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Resilience: a Conceptual Lens for Rural Studies?

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Abstract

This paper examines the concept of resilience and its increasing application within rural studies in the face of both economic uncertainty and ecological crisis. Two approaches to resilience are firstly explored: an equilibrium (or bounce-back) approach, based on 'return to normal' assumptions, and an evolutionary (or bounce-forward) approach characterised by an emphasis on adaptive capacity and transformation. While resilience overlaps with the existing literature within rural studies and rural development, the paper argues that resilience thinking opens up new perspectives and provides the potential to 're-frame' rural studies debates, provides a bridging concept. Two key contributions of resilience are identified: Firstly, resilience offers alternative analytical methods and insights for rural studies, particularly when drawing on evolutionary economic geography ideas of path dependencies and path creation, a relational perspective of rural space, and identification of place attributes which may enhance or undermine resilience. Secondly, resilience provides an alternative policy narrative for rural development practice. This includes an emphasis on adaptive networked governance, embedding ecological concerns into rural development practices and a call for blending the local and global in rural development processes. The paper concludes by identifying future research directions for rural resilience.

1. Introduction

Since 2007, financial markets have experienced one of the greatest periods of volatility and uncertainty in modern history (Scanlon et al., 2011). Initially, the crisis was centred on the banking sector and the so-called credit crunch, with its roots in the sub-prime mortgage lending practices in the US leading to bank failures and plummeting stock markets (Gotham, 2009). This has been swiftly followed by a sovereign debt crisis in Europe (notably in Greece, Portugal and Ireland) and the wider risk of contagion to larger economies (such as Spain and Italy), and the emergence of a new politics of austerity (Kitson et al., 2011). Since the emergence of the global economic crisis, rural regions and localities have faced a series of shocks and ruptures, including 'first wave' effects (such as rising unemployment and local property market crashes) and 'second wave' effects arising from austerity measures and diminishing public finances. These measures are likely to result in a radical reshaping of the delivery of rural public services, which are particularly vulnerable in the face of 'roll-out' and 'roll-back' neoliberalism due to the additional costs of service provision in dispersed rural geographies.

While the economic crisis facing Europe is severe, some commentators have noted that the current recession is simply the latest in a series of crises of varying depth and temporality that have periodically afflicted the capitalist system (Hudson, 2010). Each decade, it seems, can be defined by periods of crisis and instability, such as the oil crisis in the early 1970s, recessions and rising unemployment of the early 1980s and early 1990s in the UK, or the bursting of the speculative 'dot-com' bubble in the US during the early 2000s. Indeed, for peripheral European countries such as Ireland, the high growth period of the mid-1990s to the mid-2000s was perhaps the exception interrupting long periods of low economic growth, high unemployment and sustained emigration. For Hudson, however, the current

economic crisis is marked by one key difference from previous periods of economic volatility: that is, 'the coupling of a deep economic crisis with a perceived threat of an imminent ecological crisis, above all because of climate change' (2010, p. 12). This has potentially profound implications for rural development policies across Europe, which will be increasingly characterised by the dual challenge of coping with economic instability while encouraging a transition towards low carbon rural futures and ecologically sensitive rural economies and lifestyles.

Within this context, rural resilience represents an emerging research agenda within rural studies. The overall aim of this paper is to examine the potential of resilience thinking for opening new perspectives within rural studies, both in terms of providing an analytical lens for understanding rural places and as an approach to 're-framing' rural development theory and practice. Accordingly, the paper is structured as follows: Firstly, I briefly examine the emergence of resilience within the ecology literature and explore its increasing application within the social sciences. This will include a discussion of two broad approaches to resilience thinking: equilibrium and evolutionary approaches. Secondly, I examine the emergence of resilience within the rural studies literature. This is followed by a critique of the 'uses and abuses' of resilience thinking in relation to rural localities, providing an assessment of the potential of resilience for both analysis and policy prescription for rural places, while also highlighting the limitations and the downside of a resilience discourse. Finally, I develop conclusions related to future research directions for resilience within rural studies.

