08

Remembering Disasters:
the Resilience Approach

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Introduction

It is commonly considered that remembering disasters may help building risk awareness, thus avoiding new disasters or, at least, anticipating and mitigating risks. This disaster memory can be territorialized: street plaques, preserved urban ruins, or other various memorials, are all material traces of catastrophes intended to reach a more or less vast audience. However, the process of giving materiality to memory and more generally remembering disasters, is very complex, subtle, and political; whereas the conventional risk management practices led to debatable choices in terms of disaster memory, the resilience approach might put forward a renewed method more adapted to the complexity and the subtlety of collective memory.[1]

The concept of resilience, as a new risk management method, has now been used in the social sciences for two decades. It remains a very controversial approach, but it does prove quite useful to reform the theories and practices of disaster memory. I will rely on Louise Comfort's definition of resilience as the "capacity of a social system to proactively adapt to and recover from disturbances that are perceived within the system to

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1   The concept of collective memory is precisely defined and commented on in Halbwachs, *La mémoire collective* (Paris: PUF, 1950).

fall outside the range of normal and expected disturbances." [2] According to her, the concept of resilience introduces a new approach in territorial risks management: a greater attention to complexity and to the coordination of a larger number of actors and scales, a policy based on flexibility and qualitative management instead of heavy investments, long decision processes, and technocratic top-down management. But the key word in that definition is "perceived": urban resilience relies greatly on risk perception[3] and the memory of catastrophes. Some major disasters have occurred because of the ambiguities of perception and information about risks, and so these processes must be at the core of renewed risk management policies and disaster memory practices.

I

Risk mismanagements and political ambiguities

Why remember disasters? Possibly, among other answers, because the memory of disasters is thought to entail risk awareness. People who remember a tragic event are supposed to be more aware of risks than people who forget or who know nothing about the event. However, risk perception is linked to the memory of disasters in a much more complex way. Sometimes, memory leads to the denial of risks; for example, if a disaster has just occurred, some people believe that a similar event will not happen again before a long period of time, which is what Kevin Smith calls a "dissonant perception" of risks.[4]

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2   Louise C. Comfort, Arjen Boin, and Chris K. Demchak, *Designing Resilience: Preparing for Extreme Events* (Pittsburgh: University of Pittsburgh Press, 2010), p. 9.

3   Paul Slovic, "Perception of Risk," *Science* New Series 236-4799 (1987), p. 280.

4   Kevin Smith, *Environmental Hazards. Assessing Risk and Reducing Disaster* (London and New York: Routledge, 1996), p. 66.

There are countless examples of risk mismanagement and subsequent disasters, especially linked to decisions made during the emergency[5]; these are crucial social and political issues, among which I will point out only those related to memory and risk management.

1. Misleading risk management and memory policies

What kind of memory can lead to a better risk perception and then to more adapted risk management? What kind of urban planning decisions can develop a relevant kind of memory of disasters and risks? These might seem simple issues: the relevant authorities could preserve traces of catastrophes and call them local or national heritage[6]; in theory that would be enough to develop risk awareness, which in turn would increase local resilience. However, a simple glance at historical facts shows that there are countless examples of mismanagements, inefficient risk management policies, or altered disaster memories leading to inadequate risk perceptions and eventually to bigger disasters…

Storms and floods are good examples of these dynamics. In February 2010, in France, the Xynthia storm destroyed sea walls and flooded the Atlantic coast around La Rochelle, killing 53 people in one night. The area had been flooded before, but after a few years local authorities had started giving building authorizations again, and security norms had been loosened; just as what is happening now, two years after the disaster. Local authorities still remember Xynthia, but the danger zones (with no construction allowed) have already been reduced. Here, the memory of the disaster is being erased, and no profound expertise is needed to

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5   Claude Gilbert, *Le pouvoir en situation extrême. Catastrophes et Politique* (Paris: L'Harmattan, 1992), p. 240.
6   To better understand the meaning and dynamics of "heritage", see Jean-Pierre Babelon and André Chastel, "La Notion de patrimoine," *Revue de l'art* 49 (1980); and Françoise Choay, *L'allégorie du patrimoine* (Paris: Seuil, 1992).

understand that this means another disaster could happen someday.

More commonly, street plaques showing the floodwater line are very frequent disaster memory indicators, but they are also misleading: they tend to focus on the rise of water, and do not convey the idea of flood speed and violence. Thus, they do create risk awareness, but the expected risk does not match the real danger; which may explain why people living in repeatedly flooded areas may still be taken by surprise.

