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**Recovery, resilience and repairing: for a non-reductionist approach to post-disaster situations**

Laura Centemeri, Sezin Topçu, J. Peter Burgess

After every war  
someone has to clean up.  
Things won't  
straighten themselves up, after all

Wisława Szymborska, *The end and the beginning*<sup>i</sup>

In her acclaimed poem 'The end and the beginning', Polish poet and Nobel laureate Wisława Szymborska provides a penetrating and sharp picture of the post-war social condition. As a young girl who grew up in Poland during World War II, she directly experienced the moral dilemmas of going back to normal life after the catastrophe. Her poem compellingly recalls how the mundane necessities 'to push the rubble/to the side of the road,/so the corpse-filled wagons/can pass', to 'prop up a wall', 'glaze a window', 'rehang a door', have 'the bridges back' slowly, yet inexorably undermined the quest for responsibilities and 'causes and effects'. Through evoking how people got progressively caught in everyday occupations and concerns and lose interest in the 'dull' discourses about the past, Szymborska provides a good illustration of the moral tensions between forgetting and remembering scattered across the path that communities have to go in order to "remake a world" (Das et al. 2001) after the catastrophe.

On a different tone, author, film-maker and social activist Naomi Klein denounced in her best-selling book *The Shock Doctrine* (2007) the way in which the tenants of the free market ideology – in particular the Chicago School movement led by Milton Friedman - have been exploiting since the 1970s major catastrophes (from wars to 'natural' disasters like the 2004 tsunami in Sri Lanka or the 2005 hurricane Katrina) in order to have radical free market reforms approved and implemented. Her book supports the view of post-disaster situations as 'windows of opportunity' for socio-economic change, rife with interest struggles, even if there is a strong evidence of a 'bias among citizens and policy makers to return to the status quo' (Passerini 2000: 68).

Notwithstanding the diversity of registers, both authors touch upon fundamental sociological questions: how is a social order maintained – or challenged - in the face of disruptive events? How are issues of scale, power imbalances, social inequalities, epistemic struggles, cultural specificities and conflicting “normative expectations” (Dodier and Barbot 2016) at play in the processes that are meant to clarify causes, effects and responsibilities of such disruptions? How do the contradictory necessities of mourning, justice and forgiveness interact in the experience of those having suffered more directly the consequences of catastrophic events? What place do economic and political interests, cultural differences and local specificities play in the processes meant to address pressing technical and practical questions of reconstructing, restoring, remediating and rehabilitating?

Yet, in the field of disaster studies, of the four phases in which emergency management is classically organized, *recovery* is - together with mitigation - relatively under-researched and poorly understood, if compared with preparedness and response (Berke et al. 1993; Passerini 2000; Weidner 2009; Aijazi 2015). Recovery is defined in this literature as the process accounting for things return to ‘normalcy’ or the ‘period of time where deliberate actions are undertaken to routinize everyday activities of those individuals and groups whose daily routines have been disrupted. These activities may restore old patterns and/or institute new ones’ (Quarantelli 1999: 3).

In introducing the virtual issue on recovery of the journal *Disasters* the editor John Twigg highlights the many gaps in the literature concerned with this specific aspect of disaster studies<sup>ii</sup>. Mainly focused on appropriate reconstruction of shelter and housing, resettlement, relocation and displacement, psychological and psychosocial recovery, recovery studies have started only in the 1990s to address issues such as the roles of institutions, state and civil society actors in recovery policy-making and implementation. The focus is on coping strategies, adaptation mechanisms and more recently resilience building while research is rarely addressing issues of social change after disasters through long-term studies on recovery outcomes, including the role played by pre-existing socio-economic conditions in shaping post-disaster trajectories.

In fact, the focus on preparedness and response, and the relative neglect of mitigation and recovery can be explained as the result of the still largely dominant understanding of disasters as *temporally delimited phenomena*.