2. Resilience Debates

The term 'resilience' was first coined within systems ecology (e.g. Holling, 1973) to evaluate ecosystem functions based on assumptions of non-linear dynamics of change in complex, linked systems (Folke, 2006; Wilkinson, 2011), whereby resilience describes the ability of a system to absorb or accommodate disturbances without experiencing changes to the system. Subsequently, resilience has also been applied to examine social-ecological systems, particularly how communities and societies cope or respond to environmental crisis and risk. Drawing on ecological approaches to resilience, Neil Adger was among the first social scientists to translate the concept into the social dimension (Adger, 2000, 2003, 2006; Tompkins and Adger, 2006). In this work, Adger explores social resilience 'both as an analogy of how societies work... and through exploring the direct relationship between the two phenomena of social and ecological resilience' (p. 347). Adger's early work examines the dependence of communities on ecosystems for their livelihoods and economic activities. In this context, Adger (2003) suggests that resilience is the ability of groups or communities to adapt in the face of external social, political or environmental stresses and disturbances. For example, Adger (2000) examines a resource-dependent coastal community in Vietnam, highlighting the importance of institutions, behaviour, rules and norms (e.g. property rights) that govern the use of natural resources, creating incentives for sustainable or unsustainable use. Because of this institutional context, Adger argues that social resilience is defined at the community scale rather than at an individual level: hence, it is related to the social capital of societies and communities (2000, p. 349). Adger and other social scientists have further developed this work on social-ecological resilience within the context of climate change, including social vulnerability to climate change impacts, adaptation strategies and the cultural dimensions to how societies respond and adapt to climate-related risks (Gallopin, 2006; Janssen et al., 2006; Smit and Wandel, 2006; O'Brien et al., 2009; Adger et al., 2013a, 2013b).

More recently, stimulated partly by the recent economic crisis, commentators have increasingly looked to transfer resilience thinking to the field of local and regional development (Dawley et al., 2010; Hudson, 2010; Pike et al., 2010; Yamamoto, 2011), indicating a shift in

focus within the regional development literature from economic growth to coping with economic crisis and instability reflecting the widespread vulnerability of places to global economic uncertainty. Given the heightened sense of crisis, both economically and ecologically, it appears that resilience is fast replacing sustainability within the academic literature as the up and coming buzzword (Davoudi, 2012). Indeed, since 2000, there has been a wave of interest in applying resilience thinking to a range of social science and policy disciplines, including disaster planning (e.g. Manyena et al., 2011; Ross and Carter, 2011), evolutionary economic geography (e.g. Hudson, 2010), urban and regional studies (e.g. Gleeson, 2008; Pike et al., 2010; Evans, 2011; Raco and Street, 2012; Martin, 2012), spatial planning (dos Santos and Partidario, 2011; Wilkinson, 2011; Davoudi, 2012; Shaw, 2012) and community studies (Magis, 2010; Barr and Devine-Wright, 2012). While this interest in resilience suggests a conceptual utility, its application across a range of social science disciplines (and its translation from ecology) also points to its emergence as a fuzzy or elastic concept (Davidson, 2010; Pendall et al., 2010), whereby the term's substantial meaning becomes diminished or becomes mobilised to support competing policy agendas in a similar manner to sustainable development. For some critics of resilience thinking, this is a central point. For example, Carpenter et al. (2001) highlight that the resilience literature is characterised by multiple levels of meaning, from the metaphorical to the specific, suggesting that the lack of measurable definitions risks undermining its application. Similarly, the use of resilience alongside related concepts (also with multiple meanings) requires further elaboration, including the relationship between resilience and sustainability, adaptive capacity and resistance (e.g. see Lake (2013) in relation to landscape ecology).

This implies the need for a more rigorous debate concerning the usefulness of resilience and its various guises within geography and wider social science debates. The remainder of this section will explore two contrasting approaches to resilience thinking to highlight divergent conceptualisations and potential application of resilience: the equilibrium approach and the evolutionary approach.