Similarly, the Ponte Rotto in Rome or the famous half-destroyed bridge in Avignon, France, were taken down by floods; but this history is not at all well-known – and not at all presented on explanatory signs. The architectural value of the bridges, the oldness of the disaster, the myths created about these monuments, all tend to annihilate any risk prevention message. In Riegl's words, we could say that the historical value disappears behind the artistic and emotional value.[7] Inhabitants and tourists do not think of the violence of floods when they see these bridges, or, if they do, they might think that there is much more safety today than there was at the time. So, despite the ruin evoking a catastrophe, it is not meant to inform people about risks and hence prevent another potential disaster.[8]

These examples show that disaster memory policies can be inadequate and entail more risks instead of mitigating them. Still, one may think these policies were good attempts to reduce risks, even if they sometimes fail because of the complexity of risk and perception processes. However, quite often, these policies are the result of deliberate choices

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7   See the hierarchy of values proposed in Aloïs Riegl, *Der moderne Denkmalkultus*, Vienna, 1903, French translation by D. Wieczorek, *Le culte moderne des monuments* (Paris: Le Seuil, 1984).

8   Antoine Le Blanc, "Risques, catastrophes, traces: la conservation des ruines traumatiques," in *Actes du colloque "Risques naturels en Méditerranée occidentale"*, edited by F. Ogé and M. Fort, pp. 377-385 (Carcassonne, 2011), p. 378.

Photograph 1
Rome, the Ponte Rotto
(F. Federici, 2010).

made for political reasons.

2. The political ambiguities of disaster memory

Disaster memory is a strong political process: it modifies the perceptions of inhabitants, and more generally urban identity, in a powerful, emotional way. The majority of monuments refer to painful or tragic moments, from the first tombs to war or natural events victims memorials[9]; and in most cases, this heritage making process derives from and presents a moral and ideological message, which generally is an injunction for memory, peace, and attention for the future.[10] In theory, this attention for the future can be seen as a way to increase the system's resilience. Things, however, are not so simple, and the politics of these processes have to be analyzed.

Many so-called natural events such as earthquakes or storms are presented as unstoppable, but often this discourse helps political authorities conceal very real human responsibilities – risk mismanagement, urban sprawl, bad architecture quality… For example, Enzo Boschi and Franco Bordieri denounced these attitudes regarding earthquake risk management in Italy.[11] In these cases, disaster memory is voluntarily altered.

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9 Choay, *L'allégorie du patrimoine*, p. 8.

10 Henri-Pierre Jeudy, *La machinerie patrimoniale* (Paris: Sens & Tonka, 2001), p. 92.

11 Enzo Boschi and Franco Bordieri, *Terremoti d'Italia. Il rischio sismico, l'allarme degli scienzati, l'indifferenza del potere* (Milan: Baldini & Castoldi, 1998), p. 120.

Kevin Smith linked this attitude to a "probabilistic risk perception" [12], it is a conscious attitude of risk denial, concerning people who do not feel responsible for the event and hence do not search for human factors of the disaster.

More generally, Peter Burke showed that Maurice Halbwachs's works on collective memory did not leave enough space to "communities" sharing diverging interpretations of the collective memory of the group to which these communities belong.[13] Variations in the interpretation of collective memory are due to other community identities and ideologies, at a scale smaller than that of the whole group. Thus, the manipulation of risk perception reveals crucial political stakes: Douglas and Wildavsky showed that some categories of people downplayed or emphasized risks in order to control a specific social group.[14] Sometimes various "counter-memories" emerge, and confront the official, politically defined memory.[15]

There are countless examples of these political manipulations of memory. Auschwitz was turned into a museum by the Polish State as soon as 1946. It was put on the World Heritage List by the UNESCO in 1979, and it is now visited by 1.3 million tourists per year. Until the late 1980s however, the concentration camp was presented as a place where communists were exterminated, and not Jews or other categories of populations. An extremely painful memorial message was here largely manipulated for political reasons, with consequences that it is very difficult to

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12   Smith, *Environmental Hazards*, p. 70.

13   Peter Burke, "Geschichte als soziales Gedächtnis," in *Mnemosyne. Formen und Funktionen der kulturellen Erinnerung*, edited by A. Assmann and D. Harth, 289-304 (Francfort: Fischer-Tachenbuch Verlag, 1991).

14   Mary Douglas and Aaron Wildavsky, *Risk and Culture* (Berkeley: University of California Press, 1982), p. 29.

15   Michel Foucault, *Dits et Ecrits I, 1954-1988* (Paris : Gallimard, 2001).

assess.[16] More generally, through the question of the qualification of the victims, this example raises the highly controversial issue of the hierarchy of disasters – question that needs to be addressed by decision makers if they want to preserve and highlight heritage sites. The resilience approach, as we will see, may help carrying out policies that do justice to the complexity and the variety of disaster perceptions and memories.

