UNIVERSITY OF SOUTHAMPTON

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The hollow politics of resilience: the case of flood governance in England

by

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ABSTRACT

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THE HOLLOW POLITICS OF RESILIENCE:

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This thesis is concerned with what it means to govern through resilience, with emphasis on flood governance. Resilience has become a pervasive idiom of global governance and has grown in popularity over the last decade in UK policy making. It is increasingly seen as a policy ideal, a benign attribute whose fostering appears appropriate for dealing with many contemporary predicaments. While many academic contributions agree that resilience is a policy ideal that needs fostering, others regard it as politically problematic. Resilience is said to represent a neoliberal strategy that seeks to responsibilise individuals, away from state-centred forms of protection. However, I contend that these contributions, while welcome, are general interpretations of the meaning and uses of resilience, derived mostly from official documents and rhetoric. This thesis makes a contribution to knowledge by analysing a full length policy initiative centred on resilience, from policy design to implementation. As resilience gradually moves from high-level official rhetoric to actual policy, there is a need for critical investigations to shift from theoretical pronouncements of what resilience 'is', to what it 'does', or fails to do in practice. I argue that, in practice, the implementation of resilience is characterised by failure points and breakdowns, which signify severe disconnects between the goals of the policy and its mechanisms for implementation. These failure points challenge the substantiality of the argument that resilience is a form of neoliberal strategy. In fact, the findings of the research suggest that if resilience is to be produced at all on the ground, it requires substantial orchestration 'from above', by ongoing authority. Overall, I argue that the content of resilience policies is vacuous, and if resilience is

to be transformed in more productive directions, the work needs to begin with an acknowledgement that resilience policies present themselves as a hollow shell.

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DECLARATION OF AUTHORSHIP

I, Tudorel Vilcan, declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

'The hollow politics of resilience: the case of flood governance in England'

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself;
7. Parts of this work have been published as:

Tudorel Vilcan (2016) Articulating resilience in practice: chains of responsibilisation, failure points and political contestation, *Resilience: International Policies, Practices and Discourses*, DOI: 10.1080/21693293.2016.1228157.

Signed: .....

Date: .....

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I dedicate the following to the memory of my father, Vasile Vilcan.

Southampton, September 2016

Abbreviations

DEFRA – Department for Environment, Food & Rural Affairs

EA – Environment Agency

FCRS – Flood Community Resilience Scheme

FRM – Flood Risk Management

LRF – Local Resilience Forum

LRA – Local Resilience Area

PDT – Political Discourse Analysis

PLP – Property Level Protection

SES – Socio Ecological System

Chapter 1: Introduction

1.1 Background and argument

This thesis is concerned with what it means to govern through resilience, with emphasis on flood governance in England. Resilience is a discourse that has become very popular in the last decade, especially in UK policy making (Joseph, 2013a). It is part of the contemporary milieu and tied to a cluster of discourses concerning the management of uncertainty, risk cultures and security and is seen as a new solution to living with risk and uncertainty (Walker and Cooper, 2011; Gunderson and Holling, 2002). For example, in one of its reports, the Cabinet Office defines resilience as 'the capacity of an individual, community or system to adapt in order to sustain an acceptable level of function, structure and identity' (Cabinet Office, 2011a, p. 4). Not only has resilience become one of the most ubiquitous discourses of our time, widely circulated in the jargon of academic, experts or politicians, but it has come to occupy an increasingly important role in policy making. Its employment has greatly expanded, in relation to policy areas such as national security (Cabinet Office, 2010a), environmental degradation (DEFRA, 2013), international development (DFID, 2011), critical infrastructure (Cabinet Office, 2011a) or finance (Haldane, 2009). However, the haste with which the concept has been adopted also means that little attention has been paid to how resilience works in practice. Attending to this gap, this thesis explores what governing through resilience means, by investigating the implementation of a resilience-centred policy in practice.

An overview of the most important official documents issued in the last decade in the UK, such as the 2004 Civil Contingencies Act (Cabinet Office, 2004a), the 2008 and 2010 National Security Strategy of the UK (Cabinet Office, 2008; 2010a) or the 2011 UK's Government Humanitarian Policy (DFID, 2011), unravels the paramount role attributed to building resilience. However, the main arguments of these documents gravitate towards the need to build resilience, without much specification in terms of what that means. For example, the 2008 National Security Strategy of the UK suggests that 'since 2001, the Government has mounted a sustained effort to improve the resilience of the United Kingdom to all types of risks' (Cabinet Office, 2008, p. 41). DEFRA's National Adaptation Programme argues that 'building the UK's resilience to climate change is an economic, social and environmental challenge that cuts across every sector of society' (DEFRA, 2013, p. 5). The 2011 report on critical infrastructure makes the following remark: 'the Government's approach is that the main responsibility for resilience of critical infrastructure lies with the owners and operators… but Government, regulators and industry need to work together to ensure investment in infrastructure considers the needs for security and

resilience' (Cabinet Office, 2011a, p. 9). Resilience is used in these documents as if there is long-standing, shared consensus surrounding the meaning of the concept. Furthermore, some of the documents quoted above do not provide definitions for resilience, but simply start from the premise that building or improving resilience is necessary. The presupposed acceptance of resilience in official policy documents is problematic to the extent that it is likely to occlude the meanings, uses and effects of the concept. Therefore, the purpose of this thesis is to provide an analysis that aims to dispel the ambiguity surrounding resilience and clarify its meanings and employment in practice.

Of course, there is no shortage of academic commentary that seeks to clarify the nature, meanings or uses of resilience. However, the vast bulk of such commentary is in sync with the ethos of the official documents mentioned above. It understands resilience as a desired ideal and it is concerned with ways in which resilience can improved and operationalised (Walker *et. al*., 2004, Folke, 2006; Adger *et al*., 2011, Carpenter *et al*., 2001; Brown and Westaway, 2011; Eakin and Luers, 2006; Young *et al*., 2006). The authors that occupy this theoretical position in relation to resilience, regard it as a benign and necessary contribution, whose coming of age is warranted by the particularity of our contemporary predicaments.

Other academic commentators have attempted to clarify the nature and meanings of resilience by providing substantial critiques of the politics it engenders (Walker and Cooper, 2011; Joseph, 2013b; Evans and Reid, 2013; Zebrowski, 2009; Corry, 2014; Brassett and Vaughan-Williams, 2015; Brassett and Holmes, 2016; Lentzos and Rose, 2009; Bulley, 2013; Kaufmann, 2013; Neocleous, 2012; Joseph, 2016; Chandler, 2014; Dean, 2014). For example, resilience is understood as a strategy of the dominant form of governmentality: neoliberalism (Joseph, 2013b, Evans and Reid, 2013). Its function further embeds neoliberal governance, placing responsibility for risk and uncertainty on individuals and communities, and detached from state-centred forms of protection (Dean, 2014). Other critiques see resilience as the governance of complexity (Walker and Cooper, 2011; Chandler, 2014). In these terms, resilience is seen as a pragmatic policy solution that responds to the proposition that the world can be conceptualised in complex terms, be it in the sense of complex-adaptive systems (Walker and Cooper, 2011) or in the sense of a more general theory of complexity (Chandler, 2014). Either way, these critiques do not regard resilience as an ideal, but a problematic concept with potentially debilitating political effects (Bulley, 2013; Corry, 2014; Brassett and Vaughan-Williams, 2015; Brassett and Holmes, 2016).

These critiques are welcome, especially since the literature on resilience is suffused with contributions that strive to make it work as a desired ideal. However, many of them are focused on readings of official documents and rhetoric. Their main quest is to provide either a more general account of what

resilience is (Zebrowski, 2009; Joseph, 2013b; Chandler, 2014; Dean, 2014; Lentzos and Rose, 2009), or of its political effects (Bulley, 2013; Kaufmann, 2013; Neocleous, 2012; Joseph, 2016). There are also contributions that focus on various aspects of resilience policies and disagree with the general interpretations of resilience, pointing to some of their discontinuities (Corry, 2014; Brassett and Vaughan-Williams, 2015; Brassett and Holmes, 2016). However, what is currently lacking is an analysis of the entire policy chain, through which resilience is delivered in practice. This thesis corrects this by providing an account of governing through resilience, not only through reading official documents, but from the analysis of a full-length policy chain instantiated by a resilience centred policy.

As such, this thesis asks the following research question: how is governing through resilience actually instantiated in practice? This implies that the thesis will take account of the whole policy chain, from its design to its implementations and the effects on the ground. It is a holistic approach that acknowledges that there is likely to be an interface between the design and implementation of a policy, which releases a host of questions. The main questions this thesis asks are the following: what are the discourses that have informed the concept of resilience that are currently employed in policy making in the UK (Chapter 5)? What are the specific logics through which governing through resilience is instantiated in practice (Chapter 6)? What are the forms of subjectivity encouraged by the resilience policies? (Chapter 7)? What are the practical and theoretical problems to which resilience responds as a governance solution? (Chapter 8)? In other words, this thesis aims to capture the host of continuities and discontinuities that characterise the implementation of a resilience policy.

From an empirical point of view, the thesis investigates a resilience-centred policy initiative, in terms of the full-length policy chain. This means that in addition to policy documents, a large bulk of the original contribution derives from interview data with the most relevant stakeholders at all the levels of policy design and implementation (22 semi-structured interviews). The policy that is the focus of this study is Flood Community Resilience Scheme (FCRS). Its aim is to build individual and community resilience to flooding. It is important therefore to point here that the research is focused on depth rather than breath. However, FCRS is not treated in isolation, but connected to the broader field of flood governance through a cone-like structure: the first empirical chapter positions FCRS in the context of UK flood governance, the second focuses on the institutional dimensions of its implementation and the third engages with smaller case studies on the ground. This ensures that FCRS is well anchored in the field of flood governance, making the findings of this thesis relevant in relation to it.

This thesis makes an original contribution to the literature in a few important ways. Fundamentally, it uncovers a series of breakdowns and failures at the intersection of the resilience discourse with policy

practice. In his 2009 book, David Chandler describes the practices and discourses of Western actors in a globalised world in terms of a 'hollow hegemony', a mode of rule that is expressed in grand mission statements that at the same time work to obfuscate the limiting and short-sighted nature of its policy applications (Chandler, 2009). I use the term 'hollow' in a similar manner, to capture how, for all their pervasiveness, resilience discourses are empty at their core. This is seen best in policy practice, where the overuse of resilience as a policy solution serves to mask a series of contradictions and tensions that have the potential to undermine its application on the ground. The main implication of this contribution relates to the danger of identifying the failures at the heart of resilience as indication that more resilience is needed. However, this is not a demonstration that resilience is something bad *per se*. This is because, as this thesis documents in great detail, resilience is an empty signifier that requires to be filled with meaning by policy actors. Thus, investigating how resilience is implemented in practice becomes of paramount importance, as the effects of the implementation tell the most pertinent story about what resilience is and it can (or cannot) become.

The hollowness of resilience discourse and resilience policy, expressed by its failures and breakdowns, has a series of very substantial implications for the academic literature on resilience. Firstly, as far as UK policy making is concerned, resilience does not emerge out of (or responds to) a conceptualisation of the world as complex (in the terms of general complexity and complex adaptive systems). Instead, the entrance of resilience in UK policy making occurs in relation to the on-going (re)negotiations of the meanings and nature of risk associated with *Risk Society* (Beck, 1992; Giddens, 1994). Secondly, the findings of this thesis challenge the substantiality of the argument that resilience is a neoliberal strategy, which looks to responsibilise individuals and communities. While agreeing that the ethos of FCRS is indeed geared towards responsibilisation, the before-mentioned failures and breakdowns undercut the process of responsibilisation in practice. Furthermore, I show that for resilience to be produced at all on the ground, it requires substantial orchestration 'from above' by on-going authority. Overall, I argue that, politically, the content of FCRS is vacuous and resilience is constituted as a big, muscular operation that collapses onto a weak skeleton.

1.2 Structure and chapters

Addressing the research questions requires appropriate theoretical and methodological focus. This informs the reader of the epistemological and ontological coordinates, within which the answers to the research questions are provided. Theoretically and methodologically, the thesis draws on the work of Michel Foucault and it is informed by his work on governmentality and genealogy as problematization (Foucault, 1977a; 2009; 2010). Genealogy as problematization provides a

methodology that encourages us to inquire into how the present was contingently assembled (Koopman, 2013). As such, it sits at the centre of the thesis, since it bears the task of excavating how resilience is articulated in practice in policy making. It is worth clarifying that in Foucault's work, and in this thesis as well, problematization operates along two dimensions. It is both an act of critical inquiry (in verb form: 'to problematize' x) and a nominal object of inquiry (in noun form: 'a problematization' of x) (Koopman, 2013, p. 98-99). While in this thesis there is more emphasis placed on the former, both dimensions will be employed, as they reinforce each other. While genealogy as problematization represents the methodological core for the analysis of empirical material, governmentality furnishes the concepts that provide the contours of the analytical framework. It considers the activity of governing as a process of making reality intelligible and connecting the resulting thought with processes, institutions and agencies on the ground, in order to make it rationally governable. Resilience will be analysed as a form of governmentality, a specific mode of making sense of the world that is designed to be connected in practice with specific processes, institutions and agencies, in order to generate real effects. As such, resilience is not taken for granted as a policy object that needs to be *built* or *improved,* but it will be problematized, highlighting how it has been contingently assembled as a regime of government.

As noted above, the empirical contribution to knowledge comes from the in-depth analysis of a policy initiative centred on resilience: the Flood Community Resilience Scheme (FCRS, also referred to as 'the Scheme' in this thesis) in the UK. FCRS has been deployed in relation to the governance of floods and it seeks to build the resilience of individuals and communities to flooding in 13 localities in England. The Scheme was initiated in 2012 and has run for two years, with the expressed goal of piloting approaches that 'enhance flood risk management and preparedness in ways which quantifiably improve the community's overall resilience' (Defra, 2012, p. 2). It is a part of the *UK Government's Community Resilience Programme,* which provides the rationale (concepts, arguments and justifications) for building community resilience in England in the Strategic National Framework on Community Resilience (Cabinet Office, 2011b; see Bulley (2013) for a political critique of the Framework and its additional documents). Thirteen Pathfinder (pilot) projects were awarded funding and their aim is to provide examples of community resilience-building practices that can be replicated in other contexts. As such, it provides an excellent case study to understand how community resilience is done in practice, rather than simply how it is talked about at the level of official discourse.

The thesis is comprised of seven chapters. Chapters 2, 3 and 4 will establish the theoretical and methodological considerations required for undertaking the empirical analysis, complete with a literature review of resilience in relation to governance. Chapters 5, 6 and 7 constitute the empirical

chapters and they analyse the empirical material, collected from both interviews and policy documents. Chapter 8 engages in a more general analysis of the modes of problematization, to which governing through resilience responds.

Chapter 2 introduces the literature on resilience that is relevant for answering the research question. It distinguishes between the larger strand of literature that regards resilience as a (policy) ideal and the more critical strand, which considers resilience to be politically problematic. After assessing the strengths and in particular, the limitations of these contributions, it will make the case that the thesis is responding to a major gap in the literature: the lack of analysis of a resilience policy in its entirety, from design to implementation, in addition to the effects on the ground.

Chapter 3 presents the analytical framework of governmentality, as conceptualised by Michel Foucault (2009; 2010) and further developed and clarified by other authors such as Thomas Lemke (2001; 2002; 2012) and Mitchel Dean (2012). I will begin the chapter with a few background discussions. Here, I familiarise the reader with a series of ontological considerations in Foucault's work and an exposition of his concept of *power relations*, which holds the key to understanding governmentality from a more general perspective. After defining governmentality, I will present the main concepts which will constitute the backbone for the analysis. These concepts consist of the regime of government (intersection of practices through which we govern ourselves), rationalities of government (forms of thought employed in practices of government), technologies of government (means through which government is accomplished in practice) and forms of subjectivity (ways to conduct one's life, encouraged by forms of authority). These concepts will be employed throughout the thesis, but they will all coalesce more coherently in Chapter 8.

Chapter 4 is divided into two parts. The first part presents what I refer to as *extended governmentality*, by which I mean that I introduce three methodological devices to analyse the empirical data that are consistent (ontologically and epistemologically) with governmentality. The first of these, genealogy as problematization, inquires into the contingent makeup of the present and it is the central methodological device of the thesis overall (especially chapters 5 and 8). The second, *logics of critical explanation* (Glynos and Howarth, 2007), will be the methodological tool for Chapter 6. The third, Christopher Menke's analysis of Foucault's distinction between aesthetic practices and disciplinary practices, will be used in Chapter 7 as a heuristic method to assess whether resilience practices are empowering or responsibilising (Menke, 2003). The second part of the chapter will introduce the research design and the respective methods for uncovering and analysing the empirical data. The research uses a qualitative cross-sectional design with case study elements. The design is determined by the fact that I will be analysing a policy chain in its entirety (FCRS is the policy and hence the case

study) and that data needs to be collected across all of its tiers. The main methods that have been employed are document analysis (both UK wide policy documents and FCRS specific) and semi-structured interviews with the most relevant policy practitioners involved in the design and delivery of FCRS at all levels.

Chapter 5, the first empirical chapter, is concerned with elucidating the genealogy of the concept of resilience, employed in UK policy making. As such, it investigates the discourses and problematizations that have informed the entrance and ascendance of resilience in policy making in the UK. The findings of this chapter show that resilience has been introduced in the midst of a series of (re)negotiations about the nature of risk, associated with Risk Society (Beck, 1992). This challenges previous genealogical accounts, which argue resilience has emerged out of complex understandings of the world (Walker and Cooper, 2011; Chandler, 2014). Chapter 6 investigates how FCRS is articulated in practice. It argues that the implementation of the policy is enabled by a long governmental chain of responsibilisation, comprising several linkages that are also endangered by potential failure points where political contestations play out. It concludes that researching what resilience 'does' requires investigating the implementation of specific resilience policies and the degree to which they are successful. Chapter 7, the final empirical chapter, examines in more detail, the forms of subjectivity FCRS aims to produce. It provides a detailed account of the substrate of psycho-social characteristics that the policy practitioners encourage and which they think will lead to resilient individuals. This substrate is broadly composed of rationality, reflectivity, positive affect and relationality. However, I argue here that there is a disconnect between the kind of subjects desired by the Scheme and the inadequate nature of the mechanisms of implementation, unlikely to actually produce them in practice. Finally, Chapter 8 pursues a more general characterisation of resilience, in relation to the governance of floods. This chapter is concerned with the kind of problematizations that have upgraded resilience to governmental status and prepared the terrain for the emergence of resilience-centred policies, such as FCRS. Using the case of FCRS as a springboard, this chapter argues that while resilience has benefited from (and it is heavily indebted to) the problematizations of risk and uncertainty associated with (flood) risk management, it establishes its own regime of governance that extends beyond risk and responds to an imaginary of catastrophe. As such, resilience aims to reterritorialize the nature of the threat to the whole of society, using technologies of government focused on enactment of future threat rather than calculative prediction and flattening the future by looking to make adaptation permanent. However, this new regime that resilience establishes, is still articulated in conjunction with the rationalities and technologies of flood risk management, giving rise to a number of what I refer to as productive tensions. These tensions are what allow resilience policies to work in practice, but they also generate many of the discrepancies and disconnects mentioned above,

explaining the vacuity that emerges between the ambitious scope of FCRS and its likely effects in practice.

Chapter 2: Literature review: managerial and critical resilience

2.1 Introduction

This thesis examines the articulation of resilience governance in the UK, with emphasis on the implementation of resilience policy in the area of flood risk management. This chapter surveys existing bodies of literature on resilience, in order to define the original contributions that the thesis makes. It emphasises that increasingly, resilience has descended from academic discourse and found a home in policy making, despite (or perhaps because of) being a rather ambiguous and contested concept. As such, investigating what resilience *does* in both policy making and policy practice becomes a timely endeavour. As the literature on resilience has increased considerably in previous years, I will consider in this literature review, the contributions that are related to governance, broadly defined. As such, I divide the literature on resilience into two different camps, based on how they relate to governance. In the first one, I chart the contributions that can be pooled under the conceptual umbrella of *managerial resilience* (see Brassett and Vaughan-Williams, 2015; Brassett and Holmes, 2016). These contributions share a belief in resilience as an ideal and positive concept. Resilience is understood as a feature of the referents of governance, whose cultivation leads to positive outcomes. The second camp characterises contributions *critical* of resilience (e.g. Joseph, 2013b; Walker and Cooper, 2011; Aradau, 2014; Neocleous, 2012). While many contributors I associate with this camp, might not necessarily accept the label 'critical resilience', they are distinguished nevertheless from the first camp by their unwillingness to regard resilience as an ideal or positive good *per se*. They are more inclined to problematize the uses, goals or effects of resilience and as such, some might ascribe negative values to it or others might consider it as inherently problematic. They also tackle the issues of the relation of resilience to governance in more depth.

The chapter will proceed in three main parts. The first one will present the interface between the broader, academic discourses of resilience and the current employment of resilience in policy circles. It will suggest that the concept employed in policy making is ambiguous and contested, raising questions about its employment. The second part will present the literature on managerial resilience, emphasising its core characteristics in the work of C.S. Holling (1973) and his colleagues, in addition to its more recent conceptualisations, complete with some of its critiques. Part three will chart the critical literature, with a focus on intellectual discourses of neoliberalism and complexity, which

resilience has been associated with. Here resilience is characterised as a neoliberal strategy, or as a form of governance for complexity. The chapter will conclude with a detailed discussion of how the thesis will attend to the significant gaps of these bodies of literature. Firstly, it will show that new insights can be gained beyond what the critical literature has achieved, by employing the Foucauldian methodological toolkit. Secondly, while most critical contributions on resilience take their evidence to come from official documents and discourses, this thesis will look at the implementation of resilience policies on the ground, adding a necessary empirical contribution to the resilience literature.

2.2 Resilience as a contested concept: the interface between academic discourses and policy making

When resilience is described and defined in policy making in the UK, it is done so in an emphatic but simplistic, vague and general manner. Take for example the definition given in the 2011 governmental report on critical infrastructure: 'resilience is the ability of assets, networks and systems to anticipate, absorb, adapt to and / or rapidly recover from a disruptive event' (Cabinet Office, 2011a, p. 14). The definition is generous enough to encompass both aspects of prophylaxis (anticipate) alongside aspects related to the after event management (adapt, recover), while at the same time avoiding precise commitments to a strategic form of action. The formula becomes the organisational principle for a multitude of threats or disruptions and, what is more, the boundaries between anticipating and strategically planning for disruption (the contingency planning paradigm) and dealing with, protecting and compensating for the devastations (the protection paradigm) are blurred in the favour of a 'systematic, widespread, organizational, structural and personal strengthening of subjective and material arrangements so as to be better able to anticipate and tolerate disturbances in complex worlds without collapse, to withstand shocks, and to rebuild as necessary' (Lentzos and Rose, 2009, p. 243).

Furthermore, the kind of confidence in broad definitions that is exhibited in public policy papers is contrasted with the increasing ambiguity associated with resilience in academic research. The origins of the concept have been traced to fields as diverse as engineering, psychology, ecology and economy (Alexander, 2013). This has fostered the emergence of many avatars under the common name of resilience and allowed it to assume many forms. Resilience has found a home in academic disciplines as diverse as disaster management (Barrett & Constas, 2014), security (Bourbeau, 2013), environmental change (Adger *et al*., 2011) or development (O'Brien & Read, 2005). In a substantial review, Bahadur *et al.* enumerate no less than 16 conceptualisations of resilience in the areas of disaster management and environmental change (Badahur *et al.*, 2010). These definitions are located

on a continuum, from the equilibrium centred approach of 'bouncing back' to a state prior to the occurrence of a perturbation, to a scenario in which it is deemed productive to be 'living with' the consequences of such perturbation. Along similar lines, Brand and Jax (2007) propose that it is the proliferation of the concept across academic disciplines that has diminished its conceptual clarity. On the other hand, this has facilitated the setup of common research projects between the disciplines, which can partly explain the wide dissemination of the concept in academic research.

In light of these observations, an argument can be made that in academic research and publishing, the meaning, conceptualisations and deployment of resilience are contested or at the very least ambiguous, making the inquiry into the articulation of resilience in policy practice, a timely endeavour. At the same time, for the purposes of the literature review, the vast number and variety of contributions on resilience demands that a criterion for the selection of contributions needs to be employed. As the research aims to investigate how governing through resilience is articulated in policy design and practice, the literature review undertaken in this chapter will chart the resilience contributions in relation to the art of governing, broadly construed.

As such, the chapter will distinguish between 'managerial' and 'critical' literatures of resilience (Brassett and Vaughan Williams, 2015; Brassett and Holmes, 2016). The first strand pools the largest number of contributions together and it is characterised by the belief that resilience is a benign attribute that needs to be built and fostered into an increasingly large host of referents: from individuals to communities, infrastructure or even societies and large systems overall. This strand is very relevant as many of the assumptions and arguments they harbour can be found in various forms in official policy documents. The second strand is more sceptical of resilience and seeks to investigate more thoroughly, the nature of its effects. Most of the contributions that can be associated with this strand cast resilience in a negative light or at the very least trigger a series of alarm signals, especially in relation to its employment.

2.3 Managerial resilience

Brassett and Holmes use the label 'managerial' to describe the type of resilience literature where 'resilience is taken as a straightforwardly good thing that should be fostered' (Brassett and Holmes, 2016, p. 373). However, this understanding of 'managerial' only highlights one foundational characteristic of this strand of literature, namely the notion that resilience is understood as an ideal. This means that from its inception, resilience has been treated as a 'value' or 'attribute' that has the potential for its purchase to be positive. A second foundational characteristic is the referent of resilience, usually conceptualised in terms of a system. As a result, many contributions regard the

application of resilience as a form of management, usually expressed as co-management or adaptive management (Folke, 2006; Tompkins and Adger, 2004). The literature on managerial resilience conceptualises governance in terms that are, at least at face value, different from more traditional uses of the concept, usually centred on the multitude of processes associated with the transfers and leverages of powers between the state and various corners of society (Rhodes, 1994). This is because to a large extent, resilience carries with it the baggage of its original conceptualisation in ecology and later on in the context of socio-ecological systems (SES). The assumptions of complexity in conjunction with an increased focus on the environment, make studies of resilience focus on management outside the remit of the state and in general, outside discussions of politics. Rather, management is done in a more technical manner, on a selected system and connected to politics by way of networks or through institution of polycentric governance (Biggs, 2012). As such, politics is largely reduced to institutional governance. The third foundational characteristic is to conceptualise of systems, the referent of resilience, as transgressing traditional boundaries of governance, usually associated with the state. Resilience research and practice is posited as intrinsically inter or multi-disciplinary, drawing together different disciplines and societal and political domains, under the motif of building resilience of a referent that is said to exceed their individual remit. This allows the avoidance of issues related to politics and power relations and an increased focus on operationalizing technical and strategic measures for obtaining resilience of systems, with the express purpose of achieving (or avoid being thrown of) paths to sustainability (Gunderson and Holling, 2002).

As resilience is established, more or less as an ideal state or feature of a system, achieving it is a matter of research and discovery (Adger *et al*., 2011). For example, Carl Folke suggests that at the time of the publication of the article, socio-ecological resilience was still in an explorative phase (Folke, 2006). However, he also suggests that there have been recent advances that 'include understanding of social processes like, social learning and social memory, mental models and knowledge–system integration, visioning and scenario building, leadership, agents and actor groups, social networks, institutional and organizational inertia and change, adaptive capacity, transformability and systems of adaptive governance that allow for management of essential ecosystem services' (Folke, 2006, p. 263). As such, resilience building in this literature is an exercise in unravelling the nature of aspects of management of systems such as processes, models, networks, agents or groups. This is proposed to be crucial in achieving 'transformations toward more sustainable development pathways' (Folke, 2006, p. 263).

What is crucial to grasp here, is that propositions such as those presented by Folke and others are to be found not only in academic discourse, but they also inform many of the policy papers that propose the need to build resilience in the UK (Cabinet Office, 2004a; Cabinet Office, 2008; 2010a; 2011a;

2011b; DFID, 2011). However, perhaps even more important is that these propositions are not part of some coherent policy model put forward by proponents of resilience. The official policy documents have rather, adopted an ethos of building resilience and cherry picked specific elements of the academic discourse to accompany it. The task I undertake in this section does not relate to making an inventory of all those propositions. Instead, it is more useful to understand in an in-depth way, the theoretical assumptions underpinning the managerial literature on resilience. As such, I will first begin with Holling's original conceptualisation of resilience and then move onto how resilience has been developed in the context of discussions about socio-ecological systems and the model of 'panarchy' (Gunderson and Holling, 2002). The latter part of the section will show how resilience is used in policy and discuss the issue of agency before finishing with some criticisms of managerial resilience.

2.3.1 Holling's conceptualization of resilience

Some of the most influential genealogies of resilience trace the concept back to the work of C.S. Holling in ecology (Walker and Cooper, 2011; Davoudi, 2016). They are not suggesting that the concept originated with his work, but rather that his specific conceptualisation of resilience was the one that was adopted by different policy making circles. It is very important to present Holling's conceptualisation of resilience, as it constitutes one of the foundational pillars of the managerial resilience literature. In his seminal article from 1973, Holling employs the term 'resilience' to make some descriptive statements about the properties of ecological systems. Holling begins by challenging the view that was mainstream at the time, that stability was the desired measure or property to understand the behaviour of ecological systems. In his opinion, the understanding that all ecological systems tend towards some state of equilibrium was 'convenient' but not a 'realistic' description of how these systems behave in reality (Holling, 1973, p. 1). Ecology has borrowed too much from classical physics, Holling claims, and this might have informed a naive conceptualisation of ecological systems where the desire for precise measurements, quantities and mathematically accurate processes obscured the actual materiality of all these systems in all of its manifestations.

Countering this view, Holling appreciates that it is more realistic and more productive to see ecological systems in terms of 'the probability of extinction of their elements, and by shifting emphasis from the equilibrium states to the conditions of persistence' (Holling, 1973, p. 2). That also means that due to a focus on persistence rather than equilibrium, there is an emphasis on the transience of these systems as one of their defining features. At the intersection of all these observations, Holling insists that resilience rather than stability represents a better, more realistic description of ecological systems. Resilience is defined as 'a measure of the persistence of systems and of their ability to absorb change and disturbance and still maintain the same relationships between populations or state

variables' (Holling, 1973, p. 14). Holling's definition, while avoiding the stasis of the equilibrium approaches, can be seen to borrow combined insights from Darwinism and complexity theory. On one side, randomness and heterogeneity appear to inform the need for resilience. This is because the potential for surprise that can profoundly destabilise a system annuls the simplistic understanding of equilibrium and makes room for a more flexible and realistic approach. On the other side, Holling notices that despite the randomness, as long as populations remain within a domain of attraction 'they have a consistent and regular form of behaviour' and if the boundary of the domain is crossed than it is only then that the behaviour changes (Holling, 1973, p. 13). This means that change and perturbations as a result of randomness, heterogeneity and variability can be incorporated when describing a system in terms of resilience. As long as a system remains in a domain of attraction, this means that it has the property of being resilient and based on its maintaining or losing its resilience it will either persist or become extinct. The underlying assumption here seems to be 'survival of the fittest' where systems with capacities to reorganise themselves and persist despite the perturbations, (which are inevitable due to randomness) have a greater chance to survive than those that do not. Holling's quintessential example is one of the fish populations in a lake, which if exposed to overexploitation lose their resilience and are prey to the inevitable perturbations, which will assure their demise.

2.3.2 Socio-ecological resilience

Holling's ideas and assumptions about resilience have crossed the disciplinary borders of ecology and have been imported in the social sciences (Brand and Jax, 2007). There are two specific, yet connected extensions of his work, namely the bridging of the ecological with the social (socio-ecological systems) and a theory of resilience, change and complexity called panarchy (Gunderson and Holling, 2002). The former refers to an abundant body of literature that extends the concept of resilience to include social systems (broadly defined), forming the so-called socio-ecological systems (SES) (Adger, 2000; Carpenter *et al*., 2001; Folke *et al*., 2002, Folke, 2006; Walker *et al*., 2004; Adger *et al*., 2011). Most of these investigations seek to operationalise and broaden the use of the concept, but even more so to clarify it and make its employment in various contexts more appealing. However, it was noted that this broadening of resilience is not without its tensions. As Brand and Jax argue, it has resulted in a shift from 'the original descriptive concept of resilience first defined in ecological science' to a 'vague, and malleable notion of resilience used as an approach or boundary object by different scientific disciplines' (Brand and Jax, 2007, no page).

In one of the most quoted articles on resilience, Walker *et al.* (2004) attempt to add more conceptual clarity to resilience in socio-ecological systems. Employing the concepts of state variables, domains

(basins) of attraction and stability landscape, they seek to operationalise the various aspects of resilience such as latitude, resistance, precariousness or panarchy. The logic is similar to Holling's original conceptualisation of resilience in the context of ecological systems, but adapted and expanded to fit any sort of system (e.g. a market or society). Resilience is a function of the ability of a system to remain within the ever-fluctuating boundaries of a domain of attraction. However, since most systems do not tend towards equilibrium directly (equilibrium is understood as an attractor), but are faced with disturbance, they are moving within a particular domain of attraction. There might be more than one domain of attraction that can be occupied by a system and resilience therefore represents the ability to prevent the system from moving into an undesirable domain of attraction. To this end, Walker *et al*. operationalise features of a system, such as its latitude (the width of the basin of attraction), resistance (the magnitude of forces needed to change a system), precariousness (how close a system is to moving into another domain of attraction) and panarchy (the influence of states and dynamics above and below the scale of interest) to present proper ways in which the resilience of the system can be observed. This conceptualisation of resilience allows Walker et al. to introduce the notions of adaptability and transformability. Adaptability is therefore the capacity to manage the resilience of a system, so as to be able to prevent moving into an undesirable domain of attraction (by modifying its latitude, resistance, etc.). Transformability is the capacity to create a new system when the conditions (social, ecological, economic) become untenable (Walker *et al*., 2004).

Of great importance within this body of literature merging ecological and social systems, is the role awarded to human input. In Holling's original thesis about resilience in ecological systems, the emphasis is on the ability of the system itself to reorganise in the face of perturbations, human input notwithstanding (Holling, 1973). In socio-ecological systems, human input becomes important as evidenced by the notions of adaptability and transformability, which concern human capacity to manage resilience and transform a system. Nevertheless, despite this observation, the overall stance employed subsumes human intentionality and agency, to an understanding of nature or the social as self-evident entities trapped in the same evolutionary logic that informed Holling's seminal paper. In other words, the language of socio-ecological systems is transferable more or less across the fragmentations and striations of the natural and social space, which are understood as subjected to an evolutionary logic. If humans are considered, their role is delegated to building resilience, considered 'key to biodiversity conservation [and] sustainability in the wider sense' (Tilman, 1997, quoted in Adger, 2000, p. 349). Many of the applications of resilience in socio-ecological systems will pledge normative allegiance to systems thinking. This means that the referent of governance is conceptualised in terms of a system and the critical task at hand is to increase its resilience (Turner, 2013).

2.3.3 Panarchy

As presented above, one of the features of a system is panarchy, which represents the influence of states and dynamics above and below the scale of interest. While panarchy does not attract much attention in the resilience literature, it is important for understanding how resilience is conceptualised more generally, especially when considered in relation to larger and more interconnected systems (e.g. a habitat spanning over different political and administrative divisions). This is because it states clearer than other literatures, the host of assumptions that provide the theoretical basis on which resilience rests.

At its core, panarchy is based on a reworking of a major principle in ecology, the adaptive cycle, by infusing it with insights from complexity theory. Prior to the introduction of insights from complexity theory in ecology, the adaptive cycle was seen to be controlled by two functions (phases), namely exploitation and conservation. This is meant to indicate a zero-sum relation between the variability and rigidity of a system. In the phase of exploitation, the system becomes colonised by new elements which leads to increased variability, which decreases over time as interactions between elements become more predictable and rigid, conducive to a phase of conservation. Holling and his colleagues introduce two more: creative destruction and reorganisation. Creative destruction (also called release), a concept borrowed from Schumpeter's analysis in economics (Holling and Gunderson, 2002, p. 34), is the consequence of an external perturbation impacting the system, which collapses due to the rigidity acquired during the phase of conservation. The final phase, reorganisation, sees the potential accumulated during the first two phases, gradually restored so that the system can be colonised again during another phase of exploitation. In this reworking of the adaptive cycle, Holling and his colleagues conceptualise resilience as a function of variability: the increased variability in a system results in an increased redundancy of elements and flexibility of the relations between them, resulting in turn in a greater ability to manage the consequences of an impact (resilience).

The reworking of the adaptive cycle is consistent with Holling's initial conceptualisation of resilience in ecology and the later conceptual clarifications in the field of socio-ecological systems. However, while Holling's initial conceptualisation provided a theory of resilience for the system, he did not further insist on the interactions between different systems in relation to their resilience, or the lack of. Panarchy provides an account of the relations between systems by reconceptualising them as relations between adaptive cycles. In other words, if each system is characterised by an adaptive cycle, with relations between different phases, panarchy is constituted as a 'nested set of adaptive cycles', where all the adaptive cycles establish multiple connections between them (Holling *et al.*, 2002, p. 71-74). As such, 'each level is allowed to operate at its own pace, protected from above by slower, larger

levels but invigorated from below by faster, smaller cycles of innovation' (Holling *et al.*, 2002, p. 76). The image of panarchy can be conveyed by a cone, which at its base is formed by the smallest possible adaptive cycle, which is connected with increasingly bigger ones. The connections between the adaptive cycles enables a hierarchical relationship (by virtue of the fact that each adaptive cycle is both connected to a bigger and a smaller one) that is dynamic in nature, meaning that cascading is possible between adaptive cycles. When productive novelty cascades up or when destructive catastrophes cascade down, the panarchy is transformed (Holling *et al.*, 2002).

Resilience and variability play an important role here, because they can avoid the triggering of the release phase, which can be devastating in terms of its consequences. 'Putting the brakes on release' is a practice that encourages the creation of small disturbances that will prevent rigidity in the conservation phase and maintain the resilience and variability of the system, so that the release phase is avoided (Berkes and Folke, 2002, p. 132). Furthermore, ''by mimicking fine-scale natural perturbations, these practices help avoid the accumulation of disturbance that moves across scales and further up in the panarchy' (Berkes and Folke, 2002, p. 131). Rather than preventing and controlling, as with the previous command and control approaches, panarchy seeks to instil the idea that maintaining variability automatically enhances resilience and prevents the cascading of collapses in the panarchy. For this purpose, disturbance, perturbations and uncertainty should be harvested rather than feared (Carpenter *et al.*, 2002, p. 193).

2.3.4 Resilience as a model of managerial governance

In some respects, resilience in socio-ecological systems and panarchy are meta-theoretical reflections regarding the way we think about the interface between humans and nature. Moreover, they are reflections about governance, although not governance in relation to the state and politics, as is traditionally understood, but governance in terms of management. They attend intimately to the question: How can we govern social and natural systems (at their interconnection) once we acknowledge that reality is complex, unpredictable and full of destabilising surprises? How can complexity, unpredictability and surprise be reconceptualised from debilitating to productive aspects to governance?

These principles presented above are also well illustrated by the Stockholm Resilience Centre, which is a formal, institutional expression of the Resilience Alliance, a global network of scientists promoting resilience. They establish seven principles for building resilience in socio-ecological systems: maintain diversity and redundancy, manage connectivity, manage slow variables and feedbacks, foster complex adaptive system thinking, encourage learning, broaden participation and promote polycentric

governance systems (Biggs *et al*., 2012). These principles are not just a set of recommendations, but represent a specific philosophy of governing socio-ecological systems. I want to suggest that the clear majority of the managerial literature surrounding resilience, draws (directly or indirectly) on the conceptual basis established earlier on by Holling and his colleagues. Linkov *et al*.'s commentary for the *Nature* journal illustrates these continuities (Linkov *et al*., 2014). They seek to establish resilience management as a dominant paradigm to complement risk management for the governance of large integrated systems. They start from two interrelated assumptions. First, the nature of the threats we experience now, especially from climate change and climate extremes cannot be predicted accurately by the scientific method. Second, all systems are interconnected, creating in effect large integrated and complex systems. They go on to recognise that there are merits to the risk management approach, which identifies vulnerabilities of specific components in systems and proceeds to harden them to prevent overall system failure. However, like the panarchy literature, they suggest that the problem with this paradigm lies with its compartmentalised approach to vulnerabilities.

A resilience paradigm overcomes this problem by attending to the system overall, connecting all the compartmentalised parts together and placing them in dialogue with each other to avoid disasters 'cascading down' (in the language of panarchy). As such, resilience uses 'strategies of adaptation and mitigation to improve traditional risk management' Linkov *et al*., 2014, p. 407). These strategies can take the form of 'flexible response, distributed decision making, modularity, redundancy, ensuring the independence of component interactions or a combination of adaptive strategies to minimize the loss of functionality and to increase the slope of the recovery' (Linkov *et al*., 2014, p. 407-408). In other words, they seek to 'put the brakes on release' (Berkes and Folke, 2002, p. 132) and encourage the variability and redundancy of the system, so that even if threats occur, the functionality of the system can be maintained and resilience achieved. As such, resilience (and panarchy) fulfils the function of providing a language and conceptual model that prevents threats and uncertainty from becoming debilitating to governance.

2.3.5 The question of agency in managerial resilience

I have presented the main assumptions regarding managerial resilience, which underpin many of the resilience propositions that have made their way into policy making. These assumptions concern how resilience is made into something like a heuristic model that can be therefore operationalised for the purposes of policy. They are also developed in relation to governance conceptualised in terms of systems, rather than more traditional conceptualisations, such as state-society relations. There is another aspect of managerial resilience that factors into the analysis, namely individual agency. In particular, there is an insistence on adaptive forms of governance (Folke *et al*., 2003) and adaptive

capacities (or capabilities) (Brown and Westaway, 2011; Eakin and Luers, 2006). Here, the emphasis depends on the referent of resilience. For systems, the insistence on adaptive capacity or adaptive forms of governance comes with the territory of complexity. In a complex adaptive system, such as a socio-ecological one, much depends on the capacity of the system for renewal and re-organisation, as showcased by the adaptive renewal cycle in the model of panarchy (Gunderson and Holling, 2002). The capacity to maintain flexible relations between the elements, insures that the system does not build rigidity and it can incorporate disturbances (though an adaptive process). In the case of the individuals, they are seen by this strand of literature to be possessing agency, in the sense of 'independent capability or ability to act on one's will' (Brown and Westaway, 2011, p. 325). This agency is allowing them to adapt to the constraints of their environment. Furthermore, in terms similar to complex adaptive systems, the agency of the individuals is seen to be a function of the elasticity of their relations with the environment (both social and cultural) alongside dispositions of a psychological nature. As Brown and Westaway convey, such agency is 'determined not only by the physical capacity of an individual, but also by the extent to which that is supported by relationships with others and their own perceptions of the extent to which they can exercise agency, in other words, self-efficacy' (Brown and Westaway, 2011, p. 330-331). For this strand of literature, adaptation more generally is understood as a function of uncovering the psychological and socio-cultural aspects of adaptive capacity in individuals (Grothmann and Patt, 2005).