Our book openly aims at challenging such an approach, in line with recent developments in the field of STS disaster research (Fortun et al. 2017) that call for *expanding time frames in the study of disasters*. Such an expansion is needed in order to fully appreciate how disasters have long lasting, pervasive and “slow” (see Nixon 2011) impacts on the life of societies and

communities and how diverse forms of injustice structurally inscribed in the social fabric concur in increasing vulnerability to disastrous events. Beyond social injustice, research on disasters show that issues of environmental (Schlosberg 2007), epistemic (Allen 2018) and narrative (Barca 2014) injustice are of crucial importance to understand the specific trajectories of recovery after disaster.

Consequently, the approach to recovery we develop in this book keeps a strong connection with current debates and recent developments in social theory, since we share the vision that the ways we think about disaster itself has ‘profound operational and political consequences’ (Fortun et al. 2017: 1008; see also Kreps and Drabek 1996).

It is consensually acknowledged in the literature on disaster studies that disasters are always social phenomena, no matter what the hazard agent. Phenotypic classifications that distinguish disasters according to the agents – separating, for example, natural from technical disasters, public health disasters from ecological disasters - have been increasingly contested for their lack of analytical clarity. Following Perry (2018: 14), a quite consensual definition of disaster to which disaster scholars easily subscribe today is that of a ‘fundamental disruption in the social system (of whatever size) that renders ineffective whatever patterns of social intercourse prevail’. Its ‘causes rest in the *social structure*, *social interactions* and the *environment* as a whole’ (*Ibid* 15; our emphasis).

Being disruptive of patterns, disasters can trigger a ‘chain of occurrences’ that potentially can durably transform previous structures and practices, a defining trait of what William H. Sewell (1996) calls ‘historical events’. Historical events are temporally extended situations that reveal the interplay between action, culture and structures (including material infrastructures and the environment) in the production of social transformation.

In her review of ‘of what we know, or think we know, about long-term disaster recovery’ Passerini (2000: 67) argues that the transformative potential of disasters is more often than not defused by ‘a myriad of structural and cultural forces that keep people from considering or embracing change’ while, on the opposite side, sometimes disasters can overwhelm the capacity of communities to recover. Moreover, when change occurs, it happens at different scales, in a variety of forms and in a time span which is impossible to predetermine. In fact, the transformative potential of a disaster can be karstic, that is, it can stay latent until broader conditions for change are in place, showing that “disasters do not create the change” (Passerini 2000: 68).

The issue of scales is usually debated in the literature on recovery in terms of the social level, or unit, that is chosen in order to assess the ‘success of recovery’ (Quarantelli 1999). It is in

terms of ‘success’ – and not of social change – that recovery is mainly analysed in disaster studies, with a relative lack of clarity on the normative underpinnings of what is considered as successful: successful for whom? This question is often neglected.

This same lack of clarity on normative assumptions can be found in the idea of recovery as ‘Building Back Better’. This latter is a catchphrase coined by the US president Bill Clinton in the aftermath of the 2004 Indian Ocean earthquake and tsunami and developed into a list of ten propositions conceived as operational guideline for the humanitarian post-disaster intervention. As shown by Mara Benadusi (2015: 93), however, ‘the numerous organizations at work in Sri Lanka applied controversial and consistently value-laden significations to the “Building Back Better” slogan’.

The analysis of the epistemic, cognitive and normative tensions that pervade the process of recovery are at the core of the contributions we have reunited in this book. Our focus is not on measuring disaster impact and recovery but in providing analytical tools to explore ‘the cultural, social organizational, and political-economic conditions/options that affect how reconstruction occurs (for better or worse)’ (Passerini 2000: 71).

These analytical tools are grounded in the assumption that any disaster situation is marked by the uncertainty of the ‘whatness’ (Quéré and Terzi 2014) of the disaster, according to the diversity of actors experiencing its consequences, at different scales.

Disasters can be sociologically analysed as ‘problematic situations’ where, following pragmatist philosopher John Dewey, usual ways of making sense and doing things are no more effective. Actors deal with this practical and existential uncertainty through engaging in the contentious process of ‘inquiry’ to cognitively and normatively qualify the situation, in terms of attributing causes and responsibilities, identifying damages and victims (see Cefaï 2016).

