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The role of local communities in a global risk landscape

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Chapter 2

An overview of the research methodology and research context

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Introduction

This research project considered disasters, in all their tragedy, as opportunities for social scientists to understand and analyse basic social processes and structures in crisis conditions, during which adaptation, resilience and innovation are often more clearly revealed than in 'normal' situations (Rodriguez et al., 2007). This PhD research encompassed, over time, the different phases of the disaster management carried out by the state and civil protection authorities in L'Aquila (Abruzzo region, Italy), both before and after the 6 April 2009 earthquake (see *Chapter 3*): preparedness (*Chapter 5*), emergency response and recovery (*Chapter 3 and 6*), reconstruction (*Chapter 7 and 8*) and re-development (*Chapter 4*). Drawing from the L'Aquila case study, the primary aim of this PhD was to enlarge the theoretical and practical domain of social impact assessment (SIA), especially to better conceptualize the cognitive and interactional dimensions of local community resilience, and to consider how to build resilience at all levels of society. This aim was accompanied by three main research objectives that contributed to better achieve this research aim, which were: (i) to understand resilience and how it comes into action at the local community level; (ii) to improve SIA theory and practice and explore how it can enhance local community resilience; and (iii) to identify and address the main constraints that undermine resilience-building at the local community level and other levels of society.

This PhD research sits at the intersection between anthropological studies and sociological studies. It refers to the anthropology of disasters in that it is based on the qualitative and contextual data that came from the ethnographic methods I used during the time the State of Emergency remained in force and beyond. This PhD research refers to the sociology of disasters in that it is also based on the data that came from analytic autoethnography, systematic, retrospective sociological analysis of the findings of my ethnographic fieldwork, and from document and media analysis, and 37 retrospective retrospective, after-action interviewing, all of which are methods typically used by the sociology of disasters to cross-check and triangulate data coming from observation in the field, and provide reliable evidence that can find general application (Mileti, 1987; Tierney et al., 2001).

Parts 1 and 2 of this PhD thesis are based on participant observation, ethnographic fieldwork, action anthropology (Coghlan and Brydon-Miller, 2014), and analytic auto-ethnography (Anderson, 2006; Ellis et al., 2011) that I conducted in the L'Aquila post-disaster situation. Furthermore, using the DRR and resilience perspective, data gathered during my ethnographic fieldwork were triangulated through a systematic, retrospective sociological inquiry, document analysis, media analysis, and retrospective after-action interviewing (Quarantelli, 2005). Part 3 draws from the findings reported in Parts 1 and 2, and provides a conceptualisation of what can be learned and needs to be transformed in disaster management, development and impact assessment thinking and practice to better align the efforts of planned interventions in the 4 key priority areas of action (UNISDR, 2015).

Part 3 reflects on the implications this PhD research has for development and impact assessment thinking and practice, and provides recommendations to integrate the DRR and resilience thinking into development policies, plans, programs, and projects to better integrate DRR and resilience, and achieve the Sustainable Development Goals (SDGs). Part 3 is intended to show the main conceptual advances and key findings provided by this PhD research, it summarises the key features of the DRR and resilience paradigm, and answers to the main gaps in the literature in the SES theory and approach to resilience, in disaster studies and in the discipline of SIA.

Inventory of methods

The 6 April 2009 earthquake in L'Aquila, Italy, was selected as the case study for this research for three reasons: proximity; access to data; and coincidence. First (proximity), I am an Italian citizen and was a resident in the L'Aquila region for most of my life. I was present in L'Aquila city on the night of the earthquake and I was and remain well integrated in the L'Aquila community. Second (access), in the immediate aftermath of the earthquake, I was active in coordinating artistic events in the tent camps, engaging national artists and local NGOs in the organization of cultural activities. During this time, I gathered data and took notes of my experiences and of what I witnessed. I conducted these activities first as a Master student living in the tent camps and working as a resident-volunteer, then as a reflexive scholar, independent researcher and consultant for the consultancy firm, Architecture Social Impact Assessment, contributing to participatory reconstruction and rural development projects. All these activities allowed me to develop close personal connections to most of the key actors, which enabled me to have unparalleled access for this social research. Third (coincidence), the University of Groningen (and specifically my promotor, Prof. Vanclay) was part of the OECD-University of Groningen research team that produced a report on social and economic development options for L'Aquila (OECD, 2013). This brought Prof Vanclay to L'Aquila on many occasions and we were able to meet and talk about social impact assessment (SIA). Eventually, he invited me to undertake a PhD at the University of Groningen. His own experiences in working with the OECD in L'Aquila contributed to his understanding of the situation (even if he didn't speak Italian).

In many ways, this research happened by an Act of God. By coincidence, I just happened to arrive back in L'Aquila only a few hours before the 6 April 2009 earthquake, after almost a year away. Immediately after the earthquake, I was an earthquake survivor. Being fortunate to emerge unscathed, I tried to provide help to others as best I could. The shift from pure participant to researcher happened gradually.

Within a few days after the earthquake, it became clear that every village had their own tent camp and that their initial survival needs were being met. It became clear to me that the need at that time was for focussed actions to support social reconstruction within the tent camps. Although there were many psychologists and several cultural and artistic organizations coming from the Abruzzo region and all over the country, there was not yet a systematic overview of how the psychological support or cultural interventions were or should be conducted. There was a lack of information about where these activities were taking place and by whom, where they were missing, if there were local organizations active in the tent camps that could be engaged, where these interventions were appropriate and where not, and why. Therefore, a week after the earthquake, I began to conduct a systematic analysis of the social context, of the social and psychological conditions in the tent camps, the external actors (e.g. civil protection personnel, NGOs and other volunteers), and the local people and organizations (teachers, professionals, informal groups, NGOs and local leaders) responsible for psychological support and cultural activities. This initial ethnographic fieldwork included personal inspections I conducted in 163 tent camps dispersed across the crater.

Data were collected by compiling a database in Excel, in which the key topics were: name and contact details of the camp chief, the external organization in charge for psychological support and recreational activities, local people and/or organizations operating inside the tent camp in this sector, the kind of cultural activities carried out, and other relevant information. Such a database helped me identify the tent camps in which psychological support and recreational activities were absent; list where and how these were deployed and by whom; whether there were local people or local groups of psychologists or artists operating inside the tent camps or not; identify – where present – the organization responsible for the management of cultural activities in the tent camps; identify which regional section of the national civil protection system was managing the tent

camp; and observe what interactions civil protection could establish with local people living in the tents. Data in the survey was cross-checked with data I could gather from informal conversations, field interviews, and from the notes taken in the field, which resulted in my blogging and several articles in Italian, and formed part of the introduction to my Master thesis on social impact assessment (SIA) and post-disaster reconstruction at the University of L'Aquila completed in July 2011.

The initial data collection, which lasted till the end of September 2009, served the volunteer artistic project I was coordinating in collaboration with the local psychologists based in the DICOMAC, the regional public health system and some national artists, filmmakers and publishing houses, including Daniele Vicari, Tiziana Triana and Fandango Libri. This fieldwork helped me understand where artistic interventions would be perceived as appropriate and where they would not. This also helped me engage local teachers and NGOs who were active in the tent camps in the organization of the artistic events I was coordinating in collaboration with national artists. The first results of this fieldwork (in the form of an Excel database) were delivered to the DICOMAC in May 2009 and included a list of the tent camps where psychological support and cultural and artistic activities were absent. This was accompanied by reflections on what I observed in the tent camps and likely strategies to enhance psychological and cultural support. Methods I used to gather data in the tent camps (April 2009 – September 2009), included: (i) participant observation and ethnographic approach; (ii) document and media analysis; (iii) informal conversations; (iv) field interviews; (v) field notes; (vi) a survey; and (viii) blogging. My reflections on this personal experience (i.e. analytic auto-ethnography) in the immediate response and recovery following the 6 April 2009 L'Aquila earthquake informed my Master thesis in 2011 and Chapters 3, and 6 of this PhD research.