Resilience can be seen as a critique of the dominant research tradition in adaptation, which takes an actor centred view. In contrast, the resilience approach is 'systems orientated, takes a more dynamic view, and sees adaptive capacity as a core feature of resilient social-ecological systems' (Nelson *et al*, 2007, p. 395). The discussion here, is powered by the realisation that the 'sources of resilience for taking adaptive action are common across scales' and they are the 'inherent system characteristics that absorb perturbations without losing function, networks and social capital that allow autonomous action, and resources that promote institutional learning' (Nelson *et al*., 2007, p. 395). In sync with this realisation, is the statement that the usefulness of resilience as a concept, stems from the fact that 'it conveys the aim of enabling the persistence of broadly similar communities or ecosystem services, as opposed to accepting or promoting change in response to climate change' (Morecroft *et al.*, 2012, p. 550).

A further important strand of resilience, intimately connected with adaptive capacity and vital for the thesis, is community resilience. FCRS's focus on implementing a plethora of practices is consistent with both the Strategic Framework on Community Resilience (Cabinet Office, 2011b), in which the UK Government provides guidelines for building community resilience and the community resilience

literature. The latter has been developed conceptually in relation to a number of indicators or components of what constitutes a resilient community (Amundsen, 2012; Magis, 2010; Berkes and Ross, 2012). Examples of such components and indicators are: community resources, community networks, institutions and services, people–place connections, learning or social values. Community resilience studies stress the need to develop the agency of individuals in the community, to cope with changes caused by shocks and perturbations and enhance their participation and empowerment in policy making. However, current approaches to community resilience only consider its development at the local level, as something intrinsically benign and necessary, and fail to engage comprehensively with the connections between the local level of the community and larger scales (Davidson, 2013).

However, managerial resilience is not without its shortcomings and before moving onto critical resilience, it is worth mentioning that it has been criticised from within as well. The more trenchant criticisms highlight its inadequacy of application in social contexts due to its negligence of power relations or lack of transformative ethos (Pelling, 2010), a blind eye for inequalities (Hornborg, 2009) or unsympathetic treatment of poverty and the poor (Bene *et al*., 2012). One common denominator to these complaints is the notion that resilience-thinking is marked by an uncritical treatment of human agency (Brown and Westaway, 2011; Cretney, 2014) and a lack of understanding of social difference (Brown, 2014). The application of resilience to socio-ecological systems suggests a rather uniform view of humans and the relations between them, devoid of the messiness of their politics, power struggles or the historical and cultural contexts in which they conduct their lives (Cote and Nightingale, 2011). This is perhaps not surprising, as many contributions concerning resilience have a preference for system-wide thinking, in which humans are but one of many elements that need to be factored into the analysis (Folke *et al*., 2003; Turner, 2013).

2.3.6 Resilience in the context of flood governance in the UK

As this thesis focuses on flood governance in the UK, this section will explore the multi-layered phenomenon of flooding. This will be done in relation to how, historically, different forms of authority in the UK have conceptualized flooding as a problem for governance and have devised solutions for it. It will then reflect on the place of resilience in relation to the literature on flood risk management.

Flooding is the most frequent of all natural disasters and a ‘global phenomenon which causes widespread devastation, economic damages and loss of human lives’ (Jha *et al*., 2012: 19; Borrows and De Bruin, 2006). More generally, floods can be categorized based on several attributes such as their causes, onset time and duration. Pluvial, coastal, fluvial, groundwater or flash are all different types of flood (Jha *et al*., 2012). River or fluvial flooding occurs when the banks of the watercourse are

overflown, usually due to rainfall or obstruction of flood channels (Wilby *et al*., 2008; Jha *et al*., 2012). Pluvial floods occur when the capacity of the land to absorb water is exceeded, usually as result of heavy rainfall or snowmelt (Jha *et al*., 2012). The floods can also be described as either flash floods or slow-rise floods. The former has a short duration and it is mainly the result of a major storm while the latter builds up over time from a combination of heavy precipitation and increasingly higher levels of water.

Another way of thinking about flood governance is in the tripartite formula of the adaptive responses paradigm, formulated as part of the IPCC response strategies to climate change in 1990: protection, accommodation and retreat (Gilbert and Vellinga, 1990). While these propositions have been formulated in the context of coastal flooding, they hold equal relevance for fluvial or river flooding. Protection involves defensive measures designed to protect specific areas against the risk of flooding. They can be 'hard' approaches, focused on engineering physical structures to stop or control a flood or 'soft' engineering approaches, such as the creation and nourishment of wetlands (Bray *et al*., 1997; Gilbert and Vellinga, 1990). The advantages of 'hard' protection include the possibility to stop or control the flood but they can be costly and require constant maintenance (Borrows and De Bruin, 2006). The 'soft' approaches are more suited when social and economic activities are better not disrupted. Overall, the protection approach requires the availability of capital for the creation of defences and political and institutional will for their maintenance, making them more viable for the rich countries of the developed world and relatively inaccessible in most developing world.

In contrast, the accommodation and retreat options are more adaptive approaches that require acceptance that some areas affected by floods could be lost and space needs to be made for water. Alternatively, lands need to be abandoned, as the case of the retreat option, with the thought that they might be developed later in the future (Gilbert and Vellinga, 1990). Accommodation is most feasible in places where there already exists a history of flooding or flooding is recurring with high frequency. It is also most feasible where protection is too expensive or difficult to implement and retreat from the land is not an option. Bray *et al*. (1997) identified a few options for accommodation strategies. One is to 'adapt to effects' which requires coordinated efforts, planning, identifications of vulnerable areas and community involvement. Elevating buildings, modifying drainage or storm and flood warnings are among the most common measures of this option. It also has environmental benefits and preserves the natural processes. 'Change activities' is an option that implies a change in the socio-economic profile of an area because of flooding. It requires extensive planning and feasibility studies and applies to areas under development pressure. 'Accept risks' implies the involvement of private insurers to compensate for the damage and it is suitable to urban areas prone to low-risk

flooding (Bray *et al.*, 1997). The retreat strategy is a more extreme version of the accommodation one, with the land being abandoned in a planned manner and people and physical structures relocated (Bray *et al*., 1997; Gilbert and Vellinga, 1990). Retreat can promote the natural rehabilitation of an area and it can involve the participation of public authorities in the acquisition of the land, 'conditional development' of the area through promoting certain prohibitions, regulation and long term-term leases or 'abandonment to private market forces', where the developers incur full risks in that area.

UK has undergone a shift from structural defences, focused on hard engineering approaches and protection and towards a more holistic and integrated form of flood management. When talking about a shift away from structural defences, it must be acknowledged that in UK, the administrative structure of flood management has a highly institutionalized outlook (Werritty, 2006). The Department for Food and Rural Affairs (DEFRA) is the central authority institution that designs and develops the national policy. In charge of its implementation are the Environment Agency (EA), which has supervisory role and through its Regional and Local Defence Committees sets up defence schemes on the *main rivers* and the Internal Drainage Boards (IDBs), which is in charge of *ordinary watercourses*. The administrative architecture that placed DEFRA at the centre has privileged the emphasis on structural defences at the expense of complementary strategies such as promotion of avoidance, raising awareness and assistance provision (Werritty, 2006). Such a paradigm has proven successful for a long time until the repeated floods at the beginning of the new millennium and the rising costs of universal flood insurance prompted its questioning (Werrity, 2006).

Flood risk management has been harboured as the new paradigm designed to manage flooding in a time of climate change and uncertainty. In the narrowest sense, flood risk management involves the process of managing an instance of existing flood while in the wider sense it refers to the planning and setting up of a system designed to manage flood risk (Plate, 2002). Managing the risk of floods is deemed to be a complex and continuous activity, involving a combination of structural and non-structural approaches, as well as multiple levels of governance (Borrows and De Bruin, 2006; Plate, 2002). The starting premise here is that while floods are the most common and devastating of all natural hazards, they can never be eliminated in their entirety and therefore societies must learn to live with them and mitigate their negative consequences. Structural methods to protect against the risk of flooding such as permanent physical constructions are mandatory, but they also require non-structural methods such as 'operational activities or responses at the time of flooding' to provide holistic and comprehensive protection (Borrows and De Bruin, 2006: 152). Actual protection from flood would require a complex set of physical, social, legal and institutional arrangements. Among other things, this entails the installation and maintenance of physical constructions, regular inspection

of the river's watercourses and banks, non-structural operations such as dredging and flood warnings, legislation stating who has to take responsibility of planning and who has authority to respond to flood emergencies, involvement of the local and regional stakeholders, devolvement of responsibility to some of them, campaigns for information of the communities about the risks they face and the range of options available (Borrows and De Bruin, 2006).

In the new flood risk management paradigm, defence against flooding, living with floods or withdrawal are not mutually exclusive options. The direction of management in England suggests that spatial planning and land management can 'make space for water' through the adoption of a 'whole landscape approach to risk management' (Wilby and Keenan, 2012: 16). As a result of a series of consultations with the most important stakeholders in flood management, DEFRA issued the *Making Space for Water* document (2004). This document attends to the 'need to consider how we *adapt* to climate change, incorporating allowances into our consideration of flooding and erosion risks, ensuring our measures are reversible and adaptable, and that we review our approach on a regular basis using the foundation of best available science' (DEFRA, 2005: 7, *emphasis added*). Considered by some as an incomplete step towards sustainable flood management (Werritty, 2006), DEFRA's shift is considered though to be a 'more holistic approach involving whole catchment and risk-driven adaptability to climate change' (Wilby *et al*., 2008: 2512). This change recognises that in a world of climate change and unpredictable risk of flooding, complete protection against flooding is impossible. Instead, DEFRA opted for the holistic approach by starting to fund schemes in conjunction with the communities and individuals themselves, whereas funding was offered for the individuals to take charge of the flood defences themselves (EA, 2012**).** The follow-up to this scheme was *Flood Resilience Community Pathfinder* which is aimed to 'support innovation by funding projects that demonstrably improve resilience in communities at significant risk of flooding in England' (DEFRA, 2012: 2).

Resilience to flooding is a relatively new idea, grafted onto the body of debates around flood risk management (Werritty, 2006). The move away from traditional approaches and towards policies based on resilience is not restricted to flood risk management but rather part of a widespread policy transformation embraced in the UK and the Western world more generally (Lentzos and Rose, 2009; Joseph, 2013b). The shift draws heavily on ideas about natural and social systems and adaptation to climate change. It also advances a newfound role for individuals, inciting them to participate in the management of floods and develop their adaptive capacities to flooding. However, there is much ambiguity when it comes to the function that the new discourse of resilience fulfils in flood governance as it is not clear where it sits in relation to the flood risk management paradigm. This ambiguity is not seen as a deterrent, as there is an apparent acceptance of resilience as a crucial element in the

governance of floods. What becomes very interesting to interrogate are the novel dynamics resilience brings to flood governance and the transformations they entail for the forms of governance and individuals that are its object. To refer back to the research question of the thesis, the most pertinent question to ask is how does governing through resilience is actually instantiated in practice.

2.4 Critical literatures on resilience

The section on managerial resilience has presented the bodies of literature that have promoted the major assumptions that have come to shape policies based on resilience. It has stressed how resilience is envisioned as an ideal, an attribute of a system of governance. It is suggested that fostering resilience will lead to positive outcomes. From an alternative angle to the managerial literature, I have suggested there are a sum of contributions that regard resilience as a more problematic concept. This dichotomy is highlighted by Peter Rogers in what he regards a continuum or spectrum between positive and negative interpretations of resilience (Rogers, 2015). The positive reading emphasises 'participation, empowerment and agency' and it is pitted against a negative reading, which entails 'models of citizen responsibilisation, themselves acting as a prelude to the withdrawal of government-coordinated safety nets and financial support structures for those rendered vulnerable – be it as a consequence of structural conditions or hazard events of all types' (Rogers, 2015, p. 56). This chapter will present the contributions that are listed as negative or critical resilience. It will begin by examining David Chandler's argument that resilience represents the governance of complexity. It will then present the literature that suggests resilience is a strategy of neoliberalism and conclude with a series of remarks on the shortcomings of these critiques of resilience.

2.4.1 Resilience as governance of complexity

David Chandler's discussion of the connection between resilience and complexity is very important as it tackles the issue of complexity in a different way from the managerial literature. While the latter sees complexity as an ontological given, a feature of the world (especially the globalised, interdependent world) and a problem which resilience responds to, Chandler's work interrogates claims about complexity and argues that in fact complexity understandings provide a backbone for sustaining resilience. While not a negative reading of resilience, Chandler's thesis highlights the contingency at the heart of claims about resilience and its necessity and opens it up for critique.

Chandler operates a distinction between classical and post-classical understandings of resilience, where the difference is made by the placement of the concept in relation to the human subject. Classical resilience lies with the inner strength of the autonomous subject, enabling metaphors such

as ‘bounce-back ability’ (Chandler, 2014, p. 6). Resilient subjects are the ones that withstand external pressures, by virtue of internal capacities that enable them to thrive in life, despite adversity. However, Chandler suggests that such understanding of resilience, based on a clear distinction between active autonomous subjects and passive objects does not capture what is at stake in contemporary discourses of resilience. Rather, a post-classical understanding is more appropriate in the sense that it overcomes the subject/object distinction and conceptualises resilience as an ‘interactive process of relational adaptation’ (Chandler, 2014, p. 7). The autonomous subject is not the natural starting point anymore, but becomes an endogenous part of complex adaptive processes. The underlying assumptions behind Chandler’s conceptualisation of post-classical resilience here pertain to complexity theory.

Complex life brings order out of chaos through the mechanism of interactive adaptation. This is a process that lacks closure, that is forever open and which continually transforms the world. Complexity thinking is posited as an understanding of the world that is in radical opposition to modernist or liberal ontologies of life. The latter seeks to understand life in terms of fixed relations between objects with determinate properties and which are governed in accordance to immutable, universal laws. Such is the case for example with a Newtonian understanding of the physical universe, or many approaches to intellectual inquiry that go under the label of rationalism (see Hollis, 1994 for an overview). Complexity is cast as a radical alternative to these frameworks of understanding, which are negatively perceived as reductionist, precisely because objects are subject to interaction which in turn gives birth to emergence. Emergence is a crucial characteristic of complexity as it characterises the process by which the outcomes of the process of interaction can be a novel, qualitatively different feature that can transform the nature of the system (Ciliers, 1998). Examples of complex systems characterised by emergence are the brain, natural language or social systems. To emphasise, a complex system cannot be understood as merely the sum of its parts as the relationship between these parts are not fixed but always changing, giving birth to novel features. They are characterised by non-linearity, in the sense that the inputs don't always have proportional outputs.

David Chandler’s thesis (2014) proposes that resilience should not be dismissed as a buzzword but should be seen as enabling the governance of complexity. Complex life is neither ordered nor chaotic and it lends itself to be governed but in terms different than those of liberal modernity. This is because complex life generates self-governing order due to the constant adapting, communicating and exchanging that mark its interactions with the surrounding environment. He suggests that complexity can be governed through its own mechanisms of creative problem-solving. This is where resilience comes into play as a pragmatic framework of understanding that enables complex life to reveal itself.

In lay terms, this translates into dismissing any reductionist language (such as those of binaries: Left/Right, liberal/authoritarian) and adopting one of complex adaptive systems underlined by a problem-solving methodology.

This can be seen at work in discourses of development, where universal liberal frameworks of understanding stop counting when the 'local' is seen not as a limit to those frameworks, but a resource in itself. The local communities and individuals are understood not as a limit (or a barrier to the internalisation of liberal discourses of development), but as resources that contains the solutions within themselves. Key to resilience thinking therefore, is harvesting the adaptive potential of communities themselves, to solve their problems through solutions, which are readily available once reductionist frameworks of understanding are removed and complex life is allowed to take its course. Chandler suggests that approaches to governing that favour complexity, shift the governing rationale from an intervening and controlling central authority in the direction of fostering adaptive capacities, by removing institutional blockages 'understood as the unintended outcomes of markets and state policy making' (Chandler, 2014, p. 211).

Chandler argues that 'complexity understandings do a lot of heavy lifting for resilience-thinking', specifically because their criticism of reductionist assumptions about governance makes room for novel approaches, such as resilience (Chandler, 2014, p. 20). While Chandler provides a compelling argument that accounts for the novelty and appeal of resilience, there are some issues that this thesis takes further. First, a note of caution is needed here, with regards to the nature of complexity. As Brassett and Holmes (2016) show, complexity is not a unified field, but rather a series of discourses about the nature of reality, contending the degree to which reality can be known and in what form. Second and more importantly, a flag is raised when considering the highly theoretical nature of Chandler's claims, as they are drawn mainly from policy documents and official rhetoric. For example, Chandler suggests that the vision of official documents such as the *National Adaptation Programme* (DEFRA, 2013) can be understood through the prism offered by complexity understandings. It remains an open question however, to what extent claims of such theoretical nature are reflected in policy practice. In other words, Chandler's thesis about resilience as governance of complexity can make a statement about the overall shift in the nature of governance, but less so a claim about the actual content of governance, which for all intents and purposes can be steeped in modernist understandings. To use a metaphor, an empirical gap opens between the nature of the forest, allegedly understood in increasingly complex terms and the nature of the individual trees. It is possible that the proverbial 'can't see the wood for the trees' could apply to policy makers on the ground.

2.4.2 Resilience-as-neoliberalism

One of the most pervasive critiques of resilience is that it is 'intuitively in keeping with neoliberalism and its system of rule' (Evans and Reid, 2013, p. 91). By this, it is meant that resilience represents a neoliberal strategy of governing and that in effect, the workings of resilience further embed neoliberalism (Joseph, 2013b). The main implication of the association of resilience with neoliberalism, is that resilience embodies a shift in governing, away from state-centric backed frameworks of security and protection and towards 'inculcation of self-securitization of individuals and communities through acceptance of and adaptation to contingency' (Schmidt, 2015, p. 403). In other words, resilience becomes focused on the responsibilisation of individuals and communities, so they can take on the task of securing themselves against threats that the state is said to have lost a grasp of.

While neoliberalism has been analysed from many angles (as state policy, as a particular phase of capitalism, as ideology), its most important aspects in the context of claims about resilience, stem from Foucault's diagnostic of neoliberalism as a political rationality that looks to extend economic reason to all aspects of human life (Foucault, 2010; Brown, 2015). Foucault's work on governmentality highlights how the modern autonomous individual and the sovereign state co-determine each other's emergence, through a series of successive rationalisations of the operation of power through the social field (Foucault, 2010). Neoliberalism as a particular type of governmentality, extends liberal ideas about the 'natural processes' of the economic sphere, by embedding competitive practices into spaces and sectors of the social life that were previously not subjected to economic imperatives (Lemke, 2001, p. 203). It is a political project, not just an ideology, which seeks to render the social domain economic, while at the same time claiming that such social reality already exists (Lemke, 2001). The subjects of such political rationality are encouraged to internalise a behaviour that mimics the economic enterprise and prioritises autonomy, responsibility and flexibility. And just like the economic enterprise, they are also required to take responsibility for their own wellbeing and incur the risks that derive from their own choices and the dynamics of the overall social domain. This is consistent with an understanding of governing 'at a distance', where public services run by the state are rolled back in favour of unfolding market mechanisms and social actors are acted upon through utilising their freedom (Rose, 1993).

Furthermore, this understanding of a connection between neoliberalism and resilience is extended by the introduction of ideas about complexity. The rise of resilience is predicated on its ability to colonise the ontological domains of complexity and uncertainty. As Jonathan Joseph suggests, an understanding of the world as increasingly complex and contingent, provides a firm ontological ground

for resilience. It proposes a move away from stable and enduring social relations and towards an understanding of society composed of 'reflexive agents capable of adaptive behaviour' (Joseph, 2013b, p. 39). Many critiques suggest that resilience operates at the interface between a complex adaptive ontology and a form of governmental practice which is neoliberal in its nature (Welsh, 2014; Kaufman, 2013; Pugh, 2014). They suggest that neoliberal governmentality thrives on a complex adaptive ontology due to the onus that neoliberalism places on individual responsibility (see Schmidt (2015) for a deeper analysis of the relationship between complexity and neoliberalism). They also connect with resilience in their endorsement of a view of the world as governed by radical uncertainty and indeterminacy. After the 2008 financial crisis, some argue neoliberalism has mutated. With state backed public services under even more pressure from austerity measures and further rolling back, neoliberalism gives up promises of prosperity and simply seeks to make individuals, communities, systems or organisations learn to adapt and live with the risks and the potential catastrophe that is imminent (Dean, 2014; Brad and Evans, 2013).

Resilience is extended beyond the individual to communities, institutions and systems overall. The key to building resilience here, is the notion of networks. The claim is that resilience is reflective of the changing structure of the neoliberal societies where the autonomous, responsibilised individuals take advantage of networked forms of governance and pursue their own operations with relative independence from the state (Zebrowski, 2009). They constitute the substrate for the functioning of communities and organisations 'which need to show awareness of how to enhance their capacities through networks' (Joseph, 2013b, p. 44). Within the neoliberal logics of governance, communities, organisations or institutions are best understood as neuronal-like networks of heterogeneous elements whose resilience can be built by raising awareness of their interconnectedness. The ideal resilient individuals operating within these networks are capable not only of withstanding shocks, but they are encouraged to transform negative situations into positive opportunities, by internalizing the enterprise model and becoming an entrepreneur of one's self (O'Malley, 2010; Foucault, 2009).

Some authors regard resilience as having a detrimental impact on individuals. Some claim that resilience represents the dissolution of the political subject (Duffield, 2011), while others regard it as a subject that is relegated to permanently adapting to a world they are actively denied control over (Evans and Reid, 2013). Others have taken more reserved positions and envisioned more political space (conceptually) for individuals to struggle in the context of governmental practices of resilience. This space is created at the meeting point between the governmental rationality (of resilience) with the materiality and lived experience of the referents they are meant to secure. The neoliberal diagnoses of resilience have proposed neoliberal rule as a 'strikingly uniform theoretical schema'

(Corry, 2014, p. 257) and a 'fully formed mode of governance' (Lundborg and Vaughan-Williams, 2011, p. 375), meaning that the implementations of their strategies in practice, are oblivious to the discontinuities, complexity and interdependences of the entities to which they are applied. Lundborg and Vaughan-Williams suggest that the implementation of the neoliberal (resilience) policies is instantiated against an 'excess of life' which leads to mishaps and contradictions that put in question whether and how this mode of governance actually 'works' (Lundborg and Vaughan-Williams, 2011, p. 375). Expanding this line of thought, Mareile Kaufmann argues that (resilience) regulatory practices redistribute responsibility to the members of the society encouraging them to become their own 'apparatus of security' (Kaufmann, 2013, p. 61), while at the same time setting up parameters for action, in the event of crisis. At the same time, she also suggests that the application of these practices creates spaces for societal members to 'creatively self-organise' during a crisis, a response that would exceed the remit of the regulatory practice. As such, she concludes that the subjects of these practices can bend and re-appropriate the regulations, creating alternative modes of conduct during a crisis.

Similar critiques of neoliberal governmentality take issue with its formulation as a 'generalized, and in some cases impregnable and global, liberal regime' (Corry, 2014, p. 260). In opposition, Corry argues that 'resilience appears across a variety of contexts and is articulated in different ways, some of which support neo-liberalism and some of which are subversive of it' (Corry, 2014, p. 270). This is not meant to indicate that the resilience-as-neoliberalism thesis is wrong per se, only that it 'overlook[s] its critical potential and functions within other logics of governing' (Corry: 2014, p. 257). Similarly, Jessica Schmidt suggests that resilience is not a continuation and fortification of neoliberalism as a system of rule, but rather a reaction and attempted response to the ingrained governance failures of neoliberalism, centred on the ontologicalisation of complexity. As neoliberalism turned from critique to regime of governance in the 1990's, the issue of complexity inflected it with a paradox. Since neoliberalism advocates a complex-evolutionary ontology, it means it has a hard time reconciling between the limited agency granted by the ontology (as neoliberalism does not provide a *telos* or transformative goal of governance, only responds to the stimuli of the market) and the need for collective decision-making and social engineering. Schmidt argues that resilience overcomes this issue by reconfiguring agency, which 'resurfaces in terms of making (constant) change on inner life through learning from exposure to the contingencies of ontological complexity' (Schmidt, 2015, p. 404). This focus of resilience on the inner life of the individual, comes at the cost of abandoning concerns with transforming the external, material world through 'conscious, autonomous and goal-oriented decision-making' (Schmidt, 2015, p. 404; see also Chandler and Reid, 2016; Joseph, 2016).

There is significant merit attached to the resilience-as-neoliberalism argument, in as much as it provides a very welcome, critical contribution to the resilience literature. However, its main limitation currently lies in its top-heavy reading of resilience. The majority of these contributions take their evidence basis from official documents and rhetoric. As a result, the status and content of responsibilisation, one of the core claims of this argument, is for the most part assumed rather than empirically investigated. By focusing on the implementation of a policy initiative in its entirety, from top to bottom, this thesis aims to unpack the content of responsibilisation and assess its degree of success, in relation to the individuals on which it is targeted. As such, chapters six, seven and eight will contain a series of reflections about responsibilisation, all in relation to the empirical material that comes out of the implementation of FCRS. These reflections target the status of responsibilisation (how can it be theoretically apprehended), its content (what does it mean to responsibilise) and its degree of success and failure.

2.5 Conclusion

The research question that this thesis is asking relates to how is governing through resilience actually instantiated in practice. As a result, the literature review has provided the background for understanding the wider discussions regarding resilience and governance. This review has acknowledged that the literature surrounding resilience is wide and burgeoning, and it has focused on the link between resilience and governance, which underpins the research question of this thesis. In the first part, it has performed the crucial task of furnishing the theoretical assumptions on which resilience policies rest. These assumptions were illustrated in reference to the more substantial theoretical contributions that have established resilience as an attribute or value that is inherently good and needs to be fostered. Holling's conceptualisation of resilience, the further work on socio-ecological systems and the model of panarchy, all paint a specific image of today's world as complex and interdependent, suggesting that resilience represents a pragmatic solution. I have argued that the concept of resilience, based on these specific assumptions, informs many policies centred on resilience in the UK and other parts of the world. I have highlighted that there are also various straightforward criticisms of this concept of resilience, mainly its negligence of power relations and politics, in addition to its overly technical nature. However, for the most part, according to the managerial literature, governing appears to be reduced to taking resilience for granted, as a benign policy object whose fostering is necessary.

On the other hand, there is a strand of literature which I have referred to as 'critical resilience', in which resilience is problematized, specifically in relation to governance. I have shown here that

resilience benefits from an understanding of the world in terms described as complex, which needs further investigation, rather than to be taken for granted as in the managerial literature. The literature on resilience and neoliberalism is very important in relation to the research question. At its core, the 'resilience-as-neoliberalism' thesis suggests that resilience is a strategy that further embeds neoliberalism's system of rule and shifts responsibility for security from the state onto the individual. However, as noted above, this argument assumes the form of responsibilisation, leaving a host of empirical questions about its content and practical success unanswered.

This thesis intervenes in this gap and offers two original contributions to the resilience literature. Firstly, it suggests that, conceptually, neoliberalism and complexity do not exhaust the logics of governing within which resilience can function. This might be a function of how much of the Foucauldian toolkit is imported. As I will show in the following two chapters, there is much conceptual purchase to be gained if only the methodological toolkit (in this case genealogy as problematization) is imported, without the concepts associated with it (like biopolitics). In other words, in this research I use genealogy as problematization to generate new insights about how governing through resilience is articulated, rather than (exclusively) confirm or invalidate existing ones. Secondly, many of the critical contributions appear to take their evidence from official discourses and rhetoric (with a few notable exceptions). This research does not investigate *only* the official documents and discourses, but follows through with the implementation of resilience policies on the ground. It makes claims about governing through resilience at both conceptual and practical levels. Moreover, it investigates the interface between the two, complete with its interconnections and continuities, in addition to its failure points.

Chapter 3: Theoretical framework: governmentality

3.1 Introduction

The previous chapter which reviews the literature on resilience, has presented how the concept has outgrown its academic origins and spread in the realm of policy making, despite its ambiguity and contested nature. The UK political scene has embraced it unreservedly, as evidenced by the numerous official documents issued under the banner of achieving resilience, in one form or another (Cabinet Office, 2004a; Cabinet Office, 2008; Cabinet Office, 2011a; Cabinet Office, 2011b; DFID, 2011). While many contributors to politics in the UK welcome the dissemination of the concept and deem its employment as both benign and salutary, there are many questions that remain unanswered, in relation to how resilience actually works in practice and how to identify the associated political and social effects that derive from its employment. Lacking here most acutely, is an appreciation of the topography of power relations in society that is supposedly changing with the shift to the resilience paradigm. The potential for resilience to have affected the terrain of power relations in the UK is present because its application will, by necessity, need to prioritise a number of concerns and an implicit subset of ideas at the expense of others, with different effects for the actors that have a stake in the discussion. In other words, changing the formula of governing to one which encompasses the notion of resilience, is likely to produce a change in the way policy is designed. At the same time, it can also create an alteration of the devices and mechanisms (formal and informal) used for implementation and affect the field of possibilities for some actors when compared to others. This thesis will attend to these concerns.

The popularity of resilience has been regarded as a result of the delayed response from the critical academic commentariat (Chandler, 2013a). Of the critiques that have begun to emerge of late, most seem to be directed towards identifying resilience as a particular discourse that can be subsumed to governmentality, or if not, understood most appropriately in the context of governmentality (O'Malley, 2010; Reid, 2012; Joseph, 2013b; Reid and Evans, 2013; Walker and Cooper, 2011). The few exceptions to this trend take a more pronounced Marxist tone and denounce resilience as a form of ideology used to mask the reality of contemporary processes of accumulation and distribution (Hornborg, 2009). The identification of a fit between resilience and neoliberal governmentality and the adoption of a more critical stance towards resilience are indeed welcome and necessary contributions to the debate. This is even more appropriate, considering the avalanche of academic output, which demands the coming of age of resilience as a panacea for environmental and social

problems. However, to date, these contributions have only touched the surface by establishing the link between resilience and governmentality, and not attended to the more in-depth discussions catering to the actual effects of resilience in practice.

This chapter will provide a discussion of the analytical framework that will provide a theoretical and conceptual terminology, which will assist in addressing the concerns raised above. The analytical framework chosen is governmentality. However, the thesis does not replicate the argument that resilience is a form of neoliberal governmentality (Joseph, 2013b; Walker and Cooper, 2011). It rather takes the conceptual infrastructure of governmentality, and uses it in order to generate a set of ontological and epistemological coordinates that delineate and clarify the conceptual boundaries, within which the research takes place.

This chapter is organised into three main sections. The first section acts as a background for understanding some crucial ontological considerations, which will allow the reader to comprehend the nature of governmentality. Importantly, it will insist on the notion of *power relations* that sits at the centre of the concept of governmentality and without which, it would be difficult to grasp some of its fine nuances (such as the conceptualisation of government or subjectivity). The second part will provide a characterisation of governmentality, complete with a presentation of its main components. The third and final part will detail analytics of government, a methodological approach to governmentality, and present the concepts of regime of government, rationality, technology and forms of subjectivity. These are the main concepts that will provide the technical terminology for answering the research questions in the following chapters.

3.2 Governmentality: ontological considerations

Before addressing the questions concerning governmentality, it is worth considering some key elements pertaining to Foucault's ontological stance, or in other words, the way he conceives the fabric of the world. Foucault's governmentality should be seen as a function of complementing his earlier inquiries into the 'discipline of the body' (Foucault, 1977b), with new insights about the 'biopolitics of the populations' (Foucault, 2009; 2010). It was presented in more depth, in a series of lectures at College de France between 1977 and 1979, which bear the titles: *Security, Territory, Population* (2009) and *The Birth of Biopolitics* (2010). Common to all of these concerns is the historicist method he adopts and an emphasis on the symbiotic relationship between knowledge and power.

Rather than seeking a continuous ascendance of events through time, as with conventional historical analysis, Foucault is preoccupied with revealing 'beneath the constructed unity of things not a point

of origin but dispersion, disparity and difference, and the play of dominations' (Smart, 1985, p. 59). In opposition to political philosophy, sociology or history, Foucault does not look to start his inquiries from universals like the sovereign, sovereignty, subjects, the state or civil society. Instead, he wants to 'cut off the head of the king' (Foucault, 1980a, p. 89). This means that rather than taking for granted a 'primary, original, and already given object' such as the universal, Foucault aims to begin his analysis by considering the concrete practices that are said to have constituted the universal, or which practices are aggregated under the domain of such a universal (Foucault, 2010, p. 2). Such practices are not just given but they are reflected upon, ordered and normalised, to the extent to which they become elements of a regime of truth (Rose, 1993). Truth-telling becomes paramount for Foucault, because truth-telling plays a quintessential role in the activity of ordering and normalising specific elements of the world. Crudely put, Foucault's ontological stance is that the world, in all its manifestations, is not inherently ordered and therefore the quest is not the discovery of its law-like functioning (as in a deterministic Newtonian conception of the universe). In fact, any endeavour to order the world according to this or that principle, presupposes the pooling together (or cohering) of some elements of the world, at the expense of others. Ordering does imply therefore, a certain degree of violence, but at the same time, this violence is very instrumental in its nature and comes in the form of a strategic calculus (Lemke, 2012). Ordering the world is usually done in the name of a truth regime, a schema of intelligibility about the world, based on the acquired knowledge (a discourse) and a belief in the superiority of that truth over other orderings of the world. However, he is also not suggesting that there is a transcendental subject that does the ordering, but rather his entire governmental project is geared towards answering a crucial question: 'how is it possible that this headless body often behaves as if it indeed had a head? (Dean, 1994, p. 156).

3.2.1 The centrality of power for governmentality

Before answering the question posed above, located at the heart of the governmentality, a detour is needed to present the specific notion of *power relations* Foucault operates with. Foucault's conception of power tends to be more sophisticated and to involve mechanics that are different from the previous understandings of the concept. Power was hitherto regarded either as a quantitative capacity to effect something (more power equals more capacity of this sort), or as a right, meaning that power was considered legitimate, if based on the consent of those ruled and illegitimate, if exercised without that consent (Hindess, 1996). As such, a significant proportion of political philosophy is orchestrated around questions of legitimacy and authority that are warranted by such conception of power. In contrast, Foucault regards power as 'a ubiquitous feature of human interaction' (Hindess, 1996, p. 103), which is not restricted to the realm of political authority but rather

permeates all instances of the lived experience of individuals, from the micro cosmos of family, to the wider spectrum of social, economic and political relations.

Prior to Foucault, power was theorised mainly from two distinct perspectives. Concomitant with the formation of the modern sovereign state, power is regarded as being legitimate if underpinned by the consensus of the subjects being governed and illegitimate if not. By the same token, power was thought to be something that can be acquired and possessed, suggesting a quantitative understanding of it (Hindess, 1996). This leads to a zero-sum conception of power and as a result, to a relation of equivalence between power and coercion. This seems to be implicit in Isaiah Berlin's conceptualisation of freedom as either positive or negative (Berlin, 1969). Negative freedom, treasured by Berlin, implies the absence of power and implicitly coercion. It posits that it is possible for the individual to have an existence that is independent of social constraints. At the same time, this infers that power can only exist as coercion and in direct opposition to freedom. In the American political tradition, debates about power have started with Robert Dahl's initial understanding of power as 'wearing a face', insisting on the ability of an A to make B do what B would have not otherwise done (Hayward, 2000). The intellectual tradition initiated by Dahl, focused on unravelling the divide between powerful and powerless individuals in society, was catered to an understanding of power as quantitative, something that can be acquired and possessed to various degrees. Such conceptualisation appears to work well with the managerial understanding of resilience, as this strand of literature would suggest that resilience concerns a transfer of power towards the individual, resulting in increased agency, empowerment or participation of individuals and communities. Such a perceived transfer, replicates a hierarchical and negative notion of power and it is by extension granted a positive connotation. However, this tells a very simplistic narrative of resilience, one where resilience is taken for granted and somehow 'quantified', as more resilience equals more power for individuals and communities. To understand how governing through resilience is instantiated on the ground, a different understanding of power is necessary, one that attends more intimately to the constitution of concepts and practices of governing, rather than simply operating as a measure of them.

Foucault's understanding of power in his later works does not sit well with any of these perspectives presented above. Following *Discipline and Punish* and *The History of Sexuality,* Foucault begins to substitute the word power with government, considering that his earlier treatment of the word 'threatened above all to lead to an extremist denunciation of power-envisaged according to a repressive model' (Pasquino, 1993, p. 79). In his work in the mid-70s, Foucault started to emphasise that power is indeed productive: ''we must cease once and for all to describe the effects of power in negative terms: it 'excludes', it 'represses', it 'censors', it 'abstracts', it 'masks', it 'conceals'. In fact,

power produces, it produces reality; it produces domains of objects and rituals of truth'' (Foucault, 1977b, p. 194). By inverting the polarity of power from negative to productive, Foucault begins to consider power not as a sort of 'substance' (Lemke, 2012, p. 10) to be possessed, but in more relational terms as *power relations*, as it takes places in the interstices between individuals (Kelly, 2014).

In more precise terms, power is understood by Foucault as a facility, not a thing, the ability to create any kind of change, its significance notwithstanding (Foucault, 1980b). As the capacity to create social change, power is 'employed and exercised through a net-like organization' (Foucault, 1980c, p. 98). He shifts the paradigm through which power is to be conceptualised, from the sovereign subject as holder of power, to the *decentred network* that operates within the fabric of the social (Kelly, 2014, p. 88). The ontological coordinates of this net-like organisation derive from the 'system of differentiations which permits one to act upon the actions of others: differentiations determined by the law or by traditions of status and privilege; economic differences in the appropriation of riches and goods; shifts in the process of production; linguistic or cultural differences; differences in know-how and competence; and so forth' (Foucault, 1982, p. 792). Foucault refers to the totality of structurally-determined differentiations, as 'mechanisms of power' (Heller, 1996, p. 85; Foucault, 1977b) and regards their existence as co-determinous with the social field.

3.2.2 Power relations – intentional and non-subjective

From this specific understanding of power as ubiquitous and exercised not from above, by a transcendental sovereign subject, but within the social field, stems a very important insight: that power relations, viewed at the social level, are at the same time intentional and non-subjective (Foucault, 1980a, p. 94-95). This means that there is a difference between an action's intention and its actual effects, or in Foucauldian jargon, there is difference between tactics and strategies (Cousain and Hussain, 1984). Tactics and strategies are different, but they do connect very intimately at every time. Tactics represent the intentional actions of individuals and groups that are performed in determinate political contexts. Individuals involved in such actions, recognise their real social function, as occurs in institutions, such as hospitals, prisons, schools, etc. Strategies on the other hand, are 'unintentional, but institutionally and socially regularized-effects produced by the non-subjective articulation of different individual and group tactics' (Heller, 1996, p. 87-88). In this case, the real social function of the institutions is scarcely, if at all, perceived by those involved in its operation and can in fact contradict the social effects intended by the tactics.

Overall, institutions based on strategies survive despite unintentional effects, because the people involved in its functioning do not need to recognise the strategy, as long as they subscribe to the

tactics, which are used as justification for its operations and existence. The operators of the institutions do not see how the unintended consequences of their actions are regularised and stabilised inside the institution, by virtue of their repetition and over time, invisibilisation and naturalization. The institution as a whole, survives in the context of the wider society because it connects with the interests of other groups that can benefit from it. The congruence of interests between the institution and the other social groups will ensure that the latter don't attempt to change it. In other words, 'while the decision to exercise power is always intentional, the mechanisms of power that individuals use to exercise power are inherently non-subjective, because they do not depend on the existence of those individuals for their own existence' (Heller, 1996, p. 85). The emblematic institution of such kind is the prison, which is committed to a tactic of rehabilitation of the ones incarcerated, but the overall strategy contributes to punishing instead of rehabilitating prisoners.

At this point, it becomes apparent that Foucault's notion of power relations can help provide a more sophisticated account of governing through resilience. It becomes less about a transfer of power and more about the interplay between the intention of promoters of resilience and the effects resilience generates. The focus shifts from the individual possession of power, to accounting for a broader mechanism, in which individuals, while exercising power themselves, are intrinsically connected with the exercise of power that comes from others. As a result, power is not exercised in a vacuum, by the sole individual, but has a larger base from which it proceeds to influence what an individual can and cannot do. As Foucault puts it, power is not inherently negative or positive, but the ability to create social change (Heller, 1996, p. 87). This point is exemplified by Clarissa Hayward in her 2000 book, *De-facing power* and subsequent exchanges on the topic between her and other theorists of power (Hayward, 2000; Hayward and Lukes, 2008). Borrowing Foucault's understanding of power as subjective and non-intentional at the same time, Hayward is questioning not who possesses power, but 'how do social boundaries to action shape the field of the possible for specific actors in specific locales' (Hayward, 2000, p. 118). This understanding is drawn from Foucault's emphasis that power is about guidance (or steering), by 'structuring and shaping the field of possible action of subjects' (Lemke, 2012, p. 17; Foucault, 1982). Implicit in this conceptualisation, is the fact that the exercise of power by one individual never takes place in a vacuum, as if the 'powerful' are able to project their will onto others 'less powerful', in an unconstrained manner. Rather, given that the tactics of the individuals produce unintentional effects that coagulate into strategies, the exercise of power takes place inside specific boundaries that delineate what is possible (acceptable, normal) from what is not. Although the exercise of power by one individual appears to stem out of his or her own volition, it will

always be constrained by social boundaries to power that are unintentionally constructed, meaning not reducible to one single person or group.

I have covered the ground which is necessary for understanding the specifics of governmentality, presented in the next section. More precisely, I have established a dichotomy between the account of power that informs the managerial literature on resilience and the Foucauldian notion of power relation that underpins governmentality. I argued that the former is informed by a hierarchical, quantitative and negative (freedom from) conceptualisation of power. A paradigm of resilience is understood to facilitate a transfer of power towards individuals: more resilience results in more power (hence resilience becomes an ideal). In contrast, the Foucauldian notion of power relations locates its existence within the social field, in the interstices between individuals. As such, it makes a distinction between the exercise of power by individuals and the aggregate effects of power that become visible only within the wider social field. From this perspective, investigating how resilience is implemented on the ground, gains a new layer of complexity. Rather than simple transfers of power, it allows us to chart the broader boundaries to social and political action that are constructed in the process of deploying resilience on the ground. The next section will provide more precise, conceptual language, to help with this task.

