Resilience for disaster risk management in a changing climate: Practitioners' frames and practices

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A R T I C L E I N F O

A B S T R A C T

There is a growing use of resilience ideas within the disaster risk management literature and policy domain. However, few empirical studies have focused on how resilience ideas are conceptualized by practitioners, as they implement them in practice. Using Hajer's 'social-interactive discourse theory' this research contributes to the understanding of how practitioners frame, construct and make sense of resilience ideas in the context of changes in institutional arrangements for disaster risk management that explicitly include the resilience approach and climate change considerations. The case study involved the roll out of the Natural Disaster Resilience Program in Queensland, Australia, and the study involved three sites in Queensland. The methods used were observation of different activities and the physical sites, revision of documents related to the Natural Disaster Resilience Program and in-depth semi-structured interviews with key informants, all practitioners who had direct interaction with the program. The research findings show that practitioners construct the meaning of disaster resilience differently, and these are embedded in diverse storylines. Within these storylines, practitioners gave different interpretations and emphasis to the seven discourse categories that characterized their resilience discourse. Self-reliance emerged as one of the paramount discourse categories but we argue that caution needs to be used when promoting values of self-reliance. If the policy impetus is a focus on learning, research findings indicate it is also pertinent to move from experiential learning toward social learning. The results presented in this study provide helpful insights to inform policy design and implementation of resilience ideas in disaster risk management and climate change, and to inform theory.

1. Introduction

The relevance of exploring the disaster resilience discourse is rooted in various arguments. Firstly, ambiguity surrounds not only resilience conceptualisation in theory but also in regard to its applicability within practice in disaster risk management (DRM) (Brown, 2011). Secondly, more research is needed to explore how disaster resilience ideas have been translated by practitioners at sub-national levels (state and local levels in this case study in

Queensland, Australia) in order to apply them more generally to practice. Likewise, even if discourse analysis (DA) is a useful approach to investigate practitioners' construction of disaster resilience, very few studies have been conducted based on DA. Thirdly, by conducting a DA not only the main features of the discourse were illuminated, but also how different perspectives or positions (storylines) exist (Hajer, 2000). Their discourse and storylines influence the practices developed by them when responding to a change in a policy domain (Brown, 2011; Gelcich et al., 2005; Schön and Rein, 1994). The paper analyses practitioners' engagement in the disaster resilience discourse associated with a top-down formal institutional arrangement, under the Natural Disaster Resilience Program (NDRP). The NDRP is part of the disaster policy domain in Queensland, Australia. Thus, practitioners involved in the implementation phase of this

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arrangement are actively generating discourses in giving meaning to the NDRP. Finally, unpacking and being aware of the different positions practitioners hold, opens up new possibilities for improving and further developing policy and practice (Gelcich et al., 2005; Somorin et al., 2012). Based on these arguments, this study contributes to theory and practice by exploring resilience ideas in a bottom-up manner, using a DA in which practitioners were directly asked what they understand about resilience ideas (rather than the researchers imposing a predefined way of understanding resilience ideas); and, how these storyline about resilience can be applied in DRM practice. Moreover, as Hajer (2000) has noted, discourse analyses are useful for the examination of multiple and conflicting concepts, ideas and narratives that society holds about an issue. This resonates with this research, as resilience, climate change and DRM are controversial issues.

The paper is organized in four sections. The first section is the introduction. The second section reviews how resilience is conceptualized in the literature, the role of DA in exploring the meaning portrayed in a discourse such as that about resilience, and a brief description of the NDRP. The third section describes the methodology used. Then the fourth section presents the analysis and discussion of the results, by describing the storylines that emerged from the case study, including the main arguments and the core discourse categories (main features) of the three storylines of the disaster resilience discourse. The conclusion follows.

2. Background

Within academia an increasing number of papers and books have focused attention on resilience. Resilience theory has also proliferated across many disciplines and fields such as DRM and climate change (Aldunce et al., 2014b; Walker and Cooper, 2011). In turn, there is an increase in the use of the resilience term in different media sources (Brown, 2011). Additionally, resilience appears to have strong policy traction, as it has been widely used in different policy arenas and discourses, and has become a regular term used in a multiplicity of financial institutions, policies, programs and documents from international to sub-national levels (DCS/QG, 2009a; UN/ISDR, 2007; World Bank, 2008). In the field of DRM and climate change the use of terms and idioms such as 'resilient communities', 'resilience livelihoods', 'building community resilience', 'disaster resilience' and 'resilient nations' have been included in documents as central elements (DCS/QG, 2009a; Twigg, 2007; UN/ISDR, 2007). Thus, as Norris et al. affirm (2008, p. 128), "the term is probably here to stay".