The example of Auschwitz brings out the importance of the message coming with the monument. The interpretation of heritage is indeed at the core of disaster memory and risk management policies. Generally, when a destroyed monument is preserved, the objective is a message of "never again", of attention for peace. But it is not always the case. In Reims (France), after World War One, there was a controversy about the Cathedral that had been bombed and partly destroyed. Local authorities almost decided to preserve the ruins as they were. But the political message of the ruins was not one of peace: on the contrary, it was openly mentioned that the goal would have been to help maintain the hatred towards the Germans who had caused these damages.[17] So, in this case, the disaster memory policy would have been directed to generate another disaster… Eventually, the Cathedral was rebuilt, but the pervasive feeling of revenge led to World War II.

In most cases though, it is extremely difficult to define what policies should be carried out to develop an adequate and socially acceptable disaster memory.

The Katrina hurricane which hit the city of New Orleans in 2005 has

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16   Alain Sinou, "Résilience et patrimoine de l'inhumanité," in *Résilience Urbaine*, monthly seminar coordinated by M. Reghezza-Zitt and G. Djament-Tran at the Ecole Normale Supérieure de la rue d'Ulm (http://www.geographie.ens.fr/-Resilience-urbaine-.html, 2010).

17   Michel André, "Cathédrale de Reims," *Monuments Historiques* 145 (1986), p. 114.

been widely studied and analyzed.[18] No doubt its consequences were huge, with thousands of casualties, displaced populations, material, economic and cultural damage difficult to completely assess. Yet the hurricane itself was not one of the strongest that hit the city… It was classified in category 3 out of 5 when it stormed through the land, 150 km away from the city. The collective memory, together with the media, reinterpreted the hurricane as an extremely violent one, out of proportions compared to its reality. This remark does not demote the catastrophe but the hazard that caused it. As Mike Winiski has shown, the problem here is that this myth is now leading to a specific materialization of memory, with various memorials dotting the city center, mostly located in tourist areas and not in the most damaged areas.[19] This progressively alters the event's memory and sets aside the other factors that led to the disaster, even if the debatable management of the emergency has been put forward at some point. So, in this case, for complex, but mostly political and economic reasons – the shock of the unexpected disaster for many categories of people, the necessity to redevelop tourism, social and economic disparities – the memory of the catastrophe does not correspond to the real causes and dynamics of the event. Consequently, one may wonder if the risk management policies that will derive from this memory will be adequate and actually mitigate these risks.

There are many more examples of the ideological aspects of the preservation of disaster traces. In order to reduce the impacts of these ideological interpretations, the resilience approach integrates complexity, variety and flexibility in disaster memory. This clearly means, however,

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18   Julie Hernandez, "Le tourisme macabre à La Nouvelle-Orléans après Katrina: résilience et mémorialisation des espaces affectés par des catastrophes majeures," *Norois* 208-3 (2008), pp. 61-73.

19   See Mike Winiski, Diane Boyd and Drew Woten, website: katrinamem.org, 2012.

that resilience too is a political process,[20] so that one needs to understand to what extent.

<div align="center">II</div>

Resilience, perception and memory

There are many controversial definitions of resilience, and my point is not to elaborate on these debates; but I will point out a few essential questions in order to highlight the relevant advantages of resilience regarding disaster memory and related urban planning issues. Indeed, compared to a more traditional approach, resilience focuses on perception, on complexity, and on qualitative aspects – all features that match the requirements of memorial policies.[21]

1. Taking into account perception and complexity

When does a local drama become a disaster, or who decides to call it a disaster? Where is the line between frequent, daily risks (what Louise Comfort calls "routine emergencies"[22]), and more important ones? If the concept of resilience is to be efficient, it cannot be used to designate any kind of recovery after any type of event, and needs to be related to important phenomena, major social or natural risks and disasters. But what

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20 As Vale and Campanella had already shown in 2005: Lawrence J. Vale and Thomas J. Campanella, *The Resilient City*: *How modern cities recover from disaster* (New York: Oxford University Press, 2005), p. 341.
21 I will progressively define "perception" and "memory"; I rely mostly on the works of Halbwachs, *La mémoire collective*; Ulrich Beck, *La société du risque. Sur la voie d'une autre modernité* (Paris: Aubier, 2001); Slovic, "Perception of Risk;" Jan Assmann, *Das kulturelle Gedächtnis. Schrift, Erinnerung und politische Identität in frühen Hochkulturen* (Munich: C.H. Beck, 1992); Smith, *Environmental Hazards*; and David Atkinson, "The Heritage of mundane places," in *The Research Companion to Heritage and Identity*, edited by B. Graham and P. Howard, pp. 381-395 (London: Ashgate, 2008).
22 Comfort et al, *Designing Resilience*, p. 2.

is a "major risk", what is ordinary and what is not?