In January 2010, I became engaged in several participatory reconstruction project proposals which led me to undertake over two years of pilot ethnographic fieldwork and action anthropology (Coghlan and Brydon-Miller, 2014) in three mountain villages that were seriously damaged by the earthquake. In this project, I applied the philosophy and process of SIA. Methods used to gather data during the reconstruction project (January 2010 – October 2014), included an action anthropology approach using: (i) document and media analysis; (ii) ethnographic fieldwork; (iii) informal conversations; (iv) field interviews; (v) field notes; (vi) in-depth interviews; (vii) focus groups; (viii) public forums; (ix) survey; (x) participatory inspections; and (xi) other forms of research interviews. This material was also used for my Masters thesis at the University of L'Aquila, which included an internship at the *Centre de Recherche en Épistémologie Appliquée* at the CNRS and the *École Polytechnique* in Paris. These activities also informed my role as a lecturer for Donau University of Krems (which is based in Austria) and as a social sciences consultant in the subsequent local reconstruction process. After my Master thesis, I kept on working as a researcher and social science consultant in the local reconstruction process and in a variety of sustainable rural development policies, plans and projects in the L'Aquila mountain province. Reflections on this personal experience (analytic auto-ethnography) in the L'Aquila post-disaster reconstruction informed my Master thesis in 2011, and Chapters 7 and 8 of this PhD research.

Between December 2012 and end of 2013, I conducted ethnographic fieldwork for the consultancy firm, Architecture Social Impact Assessment (ASIA), which was founded by the Italian anthropologist, Franco La Cecla. Methods used included: (i) retrospective in-depth interviews; (ii) document and media analysis; and (iii) action anthropology (e.g. public forums and events, network and capacity building, etc.). This partly informed Chapter 3. Between October 2014 and February 2016, I was a social science consultant for a local action group for a sustainable rural development project. The action research for this project used: (i) document and media analysis, (ii) semi-structured interviews; (iii) an online survey, (iv) focus groups, (v) public

forums, and (vi) field notes. This fieldwork, and reflections on the methods I used (analytic auto-ethnography) in this rural development project informed Chapter 4.

Research for this PhD (qua PhD) became a reality in June 2014 when I was appointed as a PhD candidate in the Faculty of Spatial Sciences, University of Groningen, The Netherlands. My PhD is somewhat back to front in that normally a PhD researcher decides to do a PhD, gets enrolled, and then decides what case study to research. In my case, I was caught up in the earthquake. I was in the middle of a Master of Philosophy degree at the University of L'Aquila. The earthquake experience led me to reorient my Masters research to sociology and applied anthropology, and I became familiar with the field of SIA and decided to do a PhD on this topic. After interacting with Prof Vanclay for some years, in June 2014 I became enrolled as a part-time external PhD researcher at the University of Groningen. During this time, I was also working as a social science consultant for several participatory reconstruction and rural development project proposals. In June 2016, I became a full-time internal researcher when the University of Groningen offered me a research appointment to complete my PhD. Since I got enrolled, I conducted a thorough retrospective sociological inquiry, after action interviewing and document and media-analysis through which I could triangulate data gathered during my participant observation, analytic ethnography and action anthropology and overcome the typical research limitations of an analytic CMR approach (see this Chapter, *Positionality during this PhD research: Overcoming reflexive CMR limitations*).

In summary, the complete list of methods used for the research underpinning the PhD, starting from 6 April 2009 through to 2019, is: (1) participant observation/ethnographic approach/action anthropology during the emergency, reconstruction and development processes (April 2009 – October 2016); (2) informal conversations; (3) field interviews; (4) research notes; (5) focus groups; (6) public forums; (7) 37 formal retrospective in-depth interviews; (8) over 250 other forms of research interviews; (9) blogging and other kind of correspondence; (10) surveys; (11) document and media analysis; and (12) reflections on my own personal experience (auto-ethnography).

Positionality during the research underpinning the PhD

As stated above, this research sits at the intersection of anthropological studies and sociological studies. More precisely, it refers to and aligns with the fields of *anthropology of disasters* (Oliver-Smith, 1977; 1990; 2002; Gunewardena and Schuller, 2008; Choudhury and Haque, 2016; Oliver-Smith et al., 2017) and the *sociology of disasters* (Quarantelli and Dynes, 1977; Quarantelli, 1995; Quarantelli, 1998; Tierney et al., 1998, 2006; Drabek and McEntire, 2003; Perry and Quarantelli, 2005; Alexander, 2007; Solnit, 2009; Rodríguez et al., 2018). It refers to the anthropology of disasters in that Part 1 and various sections in Part 2 are based on the qualitative and contextual data that came from the ethnographic methods used during the participant observation and action anthropology conducted during the three years the State of Emergency remained in force. The fact that I was born in L'Aquila, that I was a resident in the L'Aquila mountain region for most of my life, that I was present in L'Aquila city on the night of the earthquake, and that I was and remain well integrated in the L'Aquila community, makes my research positionality similar to what is understood in ethnography as 'group membership' or as being a 'complete member researcher' (CMR) (Anderson, 2006).

There are two categories of CMRs: the 'opportunistic' and the 'convert' (Adler and Adler, 1987; Anderson, 2006). As explained by Anderson (2006, p.379): "opportunistic CMRs (by far the more common) may be born into a group, thrown into a group by chance circumstance (e.g., illness) [or earthquake], or have acquired intimate familiarity through occupational, recreational, or lifestyle participation. In each case, group membership precedes the decision to conduct research

on the group”. Convert CMRs, on the other hand, are those who have a “purely data-oriented research interest in the setting but become converted to complete immersion and membership during the course of the research” (Anderson, 2006, p.379).

As stated above, research for this PhD became a reality in June 2014, when I was appointed as a PhD candidate at the University of Groningen. Between April 2009 and June 2014, the shift from pure participant to researcher happened gradually. Thus, initially my research positioning was as an opportunistic CMR (Adler and Adler, 1987; Anderson, 2006) in that when I experienced the earthquake and the immediate aftermath, I had no idea or intention to undertake research in this situation. From a classic ethnography perspective (Anderson, 2006), there are methodological and analytic advantages of being a CMR, but also research limitations, which can be specific to CMR approaches or common to any anthropological approach (Anderson, 2006). The methodological advantages of being a CMR relate to the fact that it facilitates the availability of data, in that the researcher, as a full member of the community of study, has multiple motivations to spend time in the field and opportunities. Being a CMR provides the researcher with unique access to ‘insider meanings’ and to certain kinds of data (Anderson, 2006).

Being an earthquake victim myself, enabled me to have unparalleled access to data sources. This access facilitated me in having a closer understanding of the local psychological, cultural, social, political, environmental, and economic processes that characterised the L’Aquila situation before and after the 6 April 2009 earthquake. Furthermore, it also allowed me to have access to insider meanings from multiple local actors, with different roles at multiple levels of the local social organization, and to various kinds of data that would have been impossible to get otherwise.