3.3 Presentation of governmentality

To ensure that the discussion of power relations is more precise, Foucault differentiates between strategic games, government and domination as the three main categories of power relations. Power relations as strategic games between liberties are considered a ubiquitous feature of human interaction inasmuch as it refers to 'structuring the possible field of interaction of others' (Lemke, 2002, p. 53). Consequently, strategic games take many forms, from rational argumentation, to economic exploitation and is best characterised as a mean to influence the conduct of others. This does not necessarily entail a removal of the other's liberty, instead it may result in their empowerment. Government, which will be elucidated further below, refers to 'more or less systematized, regulated and reflected modes of power (a 'technology') that go beyond the spontaneous exercise of power over others, following a specific form of reasoning (a 'rationality') which defines the telos of action or the adequate means to achieve it' (Lemke, 2002, p. 53). Lastly, domination refers to what is regularly called 'power', meaning the solidification of relations of power in a very unequal manner. Such hierarchies can be the effects of technologies of government in the sense that over time, the stabilisation of such technologies can lead to these asymmetries of power (Lemke, 2002, p. 53). Foucault makes the argument that in society, all these forms of power coexist to

different degrees and that they do not always work as intended (they are subject to failure, evasion or resistance), but they 'work' in the sense that they *produce effects that are real*. This novel conceptualisation of power constitutes the backbone of any discussion of governmentality.

Very broadly speaking then, governmentality refers to an analysis of government as a 'problematization of rule', a way of reflecting over who should be governed, in what way and through what means (Rose, 1993, p. 285-286). Foucault highlights that humans have always reflected on the best way in which the conduct of individuals can be shaped and guided, in relation to specific principles, ends or goals. However, starting with the 16th century, government becomes a specific topos of reflection, or in other words, there occurs a 'multiplication of all arts of governing […] and of all the institutions of government' (Foucault, 1996, p. 27). What makes these forms of reflection governmental rather than theoretical or philosophical, is the drive to make them practical, to have them connected with procedures and technologies, which will allow them to have effects that are real. Reflection on how to manage the conduct of others therefore, will only become governmental to the extent that it seeks to 'render itself technical, to insert itself into the world by 'realizing' itself as a practice' (Rose, 1993, p. 288). In other words, governmentality can be understood as 'the reciprocal constitution of power techniques and forms of knowledge' (Lemke, 2001, p. 191). On one hand, governmentality seeks to capture a form of 'representation', where government delineates a discursive field in which the exercise of power is 'rationalized', by the provision of concepts, borders of things, arguments and justifications for undertaking specific actions (Lemke, 2001, p. 191). On the other hand, governmentality refers to forms of 'intervention', where specific political technologies (in the shape of agencies, procedures, institutions, legal forms, etc.) enable the government of the objects and subjects of the represented political rationality (Lemke, 2001, p. 191).

3.4 Analytics of government

How can governmentality be useful for understanding governing through resilience? In order to translate the above insights into a more methodological discourse and engage in a study of governmentality, I will pursue what is referred to in Foucauldian literature as *analytics of government*. This entails an analysis concerned with the conditions under which specific entities 'emerge, exist and change' (Rose, 2010, p. 30). It signals a significant departure from a host of other theoretical approaches that attend to specific concepts (such as state, democracy, sovereignty) as instances of ideal types, effects of laws or regularities (natural or statistical) or manifestations of fundamental contradictions (e.g. contradictions of capitalism in Marxist literature). An analytics of government regards all practices and regimes of practices as having inception and emergence, undergoing a

process of stabilisation and continuity, which are contested and transformed. As such, the focus is not on discovering a law, contradiction or concept, but on more mundane aspects, such as the elements, processes, strategies, techniques or mechanisms that are intrinsic to how a certain regime of practices emerges, is stabilised and transformed. The concepts presented in this section will constitute the basis for analysis in the empirical chapters and especially Chapter 8, which presents the analysis.

In very specific terms, resilience will be analysed in this thesis as a *regime of government* (or *regime of practices*), which entails the intersection of a number of heterogeneous practices of government, in a relatively organised manner. I use Dean (2012), to identify the particular methodological steps, that are required for undertaking an analysis of resilience as a regime of government. Based on the work of Deleuze (1991), Dean suggests there are four autonomous, yet reciprocally conditioning dimensions, according to which, regimes of government can be analysed.

The first dimension relates to the field of visibility of government, which is meant to characterise a specific necessity to the mode of operation of a regime of government. Government is accomplished by specifying a field of visibility, by which certain objects are illuminated, brought to attention and others are obscured or hidden. In a more general sense, the field of visibility constitutes a picture of the governing that specifies who is doing the governing, what is to be governed, what problems need to be solved and objectives are to be achieved. As I will show in Chapters 6 and 7, resilience operates a field of visibility, centred on the individual and the community, replete with accounts of their capacities and interrelations, while at the same time looking to make redundant, the role and capacities of the state.

The second dimension emphasises the connection between government and thought, the essence of the term 'governmentality'. The question asked here, relates to the forms of thought, modes of knowledge or means of calculation that are employed in practices of governing. In other words, what are the *rationalities* utilised, in order to enable government, what are the thought processes by which certain issues are rendered governable and what is their relationship to specific forms of truth? Dean also stresses the 'intrinsically programmatic character' of governmentality, through which government is about the intentional attempt to 'organize and reorganize institutional spaces, their routines, rituals and procedures, and the conduct of actors in specific ways' (Dean, 2012, p. 43). Most of the thesis will attend to the rationalities and the programmatic character of resilience, inquiring into the modes of thought that have introduced resilience into policy making in the UK (Chapter 5), or the modes of problematization, which resilience instantiates in the case of the FCRS (Chapter 8).

The third dimension concerns the technical aspect of government, the technologies or 'techne' (Dean, 1995) of government. This refers to the technical means – 'mechanisms, procedure, instruments,

tactics, techniques, technologies and vocabularies' by which rule is accomplished (Dean, 2012, p. 42). What needs to be emphasised here, is that technical aspects of government are often limiting and constraining: a specific rationality of governing can be implemented to the extent to which the materiality of the technical means allows it to be. As I will show in Chapter 6, which looks at how resilience policies are implemented, it is crucial to investigate the means by which certain rationalities of governing are deployed, as their limitations can be revealed and at the same time revealing.

Finally, the fourth dimension is concerned with identity, both individual and collective, which informs both the operation of governing and the specific practices it seeks to put together and form. It questions the statuses, capacities, attributes and orientations of those at both ends of the exercise of authority. It is important here, to specify that regimes of government do not *determine* forms of subjectivity, but seek to act on fostering and encouraging the above mentioned statuses, capacities, attributes and orientations of agents. They seek in fact, to encourage agents to *identify* with the prescriptions of specific modes of government. If they are successful, the agents will conduct their lived experience through the rationalities, codes and prescriptions encouraged by the mode of government. However, these can also be resisted or avoided, triggering a form of counter-conduct, an understanding of one's lived experience that operates outside or in opposition to the rationalities of governing. Chapter seven will attend closely to the forms of identification that resilience seeks to instantiate, as a regime of governing. It will explore how the subjects of the policy are problematized and the types of new subjectivities that are encouraged as a response to the problematizations.

It is very important here to specify in more detail, the theoretical coordinates of the concept of subjectivity in Foucauldian analysis, as subjectivity is a major part of conceptualisations of resilience. The Cartesian conceptualisation of the individual (that regarded rationality to be emanating from a pre-formed self) that has dominated modern political thought, is not found in Foucault's work. Instead, he argues for a 'decentred construction of subjectivity', which means the individual subjects are always the product of a pre-existing system of power relations (Heller, 1996, p. 91). In other words, individual subjectivity is always a function of the discursive practices, in which individuals are immersed by virtue of the specific 'institutional topography of a particular social formation' (Heller, 1996, p. 91). As a result, it follows that the choice of tactics of the individuals is constrained by the social (institutionalised) discourses that shape their emergence as subjectivities, constraining their intentionality as well. Put in a nutshell, the argument Foucault is making, is that subjectivity can never exist outside processes of subjectification (Heller, 1996, p. 92).

As far as the processes of subjectification go, it has been suggested that there are two distinctions between scholars. On the hand, we can talk of *subjectification* as the way in which individuals are

objectified into referents of governance, through processes of power/knowledge that include subjugation, but are by no means restricted to it. On the other hand, we can speak of *subjectivation* or the ways in which individuals shape and fashion themselves into subjects (Hamann, 2009). At the intersection of subjectification and subjectivation though, there is a recognisable subject which is embedded in a matrix of power relations, meaning that there are specific social constraints on its agency: no subject is ever acting 'out of nowhere'. This is highly relevant for discourses of resilience, since building or improving resilience entertains 'particular beliefs about the nature of human subjectivity' (Miller and Rose, 1997, p. 42).

3.5 Conclusion

In this chapter, I presented governmentality as an analytical framework that is appropriate for establishing the conceptual terrain, in order to answer the research question. I have begun by presenting a background discussion in the first section that focuses on Foucault's ontological commitments and his particular account of power. This is important because it constitutes the ontological and epistemological substrate on which governmentality rests. As conceptualised by Foucault, governmentality operates with a different conception of power, which allows us to investigate questions of rule, authority or policy in terms of their constitution, maintenance and transformation. In sections 3.3 and 3.4, I have introduced the concepts that will constitute the basis of analysis for chapters 5, 7 and 8 (Chapter 6 will be focused on *Logics of critical explanation*, presented in the next chapter). As such, I analyse resilience in policy making as a regime of government and according to an analytic of government.

Regime of government makes a statement about resilience, not as an object of policy or intrinsic good that needs to be fostered, but as a collection of practices underlined by a specific form of intelligibility. Analytics of government allows for a regime of government to be analysed in terms of its field of visibility, rationalities (chapter 5, 6 and 8), technologies (chapter 6 and 8) and forms of subjectivity (chapter 7 and 8) that it gives rise to. It is important to stress that the analytical framework is not a method per se, but instead its function is to provide the main assumptions and concepts that will frame the analysis from a theoretical point of view. In other words, it specifies both the theoretical terrain and boundaries within which the research question will be answered. The next chapter will present a series of methodologies as part of an extended account of governmentality. These are specific conceptualisations that make statements about how the empirical data needs to be analysed. The methodologies employed, (genealogy, political discourse theory and Foucault's typology of social

practices), operate in synchronisation with the theoretical assumptions of governmentality, but each will generate different insights, as they emphasise different aspects in terms of the analysis of data.

Chapter 4: Methodology: extended governmentality / cross-sectional design with case study elements

4.1 Introduction

This chapter will present the methodological approaches utilised, in order to answer the proposed research question. It will focus on two main aspects: the theoretical approaches that *extend* governmentality and the practical methodology, where the research design and research methods will be presented. The purpose of this chapter is to provide and clarify the methodological approaches that present information on how the empirical material was collected and analysed.

This chapter will be split in two main parts. The first part will extend governmentality as an analytical framework, by adding theoretical approaches that will assist in answering the research questions in each of the three empirical chapters (namely 5, 6 and 7). Chapters 5 and 8 will be informed by a genealogical methodology. Genealogical *methodology* will be stressed here because I am following Koopman (2013) and he argues that genealogy can be used as a methodology in its own right, without the necessity of syncing it with Foucauldian *concepts,* such as bio-power or discipline. Empirical data for Chapter 6 will be analysed using political discourse theory *(PDT).* PDT specialises in the connection of raw data with abstract theoretical devices and can inform us about the rationalities, technologies and effects of resilience. The chapter will use a methodological development of PDT, namely *logics of critical explanation,* as developed by Glynos and Howarth (2007), to unravel the logics through which governing through resilience is articulated in practice. Chapter 7 will use the genealogical methodology to analyse the empirical data, but will also employ a theoretical frame to gauge the nature of the relationship between individuals and practices of government. Christopher Menke's distinction between aesthetic and disciplinary practices, aids our understanding of whether resilience allows individuals to lead a life according to their own will (one in which they individualize norms), or if they end up performing and re-using disciplinary practices (one in which they become normalised individuals).

The second part presents the methodological section, where I explain the research design that was adopted, complete with an exposition of the research methods. There is a large variety of data required to answer all the facets of the research question, making the employment of a multi-method approach desirable. The design of choice and which responds the best to the requirements of the research, is a *cross-sectional design with case study elements*. This form of research design is

appropriate where data is stratified and gathered at a specific point in time (rather than over a determinate period of time). In this case, I analyse a policy instantiated on different tiers (national, regional, local) and I am interested both in the specific tiers and more importantly, their cross-connections. The policy functions as a *case study*, as the research questions I am asking require empirical data regarding policy implementation, something that cannot be achieved through reading official documents alone. The bulk of empirical data will be sourced from a combination of *document analysis* and *semi-structured interviews*. The methods employed ensure that the research questions are answered adequately.

4.2 Extending governmentality: genealogy, logics of critical explanation and two kinds of social practices

As stated in Chapter 3, governmentality is not a theory, but an analytical framework. In this sense, it shapes the contours (or boundaries) of the research, informing the reader of a series of ontological and epistemological commitments. It also makes visible, a specific way of investigating the ontological and epistemological coordinates of reality, but it does inform us beforehand which elements of this reality are the most important ones and why. Rather, it puts forward specific concepts (such as government, power relations, analytics of government, etc.) to guide the analysis of empirical data. In this section I will present the methodology, which informs such concepts (genealogy) and add two other theoretical approaches, which will assist with answering the sub-research questions for Chapters 6 (logics of critical explanation) and 7 (two kinds of, or orientations to social practice).

4.2.1 Genealogy

The methodological approach to the research question takes a genealogical form, in which the concept of problematization is of crucial importance (Koopman, 2013). Genealogy is a methodological approach originally employed by Friedrich Nietzsche, which Foucault developed further. Genealogy has been employed in some of Foucault's most famous books such as *Discipline and Punish* (1977b) and the *History of Sexuality* (1980a).

In lay terms, genealogy means tracing a person's family tree, their descent, yet Foucault, like Nietzsche before him, employs the term in a distinct fashion (Kelly, 2014). In Foucault's work, the person is replaced by society and its practices, and the task is to descend into the past to uncover the diverse impetuses that coalesced to produce contemporary society or some feature of it. In short, Foucault is pursuing a 'history of the present' (Foucault, 1977a, p. 31). We should however, treat the term

'history' with caution here, as Foucault does not understand history in the traditional, established sense. He rather opposes genealogy to history. In the essay *Nietzsche, Genealogy, History* (1977a) he explained why genealogy is the opposite of history. He understands history as a search for 'exact essences of things' and 'carefully protected identities', a search in the past for 'that which was already there' (Foucault, 1977a, p. 78). In other words, he argues that the *modus operandi* of history and historians has been to descend into the past and search for an origin to the reality we experience in the present. This presupposes continuity between the currently existing aspects of reality and their inception in the past. Foucault turns this understanding on its head and invites us to look for 'something altogether different', 'not a timeless and essential secret, but the secret that they have no essence or that their essence was fabricated in a piecemeal fashion from alien forms' (Foucault, 1977a, p. 78). Genealogy therefore is nothing like evolution, the notion that what we see in the present is the proof of the fitness of a species, deriving from and through the past. Rather, its purpose is to 'identify the accidents, the minute deviations-or conversely, the complete reversals-the errors, the false appraisals, and the faulty calculations that gave birth to those things that continue to exist and have value for us' (Foucault, 1977a, p. 82).

If Foucault replaces the search for origins and continuity of the historian with a call to follow the complex dispersions that give form to the present, it is because, at least at this point, he sees the emergence of the past into the present as an 'endless repeated play of dominations' (Foucault, 1977a, p. 85). This is consistent with his understanding of power as productive, as producing 'domains of objects and rituals of truth'' (Foucault, 1977b, p. 194). As such, the present bears the form of the struggles and differentiations created by plays of power, domination and resistance that can be found in 'in rituals, in meticulous procedures that impose rights and obligations' (Foucault, 1977a, p. 85). Consistent with the material presented in Chapter 3 concerning governmentality, genealogy turns the historian into 'diagnostician who concentrates on the relations of power, knowledge and the body in modern society' (Dreyfus and Rabinow, 1982, p. 105). Philosophy that focuses on uncovering hidden meanings is rejected by a genealogical approach which focuses its attention on 'surfaces of events, small details, minor shifts, and subtle contours' (Dreyfus and Rabinow, 1982, p. 106). Our present is not made out of emerging essences, but contending discourses and rationalities, which leave their mark on it.

As such, genealogy articulates ''submerged problems': 'those problems found below the surfaces of our lives – the problems whose itches feel impenetrable, whose remedies are ever just beyond our grasp, and whose very articulations require a severe work of thought' (Koopman, 2013, p. 1). As Koopman makes clear in his timely intervention on Foucault's genealogy, at the heart of the project

of genealogy rests the master concept of problematization, which enables the articulation of submerged problems. Problematization undertakes a 'critical inquiry into conditions of possibility' by focusing on the 'contingency and complexity of the historical present' (Koopman, 2013, p. 21). Koopman's argument is that we need to distinguish Foucault's *genealogy as problematization* from other genealogical forms, such as Nietzsche's subversive genealogy or the vindicatory genealogy of authors such as David Hume and Bernard Williams. Foucault seeks to problematize, not to subvert or vindicate, and aims towards 'responsive reconstruction' (Koopman, 2013, p. 21). This means that he is not only interested just in 'showing *that* the present is contingent', but most importantly with showing '*how* the present is contingently made up' (Koopman, 2013, p. 140, *emphasis in original*). Reconstruction does not involve the negative task of proving that certain practices are essentially wrong (subversion), while others have been right all along (vindication). It involves the positive task of asking how conditions of possibility were composed, in order to begin the equally positive and laborious task of transforming the institutions, practices, subjects or assumptions they support. It comes up with problems that require responses and resolutions.

The thesis is underlined by genealogy as problematization at every point, but it will come into play more critically in Chapter 5, where I undertake a genealogy of resilience in UK policy making and FRM more specifically, as well as in Chapter 8, which brings all the empirical chapters together and analyses them. To analyse how governing through resilience is articulated from a genealogical perspective, I problematize the unity and coherence of the discourse of governing through resilience. I investigate how such discourse is composed at the intersection of contending rationalities and attend to the problems that emerge from their problematization. It is important to insist here that I take up Koopman's argument that genealogy is primarily a methodological toolkit. Koopman differentiates between concepts in Foucault's work (e.g. discipline, biopower) and critical methods (e.g. archaeology, genealogy). While the former lose their traction if separated from the latter, his argument is that the latter can be employed in other instances, even if divorced from the concepts they have uncovered on past occasions. In other words, I employ genealogy as a methodological toolkit to produce novel insights, in relation to current problems.

4.2.2 Political discourse theory and logics of critical explanation

In order to address the sub-research question that features in Chapter 6, the principal method through which the empirical data will be examined, is a particular kind of discourse analysis, namely political discourse theory (PDT). After presenting PDT, I will explain the precise theoretical work that PDT is doing in the context of this thesis which is different from genealogy.

As opposed to species of discourse analysis that propose the emphasis to be located on the text (or linguistic and rhetorical practices), such as Interpretative Policy Analysis (IPA) or on the material structures (or objective contexts) such as Critical Discourse Analysis (CDA), PDT regards linguistic and non-discursive practices to be internal to discourse, which acts as an 'ontological horizon' (Glynos *et al.*, 2009, p. 33). PDT starts with the assumption that all objects and actions are meaningful, while their meaning is given within historically specific systems of rules (Howarth *et al*., 2000). In other words, it can be said that all objects are objects of discourse insofar as their meaning is contingent upon a 'socially constructed system of rules and significant differences' (Howarth *et al*., 2000, p. 3; Laclau and Mouffe, 1985). This does not imply a denial of the world and its objects, but underlines the fact that such world and objects cannot have an intelligible existence that is somehow external to our frameworks of understanding. In an often quoted passage, Laclau and Mouffe argue precisely, that it is impossible to assert not that 'objects exist external to thought, but the rather different assertion that they constitute themselves as objects outside any discursive conditions of emergence' (Laclau and Mouffe, 1985, p. 108). The discursive, in this case, can be conceptualised as a 'theoretical horizon within which the being of objects is constituted' (Howarth *et al*., 2000, p. 3). It bears therefore emphasis, that there is a difference for proponents of discourse analysis between existence of objects (which is in no way denied) and their being as objects.

The notion of discourse is therefore critical in PDT, though its definitions are multiple. Some commentators regard discourse as something that can be subscribed to. Discourse in this view, is a 'shared way of apprehending the world', which ‘enables those who subscribe to it to interpret bits of information and put them together into coherent stories or accounts’ (Dryzek, 1997, p. 8). We acquire here a sense of decidability, meaning that actors have the possibility to opt in and out of discourse. More radically, Roxanne Doty underlines that discourse is a 'structured, relational totality' that 'delineates the terms of intelligibility whereby a particular 'reality' can be known and acted upon' (Doty, 1996, p. 6). Such delineation of the terms of intelligibility of a specific reality, more readily alludes to the possibility that discourses might come before the formation of identity and interests on the part of actors. Last, Howarth *et al.* take discourses to refer to 'systems of meaningful practices that form the identities of subjects and objects' (Howarth *et al*., 2000, p. 3-4). This understanding of discourse reflects more appropriately what was discussed above about objects and subjects being unable to constitute themselves outside a discursive condition of emergence. As a system of social relations and practices, a discourse is *political*, as the formation of those practices is an 'act of radical institution, which requires the construction of antagonisms and the drawing of political frontiers between 'insiders' and 'outsiders'' (Howarth *et. al*., 2000, p. 4). Discourses always imply the exercise of *power* because their constitution involves the privileging of a specific set of possibilities and the

consequent (re)structuration of the social field of interaction (Howarth *et al*., 2000). This is entirely consistent with the concept of power that Foucault and Clarissa Hayward utilise, a concept described in the theoretical framework of the research (Foucault, 2010; Hayward, 2000). At the same time, discourses are *contingent* and *historical* constructions, which are 'always vulnerable to the political forces excluded in their production, as well as the dislocatory effects of events beyond their control' (Howarth *et al*., 2000, p. 4; Laclau, 1990)

Having established what discourse is, PDT refers to the 'process of analysing signifying practices as discursive forms' (Howarth, 2000, p. 11) or in more practical terms, it can be said to be analysing 'empirical raw materials and information as discursive forms' (Howarth *et al*., 2000, p. 4). An important point to note, is that discourse analysis treats a wide range of linguistic and non-linguistic data as 'texts' or 'writing', meaning that empirical data is seen to be a set of signifying practices constituted in a discourse that provides the necessary conditions for subjects to experience the world (Howarth *et al*., 2000). 'Text' or 'writing' serves as a common denominator that showcases how a specific 'reality' (composed of a plethora of material - non-material/ linguistic - non-linguistic elements) was made intelligible (rationalised) in a discourse.

PDT is foregrounded in a negative ontology that emphasises the radical contingency of social relations (Glynos *et al*., 2009). This means that structures of social relations are incomplete or lacking, as they do not possess an essence that allows them to be self-sufficient. As a result of the radical contingency, practices are constantly articulated around *nodal points*, which fix meaning partially, but are always over flown by the infinite potentiality of the field of signification. The discursive elements are constantly articulated along the *axes of difference or equivalence* and constantly subject to contestation and reappropriation (Laclau and Mouffe, 1985). In more concrete terms, this is what Laclau and Mouffe term *social antagonism*, which means the formation of political frontiers that separate between sameness and otherness (stereotypical friends and enemies). Such political frontiers can become stabilised and naturalised in time, giving birth to *hegemonic discourses*, but they are also subject to *dislocation* whenever confronted with an event that cannot be explained, domesticated or accommodated.

Given such ontological considerations, it follows that PDT is a brand of problem-driven research, in that rather than taking some claims and a specific ontology as the object of study, it emphasises that the object of its study is constructed. This means that it is concerned with an analysis of the way in which proposed solutions to our predicaments come from specific problematizations of those predicaments. Problem-driven research is different from method-driven research (preoccupied with methods and techniques of gathering and analysing data, rather the empirical phenomena observed),

theory-driven research (looking to validate a specific theory) or problem-solving research (which aims to take a problem and the social structures and rules on which it is located for granted) (Glynos *et al*., 2009).

PDT adopts a methodological stance captured by the phrase *logics of critical explanation* (Glynos and Howarth, 2007; Howarth, 2005; Griggs and Howarth, 2009; Glynos *et al*., 2009). Logics are inspired by the work of Ernesto Laclau (1990) and are an attempt to develop ways of thinking beyond the causal law paradigm, which overemphasises prediction and deduction at the expense of historical context (Glynos *et al.*, 2009). As such, PDT's object of investigation concerns practices or regimes of practices and its aim is to critically analyse their transformation, stabilisation and maintenance (Glynos *et al.*, 2009). This is done through five connected steps. It begins with an account of *problematization* of the empirical phenomena at hand, as suggested above. This goes hand in hand with a form of explanation which is *retroductive* and not inductive or deductive. Retroduction seeks to explain an anomalous phenomenon by initiating a tentative hypothesis that is then verified against the empirical data available, until there is certainty that the explanation fits the empirical phenomena (Griggs and Howarth, 2009). For accepting the hypothesis, the criterion must be that it tentatively accounts for the phenomena in hand, so the hypothesis is not generated until the content is already present in the explanation.

Logics are thought to be the content of retroductive form of explanation and in more general terms, the concept of logic aims to capture 'the purposes, rules and ontological presuppositions that render a practice or regime possible, intelligible and vulnerable' (Glynos *et al.*, 2009: 11). The logic of a practice seeks not just to make a characterisation of it, but also understand the conditions that allow the practice to function or work. The types of logics employed in Chapter 6 are social and political. If social logics aim to characterise practices and regimes (e.g. resilience can be couched in terms of logic of atomisation), political logics look at the way in which regimes or practices emerge, are contested or transformed.

The glue that holds all the different logics and empirical phenomena together is the *practice of articulation* which, according to the original definition of Laclau and Mouffe (1985, p. 105), means 'any practice establishing a relation among elements such that their identity is modified as a result of the articulatory practice'. To apply theoretical concepts and logics to account for a specific problematique requires 'a mutual modification of the logics and concepts articulated together in the process of explaining each particular instance of research' (Howarth, 2005). As a concept, articulation seeks to address the dangers of both subsuming empirical phenomena under law-like generalisations or of an eclecticism that would simply combine disparate elements without alteration and synthesis (Glynos

et al., 2009). It builds a bridge between the two, connecting the abstract concepts and empirical phenomena without assuming that there is an inherent gap between them, which can only be captured by objective knowledge (e.g. theory vs fact). Understanding the practice of articulation presupposes full subscription to the ontological tenets of discourse theory.

Chapter 6 will employ logics of critical explanation to uncover the logics used in the implementation of FCRS in practice and provide an explanation of how governing through resilience is articulated. It is important to specify here that the empirical contribution of this chapter is driven by the concepts of *logics* and *articulation*. These concepts allow to make sense of the implementation of the resilience policies in practice without presupposing a particular understanding of resilience (as opposed to the way resilience is defined and operationalised in the Evaluation Report (Twigger-Ross et al., 2015)). Even more important, thinking about the implementation of resilience policies in terms of logics and articulation generates insights unavailable via any other theoretical device. As such, some of the insights that rest at the foundation of the contribution to knowledge of the thesis, such as chains of responsibilisation and failure points, are a direct result of the application of these concepts.

4.2.3 Aesthetic and disciplinary social practice

Chapter 7 investigates how FCRS problematizes subjectivity, in order to accommodate the construction of resilient individuals. This chapter will use the genealogy as problematization as the main methodological angle. In addition, it will also employ another theoretical device, inspired by the work of Michel Foucault, in order to assess the nature of practices connecting individuals to resilience governance. Christoph Menke's (2003) discussion of the relationship of individuals with themselves and governmental norms in the work of Foucault, provides a good starting point for understanding the nature of resilience building practices for individuals. When it comes to social practices, Foucault differentiates between processes of individualisation where the individuals seek to shape their own individuality (an aesthetics of existence) and processes of socialisation, where individuals are subjected to the normalising influence of collective norms (disciplinary practices). Foucault's main argument is that modern society has seen increasing cultivation of disciplinary attitudes/relations rather than aesthetic ones. Crucial for the analysis pursued in this chapter, is a presentation of the fine differences between aesthetic practices and disciplinary practices.

The difference between an aesthetic-existential practice and a disciplinary practice relates to the attitude with which it is carried out. The former orients agents to an aesthetic freedom of self-overcoming, the freedom to individualise norms (think of the concept of virtuosity). Self-overcoming here, comes from the fact that, unlike disciplinary practices which have an established aim (whether

externally given or internally self-imposed), aesthetic practices are characterised by the overstepping of pre-established aims: 'they succeed precisely when they lead to something other than what was decided at the beginning' (Menke, 2003, p. 448). This can be more clearly explained in relation to the two phases of the process of subjectification, the first related to the inculcation of discipline and normalisation and the second focused on individual's drive to transform the capacities inculcated through discipline. In the first phase, discipline and normalisation are understood as the creation and formation of 'capacities for self-direction' (Menke, 2003, p. 446), by which these capacities are developed, which allow the individual to lead an autonomous life. This point is similar to the one Nietzsche makes about 'domination' as being necessary for establishing the conditions of possibility for social existence (Hindess, 1996). For example, social practices can be performed as individuals acquire the capacities (both power over self and knowledge of self) that allow them to perform them. The second phase of subjectification consists of the expansion of the subjective capacities produced by discipline. It is here that the aesthetic practices differ from the disciplinary ones, as they are transformative and experimental, meaning that the possibilities and capacities for self-direction are being employed in excess of the limits presented by the disciplinary practice. Under the mark of the disciplinary practice, a subject merely uses, reorders and revaluates the capacities for self-direction that were inculcated through disciplinary training. On the other hand, to perform an aesthetic practice is to be concerned with leading a life that is good for oneself in excess and opposition to the aims proposed by the disciplinary practices. It is the individualisation of the norms of the practice rather than the normalisation of the individual.

Extending governmentality in the case of this research, means in essence that there will be minor departures from the resilience-as-neoliberalism literature presented in Chapter 2 (p. 23-26). First, it insists on the genealogical method as problematization, meaning that it emphasises genealogy as methodology. This means that I do not introduce into the analysis a host of preformed concepts (such as biopolitics) to assess whether the empirical material fits with it or not, whether resilience is a case of biopolitical production or neoliberal governmentality or not. The emphasis is to go beyond exercises of concept identification and use the conceptual architecture of governmentality to generate new insights. This leads to the second point. To go beyond the resilience-as-neoliberalism thesis, I employ not just genealogy as problematization, but other methodological and theoretical devices that are compatible with governmentality (logics of critical explanation and two kinds of social practice). The point is, to extend the range and depth of insights that can be gained from the theoretical and empirical material.

4.3 Methodology

In order to achieve the proposed aim of this research, in the most comprehensive manner, a qualitative cross-sectional research design is employed, with case study elements**.** Such composite design is usually utilised when a combination of research methods is required, in order to provide all the necessary data to answer the research question. It fits well with the theoretical framework of governmentality and the choice of case study, namely FCRS.

All research designs respond to the (more abstract) demands of the theoretical framework and the way in which the empirical terrain has been problematized by the literature review. In the case of this research and with the choice of extended governmentality as a theoretical framework, two considerations are necessary. First, the research requires empirical material that comes from the actual implementation of policies on the ground. Secondly, there is a need to chart the rationalities of actors across the different tiers and sectors of policy making and practice. Governmentality requires an analysis of rationalities, technologies and forms of subjectification, meaning that the entire policy chain and the interrelation between various sectors of it are subject to investigation. As a result, two main blocks of data requirements become paramount: data relating to rationalities, as well as data about technologies and forms of subjectification. The two blocks of data are *intrinsically linked together* and the design is conceived as a whole to provide the necessary data to answer the research question. I have chosen a design that is 'cross-sectional' as it denotes that the data is collected at one point in time (as opposed to longitudinal research, which is concerned with variation over time) and the focus is *exploratory*, rather than seeking to explain causation (Zakaour and Gillespie, 2013). In the case of FCRS, the data comes from a policy initiative that has now officially concluded and looks to generate insights about governing through resilience, an under-explored topic. The empirical data covered by the second piece of the design, the 'case study element', explores how policies centred on resilience play out on the ground. This specific research design has been chosen because it provides the optimum way to incorporate all the methods, necessary to provide and analyse the needed data in a coherent multi-method structure.

As the case studies are an instrument of the study, rather than its intrinsic object of interest, a cross-sectional design that has case study elements is more appropriate than a simple case study design (more common in anthropological or ethnographic research) (Bryman, 2012, p. 68). A qualitative cross-sectional design is warranted (and defined) by the fact that the research seeks to chart the rationalities, technologies and forms of subjectification embodied in resilience policies. This is done over a relatively large and consistent population (given through the case studies), at a specific point in time, with the purpose of exploring the issue at hand in a systematic, comprehensive and holistic

manner (from the government end of the policy chain to specific localities on the ground) (Bryman, 2012). The cross-sectional design has been traditionally associated with quantitative, but it can be qualitative in nature as well (Bryman, 2012). One major reason for framing the research as 'qualitative cross-sectional' has to do with the fact that although the case study frames the boundaries of empirical inquiry, surveying the rationalities of the actors is not restricted exclusively to the case studies, but has a more general purpose. The intent is to provide a more general account of the form of problematization that the invocation of resilience instantiates in policy making in the UK and such attempt is not restricted to a case study approach.

Although cross-sectional designs are more popular with quantitative methods, there are indications that they can work well with qualitative methods too (Walters *et al*., 2003, Steven *et al*., 2002; Powell *et al.*, 2011). In a large cross-sectional study, Blaxter (1990) used interviews and other qualitative methods with a sample of 9000 individuals, to establish the relationship between smoking and diet. An example of a cross-sectional design with case study elements is a study conducted to investigate the notion of social capital in neighbourhood formation in Northern Ireland (Leonard, 2004). In this specific research the relevance of social capital was the study focus, requiring a cross-sectional design (Bryman, 2012), and the specific method to do so was semi-structured interviews with a 200+ sample of individuals in Belfast. The case studies element here, was demanded by the realisation that the unique political history of Belfast has a considerable bearing on the research and generalisations cannot be made without first discussing the uniqueness of the Belfast study context. In my research, the case study is necessary due to the commitment to investigating governing through resilience and its effects on the ground. The size of the sample is proportional to the purpose of the research. As I am investigating resilience policies and I have chosen a specific policy initiative, my sample of 21 interviews covers the vast majority of the important policy practitioners involved in its design and implementation.

One of the limitations of this study, as with the social capital one mentioned above, is in regards to the ability to generalise based on the findings. However, the analytical framework of governmentality does not have a focus on generalisation in the same way, for example, a comparative statistical study would. The research design is appropriate as I am seeking to gain novel theoretical and empirical insights about resilience policies. My purpose is to explore in depth and in practice, and to problematize resilience policies, so that new problems and new potential answers can be unravelled. Further studies are required to put these insights through further empirical testing, in order to make claims about how generalizable they are.

4.4 Methods

4.4.1 Case study

Although the term case study has existed in methodological literature for a long time, it does not have a standard definition, but it is often employed in conjunction with other research methods terms (Hammersley and Gomm, 2000; Merriam *et al.*, 2002). In general, a case study refers less to a methodological choice than to an object of interest, a 'what' to be studied that has the quality of being bounded and being identifiable as a unit on its own (Stake, 2000). Case studies can be single or multiple and they can be chosen because there is interest in the case alone (due to a series of unusual features) or because the case can help illustrate a particular issue. As a result, the 'case' can be an individual, activity or event and the interest is in developing an in-depth understanding of the case through a variety of forms of data (Merriam *et al*., 2002).

The exploration of the deployment of resilience on the ground and its effects can only be investigated through case study analysis and cannot be kept simply at an abstract or theoretical level. Moreover, since there is less interest in the case study per se, its typology will be qualified as instrumental (Yin, 2012). An instrumental case study is used when there is a need to 'provide insight into an issue' and the case itself facilitates that understanding (Stake, 2008, p. 123). Furthermore, the case study can be thought of as descriptive. As the name suggests, this kind of study is orientated towards the detailed description of particular units and requires the researcher to provide an analytical framework, which would frame what is being investigated and provide criteria for interpreting the findings (Yin, 1994). In this research, this has already been conducted by extending the analytical framework of governmentality.

The major criterion for selecting the case study requires that it has been deployed under the banner of building resilience, or in other words, it is centred on resilience. The case study intends to capture a policy chain that stretches all the way from the government, through various agencies, institutions and proxies, down to the ground level to communities and the individuals that constitute them. Satisfying these conditions, FCRS has been chosen. This case study is a policy initiative that is centred on building resilience and has already been implemented in practice. Even more pertinent is the fact that the policy initiative is a pilot one, looking to develop resilience building in thirteen locations in England. As such, it offers rich empirical material because at its core it contains a series of problematizations and rationalizations of resilience building and how it should be done in practice. It is also important to point out that the case study rests within the wider domain of flood governance. This domain has been chosen because flooding is the most frequent of all natural disasters, both in

the UK and globally (Jha *et al*., 2012: 19; Borrows and De Bruin, 2006). This does not mean that what is said about resilience in flood governance applies to other domains necessarily. It does mean however that, at least as far as England and the UK are concerned, what is said about resilience in flood governance is of high relevance. The findings of this thesis invite further comparisons with other domains in relation to how resilience is applied within them, in order to get a better understanding of both continuities and differences.

Another very important criterion for the selection of FCRS as a case study relates to the fact that the design of the thesis focuses on depth rather than breath. The focus on depth, by necessity, forces the investigation to be conducted on a clearly delimited empirical content. FCRS is a policy initiative that is clearly delimited in terms of the areas of application and the policy content that is aimed for. However, the thesis does not treat FCRS in isolation, but it orchestrates a cone-like structure to secure FCRS as a case study in relation to flood governance. The cone structure can be explained as follows. Chapter 5 presents a more general discussion of the genealogy of resilience, placing FCRS theoretically and temporally in the context of UK policy making. Chapter 6 attends specifically to the implementation of resilience policies, from top level policy and following the policy chain down to the implementation on the ground. Having done all this work of grounding the case study in relation to the wider policy making context within which it operates, Chapter 7 takes on specific instances within the case study to discuss a series of in-depth dynamics pertaining to forms of subjectivity. It is worth mentioning that such dynamics require their very particular contexts of application in order to be meaningful (and it is a counter to the wider literature on resilience, which makes statements about resilient subjectivity from high-level official documents).

Case studies have been applied extensively in social science research, especially in respect to investigating communities as units of analysis (Chaskin, 2001; Corbera *et al.*, 2007; Stone and Wall, 2004). All these cases bear resemblance with my research as they investigated how concepts like equity, community capacity or community development translate on the ground, from academic literatures and policy making. When intending to understand the detailed workings of a concept in practice, a case study almost always represents a good avenue. The major limitation of the case studies relates to the limited degree of representativeness. However, as I noted above, I am not trying to 'generalise' in the same way positivist approaches might wish to, meaning that this cannot be considered a weakness of my thesis.

4.4.2 Document analysis

The case study will consist of a government policy rolled out under the banner of building resilience to floods. Before the actual investigation of the projects can take place, an analysis of the documents associated with the projects is necessary. These documents are a major source of insight regarding the rationalities and processes involved in designing and implementing resilience policies in practice. Some of the documents speak to a broader audience, having been issued at a national level, while others are more precise and attend to the more local instances of policy implementation on the ground. These documents will serve as a foundation for the research, but there is no expectation that they need to provide the bulk of data. The precise purpose of this research is to go beyond the face-value reading of such documents, meaning that another major source of data will be the semi-structured interviews.

With regards to the actual method of analysing the documents, they will be scrutinised with the tools of PDT technique and genealogy. These two methodologies share very similar assumptions (PDT is largely inspired by the work of Michel Foucault). This type of document analysis treats the document as *text* (Howarth *et al*., 2000) and is quite distinct from more positivist methods, which are geared mainly towards the identification, codification and inventory of statements present in documents (official or otherwise). Instead, discourse analysis suggests that such codification is untenable and regards this way of researching as an 'analytical mentality' and as such as a 'craft skill, more like bike riding' (Potter, 1997, p. 147-148; Bryman, 2012). The empirical data will be reconciled under the umbrella of genealogy/PDT, which as seen above, equates the linguistic-non-linguistic / material-non-material practices as 'text' or 'writing', making the objects and subjects of human existence intelligible in a narrative.

As far as criteria for selection go, the documents that were issued in the process of designing and implementing FCRS were targeted. A methodology for the selection of documents was not needed since their number was small. The main documents used are the case for support (DEFRA, 2012) and the intermediary and final report (Twigger-Ross *et al*., 2014; 2015). Chapter 5 draws extensively from a series of documents issued in the UK, in the first decade of the new millennia. Since the chapter pursued a genealogy of resilience in UK policy making, documents referring to, or relevant to resilience were selected.

4.4.3 Semi-structured interviews

The second major source of data necessary for the success of this research, comes from semi-structured interviews with the main policy practitioners in FCRS. This is one of the main contributions to knowledge of the research, as it provides original, exclusive data. In general, interviews are chosen when the researcher's position suggests that 'people's knowledge, views, understandings, interpretations, experiences, and interactions are meaningful properties of the social [and political] reality' (Mason, 2002, p. 63), which resonates entirely with the theoretical approach of this research. In terms of a definition, it can be said that semi-structured interviews require an intentionally limited number of sufficiently open-ended questions, to be prepared in advance, while the ones that cannot be planned are 'improvised in a careful and theorized way' (Wengraf, 2004, p. 5). More precisely, the interview is conducted by asking key questions and following up with *probes*, which allow further clarification and investigation into something that the interviewee has said (Hennink *et al.*, 2011). Semi-structured interviews are the best fit for purpose, since they allow the interviewees to have more of their own say than the structured alternative, but provide a better 'structure of comparability' than the unstructured ones (May, 2001, p. 123). In other words, semi-structured interviews lend themselves better to systematic analysis than unstructured ones, while not subjected to the parsimony and rigidity of the structured style (Arksey and Knight, 1999). The interview process can be described as flexible and it focused on the interviewee's frameworks of understanding of the issues under exploration (Bryman, 2012). This is very important because it generates rich data with the interviewee's own language and rationalisations, while maintaining the possibility to generalise and connect this data in many directions.