To address this issue, Louise Comfort's definition of resilience gives great importance to perception[23]: perception, indeed, is what will make the difference between the ordinary and the extraordinary, between living on as usual after an ordinary event and being resilient after a disaster. The psychometric paradigms defined by Slovic, Fischhoff and Lichstentein in the 1980s already pointed out that perception was at the core of risk analysis and management: what was most dreaded by citizens did not correspond to experts' assessments of the actual dangerousness of hazards; citizens feared what was perceived as uncontrollable and involuntary (such as nuclear accidents or chemical technologies), and they did not dread risks that were perceived as controllable and voluntary (such as car accidents or smoking).[24] What is perceived as most uncontrollable is also perceived as potentially catastrophic: disasters differ from routine risks because they are perceived as such, not because they cause less casualties per year. So, whereas a more conventional approach puts the emphasis on figures and thresholds (a dramatic local event will be called a national disaster when there are more than x casualties, or when more than x municipalities are involved…), resilience reintroduces perception in the process: perception, through information and its communication, makes the difference between the ordinary, the drama, and the disaster. Hence, decision makers have to take into account the perception of the event – more precisely the various perceptions of the event, since the same phenomenon does not have the same importance for different peo-

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23   Paul Slovic defines risk perceptions as "intuitive risk judgments", and shows how different they are from one group of citizens to another: Slovic, "Perception of Risk," p. 280.

24   Paul Slovic, Baruch Fischhoff, and Sarah Lichstentein, "Characterizing perceived risk," in *Perilous Progress: Managing the Hazards of Technology*, edited by R.W. Kates, C. Hohenemser, and J.X. Kasperson, pp. 91-125 (Westview: Boulder, 1985).

ple. This difficulty forces decision makers to deal with complexity in their analysis and in their action.

Furthermore, the resilience model considers a system as a flexible set of elements, something able to evolve, something dynamic.[25] The qualification of resilience does not apply to a single element, but designates a whole set of elements composing a society and its territory: places, people, processes. It does not refer to a static photograph of a moment or a place, but to a complex and dynamic set of elements. Hence, the most important feature in a resilient system is not one element or another but the strength and the quality of their links. As Halbwachs showed, memory and knowledge are at the core of these links between people, places and territorial dynamics.[26] Consequently, it seems that there may be resilience only, or mostly, when memory is transmitted.

So disaster resilience and disaster memory processes rely on the same bases of perception and imply the same attention to complexity.

2. The "positive" side of resilience

Resilience is sometimes accused of being another fashionable concept bringing no new theory or action compared to other more conventional concepts such as vulnerability or adaptation. I will not come back on these issues, since there have been plenty of studies about the opposition or continuity between vulnerability and resilience, or adaptation,

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25   One of the most important controversies about the concept of resilience is whether it implies a "bounce back" (to what the system was before the disaster) or a "jump forward" process, thus changing the identity of the system (see the editorial "Disaster resilience: a bounce back or bounce forward ability?", *Local Environment*, 2011). Actually, as Provitolo mentions, even bouncing back implies change and evolution; the real issue is the degree of change, in a flexible system: see Damienne Provitolo, *Vulnérabilité et résilience, géométrie variable de deux concepts*, http://hal.archives-ouvertes.fr/hal-00497757/fr (2009).
26   Halbwachs, *La mémoire collective*, p. 84.

adaptive capacity and resilience.[27] Instead of focusing on the diverging interpretations of the concept, I suggest to analyze what might be the sole consensus about it: that the word "resilience" conveys a positive feeling. Some criticize the concept precisely because of this positive connotation, which would dissimulate the reality of disaster or risks, and which may facilitate the carrying out of debatable policies by making them sound more acceptable. These critics might be legitimate, and it has been shown that resilience has become "a pervasive idiom of global governance" (that is to say, global neo-liberalism) because politicians appreciate its social acceptability.[28]

However, another hypothesis can help understand the success of the concept and its "positive" side, and this has to do with disaster memory. When people suffer a disaster or a trauma, some of them have great difficulty to talk about it. Resilience allows them to create a positive narrative of the event by inserting it in a larger time scale including re-construction and recovery, giving less space to the remembrance of loss and pain.[29] Thus, resilience acts as a compromise between positivity and negativity, and between remembering and forgetting. Finding the right balance between memory and forgetfulness may be how resilience can help redefine disaster memory policies.