2.1. EQUILIBRIUM RESILIENCE

Often referred to as engineering resilience, this approach is defined as the ability of a system to absorb or accommodate shocks and disturbances without experiencing changes to the system (Holling, 1973). In this perspective, both the *resistance* to disturbances and the *speed* by which the system returns to equilibrium is the measure of resilience (Davoudi, 2012). This approach is particularly common within disaster management, in particular managing responses to geo-environmental hazards, terrorist threats or disease outbreaks (Barr and Devine-Wright, 2012), whereby the ability to 'bounce-back' to a pre-disaster state in a rapid fashion is the preferred goal. However, the notion of a bounce-back to a steady-state has also been translated into the economic realm and financial regulation with policies such as the UK's 'quantitative easing' programme designed to deal with a shock to the financial system by rapidly returning to a perceived 'more normal' or pre-shock state through a short term policy response. Similarly, within the regional studies literature, the equilibrium approach emphasises the ability of an economy to maintain a pre-existing state in the presence of an exogenous shock or its ability to return to a previous level of growth, rate of output or employment (Pike et al., 2010).

However, a number of limitations can be identified in relation to equilibrium resilience. For example, Davidson (2010) questions whether an ability to absorb or accommodate disturbances without experiencing changes to the system should be the preferred option. In this regard the so-called 'normal system' may itself produce risks (e.g. the global financial system) or may be underpinned by socio-spatial inequities, as revealed by the Hurricane Katrina disaster in New Orleans whereby vulnerability to disaster was defined on the basis

of class and race (Forester, 2009; Rumbach, 2009). Fundamentally, therefore, the equilibrium approach does not allow for reform and transformation as a response to crisis, largely ignoring distributional and normative concerns in favour of aligning with or reinforcing existing power structures and relations. To further illustrate this, Davoudi and Porter (2012) provide the example of the current volatility experienced in housing markets across the globe. They question the emphasis that many commentators place on 'returning to normal', highlighting the potential of equilibrium resilience to align with neoliberalising tendencies:

> Why would we want to return to 'normal' when what has come to be normalised (over inflated housing markets, predatory lending practices, gross wealth disparities) is so absolutely dysfunctional? (2012, p. 332).

This example also highlights the bias within 'bounce back' resilience to depoliticise, normalise or indeed naturalise economic crises (e.g. a crisis as inevitable, part of a 'natural cycle' or a necessary 'market correction') that are underpinned by human behaviour, institutions, rules and ideologies.

2.2. EVOLUTIONARY RESILIENCE

In contrast to equilibrium based approaches, evolutionary resilience rejects the notion of single-state equilibrium or a 'return to normal', instead highlighting ongoing evolutionary change processes and emphasising adaptive behaviour and adaptability. These themes have been particularly explored within the evolutionary economic geography literature (Martin and Sunley, 2006, 2011; Boschma and Martin, 2007; Hudson, 2010; Pendall et al., 2010; Pike et al., 2010; Martin, 2012). As outlined by Pike et al. (2010), an evolutionary analysis emphasises the 'path dependent unfolding of trajectories of change, shaped by historically inherited formal and informal institutions, whereby economic geographies are marked by diversity and variety' (p. 62). Therefore, a key departure point in this analysis is that development does not proceed along a single path, but along multiple pathways (some of which may be suboptimal). By embracing the inevitability of evolution, resilience thinking from this perspective emphasises the role of adaptation as a response to shocks and disturbances, enabling a more optimistic and potentially more radical notion of resilience. In summary, 'bouncing back' to a perceived normal state following a shock need not be the only response. Instead, evolutionary resilience places significance on *transformation*, whereby social systems (through individual or collective agency) can adapt or search for and develop alternative development trajectories (Davidson, 2010). Similarly, Hudson (2010) also argues that a resilient system is an adaptive system:

> Creating resilience is therefore most appropriately thought of as a process of social learning, using human capacities and knowledge to reduce vulnerability and risk in the face of the unknown and unexpected (p. 12).

Drawing on Pike et al. (2010) and Hudson (2010), the key advantages of an evolutionary perspective is its potential to reveal (Table 1):

- The importance of both exogenous and endogenous shocks intertwined with 'the unfolding of broader, longer-run and slow burn processes' (Pike et al., 2010, p. 63), including long term socio-spatial and economic restructuring processes.
- The importance of path dependencies in shaping resilience, adaptation and adaptability, which may be weakened by entrenched path dependencies.