The contributors to this book share a similar approach in researching processes of recovery that consists in following how the disaster and its consequences are made the object of a variety of *struggles of meaning-making*, that is, struggles about the meaning of what happened and how it affected a given order of things (Centemeri 2010, 2015). These struggles are interlinked with interest-based struggles and power-based struggles that more often than not reproduce pre-existing social hierarchy and forms of marginality, as feminist and postcolonial scholars in disaster studies have proven in the global South (see Fortun 2001; Choi 2015). But evidence shows that also in the global North disasters usually intensify pre-existing conditions of inequality in the long term (Passerini 2000).

We consider that in order to explain the dynamics through which such inequalities are maintained and reinforced it is crucial to understand how a shared sense of the “whatness” of

the disaster is stabilized, knowing that this stability is always potentially open to future revision, as disaster victims collective memory battles testify (see Gorostiza and Armiero in this book). These struggles of meaning-making take place in a variety of “arenas” with their “material armors” (Cefaï 2002) in which concerned actors confront each other. An arena can be defined in general terms as a *dispositif* that brings together speakers and their audiences and that defines a mode of confrontation between speakers, or speakers and the audience (Dodier 1999). Arenas organize a form of collective reflexivity – and ‘reflexivity loops’. They can be more or less specialized according to the rules that define the conditions for access (Dodier and Barbot 2016). We can then distinguish between technical-expert arenas, doctrinal arenas, judiciary arenas, media arenas, parliamentary arenas, and other arenas of public or expert debates. In these arenas, actors express conflicting understandings of the disaster and conflicting normative expectations about what should be done to recover and what can be considered as ‘good’ recovery. Conflicts of interest and power struggles are then interweaved with processes that aim at the definition of a shared ‘sense of things’ across a variety of arenas, of scales and temporalities (Chateauraynaud 2016). These processes of sense-making are of crucial importance in explaining the specific observable path to recovery after disaster.

But beyond structured arenas where to exercise collective reflexivity, disasters upset the space of everyday life through affecting people in their ‘attachments’ (Hennion 2004). Death, destruction, toxicity and displacements confront disaster victims with the need to find a way to meet their basic needs, rebuild familiarity with people and places, while dealing with the irreversibility of loss. As discussed by Revet and Langumier (2015: 5): ‘The everyday life of “disaster victims” and those “displaced” by catastrophe cannot be summarized solely in terms of the management of a day-to-day existence that has been impacted by these events. Far from the cameras and in unspectacular fashion, life very quickly resumes its course on the ruins and traces of disaster. (...) The issue is therefore no longer to recognize and account for what disaster destroys but rather what it contributes to producing, the social recompositions it brings about’.

From a different perspective but with a similar focus, Aijazi (2015: 16) discusses the interest for disaster studies – and especially recovery studies - of Veena Das’s work on - and with - survivors of violence. What Das’s approach reveals is that ‘the process of re-occupying the same spaces of daily life where one once experienced disruption’ is scattered with ‘acts of self-creation’. ‘Generative spaces for social remaking’ (*Ibid.*) can emerge that are cantered in ordinary activities which are necessary to keep life going on, like providing for food and shelter, taking care of children and elderly people.

Initiatives of ‘grassroots recovery’ can occasionally overlap with ‘interstitial initiatives’ that aim at reconquering a form of autonomy from dominant economic and political logics and structures (Monticelli 2018), as in the case of the post-earthquake ecovillage of Pescomaggiore (L’Aquila, Italy) studied by Tomassi and Forino (2019) <sup>iii</sup>. However, as shown by Benadusi (2013, 2015), grassroots initiatives in contexts heavily exposed to international aid are systematically instrumentalized to support a rhetoric of resilience that reinforce local power dynamics deeply entrenched with the reproduction of conditions of inequality: ‘the emphasis on resilience in disaster management interventions presents reconstruction and disaster risk-reduction practices as if they were selfgoverning, not pre-set and chosen by the participants. However, field research reveals the extent to which resilience-oriented projects adapt to politicized and elite-centred contexts’ (Ibid. : 436).