Regardless of its popularity, the resilience concept has been widely criticized (Brown, 2011; Moser, 2008; Walker and Cooper, 2011). These critiques particularly address its abstract and malleable in nature; it can be viewed as an imprecise policy term, being subject to manipulation to suit different interests, as well as lacking attention to issues of power and agency (Nelson et al., 2007; Walker and Cooper, 2011). Another relevant critique is that there is of resilience theory is that there is confusion, ambiguity, lack of substance and conceptual clarity (Bahadur et al., 2010; Brand and Jax, 2007; Cutter et al., 2008). This problem transcends practice, as some authors maintain that there is no clarity on how to apply resilience to practice (Djalante and Thomalla, 2011; Manyena, 2006; Moser, 2008). This implies that what disaster resilience entails and embraces, remains open for debate. In order to advance theory and especially its implications in practice, an approach such as DA is needed, which recognizes the importance of acknowledging multiple views. The following section describes the relevance of a discursive analytical framework and then briefly explores how resilience has been framed within DRM literature.

2.1. Discourses

Discourses can be understood as social constructions held by different actors who promote the importance of some aspects over others in a specific situation (Hajer, 2000). Consequently, studying discourses is helpful for exploring the construction of diverse and conflicting ideas, conceptualisations and narratives that actors in society hold, including practitioners in a policy domain (Dryzek, 1997). Nevertheless, generally, how people frame issues is not self-evident or explicitly expressed (Adams, 2004). Therefore, examination of discourses is helpful in detecting whether different practitioners or groups frame the same issues in diverse ways, and to make actors aware that divergent positions exist and what they embrace (Adams, 2004; Gelcich et al., 2005).

Discourses are context dependent; they are linked to a specific situation, constituted by an historical, cultural, environmental and political context (Hajer and Versteeg, 2005). In this sense, the meaning of the same policy can differ at the national and local level (Pressman and Wildavsky, 1973; Verloo, 2005), because of the different frames that bureaucrats and legislators hold, as a consequence of their different policy contexts (Schön and Rein, 1994). For example, different concepts and ideas are contested in searching for meaning and to inform interpretation during policy and program implementation (Hajer and Versteeg, 2005).

There have been a few DA applied to resilience in the context of disasters. Examples are Bohensky and Leitch's (2013) Australian study of the media representation of natural disasters from 2006 to 2010 and Brown's (2011) review of academic literature, media and international documents. Applying a DA methodology which analyzed either the discourse in the implementation phase of a policy or program at the local level, or where practitioners were asked directly through in-depth interviews allowed us to probe more deeply than previous studies have been able to do, into the underlying framing of resilience for those enacting policy directions. To make sense of the interview responses, we first briefly review how resilience has been applied in the DRM literature.

2.2. Resilience and disaster risk management in a changing climate

The resilience literature has been developed in three main disciplinary areas. Firstly, some authors suggest that resilience emerged in ancient thinking, and was first developed in mathematics and physics (Bodin and Wiman, 2004). Secondly, it can be traced to the 1940s to the fields of psychology and psychiatry with the research of Garmezy, Werner and Smith (Manyena, 2006). Thirdly, it has been developed in the ecology literature, emerging in the 1960s and 1970s from a series of studies carried out by Holling (1961), Lewontin (1969), May (1972), and Rosenzweig (1971), and especially influenced by Holling's (1973) seminal paper.

These three academic areas have influenced DRM. Mathematics and physics resilience has been helpful in describing the ability of a material or system to resist without breaking, and the speed at which it returns to equilibrium after a displacement (Aldunce et al., 2014a; Bodin and Wiman, 2004). The main contributions of the fields of psychology and psychiatry are that they have helped to elucidate the relationships between specific psychological factors and individual or collective resilience to adversity and on the potential for recovery after experiencing a disaster (Paton et al., 2001). Resilience here refers to the ability of individuals and communities to resist and return to baseline functioning after a stress, disaster or external shock (Adger, 2000; Norris et al., 2008; Pfefferbaum et al., 2005). The most significant contribution of the ecology, and more specifically social–ecological systems theory, is that it provides a framework for analysing, interpreting and