While it facilitates study of the local context, an anthropological approach and being a CMR are often criticised for being too context-specific, which potentially limits general application of the findings. An analytical, self-reflexive CMR approach (i.e. analytic autoethnography) can counteract this limitation and provide the researcher with an opportunity to explore some aspects of social life in a deeper and more sustained manner. Being a reflexive CMR offers the opportunity to explore the connections between biography and social structure, which is at the core of the ability to see things socially and how they interact and influence each other (i.e. the sociological imagination, Mills, 1959). As noted by Anderson (2006, p.390), the resulting analysis of merging CMR and autoethnography “recursively draws upon our personal experiences and perceptions to inform our broader social understandings and upon our broader social understandings to enrich our self-understandings”. In this way, being a reflexive CMR is somewhat unique in that, more than any other research method, it also provides the researcher with an opportunity to develop her or his own self-knowledge which emerges “from understanding our personal lives, identities, and feelings as deeply connected to and in large part constituted by – and in turn helping to constitute – the sociocultural contexts in which we live” (Anderson, 2006, p.390).

Analytic autoethnography refers to “research in which the researcher is (1) a full member in the research group or setting, (2) visible as such a member in published texts, and (3) committed to developing theoretical understandings of broader social phenomena” (Anderson, 2006, p.373). Perhaps, because of my background in the philosophy of science (i.e. complexity theories) and philosophy of mind (i.e. mirror neurons and inter-subjectivity), I have always engaged in much self-reflection. As soon as I was planning my coordination activities of the artistic events, I became interested in the international principles, declarations, recommendations, and best practices concerning disaster management, recovery, and capacity-building, and, more generally, managing complex systems and situations. Coming from a strong passion in anthropological studies, naturally (and almost immediately) I became interested in the community resilience construct and in community resilience building and sustainable development strategies in post-disaster situations, and started to investigate this field. I thus started to develop a self-reflexive

attitude on how to orient my activities in the tent camps according to the broader international understanding of community resilience and community resilience-building strategies in post-disaster situations.

I started to reflect on the role arts, and the artistic events I was coordinating, play or could/should have played in the reconstruction of social relations in the tent camps, and how this potentially contributes to building local community resilience, both from a cognitive and an interactional perspective (see van der Vaart, 2018, van der Vaart et al., 2019). My research interest in community resilience and international principles and declarations about local capacity building and community development evolved over time. A first understanding informed my analytic self-reflection on the activities I was conducting between April and September 2009, thus better aligning and re-orientating them towards local capacity and community resilience building.

The research interest in SIA and how it can be used to enhance community resilience in post-disaster reconstruction emerged in September 2009 when I met the Italian anthropologist Franco La Cecla, thanks to whom I came across the philosophy and process of SIA. I started to reflect on how I could systematically apply SIA to the participatory reconstruction and rural development project proposals with which I was engaged. My research interest in SIA increased after 2011, when I started my interactions with Professor Frank Vanclay, something that led me to enhance my systematic, analytic sociological understanding of social changes and impacts, the processes comprising SIA and its internationally-agreed principles, methods, and state-of-the-art. I began to appreciate the sociological approach in that I realized that adopting such an approach could provide me with a more solid and structured taxonomies to better identify and understand the individual and collective patterns, processes, feelings, attitudes and behaviours underlying community resilience in action. Investigating and elaborating on the philosophy and processes of SIA, and adopting such a sociological inquiry, informed my analytic self-reflection and actions in the reconstruction and rural development projects. This helped me align and orient my research activities within the operational framework of SIA, elaborating on, and expanding it to post-disaster reconstruction, rural development and community resilience-building practices.

As with all research methodologies, being a CMR has also limitations. First, the multitasking implied by being a complete member of the community of study and a researcher can diminish the researcher's awareness of her or his research focus, and/or it can make the researcher overly absorbed in participating in activities in the field at the expense of writing fieldnotes (Anderson, 2006). A reflexive CMR also risks identifying her/himself with the perceptions and values of only one group within the community of study. Because of the variety of groups and members in a community and their varying values and beliefs, a reflexive CMR should always "pursue others' insider interpretations, attitudes and feelings, as well as their own" (Anderson, 2006, p.389). Ultimately, a CMR's research interests may not be that intertwined with their personal life, and the research should not be only related to the CMR's own personal involvement (Anderson, 2006).

Perhaps a drawback of this PhD research is that I do not have extensive recordings of the many conversations I had or activities I undertook during my fieldwork in the tent camps and in the initial participatory post-disaster reconstruction activities. Sometimes, especially in the very beginning – when I was still developing my research skills – it was hard to balance the constraints of living in an emergency situation and being a volunteer, with the complexities of recording conversations. However, this was counterbalanced by using a diverse set of research methods during my activities in the tent camps and in the reconstruction process. For example, the rapid assessment of local community needs and capacities related to the psychological and cultural/artistic support in the tent camps worked well for the purposes of my activities: (a) reminded me who said what, and what was needed and where; and (b) helped me identify the

many local teachers and NGOs who were already active in the tent-camps organizing social activities that could be engaged and empowered by the initiative I was coordinating.

In the reconstruction project proposals, the drawback in the lack of recording was counterbalanced by taking extensive fieldnotes. Another source I could rely on were the minutes from each public forum or focus group I organized, which were subsequently accompanied by personal notes and reports I published in my blogging; and subsequent surveys which supported further semi-structured interviews, which I fulfilled while conducting the interviews and which were signed and cross-checked by each interviewee. All this, worked well and ultimately oriented my activities towards modifying the reconstruction project proposal according to local community needs, and gaining the initial consent of more than 180 families for the reconstruction project proposal I was working for. In the rural development project, the limitation of the lack of recording was counterbalanced by the extensive fieldnotes I wrote on the survey sheets I used to structure my interviews. These were filled out also including further notes concerning other comments and information the interviewees provided me, and then were all signed by the interviewees. These signed surveys were all scanned and stored, both physically and electronically by the local action group for which I was working. All this was also supported by the notes I wrote after the in-depth interviews I conducted with local public officers and the minutes I could write during the focus groups and the public forums and event I organized within the context of these rural development project proposals, all of which then formed part of the reports I made for the local action group. All this proved to work well in that it led to the constitution of a formal network agreement among local entrepreneurs for the sustainable development of the region, *Paesaggi in Transumanza (Chapter 4)*.

As an earthquake victim myself, I felt a strong resonance with, and a sympathetic understanding of the whole community I was member of, and of the devastation of the earthquake and its negative impacts on local people lives and wellbeing. I thus took almost immediately the emotional stance of the L'Aquila local communities as I considered all other community members as earthquake victims like me. This could have potentially led me to identify myself in the perceptions and values of only one group within the community of study (Anderson, 2006), such as the people living in the tent camps, or those taking part of political groups opposing the top-down civil protection activities, and so on. However, I effectively counterbalanced all this deliberately choosing not to adhere to any political local movement or organization, and to conduct my activities independently from any political support, in that, since the beginning, I wanted to maintain distance and preserve my research integrity. Furthermore, my adhering to any political organization and/or working under commitment of and/or being an active member of any political organization would have compromised the effective achievement of the intended social (and research) outcomes of the activities I was carrying out in the tent camps and in the reconstruction and rural development projects.