Table 1. Key features of equilibrium and evolutionary approaches to resilience.

Equilibrium resilience	Evolutionary resilience
'Bounce-back' resilience	'Bounce-forward' resilience
The ability of a system to accommodate disturbances without experiencing changes to the system.	The ability of a system to respond to shocks and disturbances by adaptation and adaptability
Emphasises a return to a steady-state after disturbance – 'business as usual'.	Emphasises transformation or path creation in response to disturbances – 'do something different'.
Short-term response to shocks and disturbances.	Long-term response, emphasising adaptive capacity.
Prominent in the literature surrounding disaster management, managing geo-environmental hazards	Prominent in the literature surrounding regional economic development, spatial planning
Conservative approach, naturalising man-made crises and depoliticising responses.	Recognises the politics of resilience, involving normative and value judgements.
A reactionary tool, reinforcing existing power structures	A critical tool, enabling reform

• The potential of 'lock-in' development paths to compromise place resilience, whereby formal and informal institutional culture and relationships may inhibit adaptive behaviour and capacity. Similarly, the process of 'de-locking' may be central in path creation and transition towards a more sustainable future.

• The need to blend the local with the extra-local in building resilient places – in other words, deploying local assets within the context of global circuits of capital while competing to attract extra-local resources.

Increasingly, the term 'resilience' appears to be displacing 'sustainable development' in academic discourses (although not yet in policy and practice). On the one hand, this perhaps reflects a 'misuse' of sustainable development and its application within competing policy agendas (Connelly, 2007; Scott, 2008). However, as the discussion on equilibrium versus evolutionary resilience illustrates, resilience is also open to various and competing interpretations and selective agenda-setting. On the other hand, for a range of authors, the adoption of resilience thinking is primarily viewed as a means to further elaborate (rather than replace) sustainable development as a concept, in particular resilience-building as a transformative process in *transitioning* towards a more sustainable future (Holling, 2001; Leach et al., 2012; Shaw, 2012). The value of resilience vis-à-vis more longstanding debates on sustainable development is its emphasis on uncertainty, disruptions, future surprises or unknowable risks (Tompkins and Adger, 2004) and how periods of gradual change interplay with periods of rapid change and how such dynamics interact across temporal and spatial scales (Folke, 2006). This perspective, therefore, has implications for policy-making for sustainable development; for example, resilience thinking focuses on change triggered by disruptions or agents of disturbance (Holling, 2001), leading to an emphasis on adaptation, adaptive governance and capacity building as a means of creating new trajectories for a more sustainable future. For Holling (2001), this accent on adaptation can serve to clarify the meaning of sustainable development:

> Sustainability is the capacity to create, test, and maintain adaptive capability. Development is the process of creating, testing, and maintaining opportunity. The phrase that combines the two, 'sustainable development', therefore refers to the goal of fostering adaptive capabilities while simultaneously creating opportunities (2001, p. 399).

For Folke (2006), emphasising the capacity for renewal, re-organisation and development is essential for the sustainability discourse.

3. Resilience and Rural Studies

Resilience has been an emerging topic within rural studies in recent years. This section of the article will examine the application of resilience thinking within the rural geography literature, identifying both the *range* of themes within which resilience has been deployed, and also assessing *how* resilience has been used as an analytical framework distinguishing between equilibrium and evolutionary approaches.