Semi-structured interviews are appropriate for providing: data on the rationalities coming from policy practitioners, data on the technologies that accomplish resilience in practice and data on the forms of subjectivity that are encouraged through the Pathfinders. As a result of the fact that semi-structured interviews bring forth the actor's own rationalities, they also synergise with PDT, genealogy and governmentality, which benefit significantly from such type of empirical data.

With to the practicalities of conducting the interviews, I am aware of the limitations associated with this method. The issue of embodiment is of major concern here. To clarify this, the following passage is useful, quoting at length:

> The interviews that you do or that you study are not asocial, ahistorical, events […] you do not leave behind your anxieties, your hopes, your blindspots, your prejudices, your class, your race or gender, your location in local social structure, your age and historical

> positions, your emotions, your past and your sense of possible futures when you set up an interview, and nor does your interviewee when he or she agrees to an interview and you both come nervously into the same room […] nor do you do so when you sit down and analyse the material you have produced **(Wengraf, 2004)**.

The quote covers in depth, the array of issues that derive from the fact that one (and one's body) is always embedded in specific social contexts. As a result, what I claim is not objective knowledge, as understood within a rationalist framework of understanding. Rather, the subjective qualities of the interview format fit directly with the analytical framework of governmentality. Another common limitation is said to be the inability to test the findings derived from interviews, but instead take them at face value (Arksey and Knight, 1999). This does not pose a challenge to the research since the face value findings are valuable in themselves, as the way in which the actors make the issue at hand intelligible to themselves and others.

Semi-structured interviews are among the most commonly used qualitative methods and in many cases, alongside various ethnographic accounts, the weapon of choice in in-depth research (Longhurst, 2010; Bryman, 2012). In an example of qualitative research with cross-sectional design, the dietary design and practices of vegetarians were investigated using 'relatively unstructured interviews' which were 'guided by an inventory of issues' (Beardsworth and Keil, 1992, p. 261). Cross-sectional design and interviews go hand in hand here because the focus is on exploring an issue, both in a more general fashion and in-depth. Such design is also warranted by the fact that in this research, attention is paid to 'beliefs, attitudes and practices' associated with food selection and avoidance (Beardsworth and Keil, 1992, p. 253). Similarly, in my research, the focus is on the way actors make sense of and rationalise resilience as a technique and practice of government.

The empirical material from interviews will be quoted in the text of the thesis, according to the taxonomy presented in the table below:

Table 1. Scale and institutional affiliation of main actors interviewed:

Scale	**Government / state (G)**	**Non state actors (NSA)**

National (N)	Ministry or government department officials (4)	National charities (1)
Regional (R)		Consulting firms (2)
Local (L)	Pathfinder Managers (13)	Community flood members (2)

Throughout this chapter, comments provided by interviewees are coded by scale and institution of the actor (e.g. a comment from an individual in the National Flood Forum would be coded National-Non State Actor (N-NSA), a local government officer would be coded as Local-Government (L-G)). While anonymised, I ascribed a number to each interviewee, starting with the national level, down to the local. As such, an interviewee at the national level might be referred to as 'Interviewee 1', while one at the local level might be referred to as 'Interviewee 20'.

4.4.4 Positionality

In relation to the personal influence I might have had in the research and the issue of embodiment illustrated by Wengraf (2004), the issue of positionality needs to be addressed in more detail. During my data collection phases, I needed to be aware that I am a young male and non-British citizen, conducting interviews with British policy makers and members of the communities. There was always a risk that some individuals might regard me differently or might be distrustful of myself or my abilities. That being said, I did not have any negative experiences during the data collection sessions and there was no indication that my embodiment distorted the interview process. This might have been because the discussions carried out had a more technical nature (questions about the projects and resilience) and were not concerning sensitive political or social issues (for example immigration in the UK). I presented myself as a postgraduate student who wants to learn more about the government's response to the issues of flooding. I made it clear that I am not working for the government, that all their contributions will be guaranteed confidentiality and the purpose of the research is to advance academic and public knowledge on the issue.

4.5 Conclusion

This chapter has introduced the methodological tools that are needed to answer the research question. The first part of the chapter has presented three critical methodological and theoretical approaches that extend governmentality and help answer the research question. The first of them,

genealogy as problematization (Koopman, 2013), plays a crucial role throughout the thesis. It is the methodological approach that will be used primarily in chapters 5, 7 and 8. Chapter 6 will use primarily logics of critical explanation, where problematization plays an important role (Glynos and Howarth, 2007). However, this chapter will have a more specific focus on the logics that underpin resilience policies and their articulation in practice. In Chapter 7, while genealogy as problematization serves as the main theoretical approach, it will be supplemented by Christopher Menke's discussion of the two possible kinds of social practice (aesthetic and disciplinary) that are present in Michel Foucault's work (Menke, 2003). This discussion will assist with the task of providing a more accurate methodological frame of reference, for the argument that resilience can be interpreted on an empowerment/responsibilisation spectrum (Rogers, 2015). All these methodological approaches are consistent with each other and consistent with the analytical framework of the research, governmentality.

The second part of the chapter introduces the practical methodology, concerned with the research design and methods for obtaining and analysing the empirical material. The research uses a qualitative, cross-sectional design with case study elements. This design most appropriately responds to the requirement of the research question. Data needs to come from all tiers of the policy chain while it attends to its practical implementation (FRCS is used as the case study). The thesis looks at the rationalities of policy practitioners at different levels of the policy, but it also investigates its actual implementation by focusing on the technologies employed, the forms of subjectivity encouraged and the actual effects that occurred in practice (intended and unintended). As such, there are two main sources for the data. The first source is policy documents. Chapter 5 will be making heavy use of the policy documents focused on resilience in the UK from 1998 until present. Chapters 6 and 7 will draw mainly from the policy documents associated with FCRS. The second source is the interviews with the policy practitioners involved in the design and implementation of FCRS (22 semi-structured interviews). While chapter 5 benefits from some of this material, it will constitute the empirical basis of chapters 6 and 7.

Chapter 5: A genealogy of the concept of resilience in UK policy making

5.1 Introduction

As Chapter 1 showed, while the language and assumptions of managerial resilience influences policy documents in the UK, at its core, the managerial literature proposes a series of recommendations, rather than a precise and coherent policy. While the concept retains connotations for the managerial literature and deals with specific governance and management problems (Walker *et al*., 2004; Gunderson and Holling, 2002), in the UK particularly, the employment of the concept has been subject to increased scrutiny by the critical literature (Joseph, 2013b; Bulley, 2013; Neocleous, 2012; Evans and Reid, 2013). As such, this chapter will begin the investigation into how governing through resilience is articulated, with a critical discussion of the nature of the concept of resilience that has been accommodated in policy making in the UK. Before investigating how resilience is articulated in practice (Chapter 6) and the forms of subjectivity it seeks to form (Chapter 7), some questions about the emergence of resilience in policy making need to be asked first. These relate to how resilience has come to inform policy making in the UK, how the concept been understood and utilised, the kind of problematizations that have brought forth resilience as a policy solution and the way in which the concept is operationalised by policy practitioners.

In theoretical terms, the chapter engages with a series of contributions that can be loosely characterised as genealogies of the concept of resilience (Walker and Cooper, 2011; Aradau and Van Munster, 2011; Chandler, 2014; Davoudi, 2016). Such genealogies have traced the concept (and its popularity in academic and policy making discourse) to the work of Holling in ecology (Walker and Cooper, 2011; Aradau and Van Munster, 2011; Davoudi, 2016) or as a response to the challenges of complexity (Chandler, 2014). In a nutshell, they argue that notions of complexity underpin resilience, whether in the form of complex adaptive systems or a more general theory of complexity. On the one hand, the popularity of resilience can be attributed to the synthesis between complex adaptive systems and neoliberalism (Walker and Cooper, 2011). On the other hand, resilience can be regarded as embodying the governance of complexity (Chandler, 2014). I argue in this chapter, that it is difficult to characterise resilience as a concept that is attributable to a specific source or which is endowed with a clear historical trajectory. As such, the claim that resilience is indicative of a paradigm shift, based on notions of complexity, cannot be corroborated. Instead, it is more the case that resilience

has been co-opted into a series of changes, already in motion at the time of its entrance in the UK policy making arena.

This chapter focuses on the significant official documents that call for resilience as a governing rationality, with a focus on flood risk management (FRM) and FCRS, which is the empirical locus of the research. In terms of the methodology for analysing the documents mentioned above, this chapter utilises genealogy as problematization, in order to understand how the concept of resilience in UK policy making has been contingently put together.

5.2 The question of complexity in genealogies of resilience

Undertaking an etymological journey, Alexander (2013) suggests that the root of the word resilience derives from the Latin *resilire* or *resilio* which means 'bounce' and by extension 'bounce back' (see also Manyena *et al*., 2011). 'Resilience' had been transferred to English over the course of the 17th century and started being employed in mechanics in the 19th century, denoting the ability of steel to resist the application of a force with strength and absorb it with deformation (Alexander, 2013). The term also became to be employed in psychology in the 1950s, especially in relation to the psychiatric problems of children (Goldstein and Brooks, 2006). Alexander (2013) suggests that resilience has entered into social sciences via the use of the term in psychology. While an argument can be made that the transition of the concept to the social sciences has broadened the horizon of application of the concept (see Adger, 2000), other genealogies have located the entrance of resilience into social sciences to be descending from ecology and particularly from the work of C.S. Holling (1973). Genealogies that trace resilience to Holling's work, tend to emphasise the foundational role played by the problematization of the world as complex. Below I will present the two most influential genealogies of resilience that trace the intellectual emergence of the concept, in relation to problematizations of complexity: resilience-as-neoliberalism (Walker and Cooper, 2011; Evans and Reid, 2013; Joseph, 2013b) and resilience as governance of complexity (Chandler, 2014).

Resilience-as-neoliberalism has been arguably the most voluminous critique of resilience: the suggestion that the concept is a strategy that seeks to further embed neoliberalism (Joseph, 2013b; Walker and Cooper, 2011; Evans and Reid, 2013; O'Malley, 2010; Kaufmann, 2013; Lentzos and Rose, 2009). As stated above, it is crucial to highlight that the association of resilience with neoliberalism is advanced on the ontological terrain, occupied by problems of complexity, non-linearity and surprises (Walker and Cooper, 2011). As Jonathan Joseph interprets it, resilience fits well with an understanding of the world as complex (Joseph, 2013b; Joseph, 2016). Walker and Cooper connect resilience back to the work of C.S. Holling in ecology and suggest that his conceptualisation of resilience is indebted to

an understanding of the world and natural systems as complex and adaptive. Holling's concept of resilience concerns how much disturbance a system can take and still persist (remain within its critical thresholds) (Holling, 1973). This entails that there isn't an inherent equilibrium, but multiple ones, multiple attractors and non-linear relationships that cannot be predicted in advance. In other words, the idea of 'unknown unknowns' is critical, the logical impossibility of knowing the unknowns (Davoudi, 2016). As a result, Holling's way of responding to conditions of complexity is by renouncing rationalist principles of abstract and predictive models of the world and proposing resilience as a 'qualitative capacity to devise systems that can absorb and accommodate future events in whatever unexpected form they might take' (Holling, 1973, p. 21).

The connection between neoliberalism and complexity is most visible in the theoretical affinities between Holling's conceptualisation of complex adaptive systems and Friedrich Hayek's conceptualisation of the market. For Hayek, one of neoliberalism's main theorists, the problem of complexity is of central importance (Walker and Cooper, 2011; Chandler, 2014; Schmidt, 2015). Like Holling, Hayek rejected the Keynesian economic models of state interventions, which he perceived as hubristic and in essence, the root of economic problems. Gradually, he adopts insights from complex systems theory and conceptualises closed systems, such as the market as being adaptive and non-linear. For Hayek, the market is a 'radically decentralized computation and signalling system', the only one capable of dealing with problems of information posed by complexity (Walker and Cooper, 2011, p. 148). In other words, Hayek proposes that state intervention and planning do not take stock of complexity and therefore, such command and control, linear interventions in the market (which is complex) can only generate more complexities. Liberated from the rigidity trap of state intervention, the evolutionary logic of the market can identify the 'real' relative value of objects and adapt in real time to the excess of information that can never be captured by way of human rationality. In other words, the problem for Hayek is an epistemological one, as humans can never effectively process the infinite amount of information in the world, only the market through price signalling. It appears clear now why neoliberal forms of rule would pick up resilience as a strategy, since the underlying assumptions of both are very similar. As such, Walker and Cooper see the popularity of resilience as no accident, since it is marked by an 'intuitive ideological fit with a neoliberal philosophy of complex adaptive systems' (Walker and Cooper, 2011, p. 144).

David Chandler's argument that resilience represents the governance of complexity, works along similar lines to Walker and Cooper's argument, but unlike Hayek's conceptualisation of the market as a closed system, general complexity dismisses that any system can be closed from outside interferences. As a consequence, life itself is considered to be self-organising and to constantly be

generating order through interactive adaptations. Self-organisation is thought to be hampered by liberal modernist and collectivist frameworks of understanding. Chandler's main argument is that complexity can be governed through its own mechanisms of creative problem-solving. Here is where resilience comes into play as a pragmatic framework of understanding that enables complex life to reveal itself. In lay terms, this translates into dismissing any reductionist language (such as that of binaries: Left/Right, liberal/authoritarian) and adopting one of complex adaptive (open) systems underlined by a problem-solving methodology.

The concept of complexity and/or Holling's work on complex adaptive systems play a central role in the main genealogies of resilience. As we have seen above, in some of them, complexity is valorised in its own terms (Chandler, 2014), while in others it is connected with one way or another with neoliberalism (Walker and Cooper, 2011; Joseph, 2013b). Increasingly, resilience is seen as a response to the problems of complexity, whether the failures of central planning and intervening, or the ones at the heart of neoliberalism (Schmidt, 2015). This chapter takes stock of the critiques of resilience outlined above, but undertakes its own genealogy of resilience in UK policy making.

While these are very compelling accounts of the genealogical emergence of resilience, I argue that they have more traction at a general, theoretical level. This is mainly because my genealogy of resilience, in the context of policy making in the UK, highlights that the concept of resilience has been adopted in the wake of theoretical debates about risk and uncertainty associated with Risk Society (Beck, 1992), rather than having brought forth an agenda focused on complexity and complex adaptive systems. In other words, the concept of resilience responds to problematizations about risk in the context of a changing understanding of the British society and the world more generally, as interconnected and increasingly uncertain. While discussions of complexity and complex systems surface through in places, the entrance of resilience into UK policy making does not bring with it a reconceptualization of society in terms of complex adaptive systems, for whom resilience presents itself as a measure of fit and persistence (Walker and Cooper, 2011). Neither does resilience present itself as a pragmatic framework of understanding that enables complex life to reveal itself (Chandler, 2014). This means that there is emphasis on the agency at the level of the individual and institutional actors, rather than agency being reconceptualised as an integral part of a complex adaptive system or in terms of self-organisation. Instead, resilience is co-opted into a series of changes already in motion, as an integrating concept that makes different knowledge, institutions or actors resonate with each other. In the second section of this chapter, 'Resilience in Flood Management', I will show how this works with reference to flood risk management, where the function of resilience is that of enabling communication between groups and institutions that were hitherto isolated from each other. The last

section will illustrate how resilience performs a similar function in practice, between policy practitioners at different levels. I show how, in practice, policy practitioners perform resilience by making do with whatever theoretical and practical tools they already possess, rather than informed by a theory or model of resilience. However, I also highlight an issue that will become a recurrent theme in the next chapters: there appears to be a discrepancy between the conceptualisation of resilience at the top level of policy making and its implementation in practice.

5.3 The inception of resilience in UK policy making: The Civil Contingencies Act and the problematization of risk

5.3.1 Towards governing through risk

Historically, the institutional evolution of emergency planning and emergency management in the UK started after the Second World War and at its core, preoccupies the interplay between the responsibilities and capacities of the local and national levels (O'Brien and Read, 2005). The Civil Defence Act of 1948 was the first official document to establish a series of procedures, outlining how the general public can protect themselves in the event of a nuclear attack. Central government was willing to allow local agencies to deal with the emergencies, both in terms of planning and execution. However, the central government has not advanced a duty onto the local organisations to co-operate and co-ordinate their efforts. The devolution of responsibility for planning and responding to the local level has provided a template and a background for how emergency planning would evolve in the UK (O'Brien and Read, 2005).

The provisions of the Civil Defence Act of 1948 remained in place (having been reviewed in the 1980's and the beginning of 1990's) until the beginning of the new millennium. In 2000, the Millennium Bug, a software problem that affected the central government's electronic infrastructure, disclosed a series of issues in emergency management and set in motion a number of changes. The report commissioned to identify the lessons that could be learned from the Millennium Bug issue, highlighted a gap between central and local authorities, not least as many governmental departments did not possess formal powers to request information or action at the local levels (Beckett, 2000). The report also signalled the importance of business continuity planning, a very important theme in civil contingency planning that would become part of the resilience narrative (Joseph, 2013b). Other events in the year 2000, such as flooding and the UK Fuel Blockade crisis, helped generate a widespread conviction that reforms to emergency planning were needed. A few months before the September 11 terrorist attacks, the Civil Contingencies Secretariat (CCS) was established to take responsibility for emergency

planning and for overall management of future crises (Lentzos and Rose, 2009). The main goal of CCS is to 'improve UK 'resilience', that is to say, the ability to handle any disruptive challenges that can lead to, or result in crisis (not just terrorism but also eventualities such as flood and fuel crises) (Lentzos and Rose, 2009, p. 241).

In November 2004, the Civil Contingencies Act (Cabinet Office, 2004a) was adopted, constituting the legislative enshrining of changes to emergency planning and management. Its importance for the genealogy of resilience undertaken in this chapter is significant, as the CCA sets up the legislative and operational architecture of emergency response in the UK. The Act seeks to 'deliver a single framework for civil protection in the United Kingdom capable of meeting the challenges of the twenty-first century' (CCA, 2004b, p. no page). More specifically, it 'clears outdated legislation, re-defines emergencies, clearly identifies the roles and responsibilities of all participatory organisations, introduces a mandatory regime for responders and replaces the previous outdated system for emergency powers' (O'Brien and Read, 2005, p. 356). O'Brien and Reid further describe the ethos of the Act as 'holistic' in nature, aiming to bridge the gaps between the central government and local organisations that were identified in early 2000. The Act boasts 'clear organisational structures making the process transparent, multi-agency approaches that bring together a range of expertise needed to face increasingly complex challenges, a clear audit of capabilities to fill gaps in provision and a duty throughout the UK on local responders leading to a uniform and consistent approach' (O'Brien and Read, 2005, p. 356). In essence, the 2004 legislation coagulates emergency planning and response around 'hierarchical networks of separate organizations that will come together at the onset of an event to prevent it from becoming a disaster' (Adey and Anderson, 2012, p. 113-114). As the same commentators have noticed, the Act is not concerned with preventing damage from occurring. It is instead about preparedness in the aftermath of the critical event (which is said to be a manner of 'when' rather than 'if'), preventing the consequences of the event from snowballing and causing large-scale damage. So the Act is concerned with the interval after the critical event, where different agencies can come together and act to stop the emergency from spreading and incapacitating society at large (Adey and Anderson, 2012).

In more operational terms, CCA differentiates between two types of local respondents. Category 1 responders (or 'core responders') consist of emergency services (e.g. fire authorities, ambulance services), principal local authorities, health bodies (e.g. Primary Care Trusts, health Protection Agency) and governmental agencies such as EA (Environment Agency). Category 2 responders ('co-operating responders') are spread across a series of private and public bodies such as utility companies (e.g. gas distributors), transport bodies (e.g. Network Rail) and health bodies such as Strategic Health

Authorities (CCA, 2004a). The difference between the two types of responders, is that Category 1 responders have statutory duties under the Act and are at the centre of the emergency planning and response, whereas Category 2 responders have a lesser set of duties related to co-operating and providing relevant information to category 1 responders. Overall, local responders are deemed to be the 'building block of resilience in the UK' (CCA, 2004b: no page). They are organised institutionally in 'local resilience forums' (LRF's) and geographically in local resilience areas (LRA). The local resilience area ascribed to a general responder (Category 1 or Category 2 responder) corresponds to the 'police area in which the responder's functions are exercisable', with the exception of London, where these areas are organised around the boroughs of London (Cabinet Office, 2005, p. 4). Policing is also given a leading role under the CCA, especially in the 'golden hour' of a critical event (Brassett and Vaughan-Williams, 2013). A local resilience forum is geographically organised in a local resilience area and consists of Category 1 responders of that area organising meetings (forums), where they cooperate and coordinate with each other and the relevant category 2 responders.

The resilience areas and forums are what, in the view of the Civil Contingencies Act, makes the multi-agency emergency response consistent and coherent, rather than patchy as before the Act. The elements of planning and response are merged together at the local area and enacted by the responders in that specific resilience area. This is because 'planning is co-ordinated in relation to the process of defining risks' by the respondents, based on what they consider to be the relevant risks in their resilience area (Brassett and Vaughan-Williams, 2013, p. 232). The shifting nature of risks also presupposes that the process of resilience building is a year round, continuous process of 'planning, training, exercising and lesson learning' (Brassett and Vaughan-Williams, 2013, p. 232). It also means that 'LRFs are a collection of equals who come together to co-operate and to ensure an effective and co-ordinated response', which in turn means that an LRF 'is not a statutory body, but is a statutory process' (Brassett and Vaughan-Williams, 2013, p. 233-234). As such, LRF's cannot be held directly accountable.

In broad terms, the Act represents a definitive move towards governing through risk (in the form of risk management) rather than protecting against it. Two developments are important for understanding how governing through risk is rationalised. First, it responds to an understanding that the threat is now internal to society (not just the state), rather than external to it. Whereas the 1948 Defence Act was concerned with nuclear attacks originating outside Britain and set up a top-down government plan to deal with them, the CCA responds to crises such as the Millennium Bug or the UK Fuel Blockade that originate from inside the interstices of society and materialise within its ranks. Second, the identified nature of the threat extends the emergency and planning response to the whole

of society, rather than just the government. The gap between the national and local organisations is bridged, the process is made holistic and multi-agency approach is pioneered. The response is spread between institutions, agencies and any actors with a stake in preventing threats from incapacitating society as a whole.

5.3.2 The adoption of resilience within risk management

While plenty of academic commentary links the emergence and popularity of resilience in UK politics with the major part it plays in the Civil Contingencies Act (Adey and Anderson, 2012; Aradau and Van Munster, 2011; Brassett and Vaughan-Williams, 2013), there isn't any investigation that considers how the concept itself came to furnish the Act in the first place. As explained in the introduction of this chapter, commentaries about the genealogy of resilience in the UK and internationally, trace the concept to the work of Holling and his colleagues (Walker and Cooper, 2011) or complexity more generally (Chandler, 2014). In this section, I argue that resilience's inception in UK policy making is not traced back to Holling or genealogies of complexity, but it responds to a series of theoretical debates about the nature of risk, encapsulated in the umbrella term *Risk Society* (Beck, 1992; 1998; Giddens, 2002).

Precursors to the Act were a public consultation exercise and a Draft Bill (HL/HC, 2003), which provide more details about how resilience is rationalized as a working concept. In these documents there are a number of definitions and essential characteristics of resilience that do not follow in the footsteps of genealogy grounded in theories about complexity. In the Government's Consultation Exercise, the issue has been raised about the novelty and peculiarity of resilience as a concept meant to deal with disasters and emergencies:

> The terminology used within the Bill differs from that normally associated with the field of disaster management. The Bill refers to emergencies and resilience, whereas the more normally accepted terminology in this field of study is concerned with disaster, vulnerability and risk. It is normally considered that a disaster is a result of the conjunction of a hazard with a vulnerable target. The concept of an emergency as distinct from a disaster omits the central role of vulnerability **(HL/HC, 2003, p. 161-162)**.

This is also reflected in the interviews with members of the CCS, where it appears that the concept was floating around and adopted without an overarching effort from a specific actor:

> The idea of resilience emerged during that period of 2001-2002 […] there has been quite a bit of a debate about what resilience actually means and how far it encompasses […] We in

> the Secretariat [CCS] at the time effectively picked up and developed that concept [resilience] […] I think it was no doubt used […] outside, I certainly wouldn't say we founded the idea, but I would have thought that we were probably the first people in any systematic way to try to develop and build a framework of resilience and that's evolved and developed other things **(Civil Contingencies Secretariat member, N-G)**.

I suggest here, that the entrance of resilience in British politics through the medium and opportunity provided by the Civil Contingencies Act, is a matter of 'muddling through' (Lindblom, 1959). Lindblom discriminates between 'branch' and 'root' methods when it comes to policy making, with 'the former continually building out from the current situation, step-by-step and by small degrees; the latter starting from fundamentals anew each time, building on the past only as experience is embodied in a theory, and always prepared to start completely from the ground up' (Lindblom, 1959, p. 81). In other words, the 'root' method characterises the (ideal) world of the theorist, who looks to provide a comprehensive account of making a new policy that looks to establish clear aims and steps to success, complete with consideration for all possible variables. On the other side of the spectrum, the 'branch' method characterises the policy practitioner, pressured by limits of time and funding, and who incrementally adds to the already existing policy practice and experience, in order to craft a new policy. The focus on resilience doesn't appear to be concerned with the application of a paradigm shifting concept that would redirect civil contingencies in the UK, to better deal with disasters and crises. For example, it is interesting to look at the definitions of resilience and civil protection to observe their similarities:

> Central government's approach to civil contingency planning is built around the concept of resilience. This is defined as the ability "at every relevant level to *detect*, *prevent*, and, if necessary, to *handle and recover* from *disruptive challenge* **(Cabinet Office, 2003, p. 1, *emphasis added*).**

> Civil protection, or civil contingency planning, can be defined as the application of knowledge, measures and practices to *anticipate*, guard against, *prevent*, reduce or *overcome* any hazard, harm or loss that may be associated with natural, technological or man-made [sic] *crises and disasters* in peacetime **(Cabinet Office, 2003, p. 1, *emphasis added*).**

Both concepts span the entirety of the disaster management cycle and both have similar goals. From the analysis of the documents quoted above, it seems that the function resilience fulfils is that of providing a common denominator for the concepts and practices that existed before. As such, the characterisation of resilience as a boundary concept (Brand and Jax, 2007) holds its ground. Resilience

is used to bring together existing (and sometimes disparate) elements, rather than articulating a new policy paradigm. Brand and Jax highlight this tendency with resilience more generally, by observing a 'tension between the original descriptive concept of resilience first defined in ecological science and a more recent, vague, and malleable notion of resilience used as an approach or *boundary object* by different scientific disciplines' (Brand and Jax, 2007, p. no page). Furthermore, 'even though increased conceptual vagueness can be valuable to foster communication across disciplines and between science and practice, both conceptual clarity and practical relevance of the concept of resilience are critically in danger' (Brand and Jax, 2007, p. no page). These quotes suggest that the concept is adapted to the notions and definitions, which are already at play in policies concerning civil contingencies.

It becomes clear from the empirical investigation undertaken, that it cannot be claimed that policy practitioners operated with the concept of resilience that can be traced back to Holling or general complexity. In fact, no interviewee has been able to specify where the concept is coming from, meaning that its source is open for speculation. In a similar vein, Jones *et al*. (2013) suggest that the entrance into policy of nudging and behaviour change, another set of highly influential policies adopted by the UK Government (detailed more in Chapter 7), was as a result of the presence of a key economist at a Cabinet Office seminar, an event that catalysed the spread of those specific ideas within the government. The best hypothesis is that the concept was floating in policy circles at that time, similar to how Cohen *et al*. (1972) suggest that in 'organized anarchies' (institutions such as the Government for example) there are solutions looking for issues.

What can be stated with more confidence however, is that the concept of resilience adopted at the time did not come with its core focus around (complex adaptive) systems thinking (as Holling and the Resilience Alliance conceptualised of it), but was rather inserted into the on-going theoretical (re)negotiation and rethinking of risk (and only tangentially complexity) associated with Risk Society (Beck, 1992). There are various indications of this. For example, two academic advisors who commented on the Draft Bill, later wrote a book called *The Civil Contingencies Act: Risk, Resilience and the Law in the United Kingdom* (Walker and Broderick, 2006). In it, they provide a theoretical background for the emergence of the Act, which is heavily influenced by Beck and Giddens theorisation of the Risk Society:

> Faced with an ever-widening and ever-deepening range of risks and uncertainties, governments must engage in their management. But in a risk society, they cannot promise delivery. In terms of response, and bearing in mind reflexive modernization, considered

> approaches tend to involve either risk evaluation or the application of the precautionary principle against uncertainty **(Walker and Broderick, 2006, p. 29)**.

In other words, CCA contains at its heart, a range of problematizations about how to deal with risk once the older frameworks that promised protection have been jettisoned. The Act follows a series of crises around the year 2000 (Millennium Bug, The Fuel protests, the foot and mouth outbreak, widespread flooding), where the provisions put in place proved inadequate. Beck suggests that the transition to risk society occurs when hazards produced by society exceed or cancel the safety nets of publicly provided forms of protection (Beck, 1998; Giddens, 2002). Risk is no longer insurable and calculable, and its causality cannot be readily attributable to a clearly defined entity (e.g., environmental risks). Risk society is also characterised by *manufactured uncertainty*, which denotes that attempts to control or prevent risks will create even more risks (Giddens, 1994). It can be argued that the academic account of Risk Society grapples with the problem of complexity in both epistemic (risks cannot be known anymore) and ontological terms. For example, Giddens' suggests that in risk society, technological transformations cannot be known but they also generate a number of possible futures (Giddens, 1998). There is a tacit understanding of emergent causality in the risk society thesis, in the sense that the interactions between the highly interconnected actors in the globalised world give rise to unpredictable and qualitatively different phenomena. However, in the context of the CCA, such complexity is not tackled from the perspective of complex adaptive systems (as Holling proposes) or evolutionary and relational adaptation (as general complexity suggests). Agency is placed at the level of individual and institutional actors, making concerns with complexity tangential, rather than central. The Draft Bill suggests that the response should be conceptualised in modernist terms of risk calculation and evaluation:

> The detailed response requirement may be established by comparing the probable disruptive challenges (based on historical precedent, identified weaknesses, declared intent of enemies and blue sky thinking) with existing response capability to expose the degree of vulnerability **(HC/HL, 2003, p. 107).**

Even if the precautionary principle (action is needed to act preventively even in the absence of scientific knowledge about hazards) is to be applied, as the previous quote by Walker and Broderick (2006) suggests, this is also based on a modernist notion of temporary action until science can quantify the risks. Similarly, when the Draft Bill talks about the rationale for building resilience, the notion that is central, is risk minimizing within parameters defined by stable (rather than complex) relations:

> The aim of building resilience is to reduce susceptibility to incidents by reducing the probability of their occurrence and their likely effects, responding effectively and efficiently

> when they occur and building institutions and structures in such a way as to minimise the possible effects of disruptions upon them **(Cabinet Office, 2003, p. 31)**.

Overall, my investigation into the emergence of resilience into British policy making, shows that resilience has been imported by policy makers in complementarity to a series of changes already in motion at the time. The function of the concept of resilience related to enabling communication between different quarters of the broadened policy making arena (which was extended to include different quarters of society and civil society). While these changes respond to the breakdown of modernist notions of risk as secured by an agency (the state), the response to it is re-orchestrated in terms of risk management, rather than risk avoidance. This implies that once it is recognised that risks cannot be avoided entirely, the question becomes one of how they can be managed through the response-resources offered by the members of society. While notions of complexity appear in places, the thinking of policy practitioners is grounded in the notion that risk can still be dealt with, provided that a horizontal and vertical dispersion of risk is enabled. As such, the entrance of resilience appears to be symptomatic of a series of institutional and ideological changes occurring in British society (Zebrowski, 2009) and the concept appears to match these changes.

Having charted the inception of resilience in the UK through the CCA and its associate documents, it becomes clear that there isn't much that the concept of resilience brings to the table itself, at least not enough to enact a paradigm change. Rather the converse appears to be true, where resilience is being adapted to the arrangements and dispositions of the emergency planning and management in the UK. This argument will be further illustrated in more depth in the next section, which will chart the emergence of resilience in relation to FRM.

5.4 Resilience in Flood Risk Management: from risk protection to risk management

The previous section has charted the inception of resilience in the UK. As the policy practitioner from the CCS has noticed above: 'we were probably the first people in any systematic way to try to develop and build a framework of resilience and that's *evolved and developed other things*' (Civil Contingencies Secretariat member, N-SA*, emphasis added*). This section will chart the evolution of resilience, restricted to the policy domain of flood risk management, as it is the policy domain of interest for the research. However, by evolution I do not suggest the 'survival of the fittest' paradigm, where resilience represents the most 'adapted' idea, which ends up surviving at the expense of other ideas. Consistent with a genealogical approach, I attend to the ways in which different agents, institutions or structures

use and push the resilience agenda to the fore, keeping a constant eye on the agency and intentionality of the agents involved. This will aid the understanding of the trajectory of resilience in FRM, up to and including the FCRS, but it is important to keep in mind that such trajectory is charted by reference to the rationalities of policy makers mainly, as contained in relevant official documents. It will be interested in how these documents make sense of resilience and employ it in the context of FRM. Chapter 8 will give a more in-depth reading of the rationalities of resilience in FRM, compiling all the insights from the empirical chapters in an analysis of resilience as a regime of government.

Investigating the evolution of resilience in FRM in England should not start with the use of the term in official documents but earlier, with a survey of the documents that have shaped the terrain for resilience policies. Of particular importance here, is a close and critical reading of the Bye Report, authored in 1998 as a review report, analysing the performance of the Environment Agency during the Easter Floods of 1998. Many of the issues and solutions highlighted in this document resonate with the provisions of the CCA, despite the fact that it was issued a few years before it. I will argue here that, as far as FRM is concerned and consistent with the case of the CCA, the advent of resilience as an organising concept in policy is preceded by a series of background changes, which facilitated its policy entrance. More specifically, a careful examination of the Bye Report shows that it contains many of the policy initiatives which will come to be associated at a later point with resilience. For example, the report suggests that in order to improve consistency and efficiency, the identification of best practice is needed (Bye Report, 1998, p. 5). Best practice identification is one of the pillars on which FCRS is built. Furthermore, it also suggests that EA should have a more realistic understanding of its capabilities and how much it can practically do, paving the way for the later gradual withdrawal of the state. However, perhaps more importantly, the report highlights the inadequate provision of flood warnings, suggesting it was one of the reasons for the major impact the flooding had. As a result, it recommends giving 'greater attention to the human and social aspects of warning message construction, dissemination and encouraging effective responses' (Bye Report, 1998, p. 5). Making the public aware of floods has been one of the central efforts of the FCRS, so it is vital to point out that it was a change recommended long before resilience policies. In other ways, the Bye Report remains anchored in the 'command and control' policy practices of its time. It is important to highlight them as it will set up a baseline, against which later changes can be compared. The report makes a few key recommendations, centred on the proposition that the leading role of the EA should be bolstered:

> The Agency should exploit its expertise in flood defence, taking an active role in bringing greater clarity to command and control in the combined response of all organisations to flood emergencies **(Bye Report, 1998, p. 7)**.

This was done through increased centralisation of flood warnings and 'defence technical specialisms' at the regional or national level (Bye Report, 1998, p. 10). The importance of flood warning and emergency response is highlighted, to be conducted by senior, experienced staff during times of flood emergency. And overall, the drive was to 'increase the importance and strength of the flood defence management line, from the level of national head of service down, in order to permit more authoritative direction of the function and bring about greater national consistency' (Bye Report, 1998, p. 10).

The floods of 1998 can be considered to some extent, a turning point in the way flood management was conceptualised and acted upon in England. As Johnson *et al*. (2005) suggest, at the time of the floods, the public and part of the authorities had become complacent about flooding. Since the 1953 floods, there has been significant investment in structural flood protection, so many locations deemed at risk were protected. However, the sprawling populations on floodplains in coastal and river areas left as many as 5 million at risk (Johnson *et al*., 2005). The floods of 1998 were particularly severe because prior, there were no major floods and while the authorities were taken by surprise, the public had grown used to a flood paradigm orchestrated around the power of humans to 'control' nature and avoid floods (Johnson *et al*., 2005). The Bye Report is important as it shifts the conversation around flooding to include two major points: structural defences cannot deal with all sources of flood risk and a balance needs to be struck between technical and social aspects of flood management.

Another set of flood events in 2000 and 2002 intensified the public debate surrounding flooding, sparking a re-assessment of the flood policy (Werritty, 2006). The Department for Environment, Food and Rural Affairs (DEFRA) was created in 2001 with the goal of creating national policy, which is implemented by the EA (for coastal erosion risk and main rivers), the Internal Drainage Boards (IDBs) and local authorities (for regular watercourses). The 2001 *Learning to Live with Rivers* report authored by the Institution of Civil Engineers, suggested that structural defences needed to be deployed in balance with the environmental concerns and avoided unless there is no other option (Institution of Civil Engineers (2001) quoted in Werritty, 2006). In 2004 DEFRA called for a consultation exercise with relevant stakeholders on the theme of flood and coastal erosion risk management in England called *Making Space for Water* (MSW) (DEFRA, 2004). This is another crucial document in the development of flood risk management in England, as it takes into considerations the recommendations of the previous documents and sets up a 20-year long-term strategy for dealing with flooding. MSW's vision is that of holistic flood risk management, based on whole catchment (or catchment-wide), whole shoreline approaches and the involvement of stakeholders at all levels of risk management. Whereas in the past, rivers were the main flooding concern, the document seeks to take stock of all sources of

flooding, including groundwater, urban drainages and overland flow. It proposes to make the engineering practices greener as it commits to 'solutions which work with natural processes to provide more space for water' (DEFRA, 2004, p. 7). All these changes sanction the transition from 'flood defence' to 'flood risk management', the latter being considered a policy phase where people need to integrate with nature (rather than control it) and environmental concerns need to be put in balance with economic growth, national security or welfare (rather than subordinate to them) (Johnson *et al*. 2005).

Resilience makes its debut onto the FRM policy scene in MSW, although as I will show in this section, there are two different concepts of resilience that will both make theoretical contributions to the development of FCRS: one of engineering resilience that is initiated by MSW and one of community resilience, which will be promoted later on by the Pitt Review (Pitt, 2008). MSW introduces resilience not as an overarching concept (as CCA does), but pitches the concept specifically in relation to the protection of private residences and business:

> There are two aspects to managing the risk to buildings from floodwater – resistance and resilience. Resistance measures are aimed at keeping water out of a building or at least minimising the amount that enters whilst resilience measures are aimed at facilitating the recovery of buildings following a flooding event **(DEFRA, 2004, p. 91).**

The kind of resilience used here, can be interpreted as *engineering* resilience, emphasising the capacity to return to normal functioning (Holling, 1973; Alexander, 2013) and it is counter posed to resistance. Flood resistance assesses protection *against* water entering the property, through the installation of guard doors or flood barriers or even sandbags at times. Resilience measures are designed for the property to recover more quickly from a flood event and are more suitable for properties that flood often. They include waterproof tiling, raised electricity sockets or use of waterproof paint. Resilience and resistance measures (also called property protection measures or PLP) were taken forward in terms of policy, by being piloted in six locations in England in 2007 (Harries, 2009). As a result of the success of the pilots, a policy scheme was developed between 2009 and 2011 to implement property protection measures to household throughout England. As a result of this Scheme, 5.2 million pounds were awarded to Local Authorities, in order to provide 1,109 properties in 63 communities with protection (EA, 2012a). The FCRS Prospectus, the document introducing FCRS, would reference the practical developments that resulted from the implementation of the previously mentioned scheme, as impetus and rationale for developing FCRS:

> In the course of reviewing that scheme we became aware of other activities that communities benefitting from the grant had also implemented to further increase their

> resilience to flooding. For example, some had set up "gully watch" schemes; others had put in place local monitoring equipment on non main-river streams; while others were disseminating information or carrying out exercises to increase local levels of awareness and flood preparedness. We believe that there may be many other innovative local initiatives that could be developed to complement the protection offered by flood defences at a property or community level, and to help people manage their level of risk and improve their financial resilience **(DEFRA, 2012, p. 2).**

It would be tempting to regard the development of FCRS, a policy scheme centred on building resilience, as a policy snowball effect which builds on the concept of resilience, for the protection of buildings, as was introduced by MSW (DEFRA, 2004). However, said concept can be described as *engineering resilience*, while the concept used in FCRS can be characterised as *community resilience*.

The focus of FCRS on community resilience stems from the popularisation of the concept by another highly influential policy document in FRM, the Pitt Review (Pitt, 2008). Similar to the Bye Report a decade earlier, the Pitt Review suggested that flood risk management should start with the needs of the individuals and communities and as a result, it proposed that communities and individuals are becoming part of the flood risk management agenda:

> Much of this report has been about the roles of public and private bodies in emergencies. However, evidence to the Review shows that the public play just as important a role – and in some aspects a greater one – in coping effectively with emergencies like those of summer 2007. On visits to the affected areas, the Review team collected many stories which illustrate how active local leadership and positive action, by both individuals and local organisations, helped to minimise the extent of the damage to communities **(Pitt, 2008, p. 349).**

Aside from the positive role the public can play in flood risk and emergency management, the review also argued that the public has a responsibility to get involved as 'responsibility does not lie with Government or other authorities and organisations alone' as they 'cannot protect people from all the consequences of natural disasters' (Pitt, 2008, p. 349). Resilience is the conceptual gateway, through which the involvement of individuals and communities is framed in the report, which defines resilience more generally, as ''the ability to recover readily' (*ibidem*). However, when 'applied to individuals and communities, the term relates to withstanding the consequences of an incident; being aware of risks; acting to mitigate them; and responding effectively when the risks materialise' (Pitt, 2008, p. 349). In other words, it extends the whole cycle of risk management (spanning from prevention/awareness to response) onto individuals and communities. At the same time, the report also recommends the augmentation of the role that local authorities play in flood risk management overall. They are to 'lead

on the management of local flood risk, with the support of the relevant organisations' (Pitt, 2008, p. 85). The Flood and Water Management Act of 2010 implements this recommendation in practice and defines the lead local flood authority for an area, as the unitary authority or the county council (Cabinet Office, 2010b).