Moreover, because I was coordinating a project of artistic interventions in the tent camps that was authorised by the regional public health department at DICOMAC in collaboration with local psychologists (see *Chapter 3*), I became familiar with DICOMAC, the new governance structure that was being established by the national civil protection, the different civil protection functions, and how also this was evolving over time and interacted with local communities and the local governance. Since I got engaged within several participatory reconstruction and rural development project proposals I also became familiar with local reconstruction policies and procedures, the top-down approach and international guidelines and recommendations, the prolonged emergency, and the lack of public participation and of informed consent. Furthermore, the rural development project helped me realize other kind of disasters affecting rural mountain villages in the area well before the earthquake (the command and control approach adopted by the city), investigate more the historical development, social, and environmental processes that

created vulnerability and local disaster risks and impacts, and refine the SIA framework for Action I introduced in the reconstruction project.

Overall, having played so many different roles in the L'Aquila post-disaster situation, including being an earthquake victim, a volunteer, a researcher, a social sciences consultant, and, at the same time, a reflexive scholar, applying an analytic autoethnography and a strong commitment to sociological inquiry and to theoretical understanding, allowed me to gain unparalleled access to a variety of actors, sub-groups, and professionals within the local community. These actors were also playing different roles, and had different agency, and varying sets of beliefs and values. I thus became familiar with different 'internal meanings' at different levels of the local social organization. This led to me not being naïve, or taking for granted that the ideas and perspectives of one group were better, or more right than another.

Finally, the fact that I was caught by the earthquake and immediately felt an emotional connection to the local community, which became my case study, meant that my experience was intimately intertwined with my research aim and questions, thus ensuring the research integrity and coherence required of a reflexive CMR. Being well aware of my research focus, which was intrinsically related to my personal life, I could orient my activities through a continuous personal learning process that lasted over years, progressively developing my research skills through a continuous process of self-reflection and learning. The analytical approach I adopted and the strong commitment to theoretical advance I had since the beginning, made me deliberately choose not to use the narrative first person typical of evocative autoethnography (Anderson, 2006). However, my visibility in published texts as a CMR is evident in each chapter of this thesis.

Positionality during this PhD research: Overcoming reflexive CMR limitations

At the beginning of this PhD research (qua PhD research) in June 2014, in order to answer my research question about what role SIA should have to enhance community resilient, and its related subquestions (see Chapter 1), I had enough data from the participant observation, analytic autoethnography and action anthropology to analyse. More than just analysing this data, I considered that this had to be triangulated with other research methods to achieve more reliable evidence (Tierney et al., 2001; Quarantelli, 2005). The anthropological approach and holistic bottom-up and systematic observation in the field provided by being a CMR could have led me to have a naïve representation of the local community, to taking the stance of affected local people, privileging local knowledge, and/or problematizing the dominant mode of disaster management, without analyzing inner social processes and dynamics within the local affected communities (Burger et al., 2019).

While too often accepting that local communities are just victims, the anthropology of disasters field still lacks an adequate conceptualisation of the internal patterns of social interactions and behaviours, local power, and political, economic, institutional, cultural, social structures that contribute to inequity, vulnerability and disaster risk creation at the local level. In other literature about the 6 April 2009 L'Aquila earthquake, there unquestionably is an unbalanced research focus on the top-down response of the Italian state and the national civil protection authorities, while there is little discussion on local social risks, vulnerability, capacity, and institutional responsibility for DRR and resilience at the local level.

This PhD research also refers to sociological studies, and more specifically to rural sociology, SIA, SES and NRM theory, behavioural sciences, and the sociology of disasters in that the conceptual advances in these fields and approaches informed: (i) my analytic auto-ethnographic approach (Anderson, 2006; Ellis et al., 2011) which I developed over years and strengthened from 2014 on; (ii) the systematic retrospective analysis of the findings of my participant observation,

analytic autoethnography and action anthropology; (iii) the systematic retrospective, purposeful after action interviewing and data analysis; and (iv) the retrospective systematic document and media analysis I made concerning the response of the Italian state and of the national and local civil protection authorities both before and after the 6 April 2009 earthquake.

Telling what has been observed can always be influenced by the specific, personal perspective and experience of the ethnographer, even more if she/he is a CMR. Moreover, *reflecting on the participant observation done, and telling what has been observed* (i.e. autoethnography, reflexive CMR) is not sufficient on its own, and can still be distorted by the researcher's perspective and specific stance. Although developing analytical skills to independently reflect on personal experiences can help reflexive CMRs overcome the limits of being too specific and find general application, the participant observation and analytic autoethnography are not enough to adequately overcome the limits of the anthropological approach.

As observed in the field of the sociology of disasters (Quarantelli, 1995, 2005), using only retrospective interviewing is not sufficient on its own and it needs to be triangulated with data coming from systematic participant observation and other sources. Conversely, using only participant observation is not sufficient on its own and needs to be triangulated with retrospective analysis, interviewing and other sources. As observed in this field, *what people say* about behaviour and *how they actually behave* are not the same thing, and in order to provide more reliable data and empirical evidence, findings from systematic field observations always need to be cross-checked with retrospective after action analysis and interviewing, and vice versa, and all this has to be triangulated with other sources, and with findings of other similar studies in the field, all of which are methods typically used by the sociology of disasters to provide more empirical evidence and find more general application of the research findings (Quarantelli, 1995, 2005). In my case, it was exactly the other way around. In simple words, *what I could observe about how people actually behaved*, could have been different from *what actually people would say they behaved*. Furthermore, findings from such retrospective after action interviewing had to be triangulated with other sources to enhance their empirical validity. As observed by the sociology of disasters (Quarantelli, 1995, 2005) relying only on systematic participant observation in the field, or only on retrospective analysis, may affect empirical evidence, while combining and cross-checking observation with retrospective after action interviewing provides more reliable evidence. My personal connections with, perceptions of, experiences in and activities for L'Aquila, as a reflexive complete research member, could have potentially biased my research perspective: my participant observation and self-reflections in the field could have been systematically distorted by my personal experience, and had to be triangulated with systematic retrospective analysis, document and media analysis and retrospective, after action interviewing, something that I did and which I describe below.

Since I got enrolled as a PhD researcher at the University of Groningen on June 2014 (and even before) in an effort to provide an initial answer to my research questions, I started to conduct a systematic, retrospective after action sociological inquiry of the findings of my participant observation of the post-disaster interventions carried out, and of the analytic autoethnography and action anthropology I conducted over time while I was in the field. I thus could further explore, verify, and conceptualise with retrospective after-action interviewing with key local actors, what I directly experienced, became evident to my eyes, and I could write down, especially about what happened during the night of the earthquake and my research activities in the field during the time the State of Emergency was in force. The interviewees for the retrospective after-action interviewing were selected because I could directly observe them or I could learn about them during my participant observation and activities in the field that were key members, spokespersons, and actors within local communities and the local governance.