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27   See, for instance: Susan Cutter, *Hazards, Vulnerability and Environmental Justice* (London: Earthscan, 2006), p. 72. ; and Géraldine Djament-Tran and Magali Reghezza-Zitt, *Résiliences urbaines. Les villes face aux catastrophes* (Paris: Le Manuscrit, 2012), p. 18.

28   Jeremy Walker and Melinda Cooper, "Genealogies of Resilience: From Systems Ecology to the Political Economy of Crisis Adaptation," *Security Dialogue* Special Issue on Global Governance of Security and Finance 41-2 (2011), pp. 143-160.

29   Serge Tisseron, *La resilience* (Paris: PUF, 2007); Nicolas Marquis, "Se remettre en jeu quand rien ne va plus. Une réflexion sociologique sur la catégorie de la résilience," *Recherches sociologiques et anthropologiques* 40-1 (2009), pp. 93-110.

3. A different approach of scales, actors and territories

In practice, resilience strategies rely on many tools that of course pre-exist and have long been used, but that have often been mis- or under-used. The resilience method focuses on the coordination of actors at various scales instead of putting forward a hierarchical, top-down way of managing risks and disastrous events; so it leads to a disengagement of top scale actors and more involvement of more numerous low scale actors.[30] Paul Slovic already pointed out that "risk communication and risk management efforts are destined to fail unless they are structured as a two-way process" (bottom-up and top-down).[31] The first consequence is a greater weight put on information and its communication among all actors and at all scales – so this stresses a qualitative aspect of risk management. A second consequence is that responsibilities are transferred to people and systems with smaller budgets and less powerful means of action: risk management will then rely less on large investments and large scale, long time decisions, and more on the decisions and actions of individuals and local systems (see, for example, the CARRI[32] reports and the growing success of "community resilience" theories). More flexibility derives from this; less money is spent; decisions are more local, and reactions are faster. Sense in action is better understood, trust is better spread, improvisation is encouraged.[33] None of these trends replace State and regional scale action, but resilience leads to a new balance between policy scales and methods.

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30   See Comfort et al, *Designing Resilience*, 12; Cutter, *Hazards, Vulnerability and Environmental Justice*, p. 271.

31   Slovic, "Perception of Risk," p. 285.

32   CARRI: Community and Regional Resilience Institute (USA). See Tom Wilbanks, Various reports, Community and Regional Resilience Institute (resilientus.org, 2012).

33   Comfort et al, *Designing Resilience*, p. 11.

For instance, after the 1976 earthquake in Northern Italy, local people did not wait for official authorizations to start rebuilding and strengthening structures. Thanks to their knowledge of the territory and to dynamics relying on trust and sense-making, damages were lessened when a second quake occurred four months after the first big one. The overall reconstruction is still presented as an example, as it was fast and relatively successful,[34] compared to other, more recent earthquakes in Italy, when local people were set aside by national authorities for the reconstruction.

So, as presented here, the concept of resilience combines at least three advantages. It focuses on perception more than proven facts (which, in the field of risk analysis, are often everything but proven), on the coordination of functional and spatial scales, and on qualitative and flexible risk management solutions. These advantages fit the concept of collective memory, which also brings about perception, complexity, and qualitative, emotional issues. This may help understand, as Vale and Campanella put it, how "remembrance drives resilience."[35]

<center>III</center>

Disaster resilience: from theory to practice

To avoid inadequate risk management and disaster memory strategies, the concept of memory needs to be specified. Two types of memory must here be distinguished: one the one hand, memory designates a complex

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34 Sandro Fabbro, 1976-1986. *La ricostruzione del Friuli. Realizzazioni, trasformazioni, apprendimenti, prospettive. Un approccio multidisciplinare* (Udine: IRES Friuli-Venezia Giulia, 1986). See also Antoine Le Blanc, *Risque sismique et conservation du patrimoine. Exemples italiens* (Saarbrück: Editions universitaires européennes, 2010b).

35 Vale and Campanella, *The Resilient City*, p. 344.

process relying on countless individual perceptions and also countless links between people and their territory.[36] The memory of disasters, on the other hand, appears as a subsystem, a particular type of knowledge transmission.

If resilience is to be a strategy, a tool for decision makers, and not just an intrinsic feature of a system, the major issue for these decision makers is the necessity to enhance the quality of memory, both as a complex system of relations between people and places, and as the memory of disasters.

1. Memory as a complex system of links between people and territories

In the broader meaning, memory is a very complex and varied system of relations between people and places. It is precisely this complexity which makes resilience possible: just as biodiversity makes an ecological system more resilient to fires or diseases, memorial diversity makes a social system resilient to disasters. The catastrophe cannot destroy all the diversity of connections that link people to each other and to their territory. So this diversity needs to be sustained and developed in order to foster the system's resilience.