Pitt Review's recommendation for the Government to encourage community resilience, has been picked up in the Strategic National Framework on Community Resilience (Cabinet Office, 2011b). This framework further clarifies what is meant by community resilience, along with a more detailed presentation of who should participate in the flood risk management process:

> The framework is intended to engage interest and facilitate discussion between central government departments and agencies, devolved administrations, emergency services, local authorities, relevant voluntary sector bodies, private sector bodies, elected members and community and faith groups. All of these bodies can have a part to play in supporting the building of community resilience **(Cabinet Office, 2011b: 3).**

The Pitt Review is a crucial policy document as it officially sanctions the decade-long transition from the command and control paradigm, to a full flood risk management paradigm. While a decade before, the Bye Report pioneered some of the changes associated with FRM, it remained anchored in a policy paradigm that prioritised hierarchical forms of planning and protection. Similarly, it awarded the limelight to experts as managers of emergencies and producers of valid knowledge. The Pitt Review looks to *spread the distribution of risk* onto an increased number of groups and institutions in society, motivated by an understanding that risks and unknowns cannot be made actionable within the walls of the government alone. In a similar vein, the conditions for the production of valid knowledge are extended to these groups and institutions, signalling the attempt to generate knowledge from the 'grassroots', rather than from abstract theories of experts:

> [Definition of community resilience] Communities and individuals harnessing local resources and expertise to help themselves in an emergency, in a way that complements the response of the emergency services **(Cabinet Office, 2011b, p. 4).**

For the policy makers, enacting the flood risk management paradigm, resilience operates as an *integrating* concept that seeks to tie together the knowledge of different institutions and groups and make it resonate. The documents place it within the domain of flood risk management, which proposes a spread of risk between the various groups and institutions within society. Resilience provides a language or a vocabulary that enables the design and enactment of FRM policy. The next

section will investigate how this process occurs in practice, in terms of the 'nuts and bolts', with reference to how policy practitioners and other actors implement the resilience policy on the ground.

5.5 The operationalization of resilience by policy practitioners on the ground

In terms of the actual application of FCRS on the ground by policy practitioners, it is worthwhile to investigate how resilience was operationalised. DEFRA has been very clear in the documents which outline the Scheme, in that that it looks for 'innovative approaches' and is almost by definition, left to the discretion of local authorities, in terms of how these different projects are conceived. This makes it more interesting to uncover how policy practitioners have approached the question of resilience in relation to their specific projects. One representative of EA highlights that the projects are conditioned by a range of determinants:

> The conversation they might have about what it means to build resilience is different in each area and that would be a consequence of lots of things, whether somebody was flooded before so they know what it means, could be a consequence of the type of community you've got or the type of flood risk, so maybe that concept of resilience varies according to different factors like geographical context or it may be that it varies because people's perception of it varies as well **(Interviewee 4, N-SA).**

The different conceptualisations of resilience are to be expected, given the experimental and innovation-driven design of the Scheme. The specificity of the context however, poses new questions in relation to *how* policy practitioners engage with the rationality of resilience. Do they internalise resilience, its definitions, multiple meanings or its various characteristics and then proceed to apply them in practice? As resilience is not a straightforward concept with precise conceptual boundaries, its implementation is not straightforward either:

> When I go at emergency managers and start talking [in resilience terms], they think it is so frustrating: 'how can you operate in the world? I have to make decisions yes or no in emergency management, I can't go: it is one thing, and then another thing, and if you talk to me tomorrow I will say it is something else' […] It underpins everything that they are doing, and suddenly they are realizing when they talk to us, that they are standing on quicksand, and then they say 'Oh shut up, I am on a high wire and don't tell me I might fall and there is no net at the bottom, I just want to walk across the wire'. We have to struggle with these concepts and definitions **(Interviewee 5, R-NSA).**

In this report of an exchange between a policy consultant and members of the emergency services, it becomes clear that for the latter, the elevated conceptual pitch of resilience combined with its ambiguity, present major challenges to their mode of operation, presumably based on not only much simpler and clearer concepts, but also on an ability to improvise in an emergency situation. The exchange is also an instance of what Levi-Straus calls a dichotomy between the scientist and the *bricoleur* (Lévi-Strauss, 1966). According to Levi-Strauss, the policy consultant embodies the scientist, which proceeds to create events and interventions in the world from structures constituted by theories and hypothesis. In opposition, the bricoleur builds structures by stringing together events (outside a prescribed rationality):

> The 'bricoleur' is adept at performing a large number of diverse tasks; but, unlike the engineer [or scientist], he does not subordinate each of them to the availability of raw materials and tools conceived and procured for the purpose of the project. His universe of instruments is closed and the rules of the game are always to make with 'whatever is at hand', that is to say with a set of tools and materials which is always finite and is also heterogeneous because what it contains bears no relation to the current project, or indeed to any particular project, but is the contingent result of all the occasions there have been to renew or enrich the stock or to maintain it with the remains of previous constructions or destructions **(Lévi-Strauss, 1966, p. 17).**

The emergency personnel operate, almost by definition, based on the previous experiences and making do with 'whatever is at hand', as emergency situations can be unpredictable and severely constraining. Their mode of acquiring knowledge that is pertinent to a real life emergency comes less from theory (about how to deal with emergencies), but from previous real-life encounters with emergency situations. However, bricolage as a mode of acquiring knowledge and creating interventions in the world doesn't apply just to policy practitioners at the very bottom of the policy chain, but it is rather, a feature of the policy chain as a whole in the case of FCRS. For example, Pathfinder Managers appear to express a similar attitude towards the proposed theoretical definitions of resilience and conduct their Pathfinders by reference to their previous experience and tools they have gathered:

> From my point of view as emergency planners, I have seen some thought out definitions of resilience but we see resilience as people being more resilient in terms of emergencies, i.e. been prepared for emergencies with grab bags, stay in, tune in listen to the radio, listening to the blue light services, but for us is more about the preparation, we want them to be resilient in the sense that if something unexpected, something out of the blue comes they

> are able to do something themselves. We are not theorists, we come from a people point of view because I have read all the reports about social and economic capital, etc., but we are more concerned about the individual **(Interviewee 7, L-G).**

In some ways, the passages above highlight a more acute problem with resilience policies: the discrepancy between the ambitious, holistic concept of resilience, pushed by the national level of policy making (DEFRA, EA) and the specialisation and finitude of institutional and human resources on the ground. As a result, the content of the Pathfinders became aligned with the previous work experience of the policy practitioners (previously learned tools) and orchestrated around the material and institutional developments already in place. This is made abundantly clear in the Evaluation Report, as most success has been recorded where previous work had already been done. Perhaps not surprisingly, one of the key messages of the report has been that 'it is important to recognise and build on existing capacities' (Twigger Ross *et al*. 2015, p. 144). It also strengthens the argument that resilience works more as an integrating concept in this context, looking to connect different knowledge and practices, rather than a paradigm with its own intrinsic purchase.

5.6 Conclusion

This chapter has grappled with the entrance and emergence of the concept of resilience in policy making in the UK. It has argued that the straightforward genealogies proposed by authors such as, Walker and Cooper (2011) and Chandler (2014) have traction at a general, theoretical level, and agreed that some of the developments surrounding the emergence of resilience can be framed in terms of complexity. However, I have showed that for the most part, resilience in the UK policy context is a matter of responding to issues of risk dispersion and risk management. This is important, as it keeps the focus on the agency of individuals and institutions and does not relegate it at the level of adaptive systems or the self-organisation of life itself, as with both strands of complexity thinking. Resilience does not appear to have much purchase in its own terms but it is rather used as an integrating concept. As such, it provides a conceptual language intended to bring together, in a more or less unified framework, a series of developments already in motion before its entrance on the scene. This has been exemplified in relation to the transition from flood defence to flood risk management, where the latter means responsibility for risk does not lie with the state alone but it is shared with a plethora of groups and institutions in society.

In terms of how policy practitioners have adopted and rationalised resilience in the UK, rather than accepting a clear cut genealogy centred on questions of complexity (in both terms of self-organization or complex adaptive systems), this chapter draws attention to the way in which resilience is

instantiated in practice. For example, keeping in line with the argument of this chapter, I have shown how policy practitioners engage in bricolage when it comes to resilience, furthering their previous set of policy tools, while at the same time exposing the intellectual vacuity of resilience. However, this only tells the story at the level of official documents and rationalities, inviting questions regarding how the policy schemes centred on resilience, such as FCRS, are actually implemented on the ground. The next chapter will look to answer exactly these concerns.

Chapter 6: Articulating resilience in practice: chains of responsibilisation, failure points and political contestation

6.1 Introduction

The popularity of the discourse of resilience is attributed by many commentators to its 'fit' (Joseph, 2013b) with the contemporary form of governmentality, neoliberalism (Walker & Cooper, 2011; Evans & Reid, 2013; O'Malley, 2010; Dean, 2014; Lentzos & Rose, 2009). For these authors, resilience is folded into the structure of neoliberalism, being transformed into a strategy that seeks to further embed it. Their main argument is that through resilience, neoliberal elites and forms of authority seek to promote the responsibilisation of communities and individuals, encouraging them to take ownership of risks themselves rather than rely on state-centric forms of risk management. Resilience becomes more palatable in the context of many calls to regard the world as increasingly complex and contingent. This effectively proposes a move away from stable and enduring social relations and towards an understanding of society as composed of 'reflexive agents capable of adaptive behaviour' (Joseph, 2013b, p. 39). At the same time, resilience is reflective of the changing structure of neoliberal societies where autonomous, responsibilised individuals take advantage of networked forms of governance and pursue their own operations with relative independence from the state (Zebrowski, 2009). Mitchell Dean indicates that this changing relation between the individuals and the state has intensified in recent years. He suggests that after the 2008 global financial crisis, the rationality of neoliberalism shifted away from triumphalist economic narratives promising trickle down wealth created by markets. With state-backed public services under even more pressure from austerity measures and further rolling back, neoliberalism simply seeks to make individuals, communities, systems or organisations learn to adapt and live with risks and even potential catastrophes (Dean, 2014).

However, the proposition that resilience fits with neoliberalism or represents one of its strategies can only make a claim about the *ethos* of resilience discourse. Questions emerge in relation to the mechanisms and processes through which individuals are responsibilised and whether or not they work in practice and to what extent. If studies of governmentality propose a connection between neoliberal forms of governmentality and the production of neoliberal subjectivity, they also need to detail the mechanism through which this is achieved and its rate of success (Weidner, 2009). In other

words, there is a need to peer into the black box of governmentality and unravel how responsibilisation takes place in practice, rather than simply assume it does or that it is successful.

Similarly, diagnoses of resilience as neoliberal strategy have proposed neoliberal rule as a 'strikingly uniform theoretical schema' (Corry, 2014, p. 257), ignoring how resilience can function within logics of governance other than neoliberalism. In this vein, Rogers (2015) suggests that the concept of resilience can be interpreted on a continuum between negative and positive interpretations. A positive reading of resilience is one that stresses participation, collaboration, empowerment and agency in attempts to build resilience. Conversely, the negative reading is aligned with the critique of resilience as neoliberal strategy. However, Roger's treatment of resilience unnecessarily gravitates towards what Tom Lundborg and Nick Vaughan-Williams call a 'fully formed mode of governance' (Lundborg & Vaughan-Williams, 2011, p. 375), meaning there's a tendency to be oblivious to the discontinuities, complexity and interdependencies that derive from the implementations of the resilience policies in practice.

A much more productive line of inquiry is to move away from upfront theoretical schemas and treat resilience as a 'concept-in-formation' (Walsh-Dilley & Wolford, 2015, p. 179). Walsh-Dilley and Wolford contend that the fuzziness and ambiguity of the concept is not a weakness but instead is productive, leading to a host of subjective meanings and interpretations on the ground. Adopting this line of thinking, this chapter suggests that to move the discussion on resilience forward, more attention needs to be paid to the ground level, where resilience policy initiatives are implemented. As such, the central focus of the chapter is a 'resilience inspired' policy initiative which sought to pilot resilience building to flooding in the UK.

FCRS's focus on implementing a plethora of practices, is consistent with both the Strategic Framework on Community Resilience (Cabinet Office, 2011), in which the UK Government provides guidelines for building community resilience and the community resilience literature. The latter has been developed conceptually, in relation to a number of indicators or components of what constitutes a resilient community (Amundsen, 2012; Magis, 2010; Berkes and Ross, 2012). Examples of such components and indicators are: community resources, community networks, institutions and services, people–place connections, learning or social values. Community resilience studies stress the need to develop the agency of individuals in the community, to cope with changes caused by shocks and perturbations and enhance their participation and empowerment in policy making (in line with Roger's interpretation of resilience as positive). However, current approaches to community resilience only consider its development at the local level, as something intrinsically benign and necessary, and fail

to engage comprehensively with the connections between the local level of the community and larger scales (Davidson, 2013).

In order to get a grip on the policy object of resilience I will use the conceptual infrastructure of 'logics of critical explanation' (Glynos and Howarth, 2007). These logics '*comprise the rules or grammar of the practice[s],* as well as *the conditions which make the practice[s] both possible and vulnerable*' (2007, p. 136, *italics in the original*). I introduce several theoretical distinctions (between different types of logics) in considering the empirical material in order to show how, discursively, the policy object of resilience is disclosed through these theoretical distinctions. This thesis extends the literature on resilience by examining the practices employed in the implementation of resilience policies while also investigating the governmental chain that enables their delivery. It agrees with the literature, which regards resilience as a neoliberal strategy: that the ethos of FCRS is to responsibilise individuals and by extension the communities in which they live. This ethos however is articulated in practice through a long chain of responsibilisation that stretches from national agencies down to the communities and individuals, and is characterised by a series of linkages. These linkages are connected by articulation points, which, in turn, constitute potential failure points, jeopardising the integrity and the efficacy of the chain of responsibilisation. Moreover, these failures are also sites and moments of political contestation overlooked by the policy framework and by critiques of resilience as neoliberal strategy alike.

This chapter will develop the argument in three parts. The first part will present the practices employed in FCRS in terms of some of the main logics that characterise them: responsibilisation, preparedness, and collective solidarity. As such, practices are analysed in their own terms rather than by reference to a theoretical schema. The second part will present an account of how community resilience is articulated by analysing the governmental chain of responsibilisation that seeks to enable it. The third part will highlight a number of potential failure points in the chain of responsibilisation, which constitute points where political contestations play out in practice. These failure points are important because they showcase, not only the disconnect between policy design and policy implementation (a theme that is recurrent in my analysis), but also that resilience is potentially self-undermining when deployed on the ground.

6.2 Logics of community resilience building

FCRS is a policy aimed at building community resilience practices, rolled out between April 2013 and March 2015. The thirteen Pathfinders pilot projects proposed a considerable range of practices such as: physical measures through to social and financial measures, including: property level protection -

also called PLP measures (e.g. flood doors, smart air bricks); awareness raising activities (e.g. school education packs, information boards); engaging volunteers in FRM (e.g. training flood wardens, developing community flood forums, flood action groups, "gully watch", monitoring of rivers); developing community resilience/response plans; and improving flood warning/forecasting capabilities (e.g. local telemetry, installing river gauges) (Twigger-Ross *et al.*, 2014, p. 11). In making sense of these practices, the Evaluation Report for the Scheme follows the model conceptualised by Cutter *et al*. (2008) and distinguishes between five categories of resilience: social resilience, economic resilience, institutional resilience, infrastructure resilience and community capital (Twigger-Ross *et al*., 2015). While this makes a useful framework for assessment of the Scheme, it is problematic in that it takes resilience for granted as a policy object. This chapter is concerned with the discursive construction of resilience in practice, which is a function of how practices of resilience are constructed socially and politically. A good way to disclose the discursive policy object of resilience is to think of it in terms of the logics of resilience practices, both as social logics, by which a practice is characterised according to its rules and norms, and political logics, which attend to how the practices emerge and are instituted, but also to how they are contested and transformed (Glynos & Howarth, 2007). In the case of FCRS, I identify three underlying logics: responsibilisation, preparedness and 'inverted' solidarity.

6.2.1 Logics of responsibilisation

These logics refer to the practices through which the government seeks to enable the agency of individuals to take ownership of flood risk management themselves. Responsibilisation is the main ethos proposed in the Scheme, which is echoed by most of the Pathfinder managers interviewed. As the definition, employed in the Scheme documents, suggests, the goal of community resilience is to enable local communities to 'help themselves and others' with the aid of local resources and local expertise (Twigger-Ross *et al*., 2015, p. 30).

Many of the practices deployed in FCRS are targeted at individuals, aiming to improve their personal and inter-personal potential to be resilient against flooding in conjunction with the enrolment of various technologies and material practices. In the Evaluation Report, these interventions (or practices) are framed as building community capacities for flood risk resilience (Twigger-Ross *et al*., 2015). These capacities are understood to either improve on particular strengths communities already have (e.g., existing culture of volunteers to recruit flood wardens) or put in place new resources communities can draw on in the event of an emergency (e.g., flood plans, PLP measures, etc.). Building the community's capacity for flood resilience is accompanied by the identification of vulnerabilities at the level of the community, understood as 'inherent characteristics or qualities of social systems that

create the potential for harm' (Cutter *et al*., 2008, p. 599). For the most part, identifying vulnerabilities relates to locating vulnerable individuals - those who by virtue of age, gender, mental health, lack of resources, connectivity, education or English language ability cannot participate in community building activities themselves (Twigger-Ross *et al*., 2015). One of the achievements reported by the Pathfinders is locating vulnerable individuals and integrating them in flood plans, so they can be helped in an emergency.

Capacity building and acting on vulnerability are the products of a wider revolution in FRM, reflective of a movement away from expensive structural defences toward the incorporation of cheaper and more flexible social approaches (Verritty, 2006). To better understand this transition, it is useful to think of it in relation to the logics of equivalence and difference. They are linked to the political logics that look at how practices emerge and are transformed. The intersecting logics of equivalence and difference, respectively, construct and deconstruct antagonistic relations where similarities between frontiers are enforced and differences within frontiers are diminished (Glynos & Howard, 2007). For example, the logic of difference is at work here as it breaks down the unity of both the state in charge of the structural defences and the public passively safeguarded by them. At the same time, the logic of equivalence is at work in the re-orchestration of the distinction between the state as protector, on one side, and the passive public, on the other, into one between state as enabler and individuals as active participants.[1]

The disaggregation of the unitary character of the state was gradually accomplished as successive governments reacted to the 'windows of opportunity' (Johnson *et al*., 2005) provided by critical flood events. The Bye Report, which responded to the 1998 floods, advocated that individuals be introduced to the issue of flooding and made aware of it (Bye Report, 1998). Making Space for Water (2004) set up a holistic strategy for responding to flooding on its 'own terms' rather than being resisted outright (DEFRA, 2004). The Pitt Review (2008) was the first document to call specifically for community resilience initiatives (Pitt, 2008). Politically, these documents, as responses to flood events, gradually enacted a transition away from the idea that the 'powers that be' and formal authorities can keep hazards at bay by themselves (Deeming *et al*., 2012). Instead, they sought to entrench a narrative presenting flood risk management as a complex issue with solutions requiring the involvement of

[1] The logic of difference breaks down and keeps separate the elements of a practice, while the logic of equivalence inserts distinctions and creates frontiers and antagonisms (e.g. political right vs. left, capitalism vs socialism). The policy object of resilience is constituted in the relationship between these two logics (see Glynos & Howarth, 2007, p. 144).

multiple stakeholders. At the same time, a shift to localism was pursued, as evidenced by the creation of Lead Local Flood Authorities by the Flood and Water Management Act of 2010 (Cabinet Office, 2010). This move gave local authorities responsibility for surface water, groundwater and ordinary watercourses alongside the task of developing flood risk management strategies in their areas (Cabinet Office, 2010).

On the other side of the spectrum, the public - that was once passively safeguarded with structural defences - was increasingly asked to step up and take responsibility for flood risk. This again started with the Bye Report's (1998) call for individuals and communities to be made aware of floods and was officially sanctioned by the Pitt Review's proposition that 'responsibility [for flooding] does not lie with Government or other authorities and organisations alone – they cannot protect people from all the consequences of natural disasters' (Pitt, 2008, p. 349). Again, the logic of difference is at play in this policy framing, as it breaks down the apparent unitary character of individuals as a public to be secured by the 'powers to be'. The public is disaggregated into knowledgeable communities and individuals, more attuned to the realities of the local scene in which they conduct their lives. As an official with the National Flood Forum puts it, in regards to the solutions to flood risk advanced by national agencies, such as the Environment Agency: 'It may be the perfect solution but equally, the communities may have their own ideas about what may be a solution, they know what happened in reality in their street and their solutions may be more cost effective.'

As a policy, community resilience looks to bring together the disaggregated state and the knowledgeable individuals - united by the threat of flooding as a complex issue that requires the participation of multiple stakeholders and by the recognition that they have shared roles and responsibilities. The distinction between the state as protector and the passive public is re-orchestrated into a distinction between state as enabler and individuals as active participants. This is confirmed by the Evaluation Report, which states that the Pathfinders have achieved increased community awareness and participation and 'improved knowledge of roles, responsibilities and flood risk' (Twigger-Ross *et al*., 2015, p. 187). In the process of bringing individuals into flood risk management, alongside state structures and other actors, the differences between all the actors involved are downplayed and the mutual dependencies and the common interests highlighted according to the logic of equivalence. It can be argued that what resilience policies aim for through responsibilisation is the promotion of a particular *disposition*, understood both as a specific arrangement of actors (or subject positions) and a specific quality of mind (or mentality) that encourages regarding flood risk as a unifying and ubiquitous threat which makes taking responsibility for flood risk necessary.

6.2.2 Logics of preparedness

If logics of responsibilisation promote a disposition of responsibilisation, then *logics of preparedness* represent the practical work through which such a disposition is implemented on the ground. Logics of preparedness characterise a series of practices that aim to ingrain habits of action and practice that prepare individuals and communities for the emergency to come. The preparation for future disruptive events takes place through simulations akin to scenario planning and exercises. In an exercise, subjects are asked to inhabit the event; they are exposed to experiential knowledge and asked to develop 'habits of action and thinking' (Adey & Anderson, 2012, p. 107) while the scenarios 'attune imagination to the unexpected, the rare, the uncertain' (Aradau & van Munster, 2007, p. 9). Unlike other modes of intervention, preparedness does not look to stop the future event from happening all together but rather aims to 'stop the *effects* of an event disrupting the circulations and interdependencies that make up a valued life' (Anderson, 2010, p. 791, *emphasis in original*). This is central in the definition of community resilience employed in the Scheme. Community resilience is defined as a process where communities 'help themselves and others to *prepare* and *respond* to, and to *recover* from emergencies' (Twigger-Ross *et al*., 2015, p. 30, *emphasis added*).

In the context of the Scheme, only one Pathfinder developed a scenario exercise, in which participants from the community discussed the issue of flooding and developed a flood action plan (Interviewee 11, L-G). However, more generally, the attitude cultivated through various practices - such as dry runs (sirens go off and information about flood response is given out by volunteers in an area), learning events, flood awareness programmes, community flood plans or in the setup and maintenance of flood groups and flood warden schemes - is one of establishing a link with the future emergencies, inhabiting the time interval until and after the emergency and developing habits of action and thinking in relation to the nature of expected emergencies. Such practices seek to introduce flooding into both the individual and collective imaginary as something that can and will eventually happen, mobilising both cognition and affect in relation to the flood emergency. As the Evaluation Report concludes, the Pathfinder projects have contributed to 'increased community awareness, cohesion, empowerment, participation' and they have 'improved knowledge of the roles, responsibilities and flood risk' (Twigger-Ross *et al*., 2015, p. 11). Awareness, planning, learning or knowing one's role and responsibility in relation to flood emergencies is held to encourage individuals to accept they need to talk about flooding, to break down its effects and to operationalise responses to it - effectively providing a cognitive and affective link to the flood emergency to come. Furthermore, they are not asked to hypothetically inhabit only a projection (a simulation) of the emergency in the future, but also the interval up to and after the emergency. If the time until the emergency is not known (or the

emergency can happen at any time), the habits of thinking and action are to be permanently repeated as there is no expiration date for when the emergency ends.

One other set of practices, that helps ingrain preparedness habits of thinking and action, relates to the installation of flood warning systems such as rain and river gauges that monitor the level of rivers or rainfall and alert communities when such levels become critical. As presented by a member of a community that participates in the Scheme, the flood alert presents itself as an opportunity for cultivating these necessary habits:

> In the event of another flood, I have actually got a personal flood plan… for instance we had a flood alert on Friday and we very nearly got flooded again so I have now got a list of things that I do to make my house and myself more secure. For instance, I make sure my animals are in the house, so they are not in any kind of danger themselves, and then I've just got this checklist of things that I do, mainly to know, should anything happen, I have everything there. I always have a bag to help myself out with: a torch, telephone numbers you know, very different things, if I needed to leave the house grab that bag, grab my animals and just leave **(Interviewee 21, L-NSA).**

Furthermore, after an actual emergency, the performance of the preparedness habits is to be resumed and potentially updated based on the flooding experience but always in relation to the next one, whose occurrence is unknown.

It is particularly interesting here to compare the habits of preparedness, cultivated by the FCRS through resilience building, with those, Pat O'Malley proposes, the military personnel are subjected to (O'Malley, 2010). For O'Malley, the ideal resilient individual (in the American military) is capable not only of withstanding shocks, but also actively seeks to transform negative situations into positive opportunities. Such an individual makes use of risk calculation and prediction, but is ultimately prepared to deal with situations of deep uncertainty. In addition to internalizing the enterprise model and becoming an entrepreneur of one's self (Foucault, 2009), resilience can be acquired in the form of a set of cognitive skills, centred on innovation, adaptation or flexibility. However, in the case of FCRS, more attention needs to be paid to the fact that, the referents of resilience policies are regular individuals and not army personnel enrolled in a job where drills and scenarios are regularly conducted.

One important aspect that has been flagged by the disaster management literature is the consideration that anxiety appears to be intrinsic to the flooding experience (Werritty *et al*., 2007, Whittle *et al*., 2010). Anxiety and stress peak after the flood event 'when the scale of disruption

became clearer and initial coping strategies dwindled' and it is disproportionately felt by individuals that are more vulnerable (Werritty *et al*., 2007, p. iv). For some, anxiety gradually subsides, sometime after the flood event's consequences are dealt with (which can take months) and becomes not much than 'a nagging feeling of disconnect that form[s] the background to […] daily lives' (Whittle *et al*., 2010, p. 102). For others, anxiety mutates into strong feelings and emotions which emerge during episodes of heavy rain. Whittle *et al*. also note that in the latter case, the attribution of the cause of the flood event influenced the severity of their anxiety. If people attributed the cause to things such as climate change, over which they have little control, their anxiety persisted. Conversely, if they attributed it to the mismanagement of infrastructure, perceiving work being done on the infrastructure tended to make them feel more confident and alleviated their anxiety. To a good extent, these insights conflict with the picture of the resilient individual, ultimately ready for situations of deep uncertainty. Unlike the specific context of the military, for the regular individuals, considerations like anxiety complicate the picture of building resilience and limit the boundaries of what is both realizable and realistic with preparedness practices. However, from the above quote, I note that the preparedness habits encouraged and promoted by the Pathfinders are rather basic, focused entirely on the critical event itself, with little reflection on the wider considerations that could go into responding to a flood.

Preparedness requires its underlying practices to be repeated or iterated. In the implementation of the Pathfinders, it was found that sustaining the performance of habits required constantly maintained practice, since 'flood knowledge passes quickly' (Interviewee 1, N-G). For preparedness to persist, local authorities and the communities need to come in close contact according to the logic of equivalence, united by the common threat of flooding. As one of the Pathfinder Managers expresses, communities require 'an element of continuous involvement' while another appreciates that the maintenance of the resilience policies is 'infinite […] there isn't an end date to policies or the need for community resilience' (Pathfinder Managers). In the Evaluation Report, it is recognised that the interventions focused on the needs of the community rather than flood management institutions are more effective for flood resilience in the long term (Twigger-Ross *et al*., 2015). However, most of the key factors that provide legacy and continuity for the Pathfinders are centred around the local authority which needs to 'increase ownership of flood planning' or 'build on the approaches and tools developed by the Pathfinders for promoting practical flood resilience measures' (Twigger-Ross *et al*., 2015, p. 185). This suggests that preparedness practices underlying resilience building require considerable maintenance going forward. This appears to complicate the resilience-as-responsibilisation thesis. Even if the intention of authorities is to responsibilise individuals, it is less likely to be an initiation into resilience practices followed by a swift withdrawal of the local authority.

The experience of FCRS seems to indicate that if preparedness practices are to be successful and individuals are to pick them up in a consistent and systematic basis, it will likely be the result of a prolonged collaboration between the authorities and individuals.

6.2.3 Logics of 'inverted' solidarity

These logics refer to practices that seek to enrol the interests of members of the community to work together, united against the threat of future flood events (adapted from Kolers, 2012). Whereas the previous two logics focus predominantly on the individuals, the logic of 'inverted' solidarity is centred at the community level and the relationships between individuals and the community as a whole.

To bring the communities together, the Scheme operates with the notion of community capital, which is an extension of the sociological notion of social capital (Putnam, 2000) and which conceptualises the potential for mutualism, bonding and association in the community. Some of the practices that seek to cultivate community capital refer to community events or surgeries (including in schools), development of social and educational media for the community, organisation of community engagement/learning events, establishment and development of flood groups, flood networks or flood warden schemes. Research shows that having community capital helps in the sense that members of the community are willing to help one another. However, 'this help is often spontaneous, unplanned, lacking in organisation and spatially limited' (Coates, 2010, p. 34). In addition, "merely having social capital in a community does not mean that it is readily instantiated into any form of hazard resilience" (Deeming *et al*., 2008, p. 295, as cited in Twigger-Ross *et al*., 2015). On the ground, among the Pathfinders, there is recognition that resilience needs to go beyond instances of mutualism and association in the event of an emergency.

To go beyond mutualism and association in practice, the Pathfinder projects seek to encourage a more general attitude of solidaristic community building in response to future emergencies. As such, they stress the importance of 'coming together as one' to assemble groups to respond to floods 'cohesively' or how 'working together' enables 'cumulative benefits' (Pathfinder Managers). While existing community capital plays a big role, the Pathfinders premise the efficiency of the flood response on the collective engagement of individuals in the community. The Evaluation Report stresses that 'community engagement is at the heart of the pathfinder scheme' and its long term focus lies in 'involving members of the community and local organisations in preparing for and responding to flooding' (Twigger-Ross *et al*., 2015, p. 57), rather than only in post-disaster relief response. Furthermore, as a Pathfinder Manager suggests, community engagement becomes a duty of members of the community, as non-participation weakens the collective response:

> In terms of community resilience, I think it is important to come together as one, because it has an impact on the individual wellbeing. You might be resilient but if the next door neighbour doesn't have the same resilience it does have an impact on yourself. So working together you get a greater effect than individually **(Interviewee 8, L-G).**

The Scheme frames community resilience as solidaristic by (re)orchestrating the relations between individuals and changing the content and the direction of political engagement. Solidarity can be read here as a 'moral relation' that occurs when individuals or groups 'unite around some mutually recognised political need or goal in order to bring about social change' (Scholz, 2009, p. 208). Here, it is the management of flood emergencies which is presented by the Scheme as a political need that requires mutual recognition. Flood emergencies are relocated from the realm of government control and expertise into the everyday life of the community where individuals are asked to exercise their agency in solidarity, not in preventing their occurrence but in containing their effects. The meaning of the political here refers only to participation in policy, with no indication of how substantial this participation is in relation to decision-making. Solidarity differs from mutualism or association because of its emphasis on 'solidarity-given duties' (Kolers, 2012, p. 366). These are obligations incurred specifically in relation to the participation in community resilience initiatives. Individuals are encouraged to incur these duties and to recognise the long lasting benefits of 'working together' in order to enable 'cumulative benefits' and have a 'greater effect than [working] individually' (Pathfinder Managers). The solidaristic engagement within communities needs to be read in conjunction with the logics of responsibilisation and preparedness as their implementation is more efficient in the context of a collectively orchestrated response to emergencies.

By regarding the management of floods as a political issue in which they (now) have a stake, individuals are encouraged to gradually enact social change by altering material and institutional arrangements and subjective attitudes. However, this is not to reclaim some political terrain they have seemingly lost or are in need of, but to accommodate the political at the community level in terms of responsibilisation and preparedness for flood events. This is a crucial point to highlight. As this logic is incentivised by Pathfinder-initiated practices, it cannot be simply characterised as solidarity. It needs to be qualified as 'inverted' solidarity, as its direction of travel is not from the people and towards the political structures, but the other way around. Perhaps not surprisingly, the Scheme and Pathfinders are oblivious to the fact that, to be solidaristic, any movement or engagement requires individuals to come together despite incompletely shared interests (Kolers, 2012). For the most part, the Scheme operates with an understanding of community resilience applied to a 'romantic, united and unitary' conception of the community, devoid of the consideration of its contradictions and conflicts (Bulley,

2013, p. 271). As such, recognition of the tensions within the community is missing, while the consonance of interests between individuals is taken for granted. Overall, the subject encouraged, by the three logics presented above, appears to have the core - autonomous, responsibilised, networked - characteristics of the neoliberal subject, articulated by the critics mentioned at the top of the piece. The subject is 'agential, but within the coordinates of the system' (Aradau, 2014, p.74), represented here by the prescriptions of the policy.

6.3 Articulation of community resilience

The previous section analysed some of the main logics that characterise the multitude of heterogeneous practices employed by the FCRS Pathfinders projects. However, in order to make the phenomenon of community resilience intelligible, the plurality of logics needs to be linked together and fused with other concepts and empirical phenomena to provide a complex yet 'singular explanation' (Glynos & Howarth, 2007, p. 181). The question that is answered in this section is: 'How is community resilience articulated?' It will be argued that the articulation of community resilience depends on the emergence of a long governmental chain of responsibilisation that aims to ingrain particular habits of thinking and action through processes of iteration.

The logics of responsibilisation have presented the process by which the UK has shifted in the last two decades from structural defences to flood risk management, which incorporates social solutions with engineering solutions (Werritty, 2006). Structural defences involved major works of infrastructure commissioned from high level national agencies and delivered by experts at the regional level without the participation of the public, until a string of flood events starting in 1998 sparked lively debates that challenged this paradigm (Werritty, 2006). Community resilience policies seek to involve individuals and communities in the management of risk rather than simply dictating what needs to be done without their consultation. To deliver this, rather than imposing a top down direct and exclusive transfer and implementation of expert knowledge, a longer governmental chain of responsibilisation between top agencies and individuals in the communities needs to be established.

In the case of the FCRS, the governmental chain of responsibilisation is composed of a series of linkages that connect formal and informal structures with individuals in the communities. The first of these linkages involves the connections between the formal structures, involved in the top-down transfer of expert knowledge and resources for capacity building. The Scheme places the emphasis on having 'clear linkages and accountability' between these structures for these transfers to take place (Twigger-Ross *et al*., 2014, p. 4). More particularly, the Scheme is initiated and promoted by DEFRA, and implemented with the help of EA, with further support provided by third sector agencies such as

the National Flood Forum and input (of various intensities) by a plethora of other local and regional agencies, formal associations and market agents.

The second set of linkages are those between these governing agencies and community organisations at the local level, mainly flood groups. The work carried out by Pathfinders suggests that a baseline (or common denominator) is established at the very local level (defined as one or two streets) where a flood group comes together. For a number of reasons, including shared agendas and 'possibly existing community capital', the very local level is where flood groups 'work best' (Twigger-Ross *et al*., 2015, p. 140). This appears to be the level at which a flood group comes together more organically, since the Evaluation Report recognises that this dynamic would be otherwise lost or not replicable at a wider geographical level. To counteract this, the suggestion is that 'networks are of central importance' (Twigger-Ross *et al*., 2014, p. 7-8) and flood groups should connect with wider community resilience groups, which in turn would 'facilitate links with wider structures and may streamline engagement with local councils' (Twigger-Ross *et al*., 2015, p. 141). The wider networks, which can span up to regional levels, are achieved through the presence and intervention of cross-reaching actors such as NFF, which can act as catalysts for the multiple resilience groups located in and on different geographical scales and regions.

The third set of linkages occurs between the formal communal organisations, such as flood groups and individual members of the community. Flood groups are important for fulfilling the role of a translation agent between the expert knowledge that comes from national agencies and local knowledge, according to the logic of equivalency. Involvement of individuals from the community means that the role of local knowledge is recognised as 'particularly useful in identifying the most appropriate approach to engagement and framing the initiative in a way that resonates with members of the community and encourages more participation' (Twigger-Ross *et al*., 2015, p. 60). At the same time, experts from local authorities and the NFF come together, at the level of the flood groups, to provide the expert input for flood groups to be 'set up and set off in a sustainable direction' (Twigger-Ross *et al*., 2015, p. 141). Ideally, some of the knowledge that emerges from flood groups and the initiatives piloted at the community level can be shared across Pathfinders projects at low or no cost (DEFRA, 2012). At the national level, 'the sharing of practice across the Pathfinders and provision of a wide network of support' is done by national flood charities such as NFF (Twigger Ross *et al*., 2015, p. 141).

The end goal of the chain of responsibilisation is the construction of a cohesive and agential community, understood to be rich composition of individuals, their environment and the relations between them. At this level, the practices deployed in community resilience building rely mainly on

processes of iteration or repetition. Whether it is about dispositions of responsibilisation, habits of preparedness or bringing together incompletely shared interests for solidarity-building, all of these require the underpinning practices to be reiterated with the intention of ingraining them among the individuals. The elongated nature of the chain of responsibilisation through which community resilience seeks to be articulated is a far cry from the structural defences implemented exclusively top-down by experts. However, it also makes the chain and the articulation points between the linkages susceptible to failures.

6.4 Failure points in the chain of responsibilisation

Potential failures are observable where the articulation points between particular linkages in the chain are endangered by conceptual incongruences or disconnects. The main claim is that these potential failure points do not only represent points where the chain of responsibilisation fails to work as the policy making body intends, but that they also represent points where politics play out in practice. This claim will be illustrated with reference to the connection between flood groups and individuals in the community and the connections between individuals in the event of an emergency.

As discussed in the previous section, flood groups play an important role in the articulation of the chain of responsibilisation. They act as translation devices between the expert knowledge of the agencies and the local knowledge coming from the community. As the Evaluation Report makes clear, the most successful approach to engaging the community and building long-term resilience is community led, in conjunction with institutions such as local authorities or the NFF. Furthermore, one of the main catalysts for community participation in flood groups is the involvement of key people, whether they are activists from the ranks of the community, engagement officers from local authorities or other stakeholder organisations. However, the Evaluation Report also states that communities are more receptive to members from their own ranks rather than institutional actors, like local authorities (Twigger-Ross *et al*., 2015). The effective medium of translation consists of multi-agency meetings between the flood groups and institutional agencies (i.e., local authorities, NFF representatives, other stakeholders):

> These meetings work on a rolling-on basis because if you just have the one meeting many people say I will get back to you about that and they never do, the fact that you are giving communities a voice means that you are building relationships between each other and you are getting rid of the barriers… that is so empowering, for communities to know that they can be listened to **(Interviewee 10, L-G).**

The notion that 'pathfinder project officers would organise the first multi-agency meetings, then support flood groups to run the meetings themselves before finally withdrawing' is common in the Pathfinders (Twigger-Ross *et al*. 2015, p. 61). However, the Evaluation Report also concludes that while some Pathfinders have seen this initiative as an end point in itself, 'the resultant outcomes and sustainability are not yet apparent' (Twigger-Ross *et al*. 2015, p. 61). The more important point relates to how empowerment is framed here, as a function of the voices of the community being listened to. The community, however, is reduced to the members of the flood groups who feed in the issues salient to the community. As the quote below from one of the Pathfinders suggests, flood groups rely on a few key people who bring their own agendas to the discussion:

> The flood groups comprise mainly of retired, but busy community volunteers. The development of such groups takes considerable time and support. We have had moments of miscommunication that nearly led to the resignation of all flood group members from one group; we have seen conflicts in groups and a number of flood group members left since they wanted to find solutions to identified flooding problems i.e. pursue lobbying around dredging as opposed to other members who were happy to concentrate on resilience **(Calderdale Pathfinder, as cited in Twigger Ross *et al*., 2015, p. 132).**

However, the quote also suggests that the issue is not simply a matter of miscommunication but is, in fact, one of political contestation. What to do about flood risk is far from being a technical problem needing correct answers and more of a political exercise in which different ways of thinking about and acting on flood risk are often cast in antagonistic positions. At its core, a flood group embodies an ongoing political negotiation between contending narratives about how to manage floods.

The Evaluation Report omits questions of politics and frames engagement with the community along the lines of a one-sided awareness raising exercise, similar to an outreach programme. To engage the communities, the Pathfinders resorted to piggy-backing on existing community groups and community events, to embedding flooding in wider social issues like housing or poverty, or seeking to become a familiar presence in the community in order to build trust. The barriers to engagement are located by the Evaluation Report at the level of the individuals, seen in large part to be because of their unwillingness to perceive flooding as a relevant matter or because the precarity of their socio-economic status forces them to prioritise other aspects of their existence (Twigger Ross *et al*., 2015). The very one-sided nature of awareness-raising suggests that the Pathfinder projects operate with the assumption that the presence of the flood group will have spill over effects, which will in turn trickle down among community members. The Scheme therefore comes to rely on the articulation of a policy narrative in which the interests and resilience of individuals and the community overall are presented

not only as compatible but evolving in the same direction, thus failing to recognise any tensions that may arise between them.

To better illustrate the political stakes in building community resilience, attention needs to be paid not only to the latent tensions and incongruences between the individuals within the community, but also to how these tensions and incongruences *emerge in the process of building resilience*. Logics of 'inverted' solidarity are central to community resilience building where individuals are encouraged from above to 'come as one' for a 'cohesive response'. For example, a policy consultant observed that social capital has a big role to play in delivering a better response to flood than individualised ones:

> Take the recent floods, this winter, for example, because of the on-going activities on that street, people were knocking on people's doors before the flood, people already had each other's car keys so they could move each other's cars if they weren't there… which is another issue about PLP, if you are not in the house you cannot protect your property, but you've got to have that cooperation along that street. That street is a community because they are interactive and helping each other and you could say that's improved their social capital because they are a much more resilient group of people **(Interviewee 5, R-NSA).**

However, when the frame of reference is enlarged beyond the level of the street, the issues of 'knock-on' or 'ripple effects' reveal the complex nature of the flood event, where the interactions between all elements involved give rise to unexpected, hard to predict outcomes.

> If I start making it more complicated, then it becomes difficult. It starts to become unstable because say they move their cars on to another street, then this has an impact on another community, on another street. Doesn't this make their lives harder? What if it has an impact on the emergency services because they can't get to that street because the roads are blocked by all those cars? So there is lots of knock-on ripple effects, then the resilient become less resilient. **(Interviewee 5, R-NSA).**

When they move the car to another street, they are adapting to the negative stimuli of the flood event but they might set off an unexpected negative dynamic (in this case, a bottleneck) at a wider community level. This is an example of what is called 'emergence' in chaos and complexity theory, meaning that local adaptations at lower levels of complexity give rise to novel dynamics visible only at higher levels of complexity (for more on emergence, see Mitchell, 2009; Fromm, 2004).