To avoid the possible ‘fallacy of incomplete evidence’ that could come from cherry-picking information or confirmation bias, the 17 retrospective interviews used in Chapter 3 were done on the basis of open-ended questions in which people felt free to talk about their own experiences as earthquake survivors. For Chapter 3, between 2012 and 2015, 17 formal in-depth retrospective interviews were conducted with a range of local people who had played various roles in their villages and in the camps, especially in the self-organised camps. These interviews were recorded and subsequently transcribed. These interviews sometimes took more than two hours, and were made on the basis of open-ended questions in which people felt free to talk about their own experiences as earthquake survivors. The starting questions used related to what people did during the night of the earthquake and the following days, and how the self-organised camps functioned, specifically exploring what were the social mechanisms that enabled the people in these camps to survive collectively, or to take action individually, and participate, as local public officers or professionals, in the activities conducted by the DICOMAC (see Chapter 3). Personal reflection notes were taken after each interview and the transcripts were subsequently annotated by noting key themes that emerged that could enable me to understand the cognitive and interactional dimensions of community resilience (see Chapter 1). The things that were frequently said by our participants included: an overriding sense of responsibility to help others; the strong feeling of experiencing empathy for others; the solidarity that emerged from sharing sorrow and pain; the immediate concern about the wellbeing of the elderly and children (irrespective of who they were), and the need to collectively care for them; the obviousness of sharing resources no matter how limited; and the joy of cooperation in doing collective tasks, even in the face of tragedy (see *Chapter 3*). It was because certain key social issues came through very strongly both in my participant observation and in most if not all interviews that I could conceptualise which are the specific components of the cognitive and interactional dimensions of community resilience (see Chapter 10).

For Chapter 5, 6, 7 and 8, other 20 key informants that I could observe or learn that, during my participant observation in the field, were significant identities in L’Aquila and/or the trial before and after the 6 April 2009 earthquake, were interviewed. These key local people were ideal ‘key informants’ in that were knowledgeable about what happened in the L’Aquila region after the earthquake, and were willing to speak frankly with us. They included a councillor from L’Aquila City Council; the Mayors of two mountain villages; six local experts, including three seismologists, a lawyer representing the families of the victims, and an engineer who was in charge of the vulnerability reports made before the 6 April 2009 earthquake, and a local technician who was in charge of various rural development programs in the region and had roles of responsibility as expert in various local development agencies; and eleven people who emerged as spokespersons for their various communities. These interviews were taken to: better understand the local governance in the crater and how it was influenced by the state of emergency; better understand the perceptions of people who suffered the consequences of badly managed reconstruction during the three years in which the State of Emergency remained in force; better understand local knowledge and its interactions with the national civil protection DRR strategy and response to disaster risks and impacts before and after the earthquake, and the local actions undertaken by people before the 6 April 2009 earthquake and the Major Risk Commission meeting. To avoid formulaic responses, it was decided not to interview people who were strongly associated with: the leading political parties; key protest movements; or disaster management agencies.

To avoid any fallacy of incomplete evidence that could have derived from cherry-picking or confirmation bias the 20 retrospective interviews used for these chapters were done on the basis of open-ended questions in which the interviewees felt free to talk about their own experiences in the preparedness phase before the earthquake and in the disaster recovery and reconstruction processes, according to their different roles and perspectives. For Chapter 5, the primary topic discussed in the retrospective interviews were Major Risk Commission meeting and the personal

experiences of the interviewees in relation to this meeting and local disaster risk reduction measures at the time of the meeting. For Chapter 6, 7 and 8, what discussed in the retrospective interviews with local public officers, professionals and inhabitants was essentially a chronicle of their personal experiences as mayors, councillors, or local professionals and inhabitants of the crater and local experts, during the time the state of emergency was in force. These interviews sometimes took more than two hours, they were recorded and subsequently transcribed.

It was because certain key social issues and common behavioural and structural patterns came through very strongly in most if not all interviews, that my interest in the cognitive and interactional patterns of the top-down response to disaster risks and impacts and post-disaster reconstruction, and in the environmental and social risks and impacts created (e.g. rent-seeking, elite capture, organised crime infiltration, disaster capitalism, corruption, inequity, social exclusion) developed.

All this brought me also to analytically review the immediate response, recovery and reconstruction processes following the 6 April 2009 L'Aquila earthquake from a DRR and resilience perspective and the United Nations principles and recommendations, and investigate on the main constraints to respecting the UN principles and to local community resilience-building within the governance and the disaster management and planned interventions developed. The social issues emerged in these retrospective interviews included the main scientific institutional and social-cultural processes enacted by the Italian state and national and local civil protection authorities before and after the 6 April 2009 earthquake, such as: how the knowledge about local vulnerabilities, and associated disaster risks and impacts was produced; how the local governance changed with the establishment of the DICOMAC; and how safety measures and initial planned interventions on the damaged local built environment were implemented in the red zones of the villages. Furthermore, in both retrospective interviewing I conducted in the field for Chapter 3 and for Chapters 5, 6, 7 and 8, I avoided specific questions to confirm any of my impression I could have developed throughout my observation and activities in the field, while I considered this interviewing an extraordinary opportunity for me to learn more about the scientific knowledge production process; the governance mechanisms; how post-disaster interventions were actually implemented and DRR and resilience outcomes pursued; how disaster capitalism got implemented; and the violence of this on some local inhabitants. All retrospective in-depth interviews conducted were, open, fair, inclusive, and lasted more than an hour each, as a further proof that were not oriented to confirm any bias, if not to provide me with a chance to listen, learn and elaborate more on the findings I could get from my fieldwork.

Since I became appointed as a PhD researcher at the University of Groningen, I could also conceptually refine my previous attempt to apply social impact assessment to post-disaster reconstruction, by using my appointment as a social sciences consultant in the rural development project between September 2014 and October 2015. During this project, I further applied SIA through action anthropology, refined my research methods, improved my research skills, analytic autoethnography, and report writing, and increased understanding on how SIA can enhance resilience at the local community level (see *Chapter 4*).

When I moved to the Netherlands in October 2016, and up till June 2019, I strengthened my sociological inquiry with stronger reference to SIA, sustainable development, SES theory and the sociology of disasters, disaster management and the disaster risk reduction and resilience paradigm. The conceptual advances in these fields informed my systematic, retrospective, after-action analysis of the findings from my fieldwork, action anthropology and retro-spective interviews. These advances also informed the analysis of power and cultural structures, institutional arrangements, management models, governmental ordinances and decrees and governance approaches adopted by the state and the national and local civil protection authorities in L'Aquila, before and after the 6 April 2009 earthquake.

Overall, my retrospective sociological inquiry was based on: (i) the conceptualisation of the disaster management phases, the social dimensions of disaster risks, disasters, and recovery; (ii) the command-and-control-approach, and the disaster myths (e.g. Quarantelli and Dynes, 1977; Quarantelli, 1995; Quarantelli, 1998; Tierney et al., 1998, 2001, 2006; Drabek and McEntire, 2003; Perry and Quarantelli, 2005; Alexander, 2007; Solnit, 2009; Tierney and Oliver-Smith, 2012; Oliver-Smith et al., 2017; Rodríguez et al., 2018); (iii) the most recent advances in SES theory and approaches to resilience (e.g. Folkes, 2006; Armitage, 2007, 2010; Ross et al., 2010; Cole and Nightingale, 2012; Ross and Berkes, 2014; Berkes and Ross, 2013, 2016); (iv) the most recent advances in the SIA field and in the field of development studies concerning social development outcomes and sustainable development (e.g. Esteves and Vanclay, 2009; João et al., 2011; Vanclay and Esteves, 2011; Esteves et al., 2012; Smyth and Vanclay, 2017; Aucamp and Lombard, 2018); (v) an enriched and updated understanding of the United Nations principles, guidelines and recommendations; and (vi) other international guidelines and best-practices for disaster management, disaster risk reduction, community resilience-building strategies, sustainable post-disaster reconstruction and development (IDNDR, 1994; UNISDR, 2005; Benson and Twigg, 2007; Jah et al. 2010; UN, 2015; UNISDR, 2015).