To reach that goal, the relations between various actors in the territory need to be improved. Communication, understanding, knowledge, trust, are the key words. Resilience implies that policy makers give more importance to these qualitative processes: trust building, sense making, knowledge sharing. Consequently, the various links between people and territory are strengthened, and this is precisely what is most resistant to material catastrophes. Also, these processes lead to improved trust and

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36   Halbwachs, *La mémoire collective*, p. 84; see also Assmann, *Das kulturelle Gedächtnis*.

better coordination between actors in the moment of emergency: as Rhinard and Sundelius showed, resilience greatly relies on the quality of the coordination between actors.[37]

With trust at a higher level, delegating power is easier and better done.[38] More people or structures might make decisions that will be followed, because conventional, high ranked decision makers do not have the monopoly of legitimacy any more. Top-down dynamics are balanced by bottom-up processes. This may not only be more democratic, it is also more efficient, because quicker in reaction during the emergency. In practice, these processes may be confronted with major obstacles such as social and psychological norms, or insurances, which tend to prevent people from taking action spontaneously. These barriers confirm the necessity to improve and develop processes of knowledge and trust.

2. The memory of disasters

The memory of disasters is also a complex type of memory, far from being the simple remembrance of an event. It is a process which includes, for example, mourning and recovery, but also partial oblivion. It varies enormously from one individual to another,[39] from one system to another. It helps creating a discourse on the catastrophe, but reciprocally this discourse modifies the memory of disasters. For various reasons, for instance psychological processes such as cognitive dissonance or foreclosure,[40] the memory of disastrous events can disappear or be

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37   Comfort et al, *Designing Resilience*, p. 198.

38   George Cvetkovich and Ragnar E. Lofstedt, *Social trust and the management of risk* (London: Earthscan, 1999).

39   This notably leads to misunderstandings as the same word is used to designate very different processes: see for instance Tisseron, *La resilience*.

40   Jean-Pierre Poitou, *La dissonance cognitive* (Paris: A. Colin, 1974).

largely transformed.[41] These processes have to do with the fact that the memory of disasters mostly means pain.

Decision makers have to deal with this complexity and be very subtle because of the emotional implications of this memory among the population that has been traumatized. They have to ensure the durability of the memory and make sure that the message which is transmitted is not only accepted by the population, but also relevant – and this is difficult, since that memory is so varied.

Photograph 2
Berlin, Gedächtniskirche (J.-L. Piermay, 2010).

One of the most common solutions is the materialization of memory in the urban space: making a heritage of the catastrophe. The memory is then projected on physical, material symbols which become visible media of memory and identity. Berlin has preserved a bombed church, the *Gedächtniskirche*, just as famous as Coventry's St Michael's Cathedral; in Japan, landmarks indicate the limits of the reach of tsunamis; other symbols have already been mentioned, such as street plaques indicating the water line in flooded towns.

However, in many cases, it seems that this materialized memory alone does not necessarily lead to risk awareness. Two main reasons can explain this insufficiency. First, size matters: small marks on street walls and massive preserved ruins do not have the same effect on perception. Moreover, a ruined monument loses its functionality, and this sort of incongruity raises questions when people pass by, whereas small traces such as tsunami landmarks or flood water lines mark no discontinuity in

41   Antoine Bailly, *Risques naturels, risques de société* (Paris: Economica, 1996), p. 7.

the urban space and hardly catch the attention of inhabitants or tourists.[42] The memory of a disaster that was perceived as important has to be materialized by a territorial mark equally perceived as important, in spite of economic efficiency constraints.

The second reason is that resilience relies enormously on the oral transmission of individual memory and on knowledge processes. A materialized memory is almost useless if it is not commented upon, if it is not part of a more general process including communication and experience sharing. It has been shown that resilience is stronger when places are destroyed with few casualties, than when material damage is limited but there are many casualties.[43] There are many examples of regions that suffer regular disasters, where resilience is not so high, because of a lack of transmission of memory. For example, material traces of disasters were numerous in L'Aquila before the 2009 earthquake, but obviously they were not enough to strengthen risk memory and awareness. Places and monuments are powerful media for the memory of disasters, but they alone are not enough: they need to be part of a more global and more qualitative process of memory, which relies greatly on the information that is shared among people, on the oral transmission of individual memories.

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42   Antoine Le Blanc, "La conservation des ruines traumatiques, un marqueur ambigu de l'histoire urbaine," *L'Espace Géographique* 3 (2010a), p. 261.