Resilience has been gradually becoming, over about the last two decades, a key concept in guiding not only analysis but also public interventions in recovery after disaster, generating a vast literature (see Alexander 2013). Resilience has pushed researchers towards exploring what factors make a community more or less able to withstand and recover from disaster – or to ‘rebound’ - and how to translate these factors into quantifiable indicators in order to help to design more effective mitigation strategies. Social capital and a variety of other ‘capitals’ (from community capital to economic capital) and capacities (from improvisation to infrastructural resources) are thus identified as ‘elements of resilience’ that can be operationalized (Kendra et al., 2018).

However the concept of resilience and its use as a diagnostic and prognostic tool in recovery after disaster is also highly contested (see Aguirre and Best 2015; Tierney 2015). On the one hand, the efforts to operationalize resilience through a list of standardized indicators have to confront the fact that the responses to disaster are closely connected with socio-historical and cultural dimensions that are specific to each locality and that contribute to shape the sense of what counts as a ‘good’ recovery.

Beyond the denunciation of the implicit normative assumptions of resilience metrics that have been developed with the ambition to define a universally valid model of resilience building, resilience has been often ‘co-opted’ as a justification for neoliberal projects of withdrawing government support to universalistic measures of welfare and, more in general, investments in public infrastructures. Communities are then forced to compete for public, and increasingly private funding to support resilience building so that: ‘Resilience, paradoxically, is not for everyone, but for those who are best equipped to compete in the demanding milieu of government and philanthropic funding mechanisms’ (Kendra et al., 2018: 101). On a similar

note, Benadusi (2013: 434) stresses that in post disaster situations actors facing ‘dispositifs’ of international aid ‘had to appear “just resilient enough” (...), but not so resilient as to tarnish the image of vulnerability still required to intercept aid’.

In both cases, the authors show how the framework of ‘social resilience’ (see Hall and Lamont 2013) promotes a specific normativity that is sustained by neoliberal policies and narratives, and based on individual and collective capacities to cope and ‘creatively’ adapt to unavoidable catastrophes. In this perspective, resilience has been defined as the new ‘social morphology’ of our societies, that are ‘insecure by design’ (Evans and Reid 2014).

However it is important to distinguish between, on the one hand, resilience as a justificatory argument that can be mobilized by a variety of actors in concrete situations and, on the other hand, resilience as an analytical frame to approach the way in which societies respond to disruptions. In this latter use, resilience had the merit to bringing attention to the need for an interdisciplinary approach to the study of recovery after disasters, one that pays attention to the systemic dimension of the intermingling of ecological, technical, socio-cultural and political factors, at different scales.

In fact, the framework of resilience invites to develop an approach to disasters in which social dynamics are analysed in their interdependences with materiality and the life world, in specific places of disaster occurrence. From the perspective of resilience, disasters can be considered as ‘interactive phenomena of social and technical systems distributed over geographic space’ (Kendra et al., 2018: 104).

The reference implicit in the framework of resilience to the mutually constitutive dynamics of systems and places invites us to include the dimension of the *milieu* in order to understand how ‘nested systems’ can produce ‘injurious outcomes that cannot be straightforwardly confined in time or space, nor adequately addressed with standard operating procedures and established modes of thought’ (Fortun *et al.* 2017: 1004).

However, we consider that the technocratic reduction of resilience into a tool of a larger form of neoliberal ‘governing through standards’ (Ponte *et al.* 2011), the community-based focus that this framework implicitly supports and the social morphology it encourages deeply hinder the potential of such notion as a tool to explore the dynamics of post-disaster initiatives and the diversity of patterns towards social change.

In this book we deploy an alternative perspective on researching recovery after disasters, one that is based on the notion of *repairing environments*. It consists in analyzing *how a variety of issues of sociotechnical, socioecological and sociocultural repairing are defined and dealt with*



*in arenas, through 'dispositifs' and practices that together shape the paths of recovery after disaster.*

But what do we mean by repairing? And why repairing environments?