Within the long chain of responsibilisation, conditions of complexity set in motion a multiplicity of failure points which can propagate in divergent directions, exceeding the material, institutional and subjective arrangements prescribed through the policy. The propagation of failure points engenders

differential effects which can turn, as seen in the quote above, into zero-sum outcomes, producing benefits for some at the expense of others. Community resilience does not represent a seamless collective integration of individual agencies which coordinate their response to an emergency. It is rather a messy, agonistic process in which individuals seek to optimise outcomes by prioritising immediate positive adaptations, unaware of their unintended consequences in the context of the wider community. To act in a *resilient way* generates 'excess adaptive capacity' (Grove, 2014), meaning that individual and collective subject positions encouraged by the policy can be transgressed and new instances of individuals and collective agency can emerge, with both positive and negative effects. Contestations, zero-sum outcomes and agonism reveal the inherently political character of the failure points, while at the same time they carve spaces for disruptions, innovations or change.

There is a bigger theoretical claim that is beginning to form here: rather than an isolated instance, failure points highlight an aspect ignored in both managerial and critical literatures, namely that resilience building can be potentially self-undermining (Brassett and Vaughan Williams, 2015; Brassett and Holmes, 2016; Walsh-Dilley, 2016). In different ways and in different instances, resilience formation engenders outcomes that can produce fundamental challenges to the original goal of resilience building. For example, Brassett and Vaughan-Williams argue that attempts to secure through resilience end up creating novel instabilities, which in turn fuel further insecurity. They suggest that the performativity of resilience in practice is an unstable and contingent matter, an attempt to provide closure, that results in 'an excess of politics over resilient knowledge [that] renders outcomes incomplete, ambiguous, and, ultimately, insecure: the effort to make resilience more resilient potentially undermines itself' (Brassett and Vaughan-Williams, 2015, p. 35). Furthermore, Walsh-Dilley suggests that there is a 'fundamental tension in resilience-oriented practice: the tension between collective and individual interests' (Walsh-Dilley, 2016, p. 41). In similar vein to the example of FCRS, pursuing individual resilience practices determines material and subjective dynamics that undermine the formation of resilience at the level of the wider community. Walsh-Dilley's investigation of the quinoa boom in a Bolivian village highlights how accumulation of resources and skills by one individual (individual resilience formation) precludes others individuals from accessing them, leading to inequality in the community and undermining community resilience formation.

This is a claim that has profound implications for how resilience is both theorized and applied in practice. It proposes that both the managerial and critical literatures have employed a 'pure' concept of resilience, devoid of any contradictions, diverging only in relation to its theoretical implications. This chapter has shown, through an empirical example (which is corroborated by other examples in

the literature), that perhaps fundamentally, resilience needs to be treated not just as an ambiguous concept, but one that is potentially self-undermining.

6.5 Conclusion

This chapter has analysed a policy initiative to build resilience, in terms of both its implementation and the enabling governmental chain. It has argued that policies, which aim to build community resilience, are articulated through a long chain of responsibilisation that seeks to ingrain, via processes of reiteration, specific habits and dispositions (responsibilisation, preparedness, collective resilience building) at the community level. At the same time, it has also drawn attention to some of the potential failure points that occur in this chain of responsibilisation. This is not to say that the potential failures presented in this chapter are the only ones but rather that more research is needed to scrutinize the implementation of resilience policies. Analysis of how and if resilience 'works' (whether in the positive sense, of empowerment for individuals, or the negative one of responsibilisation) should be primarily a matter of empirical enquiry, rather than derived from theoretical schemas alone.

One of the main implications of this research has been that the implementation of resilience policies, such as FCRS, pose challenges to understanding resilience on the positive-negative spectrum. Failure points engender zero-sum outcomes and political contestations which alter the nature of the actual effects produced on the ground, exceeding the parameters prescribed by the policy. To place resilience in the 'empowerment' or 'responsibilisation' box respectively, means reducing analysis to a binary set of categorisations, ignoring the range of complexities that derives from their implementation. In the absence of proper scrutiny of the implementation process, and actual outcomes at different scales, of resilience policies, there is the risk that policy practitioners (and even the academic commentariat) may recast the failures of resilience as proof that more resilience is needed. As resilience gradually moves from high-level official rhetoric to actual policy, there is a need for our critical investigations to shift from theoretical pronouncements of what resilience 'is' to what it 'does' or fails to do in practice.

This chapter has looked at how FCRS was implemented and provided an account of how community resilience is articulated in practice. Understanding the mechanisms for implementation moves the discussion from the level of policy documents and abstract theoretical interpretations to the failures and political moments, that occur in the instantiation of the policy in practice. While it provides the context for understanding resilience policies, it only scratches the surface in terms of the processes by which the individuals are encouraged to become resilient, which is the ultimate aim of the policy. The next chapter will give an account of these processes and mechanisms by which, theoretically and

practically, resilient individuals can be brought about and the nature of their relationship with the governing authorities.

Chapter 7: The problematization of subjectivity in the construction of resilient individuals

7.1 Introduction

The definition of community resilience employed in FCRS, states that resilience is about enabling individuals to 'help themselves and others' in the event of emergencies (Twigger-Ross *et al*., 2015, p. 9). This chapter centres on this ethos espoused by FCRS and focuses on the forms of subjectivity the Scheme aims to produce. In other words, FCRS's drive to enable individuals to help themselves and others in the event of an emergency is premised on the notion that, in order to achieve that, individuals need to alter the nature of, and their relation to, their conduct. As stated in Chapter 3 (p. 38), specific modes of governing encourage individuals to identify with their rationalities of governing. The chapter takes an in-depth look at how the alteration of individual conduct (and hence subjectivity) is attempted by the policy rationalities and practices FCRS operates with and deploys in practice. In practical terms, this can be separated into two distinct yet connected research questions. First, as stated above, the focus is on unpacking and unravelling the nature of the resilient subjectivities that FCRS aims to achieve in practice. Second, I am investigating the practices that are deployed to produce such subjectivities and assessing to what extent they are likely to achieve what they propose.

FCRS deploys numerous practices under the banner of building resilience and proposes a number of concepts to make sense of them. In the previous chapter, I investigated these practices and provided an account of how they are articulated in practice. I have argued that, since this Scheme looks to build resilience through the responsibilisation of individuals, it needs to enable an elongated chain of responsibilisation, marked by several potential failure points, where politics have the potential to play out. This chapter builds on these insights but moves from giving an account of the Scheme at the macro-level, to interrogate how FCRS conceptualises and aims to construct resilient subjects, in terms of the relation these subjects need to build with themselves, with each other and with the norm of building resilience.

It will do so in two inter-related ways. Firstly, in an empirical sense, I will employ the data from my research to provide an expanded account of the socio-psychological substrate that enables the composition of resilient subjectivities. For now, these accounts are limited in the resilience literature. For example, Brown and Westaway (2011, p. 330-331) suggest that such substrate is constituted by an individual's physical capacity, the elasticity of relations with others and the environment and

perception of the ability to act. While this is a helpful account, it is at the same time quite broad and general. A more specific conceptualisation is emphasised by O'Malley (2010), who argues that the substrate is constituted not by innate qualities, but is rather a scientifically validated set of cognitive skills that aim to create a subject that is 'more entrepreneurial, flexible and adaptive, more relational and active' (O' Malley, 2010, p. 501). Furthermore, Howell (2015a, p. 20-21) also suggests that resilience can be taught and ingrained with training, and such training expands from the 'physicality of the body to the domains of the mind, the family, and even the spirit'. While these are more detailed and more useful accounts, they require a note of caution, as they are derived from the implementation of resilience in the American military. As such, there is a difference between military and civilian settings, precisely because the former represents a very particular institutional context with a strong tradition of training (Howell, 2015a, p. 20). In this chapter I will provide an account of the forms of subjectification encouraged by FCRS. Using three distinct empirical sources (FCRS' Evaluation Report, interviews with the Pathfinder managers and a case study: Swindon Junior Flood Group), I will investigate what statuses, attributes and orientations (Chapter 3, p. 38) are assumed to underlie the constitution of resilient individuals, through different sources of expertise and authority (Evaluation Report, Pathfinder Managers, Head Teacher in the case of the Swindon Junior Flood Group).

In the second, more theoretical sense, this chapter will continue the line of inquiry developed in Chapter 6. It will investigate the forms of subjectivity that FCRS encourages, but it will do so in relation to the question of empowerment or responsibilisation (Rogers, 2015). According to Rogers, resilience practices can be interpreted on a continuum between positive and negative. The positive interpretation relates to seeing these practices as having to do with the individual and collective empowerment, participation in policy and expression of political agency (i.e. individuals get to have and act their say in policy). For the most part, such interpretation is consistent with the managerial literature, which regards resilience building as contributing to the empowerment of individuals (see Brown and Westaway, 2011, p. 325, Berkes and Ross, 2012). The negative interpretation regards the practices to be an attempt to responsibilise individuals, preparing them for the withdrawal of state planned forms of protection. For the most part, neoliberal diagnoses of resilience propose a rather bleak view of political subjectivity and implicitly cast a shadow of doubt over its remit for political action in the absence of some radical and universal denouncement of resilience (Reid, 2012; Evans and Reid, 2013; Neocleous, 2012). Pushed by neoliberal strategies of responsibilisation, in a world devoid of securing agencies (Chandler, 2010), the political agency of the resilient subject is understood to increasingly wither away (Duffield, 2011). As a result, the subject must 'accept the dangerousness of the world it lives in as a condition for partaking of that world' rather than attempt to change its conditions of possibility' (Evans and Reid, 2013, p. 1).

The empowerment/responsibilisation spectrum represents a good meta-theoretical tool to heuristically categorise the forms of subjectivity that resilience encourages. However, I suggest it is too theoretically ambiguous for the purposes of analysing the empirical material in this chapter. Empowerment here works like a blanket concept, presupposed to be benign, necessary and ungrounded normatively. For example, resilience as capacity building is already understood to be empowerment, regardless of the actual effects and outcomes it has for the individual (which can end up being negative in the broader scheme of things). Responsibilisation works the other way round as a totalising concept, where the take up and application of resilience is suggested to be ultimately part of the bigger historical march of neoliberal governmentality, regardless of the actual effects and outcomes that come from the instantiation of resilience practices. Both terms of the spectrum end up being inexact points of reference for understanding the form of resilient subjectivities. What is needed is a theoretical framework, which allows for a more precise understanding of the nature of the relation of individuals with themselves and forms of governance that are fostered by resilience policies.

Methodologically, genealogy as problematization will serve to analyse the empirical data, sourced from official and project documents and semi-structured interviews. However, in order to look beyond the empowerment/responsibilisation spectrum and provide a more precise understanding of the form of subjectivity resilience seeks to instantiate, I will be employing Foucault's distinction between disciplinary and aesthetic practices detailed in Chapter 4 (p. 48), as discussed by Christoph Menke (2003). While keeping empowerment/responsibilisation in the background as the terms of the reference for the academic literature on resilience, Foucault's framework allows the nature of resilience practices to be grasped more appropriately, in terms of the effects they produce on the individual and its relationship with forms of governance. It allows us to qualify the terms of the empowerment/responsibilisation dichotomy by providing a more precise conceptualisation of empowerment (as self-overcoming) and a less totalising understanding of responsibilisation as a disciplinary practice always open to resistance, subversion and transgression. More specifically, it will consider a practice as gravitating towards empowerment if it is aesthetic (individualisation of a norm by the subject) or gravitating towards responsibilisation if it is disciplinary (normalisation of the individual) (Chapter 4, p. 48). In practical terms, I will be looking at the interplay between the nature of the practices employed, compared to the nature of the subjects aimed to be produced and assess to what extent, the resulting practices are likely to be aesthetic or disciplinary.

This chapter is structured into three main parts, each producing insights based on the reading of a specific source of data. The first part explores how the construction of resilient individuals is pursued in the Evaluation Report for the FCRS (Twigger-Ross *et al*., 2015). It will suggest that overwhelmingly,

such construction is framed in this report as a matter of capacity building. Furthermore, the report normatively grounds capacity building, considering it the central part of resilient subjectivity. The second part uses rich data from the interviews with all of the policy practitioners involved in FCRS, to produce a detailed account of the socio-psychological substrate needed to produce resilient subjects. The third part attends to a case study, the creation of a Junior Flood Group as part of the Swindon Pathfinder. The case study offers a very good opportunity to understand how the framings and practices explored as part of the FCRS, are instantiated on the ground. A more engrossing account of the substrate required for the composition of resilient subjects emerges at the intersection between these two sections: the resilient subject is required to be rational, reflective, relational and benefits from the creation of positive affective states (such as confidence). As such, the resilient subject is rather a very ambitious subject, and both the interviews with the policy practitioners and the case study, reveal that the mechanics of implementation design to produce results on the ground, are likely to fall short of such policy ideal. In the theoretical sense, in relation to the empowerment/responsibility spectrum, I argue that the discrepancies between the subject envisioned and the impoverished mechanisms for implementation are acting as failure points, challenging the integrity of both interpretations. If the subjects end up gravitating towards empowerment, it is because of the failure points, which means that the ingraining of the normalising training is interrupted and individuals can individualise it and take it in directions more appropriate to their personal needs. Conversely, the same failure points prevent responsibilisation from being produced in full, suggesting that what happens on the ground is only a case of cvasi-responsibilisation. As such, the subjects can engage in the ethos and narrative of resilience, but without the content. This further iterates one of the core insights of the thesis, that if resilience is to be produced on the ground, it requires substantial involvement of authority.

7.2 Capacity building and the subject of resilience policies

Many of these practices deployed in FCRS revolve around individuals, aiming to improve their personal and inter-personal potential, to be resilient against flooding in conjunction with the enrolment of various technologies and other material practices. In the Evaluation Report, these interventions (or practices) are framed as ‘building community’s capacities’ for flood risk resilience (Twigger-Ross *et al*., 2015, p. 11). These capacities are understood to either improve on particular strengths that communities already have (e.g. drawing on an existing culture of volunteers in order to recruit flood wardens), or put in place new resources communities can draw on, in the event of an emergency (e.g.

flood plans, PLP measures, etc.). The specific framing of capacity building[2] used in the final report, is in tune with other approaches that propose taking steps towards capacity building meaning 'vulnerability is reduced because resilience is enhanced' (McEntire, 2011, p. 306; see also Cutter *et al*., 2008).

In the report, capacities are intrinsically related to the 'resources communities have to draw upon in their day to day functioning' (Twigger-Ross *et al*., 2015, p. 11). Ideally, in order to be resilient, a community would have not only a large volume of resources, but these would also be diversified. Capacities are not reducible to resources though and a community abundant in resources would not necessarily be considered a resilient one. Instead, capacities are framed as 'processes that exist on a day to day basis within a community' (Twigger-Ross *et al*., 2015, p. 3). The Evaluation Report does not break down in much depth, how it conceptualises capacity building. But if we are to understand what conception of resilient subjectivity is implicit in these practices, more attention needs to be paid to what's at stake for the individual, in the framing of resilience interventions as building of capacities.

In the disaster management literature more broadly, the concept of capabilities, which reached mainstream development work through the contributions of Amartya Sen (Sen, 1981; Tadele and Manyena, 2009), is used to designate the 'process by which individuals, organisations, institutions and societies *develop abilities to perform functions*, solve problems and set and achieve objectives' (Tadele and Manyena, 2009, p. 320, *emphasis added*). Furthermore, and in more explicit terms, to 'develop abilities' to perform functions refers to the 'aptitudes, resources, relationships and facilitating conditions' that are required for the achievement of a goal or purpose (Brinkerhoff, 2010, p. 66). In other words, the concept of capacity building requires a constellation of elements (e.g. personal, material, structural) to come together for a capacity to be built or developed. A more useful distinction can be made between technical and structural aspects of capacity development and its more functional aspects (Few *et al*., 2016). For example, Hagelsteen and Becker (2013) show that much of what is encapsulated under the banner of capacity building relates to the provision of expertise, such as training or transfers of resources and equipment. However, in order for the capacity gains to be long lasting, functional aspects such as coordination or decision making processes need to be worked on. It can be argued that these functional aspects are the ones that bring capacity building together as a dynamic, more holistic process that can tackle complex and changing circumstances, and which makes its employment appropriate, in conjunction with resilience approaches (see for example Tadele and Manyena, 2009).

[2] I use capacity building and capacity development interchangeably in this chapter.

FCRS attends to capacity building in this holistic manner, seeking to integrate both expert input (e.g. flood warden training, community plans drafting) and resource development (e.g. PLP, flood stores), with functional aspects of capacity building (e.g. engagement of stakeholders, developing relations with existing community groups, etc.). In short, FCRS looks to produce what is called in the disaster risk management literature, an 'enabling environment' which Few *et al*. (2016) describe as an attempt to foster the political conditions necessary to advance disaster risk management and in the case of FCRS, to mainstream resilience as a priority. This is most obvious in the Evaluation Report (Twigger-Ross *et al*., 2015), where the interventions undertaken by the Pathfinders in practice, are framed following the resilience model provided by Cutter *et al*. as 'a set of capacities that can be fostered through interventions and policies, which in turn help build and enhance a community's ability to respond and recover from disasters' (Cutter *et al*. 2008, p. 2). Overall, capacity building is proposed to be the key development that would create not just resilient individuals, but a holistic enabling environment that would foster a community's ability to deal with disasters and be more resilient. So part of resilient individuals aimed at are abilities to cooperate, coordinate or work in a team, abilities that are possible to foster through policy intervention.

It is important to investigate the claims associated with capacity building at the level of the community in terms of resilience, specifically as they embody specific and implicit assumptions about subjectivity. As we have seen, capacity building ties together the link between resources and processes necessary for building resilience. In the Evaluation Report, presenting capacity building as central for building resilience is underpinned by a conceptualisation of vulnerability as complementary and not opposite to resilience. Drawing on the ENSURE project (which aims to deliver a methodological framework to assess vulnerability and resilience), the report states that 'a resilient community is not just a community manifesting low levels of vulnerability' (ENSURE, 2011, p. 12), but rather one where 'it is possible for a person or community to be vulnerable to some shocks and stresses in some ways, yet resilient in others through having capacities to adapt or overcome that vulnerability' (Twigger-Ross *et al*., 2015, p. 68). The example they provide is that of a person who is financially vulnerable to flooding (e.g. cannot afford insurance), but who could be resilient due to early warning systems or prompt emergency service response, both of which could reduce the amount of damage incurred as a result of a flood event (Twigger-Ross *et al.*, 2015, p. 68).

There is a need to stress here, the particular subject-positions that are encouraged by this specific framing of capacity building in the Evaluation Report. Even if the capacity building takes place at the level of the community (e.g. warning systems, community flood plans, etc.), as the example above shows, the individuals in the community are both the driving force behind the implementation and

recipient of the outcomes. Essentially, capacity building is proposed as both necessary and effective by presenting it as a common denominator between resilience and vulnerability. At the individual level, work on capacities enhances some strands and levels of resilience and therefore works towards balancing out the overall level of vulnerability. A person is required to adopt a 'mix and match' approach towards their different strands and levels of vulnerability and build capacity to some (not all), in order to bring the overall level of vulnerability to an acceptable minimum for withstanding shocks and stresses.

To better understand the interplay between capacity building, vulnerability and resilience and its implication for the subjects on the ground in communities, it is helpful to bring in the conceptual infrastructure of the notion of intersectionality, used predominantly in women's studies (Brah and Phoenix, 2004; McCall, 2005; Yuval-Davis, 2006).[3] Intersectionality is useful here as it allows for understanding capacity building as the material and functional investment of a subject positioned in a specific context and articulated by different social relations and particular structural constraints. As Brah and Phoenix put it, intersectionality signifies the 'complex, irreducible, varied and variable effects which ensue when multiple axis of differentiation-economic, political, cultural, psychic, subjective and experiential- intersect in historically specific contexts' (Brah and Phoenix, 2004, p. 76). The way the Evaluation Report frames capacity building against the vulnerability-resilience spectrum, illuminates similar dynamics for the subject of community resilience policies such as FCRS. First, an individual in a community is subject to different axes of differentiation, which means that there are no two individuals affected by the same constraints. Their specific position in the community is a function of many differences, including those of embodiment (gender, age, etc.), structural (e.g. financially vulnerability, low level of education, etc.) or ability to access resources (such as emergency services due to disability, positioned in a precarious geographical location, etc.). Second, all these social and structural differences intersect, to generate a specific historical context for an individual that is not generalizable or necessarily applicable for any other individual in that community. Third, and as a consequence, the effects that are produced as a result of these intersections are themselves complex and differential, meaning it is difficult to estimate them beforehand. The overall effect is that even if capacity building is placed at the level of the community, the work is almost by necessity, required to be taken by the individuals.

[3] The concept will not be used as it has been employed in women's studies to highlight oppression, but its conceptual infrastructure will be employed as it illuminates critical aspects of capacity building in relation to the production of subjectivity.

One other interesting aspect that results from applying the concept of intersectionality to capacity building, is that it draws attention to the problem of complexity. McCall (2005) suggests that in the case of intersectionality, complexity arises 'when the subject of analysis expands to include multiple dimensions of social life and categories of analysis' (McCall, 2005, p. 1772). This is applicable in the case of capacity building as well. As a concept, resilience responds to an understanding of the world as complex (Chandler, 2014, p. 41) and it appears that capacity building, as presented by the Evaluation Report, both takes stock and is constrained by it. Capacity building takes stock of complexity, in the sense that it is more attuned to regarding reality as ontologically complex, meaning that it recognises that reality can be non-linear and its outcomes unpredictable (see Mitchell, 2009). On top of this, it recognises that the public are not homogeneous, but rather composed of individuals in interaction with each other and the environment in which they conduct their existence. It appears to move away from 'deficit models' associated with the top down command and control style of disaster management of the past, where the decisions were made by state stakeholders and experts which assumed the public as lacking (or deficient) of certain capacities (Scolobig *et al.*, 2015). These capacities were subject to hierarchical top-down transfers from technocratic elites onto the passive public. A more hybrid understanding of capacity building emerges in the Evaluation Report, one that keeps some of the old elements of top down management but also takes complexity into account. The Evaluation Report takes inspiration from Cutter *et al.* (2008; 2010) Disaster Resilience of Place (DROP) model:

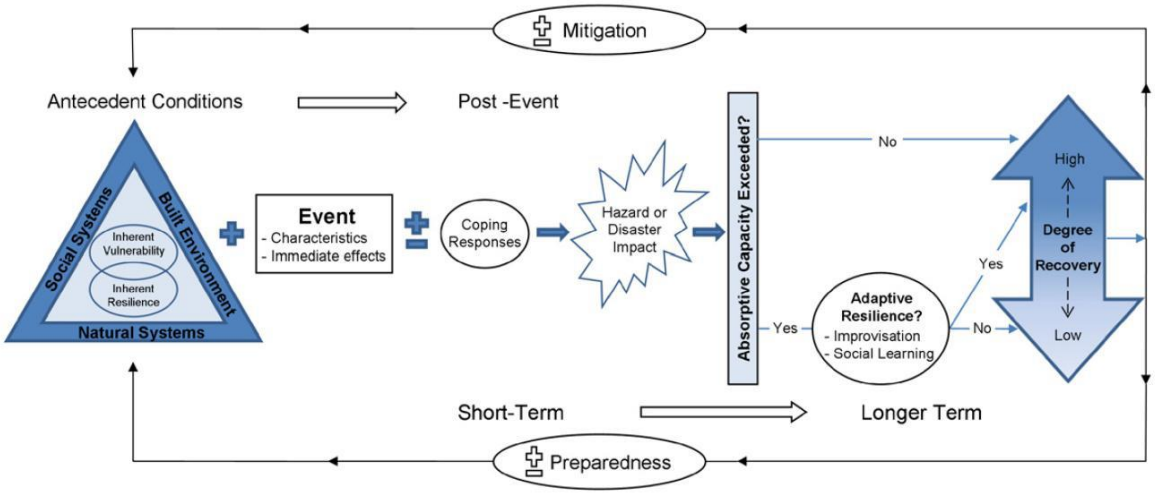

Fig 1. Disaster resilience of place model (Cutter *et al.*, 2010, p. 602), as presented in Twigger-Ross *et al.*, 2015, p. 31.

In this model, the aspect pertaining to capacity building is represented in a more static manner as 'inherent resilience', meant to designate the 'pre-existing community capacities' (the blue triangle on

the left) (Twigger-Ross *et al.*, 2015, p. 30). In more practical terms this amounts to an evaluation of the 'capacities (strengths and weaknesses) and resources within a community to find out where a community is on the resilience continuum and the extent to which community members are able to act and build resilience' (Twigger-Ross *et al.*, 2015, p. 13). The Evaluation Report still operates with an understanding of capacity building along the lines of a deficit model, as it states that resilience is 'a set of capacities that can be fostered through interventions and policies' (Twigger Ross *et al*., 2015, p. 31). It however, allows room for complexity to play out by introducing the concept of 'adaptive resilience' if the absorptive capacity of the community, in the event of an emergency is exceeded. Adaptive resilience here appears to be based on notions of 'adaptive capacity' of individuals and communities, though no explanation is given and models based on notions of adaptive capacity are currently underdeveloped in the disaster management literature (see Brown and Westaway, 2011).

After investigating the concept of capacity building in depth, which is central to the framing of the FCRS interventions in practice, the question that needs to be asked is what does it mean for the subjects of such policies? To begin with, it becomes apparent that capacity building, although focused on the individuals, is a system based concept. In the DROP model, the degree of success or failure of resilience is indicated at the level of the system (however defined: street, community, etc.) and not individuals. This is made clear in the Evaluation Report, where the definition and conceptualisation of resilience is geared towards what is 'important to maintain: a functioning community, everyday quality of life' (Twigger Ross *et al.,* 2015, p. 30).

The focus on the system level, in this case the community, produces a few distinct problems for the individuals. Even if the community is resilient overall after an emergency, some individuals will be affected more than others. As framed in the Evaluation Report, capacity building looks to equalise the level of vulnerability among individuals, by operating at both individual and community scale. The effects in the event of an emergency will be nevertheless complex and will create differential outcomes, which means that by default, some individuals will be worse off. This has two consequences. First, the Evaluation Report does not raise any questions with regards to how worse off a person can get, and what the limits are of vulnerability. No baseline is created to specify how much damage can be tolerated for one individual, but we are left to believe that as long as the community's core functions remain, the resilience building exercise has been successful, despite potential loss of human life. Second, as the concept of capacity building is expanded at the level of the community, so is the complexity of its operationalization, making it difficult to measure, leaving questions about when enough capacity building has been done. The Evaluation Report suggests that the Pathfinders have contributed to improvements that would have not happened in their absence,

but it does specify a way of quantifying how much capacity building has been done, vis-a-vis how much is needed. Third, the framing of capacity building still does not pay enough attention to the fragmentations and difference inherent to the social field. At first reading, it appears to move away from deficit models, where knowledge is inoculated on a passive public, in a top-down manner by experts and state stakeholders. The drive to focus on the system level (in this case community level) and to equalise the level of vulnerability by expanding capacity building to the community level, recast the public not necessarily as passive, but it homogenises it nevertheless. So even if the underlying assumptions are not in line with those of the deficit model, its implementation and outcomes are.

Capacity building, through the lenses of the interventions piloted in the FCRS, are framed in the Evaluation report and appears to propose specific understandings of subjectivity. On one hand, the positive point is that it recognises the complexity of a subject's unique positionality in the community. This is rather a refreshing departure from older forms of disaster management which regarded the public as passive (Scolobig *et al*., 2015). However, the emphasis on the system, the marginalisation of social difference and the complexity of its operationalization, point out that the individual of resilience foregrounded by the Scheme, is an adaptive one. More precisely, this means that little is put in place to secure an understanding of resilient subjects according to a determinate framework of understanding and measurement (e.g. such as the rational choice subject whose choices can be predicted and measured) and it is assumed that, once an enabling environment is produced, the inherent adaptive capacities of the individuals will surface and can be further fostered. The limits of these adaptive capacities and the limits inherent in the enabling environment are however, not considered. This does not mean that a return to a more determinate understanding of the subject should be desired normatively. It does raise questions though, as to how a subject that is adaptive and grounded in a complex ontology can be produced by linear, determinate policy interventions such as capacity building ones.

At a first glance, the framing of resilient individuals as adaptive, would suggest that practices such as capacity building can be characterised as aesthetic. This means that adaptive individuals would develop capacities on their own, unencumbered by limiting top-down norms. However, while capacity building can be said to provide capacities for self-direction, their transformation and experimental potential is hampered by the drive to foster the development of an 'enabling environment'. Community level capacity development is indicative of this, where the community is projected as a space of resilience building. As resilience building infuses the local environment of the community as an overall paradigm and point of reference for most practices, on the whole, the subject of resilience would merely use, reorder and revaluate the capacities for self-direction that were inculcated through

disciplinary training (Menke, 2003). In addition, the goals and aims individuals set for themselves for improvement, are likely to be goals and aims which permeate the collective imaginary, as a result of being promoted by resilience policies. If an individual achieves such a goal, it would not count as an aesthetic-existential practice since the goal is externally given (even if internally inculcated) and not necessarily an expression of the individual's needs.

7.3 Unpacking resilient subjects

The previous section has investigated how the Evaluation Report frames the policy interventions undertaken as part of the FCRS, in terms of capacity building. It has argued that such framing foregrounds an adaptive subject of resilience, whose limits are not scrutinised in the evaluating documents. As the Evaluation Report has its own limitations in the sense that it looks to evaluate and assess FCRS by grounding a specific definition of resilience, there are also limitations in terms of how much can be said about the subjects of resilience from its reading. To examine this in more depth and investigate the subject of resilience, I will draw on the interviews with the policy practitioners, from the level of policy design through to the level of Pathfinder implementation. In these interviews I have pursued questions about the practices undertaken in the Pathfinders and about meanings and conceptualisation of resilience more generally. More precisely, I will be investigating in this section how policy practitioners involved in the Pathfinders, perceive resilient subjects and how they aim to produce them through policy practice.

7.3.1 Characteristics of the resilient subject

To understand how the main actors involved in the design and delivery of the Scheme think about the characteristics of resilient subjects, we need to first understand how they define resilience. It is striking that at the level of high level practitioners (DEFRA, EA, NFF, etc.), none of the interviewees were able to define what individual resilience meant, deferring the question to the fact that is a new and ambiguous concept. One of the interviewees suggested that in general, people 'want to use the word preparedness because people don't know what resilience means' (Interviewee 5, R-NSA). At the level of Pathfinder Managers, the answers were more precise but they all pointed in different directions, without awareness of the more holistic understanding of resilience embraced by the Evaluation Report or as proposed by the academic literature. One of the most important aspects of individual resilience highlighted by the interviewees, relates to tangible material things such as, PLP measures installed in the property. As one interviewee puts it, the household is amenable to many alterations to increase its resilience: 'you can modify your property to be resilient on an individual scale, do things

inside the home, having electrical [fixtures] mounted on the wall, having laminated floor rather than carpets, just prepare it for a possible flood' (Interviewee 12, L-G). Aside from the material perspective of resilience, there is an abundance of references in the definitions to 'producing' a resilient subject. This can be done in a variety of ways, from raising awareness, to providing support and a variety of tools or knowledge about the nature of flooding. I will refer to all these in a more systematic way below.

Insight about how resilient subjects can be produced, comes from questions that asked the interviewees specifically, about what defines a resilient individual and how resilient individuals can be produced in policy practice. Perhaps not surprising, many of the answers coagulated around capacity building, mainly through education. Here, there seems to be a *tabula rasa* understanding of individuals in community that can be changed through policy interventions. The point of these interventions is what policy practitioners refer to, as an empowerment of individuals, empowerment that can take a more social and informal mantle or a more political one. The former is expressed as a generalised drive to create specific affective states that individuals can identify with. As such, a lot of emphasis is put on individuals becoming more prepared and more confident to deal with floods and flood emergencies. As one Pathfinder Manager puts it:

> When we think about empowerment […] if they [individuals] are supported in the right way or if they manage to find resources in what they are trying to do, it builds confidence and so people think they can cope with a situation and I think that is quite important, it is quite crucial **(Interviewee 16, L-G).**

From a more political perspective, resilience building becomes not just about generalised empowerment, but participation in the decision making process at the local level. In the words of the same interviewee:

> It also empowers people in another way where they can probably challenge and engage with the authorities and agencies probably on a more equal footing, they are not just the public anymore they are informed citizens, they are stakeholders, they are part of this process and that helps with planning solutions, it is a self-perpetuating, they are more resilient, therefore they are more informed, they are challenging and they are trying to get things moving and that makes the community more resilient again **(Interviewee 16, L-G).**

For some, the key to moving from the *tabula rasa* individual to the resilient individual is represented by providing education, in both formal and informal ways. As one interviewee suggests, to educate

about flood risk contains in it a whole philosophy of the interplay between risk, the individual and the state that comes very close to a neoliberal understanding (see Evans and Reid, 2013):

> But you have to educate them first because many of these people do not understand the risks they face within their own communities and one you explain to them the risks, what they can and cannot do, that is the other element, the understanding of who does what, who has responsibility for delivering what and it is one of those myth busting things that needs to be flagged up, that individuals cannot do anything because they are scared of being sued, or they see it as: this is your responsibility. And a lot of individual still perceive that this is someone else's responsibility, not theirs **(Interviewee 14, L-G).**

There are also more psychologically entrenched understandings of subjectivity, that do not regard it as a *tabula rasa*, but which distinguish between types of individuals more or less prone to take up resilience. Previous exposure to flooding is a significant catalyst for identifying resilient individuals. This is also recognised by the Evaluation Report (Twigger-Ross *et al*., 2015). Another catalyst is the presence of key people that are proactive and whom will take up resilience and aggregate other people in the process. One particular interviewee had a very specific understanding of the ideal resilient and non-resilient types of individuals that bring together all the themes presented above. The ideal resilient subject can be summarised as follows:

> Anybody can do it [resilience] but with the right help […] clearly people with income, people who are informed, better educated, have a more disposable income etc., or more organized small communities […] but let's just say a middle class community that are very used to working together, communicating together to do things and what have you and it can be pretty straightforward to look at how they can make themselves resilient **(Interviewee 13, N-G).**

It is interesting to note here that relationality (Chandler, 2014), the ability of individuals to be aware and relate to each other and their environment, is granted the same relative weight as the possession of material and subjective capacities. In other words, it is not clear which come first, the material and subjective capacities or the relationality, or maybe they reinforce each other. At the same time, relationality implies processes of self-awareness and reflexivity. The not-ideal resilient subject is located by this interviewee at the exact opposite end of the relationality-capacity spectrum:

> On the other hand, you got communities and people in it who have A) very poor awareness B) they have potentially a few skills but not many and C) they don't have real confidence in using those D) there may not be a real sense of community **(Interviewee 13, L-G).**

In other words, the production of resilient individuals is a function, at least in the first instance, identifying a sum of indicative characteristics. They have to do as much with personal development and change, as they have to do with awareness of the surrounding environment through relationality. This poses an important question: what are the policy interventions that the Pathfinders are engaging with and how likely are they to produce such subjects?

7.3.2 Production of resilient subjectivity: mechanics of implementation

To answer the question posed above, I identify a number of ways in which the Pathfinders have tried to produce resilient individuals through policy interventions. The most important of these types of interventions, relates to raising awareness through knowledge transfers. These interventions convey the unshackling of a subject from ignorance and misinformation, by providing adequate knowledge about flood risk and about the role of the individuals and other actors. As one Pathfinder Manager puts it:

> Empowering the community is to do with knowledge so that they have the knowledge to know how things work, how the system works and to a lay person, the FRM is just a minefield so I think by helping residents to understand the system **(Interviewee 11, L-G).**

Informing and educating as a form of empowerment is a pervasive idea in all Pathfinders. The only difference relates to whether or not there is an explicit drive to engage the members of the community in the activity. In many Pathfinders, transferring knowledge is implicitly understood as a top-down matter, and there is a distinction created between 'proper' and expert knowledge on one side and the lay ignorant person on the other. In other Pathfinders, a two-way channel is established between the Pathfinder and the community, underpinned by the belief that communities have their own knowledge and that more is to be gained through communication.

Another key intervention is to identify key people in the communities (and whole communities) that are proactive and willing to engage with the Pathfinders. This is a crucial aspect, as one Pathfinder manager bluntly suggests:

> In terms of a locality that hasn't got a voice in terms of a flood group we won't do any work with them because we do not have the capacity to do it and pull people together […] because of this we do what we can but we wouldn't target them **(Interviewee 7, L-G).**

Proactivity and engagement of the community are the cornerstones on which the Pathfinders are built, yet it becomes apparent that communities that are not proficient will be left behind.

One of the biggest revelations, in terms of engaging the communities that come from the practical experience of the Pathfinders, relates to the mode of engagement. Several Pathfinders have reached the conclusion that a mode of engagement that is more indirect and works through proactive individuals is preferable:

> What we found that would work is, you can use *peer to peer support* or *influence* and showcasing and introducing the communities that have worked on resilience voluntary or with a little *nudge* and ask them to talk to the ones who are not really ready to engage **(Interviewee 16, L-G, *emphasis added*).**

What is even more interesting, is that the idea or nudging or changing behaviour of people to become resilient, is not just reflected in the Pathfinders, in one form or another, but was a major consideration at the level of top national agencies such as DEFRA:

> So we are kind of looking at the broad spectrum resilience all the way from people in terms of households and risk, all the way to supply chains and the way in which you can implement change in people's attitudes […] I think […] people would need to understand it is not just about telling, because I have done a lot of work on behaviour change and I think even with these projects I think that the behaviour change element of it is not as strong as it could be and I think that it needs to be an understanding amongst authorities doing this kind of work to get behaviour change they need to be doing things and keep reinforcing messages to people **(Interviewee 1, N-G).**

It is useful to pause here and reflect more on behaviour change (BC), a strand of policy thinking referenced in the quote above that is currently popular in UK policy making, and investigate its influence on resilience policies. I will signal some similarities here which are productive for my discussion about the formation of resilient subjectivities. The BC agenda proposes that the state and other actors should 'nudge' people to make better decisions in their life, by shaping the context in which those decisions are made (Jones *et al*., 2013, Leggett, 2014). As a policy set, BC was popularised by the work of Thaler and Sunstein ([2009]2008), but its roots date back to 2004 where the need for Behaviour Change style of policies was outlined in the *Personal Responsibility and Behaviour Change,* published by the Cabinet Office (Halpern *et al*., 2004; Jones *et al*., 2013). BC and resilience policies entered British politics at similar times with comparable maturing times, as the first official mention of resilience comes with the 2004 Civil Contingencies Act (Cabinet Office, 2004a). What is more interesting, is the way in which BC policies are implemented shares similarities with the implementation of resilience policies. As specific policy interventions, 'Behaviour Change policies exhibit an explicit concern with seeking to structure the choices and practices of subjects and

consumers by mobilising the power of *social networks, peer-to-peer influence*, and by starting from '*where people are'*. It is these policies, too, that seek to work with the practices and *proclivities of subjects* – and combine them with the practices and proclivities of state agents' (Jones *et al*., 2013, p. 38, *emphasis added*).

There is a striking resemblance with the implementation of resilient policies. FCRS's implementation also looks to use networks (of all kinds), peer-to-peer support, influence, start with the people and co-produce knowledge with them or work with their proclivities (proactive individuals, those affected by flood, etc.). This is an interesting point in its own right and there is certainly reason to suspect that a cross-over between BC and resilience doctrines and rhetoric in British state apparatus may have occurred in certain places (as documented in the above quote from DEFRA). Other influential commentators suggest that fostering behaviour change policies can lead to a more resilient society (Edwards, 2009). The more fruitful endeavour here, is to pursue a comparison between the modes of implementation of both BC and resilience policies and investigate the kind of subjects they both aim to create.

In the case of BC, a dichotomy is created between the rationality and reflectivity humans possess and their ''automatic' (emotion-driven) 'systems'' which win out again and again (Leggett, 2014, p. 5). In other words, BC problematizes the rational individual of classical economic models by suggesting that actual (living, breathing) humans are characterised by bounded rationality and most of the decisions they make are subject to subconscious cues (*priming*) or emotions (*affect*) (Jones *et al*. 2013). As such, humans are ideal for nudging, by tapping into the subconscious and emotions, in order to alter the choice architecture. The default policy implementation mechanics in BC - operating through social networks, peer-to-peer influence or through targeting where people are – are justified, as the subject of BC is an atomistic, consumerist one, engaged in an exercise of choice making. Behaviour change occurs in this formulation, because the manipulation of the choice environment constrains individuals to make choices that are deemed by the state and other actors to be better (healthier, more environmentally sustainable, etc.).

Understanding the two- way channel between the type of subject desired by the policy and the actual mechanism of implementation the case of BC offers a firm baseline to assess the same channel in the case of resilient policies. There a lot in common between the BC subject and the resilient subject: resilience policies desire behaviour change in individuals so they can become resilient. This is done in multiple ways: awareness raising, peer-to-peer influence, working with people, creating networks, tapping into people's proclivities, etc. In fact, many of the Pathfinders communicated their rationale

as changing people's behaviour, powered by the underlying assumption that by engaging with individuals they will become resilient, if not in the short, then in the long run.

However, there are very significant differences as well. The BC subject is being intervened upon (its automatic systems), to have its behaviour changed for an instrumental goal (e.g. choosing a healthier product by having it strategically placed in a store). In its ideal form, the resilient subject is nothing short of a 'total' subject, one that makes informed choices (rational), reflects upon their underlying assumptions (reflective) and it is at all times in relation with other people and its environment (relational). The resilient subjects need to have its behaviour changed so that they can take charge of their own risk, not alone, but through a sense of commonality with the other people that they share that risk with. As presented in this section, it is hoped that the resilient individual engages and can challenge the authorities, takes charge and becomes emotionally confident, establishes connections with people and the environment and ultimately, is capable of reflecting and adapting to novel, unpredictable situations.

As such, the mechanisms of intervention appear to fall short of producing such an ambitious subject. As the Pathfinder managers have suggested, engaging the individuals in the community has been challenging and in most parts, this engagement has been reserved for the proactive individuals and communities. But most of this engagement has also been restricted to awareness raising activities in a variety of forms. Providing adequate knowledge to individuals has been the cornerstone of the Pathfinders and one of the main beliefs that it will make individuals resilient. However, there is little reason to believe that raising awareness and information transfer are sufficient to create a resilient subject that takes ownership of its own risk and adapts to unpredictable risks and uncertainties.