43   Georges Prévélakis, "L'amnésie contre la résilience. Charte d'Athènes, nettoyages ethniques et marketing urbain," in *Résilience Urbaine*, monthly seminar coordinated by M. Reghezza-Zitt and G. Djament-Tran at the Ecole Normale Supérieure de la rue d'Ulm (http://www.geographie.ens.fr/-Resilience-urbaine-.html, 2010). See also Jan and Aleida Assmann's analyses on communicative and cultural memory (Assmann, *Das kulturelle Gedächtnis*) and Guy Marchal's conclusions: « Only the disappearance of a group or its fundamental transformation can erase this group's cultural memory, » Guy P. Marchal, "De la mémoire communicative à la mémoire culturelle. Le passé dans les témoignages d'Arezzo et de Sienne (1177-1180)," *Annales. Histoire, Sciences sociales* 56-3 (2001), Editions de l'EHESS, p. 584.

3. An example: preserving urban ruins

I will insist on one type of materialized disaster memory: preserved urban ruins, as efficient tools of territorial resilience.[44] Preserved urban ruins are massive monuments and surprisingly effective discontinuity marks in an urban landscape, all the more impressive that they generate powerful emotions.

The small town of Gemona, in the Italian region of Friuli, suffered a huge earthquake in 1976. It was almost entirely destroyed and almost entirely rebuilt. It has now around 11,000 inhabitants. Years after the earthquake, the local authorities decided to preserve the ruins of a destroyed church, Santa Maria degli Angeli, in order to maintain the memory of the disaster. They consolidated the ruins and changed them into a small urban square which is also a kind of open air museum of the disaster. This is not a unique example: many buildings, mostly churches, have had this destiny in Europe after World War II, Christchurch Greyfriars and Saint Duncan-in-the-East in the City of London, St Nicholas in Hamburg, and so on.

Photograph 3   London, Christchurch Greyfriars (A. le Blanc, 2011).
Photograph 4   Gemona (Italy), Santa Maria degli Angeli (A. Le Blanc, 2006).

In these cases, the urban system integrates the trauma instead of re-

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44   Le Blanc, "La conservation des ruines traumatiques," p. 254.

jecting or erasing it. The preservation of the ruin is here a real proactive strategy of resilience,[45] aiming to mitigate risks: if people see it, they will remember what happened, and it will never happen again.

The American geographer J. B. Jackson has an interesting comparison to illustrate this trend: he compares these ruins to small notes reminding people of unpaid telephone bills, which we will have to pay sooner or later.[46]

As I have already mentioned, the materiality of the ruin, in spite of its size, is not enough: memory must be processed and communicated through words and experiences, material traces must be presented on panels describing it (as is done in Gemona), helping people understand its meaning and its history. Urban memory marks must be interpreted and this interpretation has to be very delicately handled by local authorities,[47] in order to foster resilience.

In Gemona, a small survey that I conducted a few years ago showed the efficiency of the municipality's proactive strategy. 30 years after the quake, only 11% of the population thought there were no more physical traces of the disaster, and when asked about what traces they could think of, 42% mentioned the Santa Maria ruin, despite its being far from the largest or the most central monument.[48]

4. Urban resilience and oblivion

I mentioned earlier that resilience relied on memory, but also on partial

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45   Stephen R. Dovers and John W. Handmer, "A Typology of Resilience. Rethinking Institutions for Sustainable Development," *Industrial and Environmental Crisis Quarterly* 9-4 (1996), pp. 482-511.

46   John B. Jackson, "De la nécessité des ruines," in *De la nécessité des ruines et autres sujets* (Paris : Editions du Linteau, 2005), p. 142.

47   Sophie Lacroix, *Ce que nous disent les ruines. La fonction critique des ruines* (Paris : L'Harmattan, 2007), p. 15.

48   Le Blanc, "La conservation des ruines traumatiques," p. 264.

oblivion. Indeed, what about the populations that have suffered and desire to forget? What about the right to move on to something else, to stop dwelling on and on about past events? Psychologists have outlined what they call the paradox of the traumatized: people are unable to decide whether it is worse to remember, or to forget.

To get past this paradox, we need to focus once again on the link between materialized memory and oral communication. Both are important, both need to be addressed by policies, with careful thinking; but a material medium allows the discharge of individual memory, and opens the way for forgetfulness.