All this allowed me to systematize my findings according to the different disaster management phases and the 4 key priorities of action as identified by the Sendai Framework (UNISDR, 2015). Using these conceptual lenses, I could thus further explore, verify, and conceptualise the main constraints that, according to the findings from my ethnographic work in the field, potentially undermined effective application of SIA (as enhanced by action research), and of any community resilience-building strategies in each disaster management phase. All this also oriented my further retrospective interviewing I conducted again in the field between January and February 2017, with people who were key local actors among residents of local villages and suburbs, of the local scientific community, and the local governance during the time the State of Emergency remained in force.

Document, photo and media analysis and triangulation of data

Finally, I triangulated the data from (1) the participant observation, analytic autoethnography and action anthropology I conducted overtime in the field as a reflexive CMR, and (2) from my systematic, retrospective interviewing, with a thorough analysis of the ordinances and decrees issued by the national government, the national civil protection and regional, provincial and municipal authorities, of several trial documents, with photo and media analysis and the analysis of other kind of documents I could gather from local key informants. More specifically, I analysed government and civil protection ordinances and decrees issued by the then President of the Council of Ministers, Silvio Berlusconi, and the then Chief of the national Civil Protection Service, Guido Bertolaso. I also focused on how these ordinances provided local authorities with emergency powers and derogation from ordinary laws and anti-mafia controls. I also analysed mayoral ordinances and decrees related to safety measure implementation and demolitions, and the initial post-disaster reconstruction policies and interventions.

To sum up, concerning local community resilience and how it came into action (Chapter 3), I could triangulate what I observed, experienced and learned through my research activities in the field, with the findings from retrospective after action interviewing, and with findings from photo analysis which depicted collective actions in support of vulnerable members of local resilient communities, or vulnerable people taking an active role within the affected local community. Concerning the main constraints that undermined effective community resilience enhancement strategies (Chapter 5, 6, 7 and 8), I could triangulate what I observed, experienced, and learned, and the findings of retrospective interviewing with evidence provided by the trials' documents,

the ordinances and decrees issued by the Italian government, and by the national civil protection and regional and municipal authorities, and by other kind of documents.

The document and media analysis for this PhD was conducted primarily using the international DRR and resilience paradigm. This included:

- document and media analysis specifically conducted with the purpose to reflect on the L'Aquila trial and consider what the trial process revealed about Italian disaster risk management and what are the lessons learned (Chapter 5);
- the document and media analysis specifically conducted with the purpose to reflect on the state and civil protection response to the L'Aquila earthquake (Chapter 6);
- the document and media analysis specifically conducted with the purpose to reflect on the local authorities' response to the L'Aquila earthquake and the State of Emergency, and the initial activities national and local authorities carried out on the damaged local built environment (Chapters 7 and 8).

Chapter 5 draws on a document analysis of trial materials, which amounted to over 1,100 pages (Tribunale di L'Aquila, 2012; Corte di Appello dell'Aquila, 2014; Corte di Cassazione, 2016). I also analysed all the phone calls recorded and released by the public prosecution departments and national media which concerned the arrangements among the national and local civil protection authorities, the scientists of the Major Risk Commission and the local politicians in charge before and after the meeting of the Major Risk Commission convened in L'Aquila on 31 March 2009, and at the time of the earthquake, on 6 April 2009. For this chapter I also considered commentary about the trial in academic journals, the international, national and local media, and did a rapid assessment of social media accounts of the trial.

Chapter 6 draws on a document and media analysis which primarily concerned the state and civil protection intervention in L'Aquila, both before and after the earthquake. This document and media analysis concerned the national ordinances issued by the government and the national and local (regional and municipal) civil protection authorities to regulate the state interventions in the post-disaster area. I also thoroughly considered media chronicles of national and local state and civil protection officers' press releases and declarations. I analysed all the phone calls released by the public prosecution departments and the national and local media, and considered commentary in academic journal, the international, national and local media about the disaster management carried out by national civil protection authorities. For this chapter I also made a rapid assessment of social media accounts of the collective actions undertaken after the public release of the phone call two influential entrepreneurs of the building sector had on 6 April 2009 late in the morning, few hours after the earthquake that devastated the city of L'Aquila.

Chapters 7 and 8 draw on a document and media analysis specifically conducted to analyse, from a DRR and resilience perspective, the emergency state, the emergency powers, how local authorities got these powers, and the role local authorities had in the disaster management and initial post-disaster reconstruction process. I analysed the government and civil protection ordinances and decrees that were issued by the then President of the Council of Ministers, Silvio Berlusconi, and the then Chief of the national Civil Protection Service, Guido Bertolaso, with a specific focus on how these ordinances provided local authorities with emergency powers and derogation from ordinary laws. I also analysed mayoral ordinances and decrees specifically related to safety measure implementation and demolitions, and the initial local post-disaster reconstruction policies. Among other things, using all these difference sources of data and evidence allowed me to triangulate and conclusively establish many key facts about the post-disaster situation. For example, that demolitions of private buildings had occurred without the consent of the local homeowners and inhabitants, something that is a breach of decency and dignity, and a violation of human rights.

Resonance between this research and the social science disaster literature

As stated above, this research sets itself at the intersection between the broader fields of anthropological studies and sociological studies. As shown by the disaster literature, the anthropology of disasters is appreciated in disaster studies in that its bottom-up and holistic approach, and because of the systematic observation in the field it provides “balances top-down biases in emergency management and enables the incorporation of local technical knowledge, insight, skills, and needs” (Burger et al., 2019, p.7). The anthropology of disasters focusses on the socio-cultural processes of, and response to disasters (e.g. Oliver-Smith, 1996; Hoffmann and Oliver-Smith, 2002). It is interested in exploring how these processes locally interact with corresponding physical and technical processes of disasters and disaster management; it focusses on the changes that disasters and external organizations create in the local cultural, social, political, institutional, economic and environmental context; it explores the changes that disasters and external volunteer and humanitarian NGOs, national and international disaster agencies, development organizations and authorities and post-disaster interventions create within the multiple dimensions of local communities’ wellbeing, including: local cultural rituals, institutions, belief systems, narratives and communication, political organizations, local social-ecological interactions, power and economic relations; and in people daily life, interactions and collective actions within local communities, or in local and regional public institutions and power geometries, the state and external actors and organizations (Oliver-Smith, 1996; Oliver-Smith and Hoffman, 1999; Hoffmann and Oliver-Smith, 2002; Oliver-Smith, 2016). The anthropology of disasters also explores changes within the local economic system, such as changes in the allocation of resources and distribution of humanitarian aid (e.g. Gunewardena and Schuller, 2008).

Such an approach provides important insights on indigenous and local knowledge, local vulnerability, risk, needs, desires, capacities, narratives and resilience, and on how this can influence community disaster risk reduction and disasters impacts mitigation (Button and Peterson, 2009; Faas and Barrios, 2015). The bottom-up, holistic and systematic observation provided by the anthropological approach uniquely qualifies the field to study, the processes of disasters and social interactions that cut across domains (Burger et al., 2019). The anthropology of disasters can reveal internal power dynamics in the social structure of individuals, groups, and communities; it sheds light on the social production of disasters and the local social processes and structure that contribute to inequity, vulnerability, poverty and disaster risk creation. It sets all this in the local history of past development processes and social changes and impacts, and in an in-depth understanding of how these processes locally created the social structural conditions of pre-disaster vulnerability such as gender inequality, social exclusion and marginalization, global inequities, endemic poverty, racism, colonialism, imbalances of trade, underdevelopment, social exclusion. Many studies in the anthropology of disasters discipline have criticised top-down response of disaster agencies and humanitarian organizations, how such response tries to control the media and the narratives, and how such a top-down response worsens local inequity and vulnerability increasing disaster risks and resulting into second disasters.