7.4 Production of subjectivity in practice: Swindon Junior Flood Group

The interventions that were piloted by the Pathfinder Projects have been analysed above, in relation to how they envisioned and enacted the production of resilient individuals. However, this analysis has been broad and sought to provide a more general understanding of these interventions. This section will delve deeper and investigate the establishment of a Junior Flood Group, which was one of the most popular interventions implemented by the Pathfinders. In doing so, I will investigate more thoroughly what it means to produce resilient individuals in practice, attending to the practical activities, underlying assumptions but also limitations and implications of such an endeavour. The empirical material utilised in this section comes from the Final Report for the Swindon Pathfinder and an in-depth interview with Scott Sissons, the Head Teacher at the Dorcan Academy in Swindon, where the Junior Flood Group was created.

The creation of a Junior Flood Group was one of the main activities undertaken by the Swindon Pathfinder. It was part of their broader objective, which aimed 'to increase community members' awareness and understanding of flood resilience and community approaches to flood resilience' (National Flood Forum, 2015, p. 1). The group created at the Dorcan Academy in Swindon consisted of students aged 11-15 (school years 7-10) and they were together for one year. The group met regularly (once a fortnight in the beginning) and performed assemblies as a core activity, at the very start conducted by the Pathfinder Manager and later organised by the students themselves for their peers. The group also engaged in a series of varied activities outside the regular meetings. They spent a day with Wiltshire Fire and Rescue, where they had training and worked on teamwork and communication. They had a session with the Red Cross, participated in the local Flood Fair and gave presentations at the Swindon wide Flood Exposition. Finally, they also contributed to the school website and newspaper with pieces about flood risk.

Of particular interest in the case of the Junior Flood Group, is how the practices and activities presented above, are framed and connected to resilience. When asked what resilience meant, in the case of the group, Scott Sissons suggested:

> Resilience was very much about confidence building and team building within the group and I guess to some extent within the school that students would have that better understanding and confidence when it comes to sort of emergency situations in that sense' **(Scott Sissons, L-NSA).**

The production of affective states, in terms of confidence building, was at the core of the group, seeking to 'develop the kind of skills which would give them confidence as much as anything, not only to be able to talk about flooding, but be able to share that information with their friends and family and in a confident kind of way' (Scott Sissons, L-NSA). The second major component of the development of the group was awareness raising. This involved a two-step process, through which young people gained an understanding of flood issues, by learning about them and then proceeded to disseminate the information among their peers and families. In addition to building confidence and raising awareness, other skills students learnt related to practicing work in a team or speaking in public and giving presentations in a confident manner. Bonding and identity building were another big part of the project. According to Sissons, the training day with the Wiltshire Fire and Rescue, one of the first activities of the group, helped energise and gel the group, so that it was able to work more effectively from that moment forward. Further group identity building efforts included creating their own logo and designing their own group hoodies. Overall, the design of the group involved the adults,

especially the Pathfinder Manager, creating a structure for the group, which aimed to be as flexible as possible, so the young people involved could come up with their own ideas.

It is interesting to see the commonality of practices between this particular project and the FCRS overall. Just like in all the other Pathfinders, the project was centred on capacity building (here as provision of skills), confidence building, awareness raising, peer-to-peer influence, bonding and creating new connections and the presence of communication channels (here a two-way one), to exchange knowledge. The underlying assumption behind the creation of the flood group, contained in the Final Report for the Swindon Pathfinder, was the notion that 'if residents had a greater awareness and understanding of flooding, then residents would be more prepared, and therefore more resilient, to a future flood event' (National Flood Forum, 2015, p. 5). Scott Sissons imagined the same overarching architecture in terms of how resilience works, as evidenced by the way he suggests young people would react in an emergency, as a result of being part of the group:

> I think they would be quite prepared those in the flood champions group anyway, quite prepared to tell their families what they could do, how they could sort of prepare for it and be aware of it. I think they would do that **(Scott Sissons, L-NSA).**

The Junior Flood Group however, did not survive and disbanded after the Swindon Pathfinder ended. One of the main reasons that the group did not last, after the end of the Pathfinder, relates to the crucial leadership role assumed by the Pathfinder Manager, who coagulated and maintained the group. The role of the Pathfinder Manager cannot be overstated. Scott Sissons argues that it was because of the enthusiasm and leadership of the Pathfinder Manager that the group took off in the first place and that was visible when this particular person left as everything then dissolved quite quickly. The other main reason for the disbanding of the group, relates to the fact that it needed 'some kind of longer term purpose and perhaps a broader purpose but secondly it did need […] some external support' (Scott Sissons, L-NSA). Linking the group with the local council or other flood groups would have potentially provided a lifeline for the group.

Perhaps even more interestingly, Scott's assessment was also that the group did not build enough momentum to keep going and that it needed more time to develop, until the point where it could function on its own. This casts into the limelight an aspect which is often ignored in the resilience literature: the importance of practice, time and support. As seen in the creation and development of this group, the underlying belief is that capacity building, combined with confidence building and awareness-raising, will ultimately result in resilience. The temporal dimension of this equation is not stressed at all. What seems to happen in actuality is that these activities need time, momentum building and practice until they can result in a self-sustaining endeavour for the individuals involved.

And implicitly, they also need funding and leadership, which means that the structures that promote resilience (state stakeholders in principal) might need to continue their activity for a long time, until they can claim resilience as something that is self-sustaining.

Another aspect that is overlooked by the resilience literature is the kind of support required, in order to build resilience. Scott Sissons argues that it was important that the young people have benefited from the presence of a 'safe environment' to develop their skills. This is corroborated by the psychology and resilience literature which proposes that 'resilience is more likely to be acquired or present when a child or adult can avoid strong, frequent, or prolonged stress' (Herrman *et al*. 2011, p. 263). All of this points towards another set of failure points, understood here more as limits of resilience building exercises. There are practical, temporal and material (funding) limits, as demonstrated in the case of the Junior Flood Group. But perhaps more acutely, there is another crucial limit that inhabits the implementation of the wider Scheme, not just the group. There is a straightforward assumption, much like a linear equation, that a series of what could be called preparedness exercises (confidence building, capacity building, awareness raising or bonding) will lead to resilience. In other words, preparation for the critical event and its effects will translate into resilience. This appears to be problematic, as the subject of resilience is envisioned to be more than just a subject that is prepared for the potential critical event. It is rather one that relates to the environment and adapts, taking charge of its risk and existence overall. The big question that has major empirical purchase, is whether preparedness exercises can actually produce resilient subjects in the way they are envisioned by the Scheme, as rational, relational, reflective individuals, capable of any adaptation. These insights, combined with those from the precedent paragraph, underlie the core finding of the thesis that if resilience is to be created on the ground, it requires substantial orchestration and support 'from above', from sources of authority.

Finally, a major question is whether the practices of the flood group result in empowerment for the students, defined in terms of aesthetic practices. In relation to the two phases of subjectification, it can be observed in the case of FCRS and more specifically in the case of the Junior Flood Group, that there was an initial phase of learning (disciplinary training) and a second phase, where the acquired disciplinary training was engaged and transformed. Since experimentation and transformation of the disciplinary training are what sets an aesthetic practice apart from a disciplinary one, it might be tempting to think of the practices associated with the Junior Group as aesthetic ones. With the Junior Flood Group however, this second phase boiled down to awareness raising and peer-to-peer influence. Despite the fact that individuals were free to engage and transform their disciplinary training, the policy intervention simply encouraged them to pass it forward to others. Within the remit

of the Flood Group, there is little to indicate an orientation of students for the individualisations of the resilience norms.

7.5 Conclusion

This chapter has presented in depth, how policy practitioners conceptualise the form of resilience subjectivities in the case of FCRS. It has done so by drawing on a three main empirical sources, presented in the chapter from the more general to the more specific. The Evaluation Report conceptualises resilient subjectivity formation, mainly in terms of capacity building, understood as fostering the adaptive capacities of individuals, in conjunction with the creation of an enabling environment at the level of the community. The interviews with the policy practitioners highlight a more diverse and nuanced understanding that teases out a variety of characteristics and proclivities, which combine to make a 'total' subject, rational, affective, reflexive and relational. In many ways, the two sources of data (Evaluation Report and interviews), though different in their conceptualisation of resilient subjectivity, converge in proposing an adaptive subject. Finally, the last source of data, the Swindon Flood Group case study, provides insight into the finely textured aspects that compose resilient subjectivities. Most importantly, the disbanding of the Flood Group offers a more striking insight into a theme that has been a consistent find of the empirical investigation: the existence of a disconnect between the aims of the FCRS policy and the extent to which it is possible to transfer and realise them in practice.

In this chapter, this theme is more visible in the material coming from the interviews and the case study. As far as the Evaluation Report is concerned, I have already signalled that it is not concerned with understanding the limitations of capacity building. This is because the tone of the report appears more concerned with the normative advocacy of capacity building as the central part of resilience subjectivity formation. In the interview material, comparing the forms of subjectivity aimed to be produced between BC and resilience policies, showcases the discrepancy between the ambitious subject that resilience aims for and the poverty of the policy tool, employed for its production. In a similar vein, in the case of the Swindon Flood Group, there was little awareness of how much work was needed, not only to establish the group, but also to maintain it.

There are two main implications of this discrepancy between what is envisioned in policy making at large and the reality of implementation. The first one relates to empowerment, conceptualised in terms of aesthetic practices or the individualisation of the norms. As I established at different points in this chapter, evaluating the practices of resilience building through the disciplinary/aesthetic filter, suggests that these practices can be characterised mostly as disciplinary. If they are aesthetic, this is

mostly due to the disconnect between what is done as policy intervention and the ambitious resilient subject desired, which is likely to allow individuals to undertake training and transform it in unexpected ways. However, this is a function of chance and accident rather than policy design. This can be understood in conjunction with the nature of the failure points described in Chapter 6. Failure points create differential and zero-sum effects that are what allows politics to play out in the implementation of FCRS. But it does not mean that the subject of the policy becomes political as a result,[4] it just means that the depoliticising effects of the Scheme, framed in terms of responsibilisation, have less purchase on the ground. Politics surface as a result of failure points, rather than policy design. Using the disciplinary/aesthetic filter, I reach a similar conclusion about empowerment (as the individualisation of the norm), which is not a matter of policy design,[5] but surfaces as a result of the failure to implement the disciplinary training.

The latter point can be explored as a hypothesis, in relation to the disciplinary training administered to the Swindon Flood Group members. They have surpassed the first phase of the process of subjectification, the inculcation of discipline, which consisted of learning about flooding and what they can do to be more resilient. The second phase, as encouraged by the Flood Group resilient ethos, consisted of the transfer of training to others, which simply meant reasserting the disciplinary practices. It is reasonable to think that if the Flood Group would have lasted long enough, and these habits were repeated for an adequate duration, they would have become ingrained and unquestioned (to various degrees). It is in fact, the disbanding of the Flood Group that allowed the students to take their disciplinary training (or parts of it) and transform it, in relation to their own needs (a process of individualisation), now free from the task of embedding it, by simply transferring it to others.

This leads to the second implication that relates to the interplay between the ethos of resilience and the complexities and discontinuities that emerge in practice. There is a possibility that individuals internalise the resilience narrative and ethos, without actually being resilient. In other words, the form of the resilience practice might be preserved without the actual content being there. As I stated above, the Evaluation Report walks this line, by seeking to normatively ground capacity building, rather than ask questions about the actual effects produced on the ground. More poignantly, the Swindon Junior

[4] In Chapter 5 I argued that failure points are also points of political contestation, but that does not mean necessarily that the subject becomes more political *per se*. This is because, as I noted above, politics are manifested here as a matter of chance and policy failure, not as a matter of individuals acting politically on purpose, according to a political agenda they subscribe to.

[5] As Peter Rogers would suggest by splitting resilience between positive (empowerment) and negative (responsibilisation) readings.

Flood Group case study shows clearly, that if the content of resilience is to be delivered, this can only be done through the provision of long term support and maintenance, an issue signalled more broadly in the *Logics of preparedness* section in Chapter 6 (p. 86-89). As such, the incongruence between the subject intended and the mechanism of implementation, represents a failure point, a misalignment between what policy makers want to achieve and the actual effect produced in practice.

This calls for a reappraisal of the notion of responsibilisation, applied to resilience (Joseph, 2013b; Evans and Reid, 2013; Kaufmann, 2013). If responsibilisation is conceptualised as an attempt to 'redistribute responsibility to societal members, who become their own 'apparatus of security'' (Kaufmann, 2013, p. 61), the intention is unlikely to be realised in practice in full, as policy practitioners intend. However, if individuals, like the Swindon Junior Flood Group students, pick up the ethos of responsibilisation,[6]in the sense that they subscribe to the need to foster resilience, they might end up reproducing it. They might use a language of resilience, but without the internalisation and inculcation of the content, and it is questionable that they can become their own apparatus of security. If responsibilisation concerns individuals actually picking up resilience and performing it in practice in their daily lives, the case of FCRS suggests that what trickles down to the individual, is an empty shell, a policy object that materialises only in policy discourse. It is not responsibilisation in full, but something that can be called quasi-responsibilisation. This is something that is recognised in segments of the resilience-as-neoliberalism literature. While Evans and Reid (2013) entertain a rather totalising outlook about responsibilisation, Joseph (2013b) recognises that 'strategies to which resilience is attached and which sustain it are themselves incomplete and thus reversible' and its 'hegemony has to be continually renewed, reproduced and institutionally inscribed' (p. 52). To use a metaphor, it can be said that resilience appears to be a vast, muscular enterprise attached to a weak skeleton, at all times in danger of falling onto itself. All this reinforces a core conclusion of this thesis: resilience, so far as it is produced at all on the ground, requires substantial orchestration 'from above' by ongoing authority, which significantly challenges the responsibilisation argument.

[6] As discussed above and in the *Logics of responsibilisation* section in Chapter 6 (p. 86)

Chapter 8: Governing through resilience: regimes of government and forms of subjectivity

8.1 Introduction

The previous three empirical chapters have described the ways in which various heterogeneous elements have come together to constitute resilience as a mode of governing. They relate to the coordinates of knowledge employed, the material and institutional arrangements set up for delivery and the forms of subjectivity encouraged on the ground. All of this has been analysed in relation to the rationalizations of the actors involved in the delivery of the policy themselves. In this chapter I will analyse the forms of problematization that governing through resilience instantiates. In other words, I will be analysing how 'the different solutions to a problem have been constructed; but also how these solutions result from a specific form of problematization' (Foucault, 1984, p. 389). In Chapter 4, I have introduced genealogy as a methodological approach in which problematization plays a central role. The function of problematization is to undertake a 'critical inquiry into conditions of possibility' by focusing on the 'contingency and complexity of the historical present' (Koopman, 2013, p. 21). Koopman insists that this entails not showing that the present is contingent but showing '*how* the present is contingently made up' (Koopman, 2013, p. 140, *emphasis in original*).

The purpose of problematization is to ask questions about the problematics to which resilience, as a regime of practices, responds. In other words, 'governing through resilience' is not taken for granted as a benign policy paradigm or object, as the managerial literature proposes. Within this literature, the discussion is one of 'how to make X referents of policy more resilient', 'when are X referents resilient' or 'why are X referents not resilient'. It implies the adoption of resilience as an essential feature of referents of government, whose manifestation is a matter of discovery through academic inquiry or policy practice. In contrast, in this thesis I conceptualise of *governing through resilience* in terms of an *emergent problematization* that has been contingently constituted at the intersection of a series of problematics. I then take these problematics, pertaining to the changing nature of the (flood) threat and the critical (flood) event and forms of subjectivity and integrate them into a singular framework.

Furthermore, problematization will be coupled with the specific terminology of governmentality, in terms of rationalities of government, technologies of government and forms of subjectivity. Resilience is understood as a regime of government, which represents the intersection of a series of practices

through we are governed and through which we govern ourselves. Rationalities of government refer to the intellectual processing of reality, or more specifically, to the thought processes by which certain issues are rendered governable. Technologies of government refer to the devices (such as mechanisms, tactics, instruments, vocabularies, etc.) by which rule is accomplished in practice. And forms of subjectivity refer to the way in which individuals are encouraged to comply with and pick up particular modes of identification proposed by the rationalities of governing. At the intersection of all these theoretical elements, the chapter will argue that, in the case of FCRS, resilience constitutes its own regime of government that is articulated in practice in conjunction with the regime of flood risk management. I make the case that this joint articulation gives rise to a series of productive tensions. They are what allows resilience to function in practice, but they are also at the heart of the disconnects and failures that characterise the implementation of the policy.

This chapter will be split in two main parts. The first part provides a governmental analysis of resilience in flood governance, with emphasis on the constitution of resilience as a distinct regime of government. It illustrates the specific rationalities that compose it, the technologies by which it is accomplished in practice and ways in which it breaks (though not entirely) with regime of flood risk management. The second part will focus in more detail on the forms of subjectivity that resilience, as a regime of governance, encourages on the ground and will highlight the productive tensions between the regimes of resilience and flood risk management.

8.2 Problematics of the (flood) threat and critical (flood) event

The case of FCRS, and flood risk management more generally, offers the opportunity to analyse in greater depth flooding, as both threat and critical event, in the context of the rationalities and technologies of government through which it is governed. From a governmental perspective, flooding is not a unitary, self-evident source of damage but it becomes constructed as a threat in different ways by different regimes of governance. Chapter 5 has shown how resilience has entered the arena of flood governance, as a transition from flood defence to flood risk management was well underway. For policy practitioners, resilience provided a vocabulary for talking about risk spreading between a plethora of groups and institutions in the society. This section, while taking the rationalities of policy practitioners into consideration, will pursue a more general governmental analysis of resilience in flood governance. It will argue that resilience and flood risk management constitute two distinct regimes of governance that construct the threat of flood in different ways along spatial, temporal, social and political coordinates. It will break down these regimes of governance, highlighting both their continuities and discontinuities. The purpose of this analysis is to show how resilience, as a regime of

government, proposes rationalities and technologies that respond to novel problematizations of threat and critical events that the previous regimes of government could not accommodate within their rationalities anymore. As such, I detail such problematizations and show how they provide conditions of possibility for resilience as a regime of government.

8.2.1 From flood defence to flood risk management

As a regime of government, flood defence responds to an understanding of the flood threat that has a relatively clear spatial determination and is dependent on scientific modes of knowledge. For example, Kundzewicz and Takeuchi (1999) detail the use of statistical methods for determining the severity and rate of occurrence of flood events in the period up the 1990s. These statistics take as their referents the main rivers and cities located on coastlines. At the same time, they quote the Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 1996, p. 338) as basis for suggesting that climate change poses a fundamental problem to the way in which floods were dealt with in the past and that a new paradigm of preparedness needs to be ushered in. However, before climate change had become a reason for concern, conventional engineering approaches had been the norm (Sayers *et al*., 2002). Defending against flooding meant exercising control over the flow of water. Werritty (2006) highlights that Britain's plains had been avoided for a long time due to the ever-present danger of flooding, but because of technological advances such as controlled drainage, most of English and Scottish land had been made available for agriculture by the end of the nineteenth century. Population increase and agriculture subsidies in the first half of the twentieth century meant that further drainage needed to be done, which led to the transformation of many rivers in the lowlands into channels that could evacuate water. Urbanization, population increase and encroachment of the flood plain have been constant trends since the first half of the twentieth century. The increased modernization meant that successive governments had resorted to structural schemes to protect the most vulnerable populations. At the same time, more land had been released by local authorities for development, often ignoring the advice of environmental regulators. This, in effect, has created an increased area of impermeable surfaces (asphalt and concrete) which changed the run-off pattern of water. The cumulative effect of these historical developments amounted to a situation of increased flood risk (Evans *et al*., 2004, Werritty, 2006).

Protecting the vulnerable population through structural defences was the dominant rationality of government for as long as the flood threat had a spatial determination and could be measured in conjunction with statistical prediction. For example, conventional engineering approaches were applied to flood defence through the concept of 'design load' (Sayers *et al*., 2002), which captures whether a system has failed or not failed to protect:

> Within this rather simplistic engineering paradigm [i.e. design load], design is proceeded by: establishing the appropriate standard for the defence (e.g. the *'100 year return period' river level*), based on *land use of the area protected*, consistency and *tradition*; estimating the design load, such as the water level or wave height with the specified return period; designing (that is, determining the primary physical characteristics such as crest level or revetment thickness) to withstand that load **(Sayers *et al*., 2002, p. 37, *emphasis added*).**

The highlighted sections of the quote illustrate more clearly the specific conceptualization of space and time underlying the technology of 'design load'. The '100-year return period' represents a statistical measurement that estimates the likelihood of an event and it is calculated in a geographically bounded area, based on historical trends. The localized nature of the flood threat allows knowledge of historical trends that can be accommodated within the scientific methods of statistical distribution and actuarial science. Flood defence therefore rests on an epistemology of knowledge of the future acquired through prediction, instantiated as a technology of governance through insurance and structural defences. It deals with recurring accidents that produce relatively minor losses that can be tolerated either by a central authority or private agents. It is a rationality that secures the future by locking us in the past, as predictions of flood risk are heavily dependent on relevant conditions of the world remaining unchanged (Beck, 1994). The type of insurance employed here can be characterised as the spreading risks over populations, the preferred modern form of insurance, that since the beginning of the twentieth century has sought to socialize more and more risks by ever-expanding public and private pools (Baker and Simon, 2002).[7]

The transition to flood risk management, as a distinct regime of government, rests on a different problematization of the flood threat, one that goes beyond clear spatial determinations and which extends the remit and form of scientific knowledge. Chapter 5 has presented how official documents such as the *Bye Report* (1998) and *Making Space for Water* (DEFRA, 2004) have started to problematize the governmental response to flooding, whose nature had started to change. Flood risk management is still based on the epistemology of knowledge underlying flood defence, with two main qualifications. First, rather than focusing on geographically bounded areas, flood risks management favours holistic, catchment-wide approaches that seek the involvement of stakeholders at all levels. Second, while scientific methods of prediction of flood are still very important (and more sophisticated), they are now combined with social approaches that argue valid knowledge could be harvested from individuals and communities. In Chapter 5 I presented how both the *Bye Report* and

[7] In the UK, the provision of insurance cover is commercial only (DEFRA, 2004).

Making Space for Water have started introducing the need for local level stakeholder involvement in the governing of floods. These changes are proposed to be more appropriate for addressing calls for sustainability and the establishment of a balance between environmental and developmental concerns, especially as the threat of climate change begins to be taken more and more seriously (Brown and Damery, 2002; Borrows and DeBruin, 2006; Johnson *et al*., 2005).

The technologies of government that accomplish flood risk management in practice still rely on risk and insurance, complete with more emphasis given to local knowledge. However, there is an increased emphasis on spatial *integration* of various locales into a wider unit of analysis and substantial attention is paid to the resulting interconnections:

> Modern flood risk management is aimed at managing whole flooding systems, be they catchments or coastlines, in an integrated way that accounts for all of the potential interventions that may alter flood risk **(Sayers *et al*., 2002, p. 37).**

As such, whole systems approaches are pioneered 'from high-level planning based on outline analysis to detailed designs using high-resolution simulation models' (Sayers *et al*., 2002, p. 36). The drive is towards 'integrated flood risk management', which is a 'complex endeavour, which will need to be supported by computer-based tools that enable analysis of the whole system, evaluation of the consequences of strategic intervention and coordination of intervention activities' (Sayers et al., 2002, p. 41). Integrated flood risk management and whole systems (not related to complex adaptive systems) are based on an epistemology of knowledge and grounded in computer modelling techniques that operate with: 'inventory of data', 'knowledge bases that guide decision makers' or 'tiered risk assessment methods' (Sayers et al., 2002, p. 41-42). Risks are not only identified, but they are also spread between the different agencies and stakeholders in a catchment area, akin to how a network distributes the impact of a localized shock between as many nodes as possible in order to minimize it. FRM is different from flood defence in the sense that is more than spreading risks over populations, where the ever-expanding pools rely on the co-optation of individual subscriptions. Consistent with the changes in civil protection and emergency preparedness that have emerged at the beginning of the 21st century (see Cabinet Office, 2004a), flood risk management shifts towards integrating whole sectors of society into the activity of managing risks. This is powered by the assumption that risks are now ubiquitous and interconnected.

Resilience fits well with flood risk management and as Chapter 5 has illustrated, it has been an integral part of it, that has facilitated the transition towards risks management more generally in the UK. However, I want to argue that, at least as far as flood governance is concerned, the case of FCRS suggests that it would be misleading to say resilience is only one rationality within flood risk

management (as regime of government). Indeed, it is policies centred on resilience like FCRS that offer the opportunity of exploring how resilience has mutated into a distinct regime of government of its own. In the next section I will detail how the regime of government of resilience, while not breaking with flood risk management, responds to a series of different threat problematizations: the conditions of possibility for resilience to gain governmental credentials are created by an acknowledgement of threat derived from an imaginary of catastrophe.

8.2.2 Governing the threat through resilience: imaginaries of catastrophe, reterritorialization, enactment-knowledge and the flattening of the future

As a regime of government, resilience does not constitute a rupture with flood risk management in the sense that it is the regime that succeeds it. Resilience benefits from the way in which flood risk management has expanded on the nature of the flood threat and enlarged the structure of the governmental response to include societal and environmental concerns. It is possible for the two regimes of government to exist, in some instances in complementarity and in some instances in opposition. More specifically, this means that to certain extent they share practices and whether they are articulated as one regime or another, it is a matter the employment of specific rationalities and technologies. For example, as I show below, while resilience grounds the need for adaptation (as a set of practices) as a response to an imaginary of catastrophe, it is possible to also ground adaptation in a rationality of risk management, focused on the 'quantification of uncertainty' (Wilby *et al*., 2008, p. 2511). However, resilience responds to a series of problematics that break away with flood risk management and as such, resilience articulates practices in specific ways. It constitutes a distinct regime of government that conceptualises differently of both the nature of the threat (imaginaries of catastrophe, reterritorialization) and the governmental response to it (enactment knowledge and the flattening of the future).

8.2.2.1 Imaginaries of catastrophe

In this subsection, I will make a case that resilience responds to the problematization of the threat and the future in terms of catastrophe (Aradau and Van Munster, 2011). While flood risk management is still based on an epistemology of knowledge, coming from both scientific modes of inquiry and local knowledge, catastrophe represents a large scale disastrous event that poses two fundamental problems to the epistemology of flood risk management: it cannot be statistically predicted and very importantly, once it occurs it disrupts historical patterns of regularity that are important for statistical prediction. As such, it presents major difficulties for a rationality of government that relies on an

epistemology of knowledge and which is operationalised by technologies of governing such as risk, prediction, modelling or insurance.

It is important to carve a distinction here between catastrophic events (characterisation of an event as catastrophic) and the establishment of an imaginary of catastrophe (which positions the catastrophic event in relation to the future and government more generally). For example, the Millennium floods (1998, 2000, 2002) have been characterised as 'catastrophic', inundating large areas and causing a dramatic increase in flood losses (Werritty, 2006). UK government's Foresight programme on *Flooding and Coastal Defence* assessed the threat of climate change suggesting increased risk of flooding for *large parts* of the UK (Evans *et al*., 2004). The insurance industry started to question the universal provision of flood cover following the Millennium floods in a quest to find novel insurance approaches to keep up with the increase in flood related losses (Priest *et al*., 2005). Overall, the flood threat was gradually expanded to incorporate a larger geographical area of effect, increased unpredictability in terms of occurrence and outcomes and a larger impact on humans and society overall.

However, a critical point is reached with the floods of 2007 and with the Pitt Review, which established an imaginary of catastrophe. The 2007 floods had been described as large scale catastrophic events with widespread damage, loss of lives and critical infrastructure failure, as evident in the description of the floods by the Pitt Review:

> Last summer's flooding was *exceptional* […] The hard facts are even more compelling. 55,000 properties were flooded. Around 7,000 people were rescued from the flood waters by the emergency services and 13 people died. We also saw the largest loss of essential services since World War II, with almost half a million people without mains water or electricity. Transport networks failed, a dam breach was narrowly averted and emergency facilities were put out of action **(Pitt, 2008: ix, *emphasis added*).**

Catastrophe enacts a break with the present (understood in terms of historical patterns) and destabilizes routine modes of operation by being exceptional and unpredictable, posing intense challenges to modes of government predicated on the coupling of the concepts of risk and insurance. Risk operates with a concept of chance applied to a limited number of outcomes and from a governmental perspective requires a securitizing agency (state, private actors) that can spread the cost of a negative outcome in time. Same can be said about the integrated and whole system approaches of flood risks management, reliant on knowledge based modelling techniques. Catastrophe puts pressure on this system of damage compensation and integrated or whole system

management through a combination of magnitude, increased frequency and unpredictability, engendering a reshuffling of the overall political technology going forward:

> The floods of last year caused the country's *largest peacetime emergency since World War II*. The impact of climate change means that the probability of events on a similar scale happening in future is *increasing*. So the Review calls for *urgent and fundamental changes* in the way the country is *adapting* to the likelihood of more frequent and intense periods of heavy rainfall **(Pitt, 2008, p. vii, *emphasis added*).**

Catastrophe is characterised by a 'tipping point', underlined by an ontology of exceptionality, which causes a rupture with the exiting modes of governing and renders them insufficient for dealing with the new realities (Aradau and Van Munster, 2011); hence the call for urgent and fundamental changes to governing. The emphasis on adaptation is reiterated by the report when the need for resilience is justified, on the basis that it is not realistic anymore for people to expect the Government to assume responsibility for flooding entirely, as they cannot protect against all of the consequences of natural disasters (Pitt, 2008, p. 349). The magnitude, likelihood and impact of flood events, only increased and made more unpredictable by climate change, alters the problematization of the flood threat and its potential consequences to include possibilities up to and including the catastrophic event. As such, resilience gains governmental credentials once it is coupled with an imaginary of catastrophe which makes the previous technologies of government inadequate on their own.

It is important to note here a productive tension within the Pitt Review that is symptomatic of the function of resilience as regime of government more generally. I made the point in Chapter 5 that the Pitt Review formally sanctions the transition from flood defence to flood risk management. Yet it also establishes an imaginary of catastrophe, which in many ways contradicts with the underlying rationality of flood risk management. This is because major policy documents such as the Pitt Review do not necessarily embody a clear and coherent narrative, as much as they are put together from disparate sources with the goal of instrumentally responding to an issue rather than vindicate a specific theoretical position. In other words, the Pitt Review brings together 'hybrid' rather than 'pure' rationalities, which are 'configured together in many and complex ways – as configurations or assemblages' (O'Malley, 2004, p. 24). This is an essential point for illustrating how a resilience centred policy such as FCRS can establish its own regime of government and at the same time contain significant traces of the flood risk management regime. This is a point I will return to at the end of this section.

8.2.2.2 Reterritorialization of floods

However, while the catastrophic imaginary has permeated the modes of problematization of the flood threat, it produces the need for resilience policies and acceptance of responsibility by individuals and communities through a process of *reterritorializing* floods. It is not enough that the likelihood, magnitude or unpredictability of flood events is increasing,[8] what is more important is that floods can happen anywhere now. Indicative of this understanding is the fact that surface water has been included as source of flooding, which in turn devolves governmental powers and responsibilities to local authorities (Cabinet Office, 2010b). Climate change can accelerate extreme weather events, which in combination with the spread of non-absorbent surfaces, such as concrete and asphalt, can produce flood anywhere, not just around rivers and coastlines. Flood becomes reterritorialized, from specific geographical areas prone to flooding (usually due to the presence of a permanent source of water like a river or the ocean), to the whole of society. This is because surface water, flash flooding or inadequate sewage provisions, accelerated by climate change, can produce flooding in places with no records of it or can elevate a local flood into a catastrophic one. The imaginary of catastrophe in conjunction with the reterritorialization of flood produce a picture of the flood threat as ungovernable through exclusive top-down, command and control, localized and unitary approaches. Surface water for example is the reason why local authorities have been added to the flood risk management institutional diagram and offered money for the starting the Pathfinders (Interviewee 5, R-NSA).

The case of FCRS, however, suggests a series of alterations in the way the critical event is apprehended and rendered governable. The most notable difference is the removal of exceptionality from the perceived nature of the critical event. In a rather paradoxical way, it is the acknowledgement of exceptionality which, while creates the need for resilience (as evident in the Pitt Review), also encourages a state of affairs, where in the context of the actual flood response, exceptionality is removed. Resilience responds to the realization that if floods cannot be predicted and if they can happen anywhere, the preparation should be not for a specific type of flood, but all floods. The policy practitioners do not operate with a hierarchical distinction between categories of flood events such as 'routine' and 'exceptional', and do not have specific type of responses for specific types of floods. They flatten the ontology of the flood threat, to an understanding that floods can occur anytime, at any rate or intensity, and can have unpredictable and potentially catastrophic outcomes. The catastrophic event is therefore folded back into the everyday existence of the community, by

[8] As such problematics can also be tackled differently, for example through quantifying uncertainty (Wilby *et al*., 2008).

removing considerations of 'tipping points' or 'exceptionality' of flood events. It does not make a difference if the flood event is minor or catastrophic. Resilience is understood to be a way of dealing not just with flooding in general, but also any other emergencies such as earthquakes, frost or terrorism. The flattened ontology of the flood threat also means that flooding is internalized to the lived experience of the community, rather than being something external that can be controlled against. Problematizing the flood threat in this way alters previous modes of knowledge and introduces additional ones. Whereas risk management internalizes the threat to the society as a whole, engendering the response in terms of greater integrations of institutions, agencies and sectors of society, resilience goes further and internalizes the flood threat to the lived experience of the community. As such, risk management approaches are still important, but ground zero is now constituted by the individuals in the communities themselves.

8.2.2.3 Enactment-based knowledge

In the case of FCRS, modes of knowledge such as risk management are altered, in the sense that they are stripped of the calculative component. Within the Pathfinders, risk management is restricted to risk identification (e.g. community plans) and risk prioritization (e.g. risk registers). The causes of flood risk are identified and prioritised within local resilience areas and operationalised in Local Resilience Forums. This is a dynamic process carried out by multiple stakeholders who are making risk plans 'in relation to the process of defining risks' (Brassett and Vaughan-Williams, 2013, p. 232). However, the calculative component (usually represented by a statistical measurement of the likelihood of occurrence of an event), which is the central part of insurance strategies, is almost entirely absent from the rationalizations of the policy practitioners. This needs to be read in relation to the flattened ontology of the flood event, for which the calculative component is not necessary. Managing the flood threat becomes almost entirely a matter of disaster management, in which preparedness occupies a central role. With the exceptionality of the flood event removed, its occurrence is meant to represent an acceleration of the state of affairs, not a disruption or anomaly. To render the acceleration governable, risk identification and prioritization retain the value they possessed within the insurance strategy but the calculative component is now replaced by *enactment-based knowledge*, which is produced by ''acting out' uncertain future threats in order to understand their impact' (Collier, 2008, p. 225). Enactment-based knowledge, in Collier's formulation, makes an inventory of elements, generates vulnerability data and creates a model of the event. While Collier's model is more specific to applications where computer power can generate models (such as in nuclear attack enactment), its conceptual infrastructure fits well with the practices of the Pathfinders. Inventory of the elements is done, for example, through the language of capability building, where the strengths of the community

are assessed. Vulnerability mapping is done in terms of identification of risks, vulnerable people or lack of capabilities. And while only one Pathfinder developed an actual exercise (simulating a hypothetical flood emergency and generating plans to respond to it), in the *Logics of Preparedness* section (p. 86-89) I have detailed how a number of practices aim to develop habits of acting and thinking that generate knowledge through linking people's imagination to flood events in order to map out their nature and potential consequences.

The replacement of calculation by enactment-based knowledge points out to the distinctiveness of the regimes of flood risk management and resilience, but also to the productive tension between them, manifested in the case of FCRS. As noted above, enactment-based knowledge responds to an understanding of the future in terms that are potentially catastrophic, revealing the limits of risk, based on an epistemology of knowledge. As such, enactment-based knowledge operates at the margins of the risk paradigm. It provides a technology for making the future governable, once it has been revealed that increased uncertainty (which is a function of the imaginary of catastrophe) makes the technology of risk significantly less reliable. I argue that the two approaches, risk and enactment knowledge, are both able to function in the case of FCRS, as they find a common denominator in what is called 'confidence' (O'Malley, 2004, p. 20). As I uncovered in Chapter 7, and as I will analyse further in the next subsection, confidence building (as an affective state) has been a very popular practice encouraged in the Pathfinders. However, confidence here refers to the formation of a set of rules, empirically-based principles or theories that can act as good predictors for the future. As such, confidence applies to both risk and enactment-based knowledge, in the sense that the techniques that reduce of uncertainty are those associated with a high degree of confidence. For example, prediction based on risk depends on specific indicators of confidence (such as size of the sample, consistency of historical patterns). Enactment-based knowledge acts in a similar fashion. Even if calculability and statistical prediction don't apply, enactment-based knowledge aims to establish some routines or rules of thumb for dealing with flooding that 'work', with their feasibility being reinforced or disproved from one flood event to the next. As such, they build confidence, not just as an affective state, but as an empirically-accumulated set of falsifiable theories about how to deal with the effects of the future threat, which reduces uncertainty and makes the future governable. These points can be exemplified further in relation the account of temporality implicit in the rationality of resilience.

8.2.2.4 Temporality

As a new rationality of governance, resilience instantiates a specific relation to time and temporality. Time does not have a fixed, essential nature but it is rather operationalised in specific forms, by various modes of governance, which establish particular relations between past, present and future. For

example, Koselleck (2004) shows how historically, religion and modernity are predicated on specific accounts of time. Religion is based on a prophetic understanding of time, the constant anticipation of the end of the world which, in effect, renders the future unusable (the future is reduced to expecting the end). The rise of modernity and its institutions (state, sovereignty, technological progress, etc.) owes to the gradual elimination (though not a complete one), from the realm of political deliberation, of religious thought based on prophesy of the Apocalypse. As such, the future opens up, making space for rational prognosis, and is reinterpreted as a 'domain of finite possibilities, arranged according to their greater or lesser probability' (Koselleck, 2004, p. 18). Rational prognosis is premised on processes such as 'abstraction, decontextualization, quantification and rationalization', which alter the meaning of time, away from religious prophesy and nature's rhythmic cycles, to the hourly cycle of the clock, which is 'invariable and precise' (Adam, 2003, p. 62). Industrialization puts further emphasis on the difference between nature and culture, mental activity and physicality, in order to orchestrate ever greater control over nature. As E.P. Thompson (1967) suggests, industrialization engenders a gradual move away from 'task orientation', a marking of time characterised by work around an observed necessity, usually having to do with nature's rhythmic cycles (e.g. farming and animal rearing practices). Task orientation entails little difference between work and life, as the working day is accommodated to the duration of the task. The entry into the landscape of industrial capitalism brings a much sharper distinction between work and life, as task orientation becomes replaced by the 'time-sheet, the time keeper, the informers and the fines' (Thompson, 1967, p. 82). Industrial capitalism also disrupts 'lines of responsibility', by separating people from their immediate environments and from being able to see the effects of their actions later down the line (Adam, 2003, p. 65). Technology contributes to 'the cultural effort to extend the 'natural' powers of the body by artificial means and to increase control over the temporality of the earthly condition' (Adam, 2003, p. 61). And finally, as a mode of organisation, the capitalist economy uses the future to secure the present (through credit, interest, financial speculation, insurance), treating the future as an 'extended present' (Nowotny, 1984/2005).

It is particularly interesting to analyse how resilience, as a mode of governing, engages with the question of temporality. Resilience is placed within the notion of time pertaining to modernity, as many practices in FCRS, such as community plans or flood warning/forecasting, rely on abstraction and rationalization. It is also placed within the workings of the capitalist economy and it still relies to some extent on insurance. But the rationality of resilience actively seeks to exceed the modernist understanding of time. A few aspects are telling. A major one is the reterritorialization of lines of responsibility. Resilience is about the community and the immediate environment of individuals, which means that individuals are encouraged to take ownership of risk management. But they are also

encouraged to take ownership of the effects they are causing in the environment. In the *Logics of 'inverted' solidarity* section (Chapter 6, p. 89-92), we have seen how, on the ground, there is an incipient realisation between Pathfinder Managers that actions of one community member can translate into positive or negative effects for the other members. In other words, if industrialization, and later on globalization, encouraged individuals to occupy a very specific intermediate part in a structure whose workings they could not entirely comprehend, resilience encourages them to reoccupy not just the immediate environment more fully, but to also take charge of the cause and effect mechanisms they inevitably put in motion.[9] The differences between culture, with its emphasis on the superior mental abilities of humans, and nature, are gradually effaced in the case of resilience. Individuals are encouraged to become more aware of nature and its workings and to actively think about disasters, with the goal to develop successful strategies to inhabit their effects. However, this does not mean a return to a 'natural' time, characterised by nature's rhythmic cycles, as nature is rendered unpredictable in a rationality of resilience. Instead, resilience appears to be fulfilling the role technology did in modernity: extending the 'natural' powers of the body, to increase control over the temporality of earthly conditions. However, this is not done by artificial means (as the case with technology), but rather through further harvesting the 'natural' capacities of the body. Discourses of capability development and adaptation are premised on an understanding that the body's resolve can be extended, helping the individual navigate situations of uncertainty better. Put differently, resilience is premised on an epistemology of the invisible, as 'through resilience, the invisible can be made visible not as a revelation of secrecy or discernment of risk, but as a discovery of new subjective capabilities' (Aradau and Van Munster, 2011, p. 47-48).

As a result, resilience signals a new relationship of the individual and society with the future. This relationship has traces of previous conceptualizations of time, but it is primarily characterised by a flattening of the future. This means that resilience does not effectively destroy the future, making it a passive expectation of the end, like religious time does. It is not an extended present either, because unlike credit or insurance, resilience is not predicated on a calculative return in the future that forecloses the present now (such as a mortgage that implies the possession of a house now on the basis of a 20 years long payment in the future). It is also not a 'natural' future, based on nature's cyclical variations, as nature is presented as unpredictable and potentially catastrophic. In effect, resilience seeks to *flatten* the future. This is predicated on a double move implicating the removal of both exceptionality and regularity. The imaginary of catastrophe makes statistical prediction

[9] As Chapter 6 has shown, conditions of complexity prevent this policy prescription from translating well in practice.

ineffective and potentially illusory, unable to predict a catastrophe. But resilience is proposed as a state of preparedness for any kind of event, removed from considerations of size and intensity. As the future event cannot be known, preparation for it is permanent and extends past it. Resilience is a mode of preparedness that proposes adaptation regardless of the scale of the critical event, its duration or rate of occurrence. As such, the future becomes flat because future time has its temporal coordinates removed or rendered irrelevant. While other conceptions of time are not entirely removed, they appear to operate in the background of the rationality of resilience, which take advantage of them for its working, but it is not predicated on them. Resilience seeks to make the process of adaptation become permanent, with successful adaptation becoming at the same time goal and measure of it.