An old metaphor is helpful here. Plato explained that writing was at the same time a remedy and a poison. If I forget something but it has been written somewhere, I can find it again, so it is a remedy; but if I rely on external media for my memory, I do not practice it and I become more and more forgetful, so it is a poison. According to him, the existence of an external memory leads to mental laziness and decay. So one needs to find the right balance between the use of writing as a remedy, and the tendency to abuse of this poison. Making risk memory a spatial heritage can be interpreted in the same way. The traces of the disaster allow people to forget, to move on with their lives, without forgetting completely; if they see the monument and the explanatory signs, they will remember. Traumatized populations thus do not have to remember permanently, but neither do they forget. Jan and Aleida Assmann have theorized this as the shift from short term communicative memory to long term cultural memory, with the progressive appearance of a "structural amnesia", which eliminates all that does not create identity and cohesion in a group.[49] Resilience is a compromise between memory and

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49   Assmann, *Das kulturelle Gedächtnis*; see also Burke, "Geschichte als soziales Gedächtnis."

oblivion. It relies on material media and, at the same time, on immaterial communication, on the oral transmission of messages. This compromise between remembering and forgetting disasters does not mean that memory is simplified: on the contrary, it points to a dynamic and complex kind of memory. Hence, urban decision makers must make choices when they plan the city and the spatial expressions of risks, catastrophes and resilience; their decisions must take into account the complexity and the variety of risks perceptions and memories.

Conclusion

When a disaster occurs, and people begin to rebuild the city, they are confronted with the reconstruction of complexity. Cities were built through time, and they have no linear histories and identities; their districts are made of countless elements, links, networks; their inhabitants have various habits and perceptions. How is it possible to rebuild this complexity after a disaster? How do we not destroy the city's identity more than the event itself? For the sake of efficiency, must recovery always be a choice of simplicity, leading to a territorial reorganization less complex than it was before the event?

  In this paper, I have tried to underline the usefulness of two concepts to partially answer this question: memory and resilience. Memory, be it materialized or immaterial, territorial or oral, and the multiple and complex links that it creates between people and their territory, might be the best way to overcome the disaster and re-establish the complexity of place. So, real resilience is achieved when, and only when, the complexity of urbanity is recovered; urbanity meaning a dynamic way to live together, the actual sharing of the city's material and immate-

rial assets. Bringing up uniformity and technocracy instead of resilience, choosing to stress one aspect of history and heritage instead of accepting complexity, might be the major issue of ideological answers to risks and disasters.

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Abstract

The aim of this paper is to show how the paradigm of disaster resilience may help reorienting urban planning policies in order to mitigate various types of risks, thanks to carefully thought action on heritage and conservation practices. Resilience is defined as the "capacity of a social system to proactively adapt to and recover from disturbances that are perceived within the system to fall outside the range of normal and expected disturbances."[1] It relies greatly on risk perception[2] and the memory of catastrophes.

States, regions, municipalities, have been giving territorial materiality to collective memory for centuries,[3] but this trend has considerably increased in the second half of the 20th century.[4] This is particularly true regarding the memory of disasters: for example, important traces of catastrophes such as urban ruins have been preserved, because they were supposed to maintain some awareness and hence foster urban resilience – Berlin's *Gedächtniskirche* is a well-known example of this policy.[5] Yet, in spite of preserved traces of catastrophes and various warnings and heritage policies, there are countless examples of risk mismanagement and urban tragedies.

Using resilience as a guiding concept might change the results of these failed risk mitigation policies and irrelevant disaster memory processes. Indeed, the concept of resilience deals with the complexity of temporal and spatial scales, and with partly emotional and qualitative processes, so that this approach fits the issues of urban memory management. Resilience might help underlining the complexity and the subtlety of remembrance messages, and lead to alternative paths better adapted to the diversity of risks, places and actors.

However, when it is given territorial materiality, memory is almost always symbolically and politically framed and interpreted; Vale and Campanella had already outlined this political aspect of remembrance and resilience as a discourse.[6] Resilience and the territorialization of memory are not ideologically neutral, but urban risk mitigation may come at that price.

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1   Louise C. Comfort, Arjen Boin, and Chris K. Demchak, *Designing Resilience*: *Preparing for Extreme Events* (Pittsburgh: University of Pittsburgh Press, 2010), 9.

2   Paul Slovic, "Perception of Risk," *Science* New Series 236-4799 (1987): 280.

3   Maurice Halbwachs, *La mémoire collective* (Paris: PUF, 1950): 86.

4   See, among others: Françoise Choay, *L'allégorie du patrimoine* (Paris: Seuil, 1992); Henri-Pierre Jeudy, *La machinerie patrimoniale* (Paris: Sens & Tonka, 2001).

5   Régine Robin, *Berlin, chantiers. Essai sur les passés fragiles* (Paris: Stock, 2001).

6   Lawrence J. Vale and Thomas J. Campanella, *The Resilient City. How modern cities recover from disaster* (New York: Oxford University Press, 2005), 341.