Over the last 30 years, the sociology of disasters has greatly contributed to disaster studies by enhancing the broader understanding of disasters and post-disaster interventions in terms of analyzing their social dimensions, and investigating those social patterns, structures and processes that create local vulnerability and risk and contribute to make the disaster happen, both before and after disasters (Quarantelli and Dynes, 1977; Quarantelli, 1995; Quarantelli, 1998; Perry and Quarantelli, 2005). Further significant advances in this field relate to the analysis and critique of top-down response to disasters implemented by the states or disaster agencies and humanitarian organizations. Quarantelli and Dynes (1977) described the typical top-down, command-and-control approach adopted by disaster agencies, as ‘chaos-command-and-control’ to imply that disasters are perceived by many agencies as situations of chaos that need to be controlled

(Quarantelli and Dynes, 1977; Quarantelli, 1998). Tierney et al. (2006) reflected on and conceptualised disaster myths, and further research in this field have kept criticizing top-down centralised response to disasters as being too rigid and bureaucratic (Drabek and McEntire, 2003), resting on a set of myths and misconceptions that support its worldview, and leading to distorted outcomes (Tierney et al., 2001, 2006; Alexander, 2007; Solnit, 2009).

Both the anthropology of disasters and the sociology of disasters converge on underlining how the way national and international disaster agencies usually carry out recovery and reconstruction processes exposes (and reproduces) hidden power relations and vulnerabilities characterising the affected local communities (e.g. Oliver-Smith, 1977; 1990; 2002; Bates, 1982; Perry et al., 1983; Bolin and Bolton, 1986; Gunewardena and Schuller, 2008; Choudhury and Haque, 2016). Both before and after the UNDR0 report (1982) (see *Chapter 6*), both research fields have provided empirical evidence from different post-disaster situations about how disaster situations often represent an opportunity for elite capture and corruption, and for perpetuating vested interests and business-as-usual, thus exacerbating pre-existing social vulnerabilities and inequalities, rather than being used as an opportunity to design and implement effective empowering strategies to enhance DRR and resilience at the local community level. This was the case, just to mention few examples, of the recovery process following the disruptive earthquake-avalanche that hit Yungay (Peru) in 1970 in which some 70,000 people died, and over 100,000 people were left homeless (Oliver-Smith, 1990; 2000; 2002); or of the recovery following the earthquake that hit Guatemala in 1976, in which 25,000 people died, and over one million people were left homeless (Bates, 1982; see also UNDR0, 1982); or of the recovery following the earthquake that hit Italy (Campania and Basilicata regions) in 1980, in which 2,743 people died, and over 400,000 people were left homeless (Russo and Stajano, 1981; Alexander, 1989).

In the last decade, the analyses of post-disaster interventions carried out after hurricane Katrina, which stroke the Gulf Coast of the United States in August 2005, impacted over 90,000 miles throughout southern Louisiana, Mississippi and Alabama, and in which more than 1,800 people died and more than 1 million were left homeless (Elliot and Pais, 2006; Cutter et al., 2006; Button and Oliver-Smith, 2008; cited by Schuller and Maldonado, 2016, p.61), provided further evidence of the negative consequences caused by mismanaged top-down interventions perpetrated by international organizations and governmental disaster relief agencies. The disaster management carried out in New Orleans brought to elite capture and the eviction of the poor, represented a secondary disaster and a secondary violence, and it ultimately reproduced social inequities, instead than enhancing affected local communities' resilience and wellbeing (Cutter et al., 2006; Elliot and Pais, 2006; Button and Oliver-Smith, 2008; Schuller, 2016; Harvey, 2017).

Lewis (2010; 2017) outlined how corruption, at all levels of society, has negative social and economic consequences, especially on local community resilience and poverty and how it perpetrates vulnerability to natural hazards and disasters. After having analysed 344 earthquake occurring between 1975 and 2003, Escaleras et al. (2007, p.226) substantially confirmed that public sector corruption, especially as it applies to construction processes, can lead to seismically insensitive building of houses, apartment buildings and other structures and concluded that "a country's level of public sector corruption to be positively and significantly correlated with the fatalities caused by large quakes, regardless of which corruption index is used, the control variables included, or the estimation strategy employed". Based on a panel of 42 countries, Kyriacou et al. (2015) pointed out that because the construction sector is characterised by potentially large rents and government intervention, it may contribute towards public sector malfeasance and advocates for implementing appropriate policies and procedures, ethical codes and related training programs for construction industry professionals (Kyriacou et al., 2015). Intrinsically associated with the risk of corruption there is the risk of elite capture (i.e. economy risk), which, in practice, is the processes of "capture of benefits by elites and the undermining of project goals by powerful interest groups whose interests are threatened by project objectives"

(Jorgensen et al., 2003, p.34). Such risks often are accompanied by those institutional risks that arise when a new implementing agency is created with staff from the public sector that previously performed a different function and that has not the ability to perform the new function (Jorgensen et al., 2003). Concerning this, it is important to underline what already noticed by Jorgensen (2003, p.34): “the tendency of development projects to create project management units or specialized agencies or organizational structures to implement the project more efficiently may in itself constitute a risk to sustainability, and even undermine national efforts at capacity building or decentralization through the support of project-specific ‘parallel structures’.”

In her essay titled “*The rise of disaster capitalism: rebuilding is no longer the primary purpose of the reconstruction industry*” published in *The Nation* in May 2005, the Canadian journalist, Naomi Klein launched for the first time the term “*disaster capitalism*” in an attempt to better frame the deviant behaviour of unscrupulous building firms which seek to extract private advantage from disaster situations, while being endorsed by national and international disaster relief agencies, and by the institutional arrangements organized by the state. In her article Klein (2005, online) denounces the rise of a ‘predatory form of capitalism’ that: “uses the desperation and fear created by catastrophe to engage in radical social and economic engineering” which is addressed to facilitate the self-interests of private companies (e.g. building firms, consulting firms, engineering companies, developers, NGOs and private health clinics, etc) in post-disaster situations. After Klein’s article, Gunewardena and Schuller (2008, p.vii) answered to the need to “elucidate the ethnographic details and provide rigorous analysis of Klein’s concept of disaster capitalism” bringing together a collection of case studies that was intended to “not only highlight the unpalatable consequences of neoliberal approaches to disaster recovery, but also serve as a call to action – for scholars, activists, and policy makers alike”. In their volume titled *Capitalizing on Catastrophe* they examined the failures of post-disaster interventions in several disaster contexts such as Afghanistan, Belize, Guatemala, Haiti, Honduras, India, Sri Lanka and the U.S. Gulf Coast, with the purpose to “highlight the secondary crisis set in motion when post-disaster assistance is made to conform to the dictates of the market, as per the prescriptions of neoliberal economic doctrine” (Gunewardena, 2008, p.4). Although Gunewardena and Schullers’ ‘call to action’ and the many researches denouncing the badly planned post-disaster interventions, social failures keep being registered even in the most recent disasters.