Let's start with environments. Disasters, in their different forms, remind us of human interdependences with the material world and societies dependence on material infrastructures and 'infrastructuring practices' (Star 1999; Bowker and Star 1999; Edwards 2003). Moreover, major chemical and nuclear disasters have contributed at least since the 1960's to the emergence of a form of environmental reflexivity on the global dimension of the ecological crisis epitomized by the sociological category of 'risk society' (Lagadec 1981; Beck 1992) and, more recently, the notion of 'Anthropocene'. This implies that it is increasingly hard to draw a clear line between what can be considered as a 'natural environment' and a socially and culturally shaped environment, while it is even harder to address issue of social change as isolated from larger processes of ecological and technical transformations.

However, against the general propensity to speak in terms of an undifferentiated global environment, disaster situations force us to pay attention to 'the activities, materialities, and concepts through which an environment is performed in always situated and contested ways', bringing into view 'an array of environments, themselves heterogeneous and differently organized' (Blok et al. 2016). In fact, disasters disrupt a variety of ecologies that shape environments thus triggering a multiplicity of processes of repairing that account for the emergence, or not, of new patterns of socio-ecological organization.

Subsequently, the reference to environments point to the need to address the analysis of disaster recovery by means of paying attention to the variety of material ecologies that become visible through their malfunctioning and the efforts to repair them. Through the notion of 'environments' we want to stress the importance to pay attention in the analysis of disaster recovery, on the one hand, to social phenomena as embedded in socio-ecosystems, and, on the other hand, to their place-based nature, as phenomena that are geographically located and shaped in a material web of life that is culturally invested with meaning and value (Gieryn 2000).

Through connecting disasters and environments our objective is to emphasize that disasters potentially reconfigure not only societies but also ontologies, by ways of the variety of processes of repairing that actors engage in in order to 'go back to normalcy'. Recent developments in the field of environmental law, like the creation of legal rights for rivers (O'Donnell and Talbot-Jones 2018), points to evolutions in this direction (see Quefelec in this volume).

But why repairing? Through the notion of repairing – and the related notions of arenas in which repairing is debated, devices aiming at repairing and repairing practices - our aim is to provide an analytical framework that can help to reveal *the complexity of recovery processes in terms of actors' normative expectations of the 'good' way to repair*. The analysis of the diversity of these expectations can help to shed light on the conflicting nature of recovery processes, and on the way in which power dynamics and interests are at work in these situations.

In fact, the observation of actual processes of recovery after disaster shows the coexistence of a 'multiplicity' (Law and Mol 2002) of possible understandings of repairing that guide actors' conducts as part of recovery after disasters.

First of all, repairing, as *asking for reparation*, can point to the righting a wrong, typically by ways of making amends to those who have been wronged. In this 'accusatory' (Dodier 1995) understanding of repairing as 'reparation', to repair entails to identify and denounce damages unjustly suffered, and to determine corresponding faults, crimes, victims and perpetrators. The disaster is framed as a 'moral crisis' requiring reparation, by providing payment or other assistance to those who have been wronged. This implies to resort to law and to a specific *dispositif* (Barbot and Dodier 2016): the trial. However, trials do not necessarily achieve the objective to solve the moral crisis. Feelings of injustice can persist, when victims or their representatives consider the definitions of the damage or the forms of its compensation as inadequate or improper. The valuation and evaluation of damages to body, life (Petryna 2013) and environment (Fourcade 2011) imply a series of complex and contentious processes that can bring to important transformations in legal systems. Beyond monetary compensations, victims or their representatives can ask for symbolic forms of reparation, as in the case of the request of apologies especially from state actors (Mihai 2012; see Jobin in this volume), whose importance can vary sensibly according to cultural contexts.

Depending on the nature of disasters and their destructive potential, these contentious processes can reveal also the power of industrial actors and practices of "ignorance production" (REFERENCE) in the frame of the evaluation of damages. A variety of factors influence these processes of reparation and their potential to trigger social change, including the existence of national insurance, juridical and environmental protection systems, as well as the lobbying capacity of collective mobilizations.