This is most visible on the ground when it comes to preparedness. As I detailed in Chapter 6, in the section on *Logics of preparedness*, individuals are encouraged to establish a link with the future emergency by mapping up modes of response to it and developing habits of thinking and action. However, if the emergency can occur at any time, it also means that they are encouraged to inhabit not just the critical event and its aftermath, but the interval between emergencies. Preparedness is permanent with this rationality. Furthermore, technologies such as flood warning systems, while designed to alert of potential flood, have the effect of further embedding preparedness. In the words of one community flood member:

> In the event of another flood, I have actually got a personal flood plan […] I just got this checklist of things that I do, mainly to know, *should anything happen*, I have everything there **(Interviewee 21, L-NSA, *emphasis added*).**

The statement 'should anything happen' suggests an understanding of the future devoid of temporal coordinates. The checklist is not for a specific type of future event, but for *any* type of future event.

8.2.3 Beyond 'pure' rationalities: the relation between resilience and FRM

Resilient centred policy initiatives such as FCRS offer the opportunity to provide academic and intellectual commentary on a series of policy practices, pooled under the theoretical umbrella of *building resilience.* In other words, to ask what exactly does it mean to build resilience? Is it something new, revolutionary, or is just the old dressed as new? The answer I provide here is that resilience can be conceptualised as constituting its own regime of governance, as it responds to specific understandings of the nature of threat, centred on problematizing the threat and the future in terms of catastrophe. However, this does not represent the 'next generation' of flood governance. Indeed, what I am arguing is precisely that the side by side existence of resilience and flood risk management

(as regimes of government), sometimes in complementarity and sometimes in contradiction, proves to be tense, but also productive for resilience policies. This does not mean that they are equally important or have equal applicability in practice, just that resilience cannot be entirely disentangled from the rationalities and technologies associated with flood risk management.

My argument here has two main implications. First, it allows maintaining the same account from Chapter 5, in regards to the accounts of resilience as responding to problematizations of complexity. There is little to no empirical material to support the argument that FCRS can be conceptualised in terms of adaptive systems (Walker and Cooper, 2011) or a pragmatic framework of understanding that enables complex life to reveal itself (Chandler, 2014). Second, and related, the governmental analysis of resilience policies prevents us to not fall into the trap of seeing resilience in terms of 'pure', unitary rationalities (such as a clean regime break or responding to complexity). It allows to account more precisely for all the complicated and sometimes conflicting dynamics on the ground. This will be further explored in the next section with reference to the accounts of subjectivity resilience policies look to engender.

8.3 Problematics of subjectivity

The previous section has shown how the rationalities and technologies of resilience problematize the (flood) threat and the critical (flood) event, in order to establish resilience as a regime of government. As a regime of government, resilience is about the intersection of practices through which we are governed and we govern ourselves. This section will provide an account of the modes of identification that the rationality of resilience encourages individuals to pick up, how resilience proposes individuals govern themselves. The Pitt Review (Pitt, 2008) and the Evaluation Report (Twigger-Ross *et al*., 2015) suggest notions of adaptation and capacity building as forms of conduct encouraged and facilitated by the regime of governance of resilience. They appear to respond best to the nature and implications of the treats and critical events problematized by resilience. However, adaptation and capacity building are propositions that resilience policies make for the individuals that are referents of government, about how they should identify. It tells us less about the socio-psychological substrate that enables their composition.

In Chapter 7 I have shown how FCRS problematizes the agency of the individuals on the ground, moving away from relegating individuals to the passive public that needs to be secured by the state and casting them into a new role as capable agents adapting to the impact of critical events. The new problematization breaks down the individuals into four main characteristics: they are recast as rational, reflective, affective and relational. In this section, I will elaborate on the relation between

these socio-psychological characteristics of the resilience subject and show how, in the case of FCRS, they all (need to) come together to produce the subject envisioned by the Scheme.

8.3.1 Rationality and reflexivity

Rationality and reflexivity are important parts of the production of resilient subjectivities in the case of FCRS. I will illustrate how these concepts are conceptualised in relation to resilience, by means of comparison with the understanding of reflexivity in resilient subjects employed by David Chandler (Chandler and Reid, 2016). Chandler suggests resilience represents the coming of age of the neoliberal subject, identified in terms of the removal of the external material world of liberalism and its gradual replacement with the inner world of the individual. More precisely, Chandler argues that, at stake in the transition from liberalism to neoliberalism, is precisely the abandonment of concerns with transforming the external world according to rationalist modernist principles of freedom and progress. Instead, neoliberalism relocates such transformation to the internal universe of the individual, who needs to perform work on self, in order to survive and thrive in the world. Chandler illustrates this by reference to the 'autotelic self', proposed by Antony Giddens (Giddens, 1994). Giddens suggests that in the globalized, interconnected world in which we live (or 'reflexive modernity' as he calls it), we can no longer be aware of the unintended consequences of our actions and that our attempts to prevent risks give rise to other unintended risks, what he calls 'manufactured uncertainty' (*ibidem*). Faced with this 'Catch 22' scenario, Giddens suggests that our attempts to transform the external world, with its material structures, only exposes illusory, hubristic thinking. Instead, what is needed is 'social reflexivity', in the form of work on the self to become more aware of our decisions and their impact on others. As such, Giddens advocates the fostering of an 'autotelic self', capable of reflexive choice making and ready to 'translate potential threats into rewarding challenges, someone who is able to turn entropy into a consistent flow of experience' (Giddens, 1994, p. 192). Chandler suggests that in the case of Giddens's promotion of the autotelic self, its necessity comes from the appreciation that humans cannot process information properly in a globalized world, as our brains cannot predict the unintended consequences of our actions. As such, Giddens advocates for 'generative politics', where governments assist individuals with choice making, rather than govern for them.

The framing of the resilient subject of the FCRS shares many similarities with the subject Chandler presents, mostly the sense that it is a subject that does not work on the world, but on self to accommodate itself to the world. But, as presented in Chapter 7, this is mostly the case when the Pathfinders engage in generalized empowerment, altering their behaviour in order to become more resilient. Some Pathfinders have regarded this empowerment to take a more political role, encouraging individuals to get involved in politics and local decision making, as part of resilience

building (Chapter 7, p. 112). However, more research is needed to see how substantial and effective this engagement with local politics is. A more important point relates to the nature of rationality employed in FCRS. While Giddens's 'autotelic self' is premised on the notion of rationality, it nevertheless regards rationality as problematic: subjects can make decisions, but they still need to be helped with their decision making, as they cannot be entirely aware of the consequences of their actions. But their decisions are reduced to choices. As Chandler puts it, 'the programme of societal resilience is based on the transformation of the inner life of the subject to facilitate better choice-making, concomitant with this is the denial of the reasoned moral autonomy of the subject' (Chandler and Reid, 2016, p. 48). Choice-making is such context is degraded, Chandler argues, as the political horizon in which the choices are made is reduced to the choices themselves, which in turn are reduced to the allocation of responsibility: 'only irresponsible individuals and communities would choose not to become more self-aware and self-reflective and therefore make more informed lifestyle choices' (Chandler and Reid, 2016, p. 47).

In the case of FCRS, it can be observed that the rationality for resilience building, though concerned with the internal world of the subject, take a slightly different trajectory. Both the Pathfinder Managers and the Evaluation Report treat individuals as capable to reason on their own (i.e. fully rational, capable of making sense of the world through categories and concepts) and learn and adapt as new knowledge and practice are presented to them (i.e. reflexive, capable of adjustment of those categories and concepts in relation to various contexts and emergent lived experience). There are however two nuances that need consideration. Through the very nature of the community resilience exercise, their rational and reflexive thinking is reduced to the level of the community. This means that individuals act on the limited number of choices, presented by their immediate (political, institutional, social, etc.) environment, rather than striving to multiply those choices, by acting on the environment in order to transform it. However, the community resilience exercise is not reduced to lifestyle choices, as Chandler suggests. Individuals are encouraged to make full use of their rationality and reflexivity, so they can take ownership of their risk management irrespective of circumstances. More precisely, the Scheme rests heavily on the dissemination of information and education. But unlike behaviour change policies like nudge, where the subconscious and affect are targeted directly, individuals are regarded as rational and reflexive, and while *tabula rasa*, they can employ their cognitive capacities once in contact with the right kind of information. Additionally, as shown in Chapter 6, conditions of complexity can produce differential outcomes, that modify the community landscape and alter the horizon of choices available to them. The example of FCRS suggests that full rationality and reflexivity are encouraged by the policy practitioners, who do not regard individual's rationality as problematic.

8.3.2 Affect

Affect is an integral part of the production of resilient subjectivities in the case of FCRS. For example, one of the most important features of the implementation is the emphasis on building confidence, so that individuals can take on the task on securing themselves without fear, turning threats into opportunities. Affect can be described as the 'transpersonal, preindividual capacity of bodies to affect and be affected' (Grove, 2014, p. 242; Massumi, 2002). What is called 'emotion' is the most intense capture of affect by an individual (Massumi, 2002) but, as such, affect acts like an atmosphere that charges bodies and their appetites, creating an 'indeterminate affective excess' (Anderson, 2009, p. 80). This affective excess bestows bodies with specific capacities that require actualization and can be subject to intensification (e.g. in a mass of people) or containment (e.g. specific building designs such as gated communities) (Anderson, 2009). Overall, affects are an intrinsic part of the lived experience of individuals, 'not substances residing inside minds, but rather transpersonal, interactive processes that are organized variably with behaviours, self and other experiential units, and, on higher levels of organisation, folded into a subjective sense of agency' (Mitchell, 2003, p. 70).

These dynamics are present all throughout the Scheme, but can be observed best in the case of the Swindon Junior Flood Group. As Scott Sissons proposed, 'resilience was very much about confidence building' and development of 'the kind of skills which would give [students] confidence as much as anything, not only to be able to talk about flooding, but to be able to share that information with their friends and family and in a confident kind of way' (Scott Sissons, L-NSA). Resilience building is therefore a set of joint cognitive (rational, reflexive) and affective processes where individuals are provided not only with pertinent information and in a larger sense education, but also with skills that build affective states such as confidence. Crucial here is to notice that confidence building feeds off transpersonal affective atmospheres generated by the pooling together of individual bodies. As Sissons admits, 'the training day with the Wiltshire Fire and Rescue, one of the first activities of the group, helped *energise* and *gel* the group, which was able to work more effectively from that moment forward' (Scott Sissons, L-NSA, *emphasis added*). Affect therefore becomes a quintessential part in the formation of resilient subjectivities.

Other commentators suggest that affect is one of the main ways through which resilient subjectivities are enrolled into the disciplining efforts of the current neoliberal order. Kevin Grove's work on resilience suggests that resilience policies, in the context of international development, seek to manipulate affective relations within communities, in order to create artificial forms of agency, in line with neoliberal imperatives (Grove, 2014). Grove documents how feelings and emotions such as fear and confidence can be altered to channel people's focus in directions congruent with neoliberal

concerns and away from exercising agency (what Grove calls excessive adaptive capacity) in ways which could be potentially harming to them (and actually empowering for individuals). In effect, Grove suggests, resilience immunizes against 'excessive adaptive capacities', creating forms of agency that internalize the need to govern themselves and dismiss the inequalities around them.

In the case of FCRS, affects are manipulated in a similar manner by the policy practitioners at all levels. While it is reasonable to assume that their intentions are benign, and they genuinely seek to build confidence in individuals, *in effect* they are also mobilizing feelings of fear and anxiety by having people think and prepare for flood at all times. In Chapter 6, I have presented the *logics of preparedness*, through which individuals are encouraged to think about flooding, prepare for it and accept that it is inevitable. This has the potential to create a sense of insecurity and precarity among individuals, replete with feelings of anxiety and fear (Chapter 6, p. 88-89). However, it is not clear whether the conclusion of Grove that resilience policies immunize against excessive adaptive capacity is entirely warranted in the case of FCRS. While it is indeed possible to draw such conclusion, in the sense of suggesting that this is an *effect* of the resilience policies (not their intention), there isn't an empirical basis to back it up, at least not without a specific empirical investigation. There are however two aspects that are in dissonance with it. First, unlike in the postcolonial context of international development, the resilient individual is not seen as one that could become problematic. As Pathfinder Managers have had a hard time engaging the individuals in the first place, the effects of resilience (both intentional and unintended) have not (yet) been fully conceptualised. In Chapters 6 and 7, I have presented how in practice, the Pathfinder Managers have realised that to produce the desired effects, the involvement of local authorities would need to be more prolonged. Intimately connected to this point is the second aspect. A big difference between FCRS and Grove's case study is the type of populations in question. Grove investigates resilience policies in the context of international development, in this case relating to the Jamaican population, which comes with a problematization of agency: there is always a possibility of unchecked adaptations (or maladaptations) and destabilization of the current order by the underdeveloped population in Jamaica. In contrast, Pathfinder Managers don't see individuals, who are part of their community, as 'others' that they need to be immunized against. If there is an understanding of maladaptations, it is in terms of how individual actions affect collective ones and undermine resilience overall, as we have seen in Chapter 6 with the logics of inverted solidarity and the failure points of the chain of responsibilisation.

8.3.3 Relationality

Rationality, reflexivity and affect are integral parts of building resilient subjectivities, as documented by a number of authors (Grove, 2014; Chandler and Reid, 2016; Chandler, 2014; O'Malley, 2010).

However, these authors do not capture the entirety of the policy phenomena of *community* resilience. By focusing on these parts of subjectivity alone, they leave out one of the most important parts about the construction of resilient subjectivities, namely relationality or human relatedness, the relations humans have with one another. Discussions of relationality have been undertaken in Chapter 6 under the umbrella of the *logics of 'inverted' solidarity*. These discussions concerned however the way in which the policy practitioners involved in the Scheme understand relationality. In this section, I attend to relationality in more detail, as a fundamental part of the process of producing resilient subjectivities.

Relationality, as a problem for governance, appears only in the context of the implementation of the Pathfinders and it is only highlighted by Pathfinder Managers and one policy consultant. In Chapter 6, I describe how the Pathfinders incentivise the individuals to act as a more solidaristic community, as it deems to make responsibilisation and preparedness more effective. I also highlight how conditions of complexity pose substantial problems to this understanding of community and can lead to differential and even zero-sum effects. I want to suggest here that that all this points out to a deeper problematic: the production of resilient subjectivities involves dependency on other members of the community.

In the context of the Scheme, various actors have hinted at the Janus-faced nature of relationality. On the one side, they understand the 'cumulative benefits' of 'working together' or responding 'cohesively' to flood emergencies (Pathfinder Managers). In this case, positive outcomes are to be achieved from cooperation and association of community members. Individual resilience is understood as a valid coping strategy, with the mention that it could be improved by a collective response. For the most part, the mainstream literature on resilience applies here, as it suggests that a form of integration between individual and community resilience can be fostered in practice and that further adaptive capacity can be promoted by community development (Berkes and Ross, 2012). On the other side, the lack of cooperation and association are likely to impact community members, even if they have achieved resilience for themselves: 'you might be resilient but if the next door neighbour doesn't have the same resilience it does have an impact on yourself' (Interviewee 8, L-G). This tells a different story about resilience, inasmuch as it highlights a disconnect between individual and community resilience. As Walsh-Dilley suggests, collective and individual resilience can enter in a zero-sum relation, as an increase in individual resilience can result in a decrease in collective resilience as overall solidarity between people decreases and 'greater goods' pursuits decrease (Walsh-Dilley, 2016, p. 40).

The failure points of the chain of responsibilisation presented in Chapter 6 have shown that the disconnects between individual and community resilience are on full display during emergencies. In these instances, individuals seek to optimise outcomes by prioritising immediate positive adaptations, unaware of their unintended consequences in the context of the wider community. As such, the relation of individuals with each other and vis-a-vis resilience can be characterised by *intersubjectivity*, a specific notion pertaining to conceptualisations of relationality which regards persons to possess self-reflective intentionality (thinking about and trying to do things) and dependency (upon other agents for completion) (Mitchell, 2000, p. 64). The dependency of people on each other is an element of subjectivity that is lost, not only on community resilience theorists, but also on commentators critical of resilience as object of governance. As Esposito (2010) argues, the construction of the community is based in a negative conception, a common debt, which sees individuals implicated in the life of each other. This involvement in each other's lives means that each individual is vulnerable to other individual's willingness to fulfil their obligations to them. For Esposito, the rise of the state replaces this reliance (or vulnerability) onto the other by transferring it onto the state (Rose, 2014). Resilience policies appear to reverse this conception, but in modes different from the way both managerial and critical literatures suggest. The critical literature suggests that reliance onto the state is retransferred from the state and onto the individual, as a negative relation of responsibilisation (Joseph, 2013b). The managerial literature conceptualises positively of the relation between the individual and community, as an increase in resilient individuals results in an increase of community resilience overall, neglecting the issue of dependency altogether (Davidson, 2013). The operation of FCRS suggests that resilience retransfers dependency onto the other members of the community, on whom the resilience of any one individual depends most immediately. Rather than a simple, positive relation of transfer from individual to the community, resilience is in effect grounded on a negative relation between the members of the community, making resilience transfer a matter of dependence between individuals.

8.3.4 Resilient subjectivities: beyond responsibilisation, towards enhancement?

After analysing the psycho-social substrate that composes the forms of subjectivities FCRS encourages, it is interesting to relate these insights with the rationalities and technologies of resilience presented in the previous section. In Chapter 7, I have compared the subject of resilience with the subject of Behaviour Change policies and suggested that in the case of the latter there is a precise link between the kind of subject envisaged and the technologies aimed at producing it (p. 116-117). In the case of resilience, there is a severe misalignment between the two: the subject desired is entirely two

ambitious (and its socio-psychological substrate substantially expanded) for the kind of technologies employed.

The analysis undertaken in this chapter suggest a similar story, with one noticeable difference. This difference relates specifically to the intentions of policy practitioners (in terms of the *ethos* they espouse). I want to suggest that, in the case of FCRS, what the policy practitioners seek to do can be characterised not as responsibilisation, so that subjects own up to the (potential) catastrophe, as much as *enhancement,* so they can actually deal with it (Howell, 2015a; 2015b). Here is important to clarify how *enhancement* applies to FCRS. Howell characterises enhancement as more ambitious than responsibilisation, a technology that aims to produce a subjectivity that not only take responsibility for their own wellbeing, but actively seeks to optimize themselves: their rationalizations, experiences, affect and relations with others and their environment. In other words, I want to suggest that, at its core, such enhancement is about something that Howell only mentions in passing: it is about producing a subjectivity that is 'taking pleasure in governance' (Howell, 2015b, p. 68).

This can be seen in the case of FCRS in many places. For example, in the way in which rationality and reflexivity are not restricted. As noted above, the baseline for policy practitioners is the *blank slate* subject, that is to become resilient at the intersection with proper knowledge. The fault lies with the fact that the subjects haven't been exposed to knowledge, not that they are unable to properly process it in a global, interconnected world, as Giddens for example would suggests (Giddens, 1994). This appears to go beyond responsibilisation, as the decisions of subjects do not appear to be restricted to lifestyle choices that are somehow sanctioned by neoliberal imperatives of rule (Chandler and Reid, 2016). Similarly, this dynamic is also seen in the case of affect. As noted above, Grove (2014) suggests that the responsibilisation is geared towards containing unchecked (destabilizing) adaptations and keeping the Jamaican population in line with neoliberal imperatives. However, such dynamic could not be found in the case of FCRS, which can indicate that unchecked adaptations are not necessarily a worry for policy practitioners. They appeared more concerned with actually making people resilient, so they are not affected as much by the flooding emergency when it occurs. Same argument can be made in terms of relationality. The Pathfinders actively encourage individuals to come together and become solidaristic, espousing the rationale that such solidarity would make the emergency response more efficient.

Overall, there are strong indications that the subject encouraged by the Scheme can be better characterised in terms of enhancement rather than responsibilisation and that the intention is to produce a subject that not just takes responsibility but also takes enjoyment in building resilience. However, I treat this discussion as only the opening salve in a series of debates I leave for others to

settle. As I explored in Chapters 6 and 7, on the ground, enhancement would be subject to similar failure points as responsibilisation. What is of interest for this thesis is the fact that, whether in terms of taking responsibility for risk or taking enjoyment in government, the subjects of FCRS are encouraged to go beyond making sense of the future threat in terms of calculable chances of occurrence. They are envisioned to build confidence (both as affective state and technology of government) in the face of any kind of emergency and work together in solidarity to withstand and get through it. This is indicative of the fact that policy practitioners envision resilience subjectivities to not depend necessarily on risk calculation: their resilience is posited in relation to any kind of event, including profoundly debilitating, catastrophic ones.

8.4 Conclusion

I have analysed above resilience as a regime of government, mainly from the perspective of the rationalities that articulate it, the technologies that accomplish it on the ground and the forms of subjectivity which it aims to encourage and ultimately produce. I proposed in this chapter a broader way of understanding how resilience is articulated in the case of FCRS, not as an ideal that needs to be fostered or as a prelude to responsibilisation, but as a distinct regime of government that contains within it significant traces of the regime of government that preceded it, flood risk management. I have argued that these regimes, rather than located on a continuum from flood risk management to resilience, are related on multiple axes, embodying both points of convergence and divergence. My main argument here is that conceptualizing of resilience in these terms casts a broader and interlaced field of visibility that allows seeing its practical articulation as a host of productive tensions.

There are two major consequences that derive from this conclusion, in relation to the broader literature on resilience and in relation to the internal consistency of resilience centred policies. In the case of the former, it drives home the point that was made in Chapter 6: if we are interested in what resilience *does*, attention needs to be paid to how resilience is articulated in practice. General, theoretical treatments of resilience can only provide something akin to a 'mapping' of resilience, 'an overview of a terrain of study and a sense of certainty about where things are in relation to each other' (Peoples and Vaughan-Williams, 2015, p. 3). However, from a governmental point of view, the practical articulation of resilience is likely to both exceed and cut across the boundaries of its purely theoretical treatments. Resilience is indeed informed by different theoretical positions, but in practice they blend and clash with a host of other rationalities, giving rise to effects that are not reducible to the initial theoretical positions. For example, this has been seen in how policy practitioners, struggling with the elevated conceptual pitch of resilience, bring in their previous conceptual tools and work

experience to make resilience policy 'work' in practice (Chapter 5). In Chapter 6, I showed the difference between the ethos of resilience policies, congruent with neoliberal responsibilisation, and their actual implementation, characterised by failure points that challenge accounts of responsibilisation. And in Chapter 7, I unravelled a discrepancy between the ambitious subject of resilience and the impoverished mechanisms of implementation, unlikely to be successful in encouraging the production of such subject in practice.

The examples above also say relevant things about the internal consistency of resilience policies such as FCRS. As the Pathfinders employ a large spectrum of practices, these are appropriated by rationalities of both resilience and flood risk management. For example, this might explain why, while many of the practices are deployed with an understanding of both the future and threat as potentially catastrophic, the vast majority of policy practitioners still use a conceptual vocabulary of risk (risk identification, risk assessment, etc.). As noted above, certain practices still retain a conceptual foundation rooted in risk (e.g. risk identification), whose calculative elements have been replaced by catastrophe-orientated technologies such as enactment-based knowledge. These nuances are not picked up by policy practitioners involved with FCRS, and this leads to discrepancies between the goals of the policy and the technologies employed to achieve them. It can be argued that the productive tension between the two regimes of government allows resilience policies to 'work' in practice, by generating novel meanings and policy content. Such new meaning and content provide a basis for assuming that resilience policies are best suited for current challenges. However, this tension also generates discrepancies and disconnects, that raise doubts about the extent to which resilience policies actually work in practice, in relation to the goals for which they have been set up.

Chapter 9: Concluding remarks

The research question that this thesis has pursued relates to how is governing through resilience actually instantiated in practice. It has answered this question by using an extended version of governmentality as a theoretical framework: a governmentality conceptual terminology, combined with methodological approaches such as genealogy as problematization, logics of critical explanation and Foucault's discussion of different types of social practice. The methodological and conceptual tools were chosen to provide an account of how resilience has been assembled as a policy object and in the process, attend to some of the implications that the insights uncovered. The function of this conclusion is to provide a record of the research findings in the first section and highlight some possible directions for future research in the second.

I will give an account of the findings of the research by highlighting several overarching themes. These themes are constituted in relation to the broader literature on resilience and to the internal consistence of resilience policies. The former themes engage with the main literature on critical resilience, namely the resilience as neoliberalism thesis and the genealogy of resilience as responding to complexity. The latter set of themes related to the conceptual ambiguity of the concept of resilience and the design/implementation disconnect. In addition, I will make an inventory of a series of implications which have become evident as a result of the research. Overall, the conclusion of this thesis is that resilience policies, such as FCRS, are characterised by a discrepancy between what is intended as policy goal and what is implemented in practice, making their policy content vacuous.

The understanding of resilience as an expression of neoliberalism, is one of the dominant critiques of resilience (Joseph, 2013b; Neocleous, 2012; Evans and Reid, 2013). At its core, this thesis suggests that resilience is a strategy of the neoliberalism that seeks to responsibilise individuals, to take up the task of securing themselves against threats, as opposed to relying on state-centric safety nets. This thesis has agreed with this critique, but only when it comes to the *ethos* of the resilience policies: they indeed seek to create a disposition, both as a state of mind and an arrangement of subject positions, that encourages individuals to regard taking responsibility for risks necessary. It has disagreed with it when it comes to the implementation of the policies in practice. Chapter 6 has shown that in order to responsibilise, resilience policies are required to establish an elongated chain of responsibilisation. This is different from the previous policies centred on securing passive individuals in a direct, top-down manner. The chain of responsibilisation however, is characterised by failure points. This means that there are various points in the chain where conceptual and practical incongruences can be noticed, for example where the chain is jeopardised by political contestation regarding how to deal

with flooding. What is more striking is that acting in a resilient way in practice, can lead to differential effects and potential zero-sum outcomes, as Chapter 6 has shown. This is consistent with other commentaries on resilience that suggest that in effect, acting resilience can result in paradoxical effects, or in other words, resilience can be potentially self-undermining (Brassett and Vaughan-Williams, 2015; Walsh-Dilley, 2016). This indicates not only that responsibilising the individual can fail on the ground due to bad practice, but it can fail because of the nature of acting resilience does not lend itself to positive sum outcomes.

One of the most visible genealogies of resilience has the concept emerge as a response to an understanding of the world as complex (Walker and Cooper, 2011; Chandler, 2014). Walker and Cooper insist that the understanding the world in terms of complex adaptive systems, common to both resilience and neoliberalism, creates the space for resilience to be advanced. Chandler argues that the work that complexity understandings have performed in problematizing liberal modernist frameworks of understanding does a lot of heavy lifting for resilience[10]. Complexity understandings advance the proposition that policy should make room for self-organisation, with resilience advanced as a pragmatic solution to embed it. However, Chapter 5 has investigated at length, whether the concept of resilience that gets imported into British policy making is underlined by complexity understandings. I have argued that this is not the case. By examining the official documents that brought resilience into practical policymaking, I concluded that they do not inherit a conceptual infrastructure centred on resilience. This means that they do not come with an understanding that solutions are to be addressed by building resilience of society, conceptualised as a complex adaptive system. It also means that the liberal modernist frameworks of British policy making have not been replaced by a notion of complexity as adaptive self-organisation, as suggested by Chandler. In effect, I have shown that the liberal modernist frameworks are preserved and the focus is the agency of actors and institutions, not on adaptive systems or life's own powers of self-organisation. Resilience enters British politics in the midst of a series of negotiations about the changing nature of risk and its nature with society, that go under the conceptual umbrella of Risk Society (Beck, 1992, 1998; Giddens, 1994). As such, it is employed as an integrating concept, which is meant to perform two functions. First, it provides a vocabulary that enables the spreading of risk among different groups, institutions and sectors of society. Secondly, it ties the knowledge each of them produces and attempts to make it resonate. While complex understandings emerge in places, I conclude that the concept of resilience employed in UK policy making does not respond to them.

[10] Liberal modernity understands life not in terms of adaptive self-organisation but in terms of fixed relations between subjects and objects and universal laws (Chandler, 2014, p. 21).

One of the main findings of the thesis, is that there needs to be more attention paid to the conceptual coherence of resilience, especially in policy making. Here I am expanding on a series of arguments I have begun to make in Chapter 8, in relation to the observation that the practices of resilience can be appropriated by a rationality of flood risk management. My argument in Chapter 8 has been that the imaginary of catastrophe calls forth the *need* for resilience. It does not mean that practices of resilience cannot be appropriated by the FRM regime of government. In fact, what I argue is that while we can differentiate between two different regimes of governance, with their distinct rationalities, technologies and forms of subjectivity, in practice they find themselves in relations of both complementarity and opposition. This is because the programmatic character of a rationality, which attempts to alter regimes of practices, in relation to more or less coherent sets of ends and goals, does not 'exhaust the intelligibility' of regimes of practices (Dean, 2012, p. 32). As such, we can understand the implementation of FCRS to be inflected with a host of productive tensions between the two regimes of governance, which allow the policy to work, in the sense that they allow the generation of new meanings and new policy content around resilience.

However, this productive tension is at the heart of the theme of conceptual ambiguity, that characterises governing through resilience. As Chapter 5 has shown, policy practitioners tend to couple resilience with the rationality of flood risks management. This might be because for policy making purposes, the flood risk management rationality preserves the focus on the individual and institutional agency, which is required for the instrumental purposes of policy making. However, Chapter 8 has shown that the need for resilience stems from imaginaries of catastrophe and the reterritorialization of floods, which break away with flood risk management and the epistemologies of knowledge on which it rests. This is evident in the way in which enactment-based knowledge replaces the calculative element of the flood risk management technologies. It is also highlighted by how resilience flattens the future, making adaptation permanent and for any kind of critical event. The lesson to be drawn here, is the one I have flagged in Chapter 6. We can theoretically gauge the rationalities of resilience, but that is not enough, as the fuller understanding of their actual instantiation comes from its implementation on the ground. The articulation of resilience, at the intersection of two regimes of governance, might make it work in practice, but it also produces a series of disconnects and failures.

Failures and disconnects, as a central theme of the thesis, is common to all the empirical chapters. It relates to the discrepancy between the understandings of resilience that are proposed by policy design and the mechanisms of implementation, designed to produce them on the ground. For example, Chapter 5 documents the disconnect between the concept of resilience proposed in official

documents and rhetoric, and the appropriation of resilience by policy practitioners on the ground. The empirical material highlights that policy practitioners on the ground have a hard time engaging with the ambitious, holistic and conceptually elevated notion of resilience proposed by policy makers. Instead, they are limited by the finitude of human and institutional resources and benefit more directly from a conceptual language that is more instrumental and more attuned towards direct cause and effect understandings. As such, rather than operating with the concept of resilience proposed from above, they end up importing their previous conceptual tools, with which they are more accustomed. They proceed in performing resilience policy as bricoleurs, making do with whatever is at hand, rather than being informed by resilience formulations from official documents. Likewise, Chapter 6 has provided a very detailed characterisation of this disconnect between policy design and implementation. It has shown that the discrepancy signalled in Chapter 5 is actually intrinsic to the implementation of the FCRS as a resilience centred policy altogether. The elongated chain of responsibilisation contains failure points, which undermine the coherence of implementation and in some cases, mainly in emergency responses, short-circuit it altogether. The failure points highlighted in Chapter 6, regarding acting resilience by moving cars on adjacent streets, show that the disconnect between policy design and implementation runs deep and makes resilience a potentially self-undermining project. It is then vital when talking about resilience, a policy centred on an ambitious and conceptually ambiguous notion, to attend to its implementation on the ground.

Furthermore, this disconnect is also visible when it comes to the formation of resilient subjectivities. In Chapter 7, I have documented in detail and by reference to various sources, how the form of identification proposed by the policy and the mechanisms that are supposed to produce it, are not in dialogue. The discrepancy appears to be a direct result of the way in which little thought has been given to what it means for an individual to be resilient, by policy makers. For example, the Evaluation Report for FCRS conceptualised resilient subjectivities in terms of capacity building, underlying a notion of adaptation to a potentially threatening environment. However, the policy interventions of capacity building are linear and determinate, inadequate to the task of harvesting the adaptive capacities of individuals. This is even more visible on the ground, where policy practitioners and the policy initiative as a whole, aim to create a resilient subject that is a 'total subject', where the only mechanism of implementation is awareness raising, through knowledge transfers. I argue that such mechanism is likely to fall short of the very ambitious task of producing the desired resilient individual, one that is rational and reflexive, takes responsibility for its own well-being and adapts in real time. For the most part, the Pathfinders operate with the assumption that once knowledge of the floods is passed to the individuals, this will shake them of their ignorance and set them on the course towards self-responsibilisation. However, as I show in Chapters 6 (p. 96-97) and 7 (p. 119-120), the Pathfinders

have fallen short of their policy ideal to responsibilise, failing to engage with all but the most proactive of individuals.

Another major theme that has emerged out of this research, is that if resilience is to be produced on the ground, it requires significant support by the on-going forms of authority. For example, Chapter 6 has shown, that the assumption that the Pathfinders will kick-start resilience on the ground and then withdraw their support, proved illusory. In fact, as Pathfinder managers discovered, there will need to be a considerable amount of time devoted to ingraining resilience practices, before they become self-sustaining. The Swindon Flood Group in Chapter 7 is a case in point. Once the Pathfinder Manager in charge of organising the group left, the group disbanded immediately. Similarly, it was highlighted how important the roles of leadership and external support are. For a group to become self-sustaining and gain momentum, the actors and institutions in charge need to spend an adequate amount of time honing its functions and (re)defining its goals. The case of the Swindon Group also brings forth the notion of a *safe environment*, in which the development of the group can take place. This is not the same as the notion of *enabling environment*, presented as part of the capacity building section in Chapter 7 (p. 106). The notion of a safe environment, as part of the Swindon Group, suggests learning and inculcating skills as part of an environment that is free of threats. In opposition, enabling environment, with its focus on adaptation, suggests that the development of skills and capacities happens in real time and that individuals deal with threats as they learn, not after. This is a debate that needs to be submitted to further conceptual and empirical scrutiny.

There are also a few other implications that derive from the implementation on the ground, insights that are novel and require further investigation. The research has shown that there is more that goes into the creation of resilient subjectivities, than the literature on resilience often suggests. O'Malley (2010) rightfully suggests that resilience has shifted from being considered an innate trait to a set of cognitive skills centred on innovation, adaptation or flexibility. He is making the case that these skills are in fact encouraged by neoliberal governmentality, as they fit well with its ontological and epistemological assumptions. However, I have shown that there is a need to go beyond blanket notions such as adaptation and to give both a more detailed and more nuanced account of the substrate of socio-psychological characteristics that compose such notions. FCRS looks to foster the characteristics of rationality and reflexivity of individuals, which makes the case for notions of adaptation, innovation or flexibility. The subjects of the Scheme are required to adapt to external stimuli, which entails an understanding of those issues, reflection upon them, choosing the most efficient outcome or being flexible with available choices.

However, for individuals in their actual livelihoods, other characteristics intervene which complicate the highly individualised picture of adaptation, through rationality and reflexivity. Affect is a significant factor in the creation of resilient subjectivities, both for positive outcomes (creation of a flood group) or negative ones (manipulation by the neoliberal regime of rule). This suggests that affect can mediate the process of adaptation. For example, Chapter 6 has shown how anxiety experienced after a flood event, can be the driving force behind future responses to critical events, overriding rational concerns with best adaptive scenarios. Similarly, the issue of relationality has been completely ignored by the literature on resilience. This is because for the most part, it has been postulated that the production of individual resilient subjectivities, will lead to positive sum outcomes in the community, meaning a more resilient community overall. In Chapter 6, I show how acting individual resilience can result in zero-sum outcomes, a proposition backed up by other studies as well (Brassett and Vaughan-Williams, 2015; Walsh-Dilley, 2016). In Chapter 8, I elaborated on the issue of relationality, in order to argue that, intrinsic to the production of resilient subjectivities, is the issue of dependency on other members of the community. Rather than the positive relation between the individual and the community, as postulated by the managerial literature, I suggested that resilience is grounded in a negative relation between members of the community. This is because one's resilience is at all times, predicated on the nature of the outcomes that result from other people's outcomes. This is an argument that undercuts the resilience-as-neoliberalism thesis (as it shows responsibilisation is dependent on the outcomes on the ground rather than inevitable), but also the managerial literature, which neglects issues of negative outcomes altogether.

The thesis has also challenged typologies of resilience that regard it as spanning on a spectrum, with positive and negative interpretations (Rogers, 2015). Chapter 6 has shown that responsibilisation can be undercut in practice, in the failure points of the chain of responsibilisation. Chapter 7 has tested the hypothesis that resilience leads to empowerment by providing a more precise conceptual model to assess it. It has suggested, based on Foucault's work, that a practice is empowering if it results in an individualisation of a norm (aesthetic practice) or responsibilising, if it results in the normalisation of the individual (disciplinary practice). Overall, I have concluded that the potential for empowerment of the resilience practices is limited, as the policy design provides little for the individuals to benefit their actual needs. There is however, the potential for empowerment, which is engendered specifically by the disconnect between the design of the policy and the mechanisms for its implementation. The Scheme encourages individuals to develop capacities for self-direction, but then to simply pass them onto others. However, if there is a failure of implementation, such as with the Swindon Flood Group, which disbanded, this means that individuals can potentially employ the capacities acquired for their own needs, rather than just pass them along.

◈

Given the findings of this thesis, what responses to the problems raised in relation to resilience governance might be suggested? As Koopman (2013, p. 20) argues, genealogy as problematization concerns reconstruction. It is the task of inquiring into the conditions of possibility that have contingently assembled an object (of government) and then the engagement in the positive task of transforming them in relation to new, more pertinent goals. In this thesis I have not attempted to reduce resilience to a series of dichotomies such as positive/negative, right/wrong, good/bad. Neither have I fallen back onto confirming or dismissing previous theoretical assimilations of resilience, such as in relation to neoliberalism. Instead, I have tried to generate new insights into how resilience governance is articulated in practice and the host of effects that result from it. While this thesis is about problematization and it is not supposed to provide policy recommendations, some insights on the possibility of transforming resilience can be provided.

The biggest problem with resilience policies, appears to be the discrepancy between what is intended (the goals of the policy) and how it is implemented. A revolving door is effectively put in place between the ambitious concept desired at the top and the impoverished mechanisms of implementation, that aim to deliver it on the ground. It is a revolving door because the process of implementation cannot but come back and reiterate the need for more resilience. It glosses over contingencies and orchestrates an overly simplistic relationship between a problematization of the future as potentially catastrophic and a perpetual process of adaptation. As the thesis has attended specifically to these contingencies, it concludes that the relation of necessity between the two is not warranted. Even if the future is potentially catastrophic, there is no reason why resilience policies cannot have more systematic modes of evaluation and measurement, based on trial and error. What appears to have happened, is the adoption of a resilience concept that obfuscates rather than clarifies. As such, the translation into policy suffers from similar deficiencies, as a disconnect looms between the upper tier of policy and their desire for resilience, and the ground level, where the mechanisms of implementation fall short of goals or produce unintended and negative outcomes. This opens up a circular logic that suggests that the failures of resilience are in fact proof that more resilience is needed. If resilience is to be transformed in a more productive direction, the work needs to begin with an acknowledgement of the fact that resilience policies such as FCRS present themselves as a hollow shell.

Appendix A Interview protocol

1) Warm-up question

1.1 Can you give a short description of your role in FCRS?

2) Resilience

2.1 How would you personally define resilience?

2.2 How do you define community resilience?

2.3 How would you characterise a resilient individual?

Probe: What do you understand by resilient individual?

2.4 What needs to be done for individuals to become resilient?

Probe: What elements, whatever their nature, are needed for encouraging individuals to become resilient?

2.5 What are the prerequisites for building resilience, as you defined it in the context of the pilot/Scheme?

Probe: What needs to be in place for resilience to be effective?

Follow up: Can it be done by anybody, anywhere?

2.6 Why is resilience a better policy initiative for managing floods than the ones before it?

Probe: Why do you think resilience, as a new policy, was needed?

2.7 Does the improvement in resilience contribute to empowerment of communities and individuals?

Follow up: If no, why is that? If yes, how would you define empowerment?

3) Implementation

3.1 What are the main pillars of delivering resilience in practice?

Probe: What are the most important aspects of the implementation of the pilot/Scheme?

3.2 Have there been any bottlenecks during implementation?

Follow up: If there were, can you expand on them? If not, why do you think that was the case?

3.3 What was the rate of engagement with the members of the community?

Follow up: If not significant, what were the biggest issues that hampered the engagement? If significant, what were the ingredients of your success?

3.4 What have you done to ensure that the outcomes of the pilot/Scheme are replicable in other contexts?

Probe: Would your outcomes be replicable by other agencies or local authorities interested in resilience?

3.5 According to the Scheme Prospectus, there is an expectation that the Scheme/pilot will become self-sustaining and coordinated by the community. Do you think this will happen in the case of your pilot?

Follow up: If yes, what guarantees that? If not, what are the causes?

Appendix B Participant information sheet v3

The hollow politics of resilience: the case of flood governance in England
Research project

(Policy practitioners)

Purpose:

This research project aims:

- To determine how governing societies through resilience is articulated and what are the socio-political implications that derive from such articulation.

The process:

The bulk of data will be collected from interviews with policy practitioners involved in the design and delivery of the *Flood Community Resilience Scheme*. You have been chosen because you are part of the policy chain that implements the pilots and because you are deemed to have valuable information for the successful completion of this research.

Interviews will be audio-recorded and '**on the record'**. During the interview you can, at any stage, indicate that a remark should be treated as 'off the record' and I will honour that.

You are guaranteed full confidentiality and anonymity. Other than using attributed quotes, the interview recording will only be available to me personally and the recordings will be kept safe at University of Southampton. I will ask you to sign a consent-to-use form at the interview, but you can withdraw from the project at any stage, up to the point of writing and publication (approximately 12 months after your interview).

The outcomes:

Findings from the research will be:

- written up in academic publications and reports
- written up in summary form for you to receive if you want to.

Tudor Vilcan, University of Southampton

In the unlikely case that you have any concerns or complaints about this study, please contact Dr. Martina Prude, Head of Research Governance at the University of Southampton (023 805925258, M.A. Prude@soton.ac.uk)

Study ethics number: 8992 Version 3 / 07/02/14

Name Interviewee Name interviewer

Signature interviewee Signature interviewer

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