations. Such flexible innovations are potentials of resistance especially for non-preventable crisis situations. Furthermore they are rather increasing.

To be sure, one can argue whether the increase is quantitatively measureable in all cases (such as damages from hurricanes, floods or other natural disasters), or whether there is increase of awareness and sensibility towards crises and natural disasters. In that case, sensibility increases that neither science nor public policy no longer promise that catastrophes can be prevented in the long term. With this in mind the growing resilience discourse actually refers to a changing attitude towards uncertainty. Uncertainty is no longer seen as a decreasing, controllable

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8 Preppers defines people that want to be prepared in an event of a catastrophe – within the USA there are more than 3 million estimated Preppers. Offers for survival kits can in the meanwhile also be found in Germany’s ebay.

problem, as Talcott Parsons affirmed (1980) (cf. Bonß 1995, p. 11f.). Uncertainty and crises seem to be much more of a permanent companion of humanity. From this on uncertainty can be somehow a little bit relativized by scientific research and political means. It is not assumed to eliminate or avoid uncertainty in general. In this extent, as the specific claims decrease, the need for (pre-governmental) resilience grows, whereby the development has to be rated ambivalent. The insights from this new perspective are that more scientific research, governmental competency, and possibilities of strengthening private resistance are needed. However that makes sense only if simple and “reflexive” resilience is supported.

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