In recovery process, however, actors have to deal not only with a 'moral crisis' but also with the re-establishment and, then, the improvement of the functionalities of the various infrastructures (including ecological, economic, technical infrastructures) that disasters unsettle. The focus of this *functional repair* is not on the past and the identification of crimes,

but on the future and the discovery and anticipation of dysfunctions (Dodier 1995). To repair means, in this case, to *fix a systemic breakdown* so as to avoid its repetition. In this case too, law and regulations play an important role since they should guarantee, at least formally, the conditions for safety and the prevention of future accidents. This implies to recur to specific devices such as technical protocols, ‘stress tests’, procedures of maintenance, ecological restoration programs (including revegetation, habitat enhancement, remediation) but also insurance or liability systems. Furthermore, such devices increasingly are conceived and organized at an international level, especially in very high-risk sectors such as the nuclear sector, where the cross-border character of radioactive fallout has been a major concern since the Chernobyl accident .

These devices are meant to deal with technical issues but they have a huge impact on the trajectories of recovery. They can be contested not only on the technical ground (controversies) but also for the social consequences of their design in terms of exclusion and injustice (conflicts). As we recalled mentioning Naomi Klein’s *Shock Doctrine*, the repairing of infrastructures can be not only an economic opportunity for interest groups but also a political opportunities to advance a certain vision of how society should work.

The repairing of infrastructures inevitably crosses path with the practices that actors engage in individually and collectively in order to maintain and repair their own environments, intended as the result of everyday relationships of taking care of people, objects, places and non-human beings. The reference here is to repair as discussed by feminist scholars and activists in relation with the concept of *care*, which is defined by Berenice Fisher and Joan Tronto as ‘a species activity that includes everything that we do to maintain, continue, and repair our ‘world’ so that we can live in it as well as possible. That world includes our bodies, our selves, and our environment, all of which we seek to interweave in a complex, life-sustaining web’ (Fisher and Tronto 1990: 40). As Steve Jackson (2014: 232) argues in discussing his perspective of ‘broken world thinking’: ‘Care (...) reconnects the necessary work of maintenance with the forms of attachment that so often (but invisibly, at least to analysts) sustain it. We care because we care’. Repairing thus intended is focused on individual and collective practices of reflexively maintaining one’s own world, in material, experiential and emotional terms. As expression of care, to repair after disasters involves engaging in maintaining as far as possible ordinary activities and experiences (such as providing for food, taking care of children, sleeping, sharing time with close ones, etc.) necessary to support the texture of everyday life: disasters reveal the importance of such ordinary practices for the preservation of the ‘human life form’ (Lovell *et al.* 2013).

This meaning of repairing therefore refers to the embodied and ‘emplaced’ (see Pink 2011) experience of the catastrophe and it points to forms of self-organization that emerge as part of the response to disaster and the recovery process. These practices respond to the need to recreate, at the level of everyday life, meaning and attachments, these latter intended as close relationships between human beings and between human beings, other living beings, and places. These practices of repair rely on the exercise of a form of ‘negative capability’: the ability to maintain the continuity of everyday life in the face of the absence or loss of meaning (Lanzara, 1993). The scope of such practices of repair, and their contribution to recovery, can be understood only through taking into account the importance of the ‘familiar environment’ as a space in which individual capacities are rooted (Breviglieri 2012). In order to grasp repairing at the level of everyday life, ethnography is therefore a fundamental complement to other methodologies of inquiry.

These practices of repair are analysed by Aijazi (2015: 15) as part of a wider process of ‘social repair’, intended as both ‘resumption of everyday life and re-humanization/re-constituting the self’. More in details, he discusses ‘memory’, ‘hope’ and ‘resistance’ as ‘strategic tools to achieve social repair’, through reconstructing ‘places/spaces/meaningful objects’ and re-embedding in them ‘memories (old and new) in a process of re-anchoring’ that is essential for the recovery of an individual and collective agency by those who have been more affected (Aijazi 2015: 18).