More recently, Loewenstein (2015), in his book titled *Disaster Capitalism: Making a killing out of a catastrophe*, analysed the relief operations in Haiti after the earthquake that hit the island in 2010 and how, after the first weeks of community resilience in action, similarly to what happened in L’Aquila and to what we reported in Paper 1 (see also Imperiale and Vanclay, 2016a), the response was quickly monetised and a ‘a gold rush’ was enacted deviating affected local people behaviours and extinguishing local community resilience. Loewenstein also enlarged disaster capitalism construct to encompass unscrupulous private profiteering from refugee management and resource extraction. Further researches provide evidences of disaster capitalism following hurricane Maria and landfall on Puerto Rico in September 2017 (e.g. Naseck, 2018). Yee (2018) and Yamada et al. (2018) analyses violence and disaster capitalism enacted during post-disaster reconstruction after Typhoon Haiyan, locally known as Yolanda, which hit the Philippines in November 2013. Matthew and Upreti (2018) described disaster capitalism in Nepal during the recovery process carried out after the earthquake that hit the region in 2015, Ronni Alexander (2018) reflects on disaster capitalism as emerged after the earthquake that hit Fukushima in 2011 and consequent tsunami and nuclear meltdown.

After Hurricane Katrina (2005), the L’Aquila disaster was the greatest disaster ever occurred in a western country in the last 30years. We argue that the L’Aquila disaster is not just an Italian story of corruption and mafia, we believe that it reveals much more than this. Being Italy one of the 8 countries included in the Group of 8 (G8) and one of the 29 included in the North Atlantic Treaty Organization (NATO), the theory and the practice applied by the Italian government in

disaster management, developed within the traditional para-militaristic NATO's approach to reconstruction and development. Since the European Recovery Fund implementation, the command-and-control approach to financial resources and reconstruction and development interventions, has been intended as an effective tool that the state should have adopted to manage emergency loans in order to spend them effectively and avoid any delay in the execution of the recovery or re-development programs of Countries affected by the second world war. However, as the L'Aquila case shows, such an approach produces cognitive and interactional failures, worsening local social risks and exacerbating local vulnerabilities and associated disaster risks and impacts. As reported in Chapter 6, 7 and 8, the recovery process following the 6 April 2009 L'Aquila earthquake has been severely criticised (Frisch, 2010; Alexander, 2010; 2013; Calandra, 2012; OECD, 2013; Fois and Forino, 2014; Forino, 2015; Contreras et al., 2017), including by a European Parliament inquiry (Søndergaard, 2013), which was concerned about the misuse of the €493 million provided by the European Union, and by several official government reports which confirmed the infiltration of mafia in post-disaster reconstruction in both public and private works (DNA, 2016; Bindi, 2018). Since the earthquake, there have been many legal actions relating to allegations of fraud, corruption, bribery, inadequate public administration, and mafia infiltration (Alexander, 2013b).

More recently, a special issue published for the 10th anniversary of the L'Aquila earthquake (Forino and Carnelli, 2019), largely confirmed previous findings, and further underlined that, unfortunately, what found in L'Aquila, could also be found in other recovery experiences in Italy, *even following* L'Aquila, such as in the Emilia Romagna region in 2012, and in Central Italy between 2016 and 2017. This further confirmed the structural failures produced of the typical top-down command-and-control approach embedded by the national civil protection system (DCP). However, all the critiques of the disaster recovery following the 6 April 2009 L'Aquila earthquake, primarily relate to how disaster management was carried out by the government and the DCP. There is still little research on how the engaging and empowering strategies adopted by the state to strengthen the role of local and regional authority figures influenced DRR and resilience outcomes at the local level. Little is said about what actually occurred in the crater as a consequence of the operations directly managed by local and regional authorities, especially concerning disaster rubble management, safety measures implementation and initial planned interventions of reconstruction on private and public buildings in the crater.

Research ethics considerations

In general terms, all research for this PhD adhered to the principles of ethical social research (Vanclay et al., 2013) and the general intention of informed consent. However, there are two complicating factors. First, the research and data collected developed over time, in response to my different roles and purposes. Second, my understanding of research methods and research ethics also developed over time. Perhaps the potentially most serious ethical issue is that for some data used in the PhD, the data were collected for one purpose or organisation (planning tent camps activities, planning reconstruction and rural development projects), but used for another purpose (i.e. the papers for my PhD). Although that there is now a strong emphasis on open data (and thus the re-use of data), arguably this is/was a minor breach of research ethics in the sense that the participants did not initially consent to the later purpose. However, for all interviewees whose stories have been used in any published work, I subsequently contacted them and gained their permission to use their stories.

All interviews done since I was enrolled as a full time PhD researcher were on the basis that the research would be included in my PhD. It remains true, however, that some tentcamp residents, civil protection officers, volunteers and other people who might have participated in conversations with me, or have been part of the social settings in which I did participant

observation and action anthropology – especially during my activities in the tent camps and in the reconstruction and development project proposals – did not give informed consent in any strict understanding of the concept. As is typical in ethnographic research and participatory observation (Lipson, 1994), I do not consider this to be of major ethical concern because: their privacy has been respected; confidentiality has been maintained; no harm will come to them; there has been no coercion; protection of data was ensured; nothing was deeply personal; and there was a strong higher purpose, i.e. identifying how the resilience of local people and communities came into action and could be engaged and strengthened.

Although I claim that most participation (at least of the in-depth interviews done) was on the basis of informed consent, in order to be conducive to coordinating artistic events in the tent camps which were authorised by the local public health department and the DICOMAC, and gather the consent of local homeowners and inhabitants for the initial post-disaster reconstruction project proposals, I did not collect signed informed consent forms for the hundreds of field interviews and informal conversations I had over time. Especially during the time the State of Emergency was in force, such a procedure would have been totally foreign and alienating to my research participants, many of whom were already oppressed by the overbearing totalism of the tentcamps. However, after I became a full time PhD researcher at the University of Groningen I did utilise signed consent forms.

Initially, I did not record interviews, primarily not to create distance between me and the interviewee, and any drawback in recordings were counterbalanced as explained above. Later, especially for the formal retrospective, in-depth interviews, I did record interviews, primarily because they were with key actors who were familiar and accepting of this. These interviewees gave their permission to me to record their interviews. One ethical principle that is normally expected is the preservation of anonymity (Vanclay et al., 2013). In my research, in most cases I did keep interviewees anonymous. However, for various reasons some local people preferred to be on the record, and this was done in Chapter 3. In this chapter, using the real names of some participants was considered not only acceptable but ethically important as the public statements they were making were a validation of their disaster experience and resilience.

Finally, many people operating in an official capacity are identified in the thesis and papers, including the then Prime Minister Silvio Berlusconi; the Head of the Italian Department of Civil Protection, Guido Bertolaso; the Mayor of L'Aquila, Massimo Cialente; the President of the Province, Stefania Pezzopane; the President of the Abruzzo Region, Gianni Chiodi; the members of the national Major Risk Commission; and various other figures in the public domain. Strictly speaking, (unless obvious to the contrary) these people were not research participants, in that they were not interviewed by me. All information about them comes from information that is in the public domain, for example in media reports or legal documents. It was decided to name these people because not to do so would have been absurd. They were all key public figures, playing key role at every stage of the disaster management operations, and their identity would have been known anyway by virtue of their public position.

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