With this third understanding of repair our aim is to bring into disaster studies recent developments that have emerged in the field of ‘repair studies’ (see Graziano and Trogal 2019). Repair studies point to the activities of ‘maintaining the world’ as a potential ‘site of altering’, that is, of ‘contingent political change without relying upon the myth of ex-nihilo creation’ (Graziano and Trogal 2019: 214). Far from the idea of re-establishing the *status quo*, repairing as caring points to the work of maintaining interdependences as a potentially transformative process. Repairing practices can then be articulated with the construction of a collective revendication and they can sustain struggles for reparation.

However, the analysis of the processes of recovery after major nuclear accidents (like Chernobyl and Fukushima) reveals the instrumentalization of this kind of ordinary repairing through the resilience narrative, in order to mask conditions of irreparability and to prove nuclear risk as socially acceptable, thus contributing to the maintaining of the *status quo*.

As discussed by Ribault (2019: 4) in the case of resilience narratives after the Fukushima catastrophe: ‘As individuals are called upon to act upon themselves hygienically to measure and mitigate radiation exposure after catastrophic levels of contamination, the proposed

responses consist in shifting the target for resilience from biology to individual psychology and to society. Resilience is thus operating as a governing technology—more specifically as a technology of consent—that displaces some problems—here the irreversible biological effects induced by radiation exposure—by offering substitute problems such as empowering individual and rebuilding communities’.

On a similar note, Topçu (2013) discusses how in Chernobyl and Fukushima ‘nuclearists’ have been promoting a ‘radiological culture’ (e.g. the use of Geiger counter on a daily basis to organize everyday activities in such a way as to reduce the exposure to radiations) aimed at turning radioactivity into an ‘ordinary’ feature of the everyday life experience, *de facto* producing a form of collective ignorance.

In this case, the human capacity to ‘maintaining one’s own world’ is instrumentalized in order to sustain a vision of repairing which is exclusively focused on recovery systemic functionalities. This vision of functional repairing imposes a technocratic, non-negotiable reconfiguration of ordinary human-environment interdependences, oriented towards future technoscientific achievements: as Ribault (2019: 6) shows in the case of Fukushima, these achievements can include ‘robotic, agronomic (...), biological, and medical experiments’, but also ‘architectural and urban planning experiments including land deregulation, smart cities, and other smart communities projects’. The ‘incantatory’ (Ribault 2019) mechanism sustained by resilience narratives contributes, in the case of Fukushima, to reduce to silence present experiences of irreparable losses – including the invisibility that strikes remediation workers – and to hamper collective efforts to transform these harms into damages in need of reparation.

The approach to recovery we outline in this book pays attention to the interaction between these different logics of repair in ‘dispositifs’, practices and arenas where the interplay of normative expectations on recovery and the struggles over meaning-making in the problematic situation can be analysed as part of larger interest-based struggles inside power-laden framework. Even if we are not outlining a ‘theory of recovery’ we are providing a theoretically-informed approach to the study of socio-ecological change that pays attention to the interaction between socio-technical, environmental and cultural dimensions in accounting for social change.

The standpoint of repair is less normative-laden and politically connoted than resilience and more alerted to the contentious nature of recovery processes. Our hope is that the repair approach that we present in this book can contribute to the development of research on recovery after disasters ‘methodologically and theoretically inventive, empirically rich, and expressed in ways attentive to the acute problems of representations that beset disaster (and disaster studies)’ (Fortun *et al.* 2017: 1018).

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<sup>i</sup> From *Miracle Fair: Selected Poems of Wisława Szymborska*, 2001. W.W. Norton & Company, Inc., New York, NY. Translated from the Polish by Joanna Trzeciak.

<sup>ii</sup> The virtual issue is accessible online

<https://onlinelibrary.wiley.com/page/journal/14677717/homepage/recovery.htm>

<sup>iii</sup> A research field that has recently emerged in disaster studies is that of “self-recovery” which is meant to provide tools to support the process whereby disaster-affected households repair, build or rebuild their shelters themselves or through local builders while trying to avoid some of the pitfalls emerged in the actual practice of resilience building initiatives (see Twigg et al. 2017).