Within the rural studies literature, two key themes are prominent: (1) an exploration of farming and its role in social-ecological resilience and (2) research examining various aspects of community resilience within rural localities. The interest in applying resilience thinking to farming is perhaps understandable given that the agricultural system and ecological system are not just linked, but are truly interconnected and co-evolving in terms of producing food while maintaining ecosystem functions and services. For example, Darnhofer et al. (2010) examine farming as part of a set of systems across spatial scales, from farm to global, and encompassing agro-ecological, economic and political-social domains. Rather than a focus on production and efficiency, they argue that farm sustainability is achieved through adaptability, learning and change. Echoing the key themes within evolutionary economic geography, the authors suggest that in the case of the farming sector, resilience is more likely to emerge when farmers have the capacity to transform the farm, when farm production is attuned to the local ecological carrying capacity and when learning and innovation are targeted outcomes. The agricultural sector has also been examined within the regional studies literature (Morgan, 2008; Hudson, 2010) within the context of creating regional food supply chains. For example, Hudson (2010) argues for a return to place-based, localised and regionalised ways of organising food production, processing and supply to transition towards a lighter ecological footprint and less carbon intensive economies; this approach should include creating greater regional closure within the food supply chain, including enhanced attention given to public procurement policies (Morgan and Sonnino, 2007). On a similar theme, McManus et al. (2012) argue for enhanced 'coupling' of farm enterprises and rural service centres as a means of building resilience in a study of farmer-county town interactions in New South Wales, Australia.

In addition, finding parallels with the evolutionary economic geography literature is the work of Wilson (2010, 2012a) in relation to resilience and multifunctional agriculture and rural spaces. Through examining economic, social and environmental capital, Wilson examines place-based characteristics that contribute to weak or strong resilience, while also exploring the 'flip-side' of resilience – vulnerability. A key contribution of Wilson's work is his examination of the temporal evolution of rural systems and the unfolding trajectories of contrasting development paths: relocalised low intensity rural systems, deagrarianised rural communities and superproductivist rural systems. Similar to the literature within regional studies, Wilson identifies examples of suboptimal 'locked-in' development paths in rural systems (e.g. monofunctional production pathways) and argues that there are substantial limits to how the local level can shape and influence alternative path creation processes. This re-emphasises the need for mobilising a combination of local and extra-local resources in building more resilient futures.

The second emerging theme within the rural resilience literature is studies of community resilience, and in particular, studies of relocalisation processes as a means of enhancing resilience and transitioning towards both less carbon intensive economies and lifestyles and

creating greater closure within the local economy. These themes have also been evident in the wider literature, with studies of eco-localisation as a response to peak oil (Bailey et al., 2010; North, 2010) and analysis of the Transition Towns movement (Aiken, 2012). Specifically within the rural studies literature, Graugaard (2012) explores models of beyond-the-state resilience-building to examine social innovation as a potential pathway to enhanced localisation. This example focuses on efforts to introduce a local currency, with Graugaard arguing that its value lies in shifting consumption patterns of its users and increasing local interactions, albeit with limited benefits to the local economy. In a similar example, Franklin et al. (2011) examines the role of social enterprises in increasing consumption of local food through a 'food hub' model. While both of these examples highlight the potential of social innovation and collective agency at the community scale in exploring new development pathways, both of the studies also highlight the difficulties associated with achieving a relocalisation of rural economies in terms of goods and services, particularly relating to expanding the population base engaged with local sustainability initiatives beyond an active minority. Wilson (2012b) also highlights limitations of localisation efforts in his study of community resilience and its relationship to globalisation processes. Wilson assesses the mix of local and extra-local forces in enhancing or weakening community resilience, suggesting that both an over-dependency on local resources and an exposure to 'over-globalisation' may weaken community resilience, arguing that there is limited evidence that relocalisation processes offers a transitional pathway towards sustainable rural development. Drawing these themes together, the next section will explore both the potential of resilience thinking within rural studies and also the potential misuse of resilience, particularly when mobilised within the rural policy arena.

4. Uses and Abuses of Rural Resilience

Does resilience thinking offer anything new for rural studies? From the brief overview of the literature, there appears to be a considerable overlap between many of the themes addressed within the emerging field of rural resilience and the more established literature on rural development theory and practice. For example, the emphasis within the resilience literature on adaptive capacity echoes earlier debates in relation to capacity building processes in rural development (e.g. Murray and Dunn, 1995; Shortall, 2008), while ideas around learning communities have been explored within asset-based community development approaches to rural development (e.g. Mathie and Cunningham, 2003). Similarly, the emphasis within resilience thinking on mobilising both local and extra-local resources has received much attention within debates concerning neo-endogenous rural development (Ray, 1997; Ward et al., 2005; Shucksmith, 2009; Bosworth and Atterton, 2012). This body of work recognises the limitations of endogenous development models whereby:

> 'the notion of local rural areas pursuing social-economic development autonomously of outside influences (whether globalisation, external trade or governmental or EU action) may be an ideal but it is not a practical proposition in contemporary Europe.' (Ward et al., 2005, p. 5)

For Ward et al., any rural locality will include a mix of endogenous and exogenous forces and the local level must interact with the extra local; however, developing the capacity of local resources to steer these wider processes to their benefit remains a critical issue.

In this sense, resilience thinking does not represent a 'clean break' within the rural development literature, but I argue that resilience thinking does open up new perspectives and provides the potential to 're-frame' rural development debates – or in the words of

Davoudi (2012), resilience provides a 'bridging concept', rather than an off-the-shelf rural development model. Within this context, resilience thinking offers two key contributions for rural studies (and specifically the rural development literature).

Firstly, resilience offers *alternative analytical methods and insights for rural studies*. For example, drawing on the emerging regional resilience literature, applying an evolutionary analytical perspective sheds new light on exploring the role of path dependencies in place development, and also indentifying 'locked-in' development trajectories based on entrenched interests and institutional apathy. Similarly, the evolutionary approach draws our attention not only to sudden shocks and disturbances within localities but also to 'slow-burn' (Pike et al., 2010), longer term processes of change which may prove to be equally important in place-shaping. Ireland currently provides an illustrative example in this regard. In the Irish case, the current economic crisis has been marked by high profile examples of sudden shocks, including the collapse of the rural housing market leading to the emergence of negative equity and vacant housing (Gkartzios and Scott, 2012) and also high-profile rural-based businesses going into administration (e.g. a national insurance company that employed large numbers in rural border counties in both the Republic of Ireland and Northern Ireland). However, these high profile shocks have also masked longer-term, and perhaps more fundamental, changes in the restructuring of the rural economy and the agricultural sector.

A further analytical perspective provided by resilience thinking is the identification of place assets or attributes that contribute to weak or strong resilience or vulnerability. Both Wilson (2010) and Schouten et al. (2012) identify place-based characteristics associated with strong resilience, which can be further applied as a tool to assess the extent that public policies enhance or erode rural resilience in the face of unpredictable events. This theme has also been developed in a more practice-orientated framework by the Resilience Alliance (2010) in developing a community toolkit for assessing resilience characteristics. The assessment of vulnerability is perhaps of equal importance as a means to highlight individuals, groups and places at risk from exposure to shocks and disturbances. Vulnerability perhaps represents not only the 'flip-side' of resilience, providing a useful device for assessing the exposure to risk of places due to economic and environmental disturbances, but also as a tool for assessing vulnerability trajectories based on public policy interventions (e.g. the continued roll-out of austerity measures) or economic scenarios (e.g. impacts on rural household vulnerability due to rising commuting costs associated with rising petrol prices). Similarly, Holling (2001) highlights concerns with maladaptive systems, whereby a system may be characterised by rigidity and low potential. In a rural context, this may include the rural settlement system where entrenched interests can lead to diminishing social and ecological resilience. For example, in the UK, with highly restrictive rural planning policies constraining housing supply, social resilience can be eroded through the displacement of 'locals' and lower income groups as house prices rapidly increase (e.g. Scott et al., 2011). In contrast, more laissez-faire approaches to rural settlement growth (such as in Ireland or much of southern Europe) can maintain social resilience attributes (such as maintaining stocks of social capital and family and kin networks) but perhaps undermine ecological resilience through dispersed and fragmented development patterns. In both cases, the rural settlement system is underpinned by norms, rules and entrenched institutional behaviour.

With its emphasis on the need to blend the local and global, resilience highlights the need to analyse rural places in relation to an interdependent set of socio-spatial, economic, institutional and environmental systems, while emphasising a relational perspective of rural space. For example, Woods and McDonagh (2011) argue that rural places should not be understood as bounded and definable territories, but through the relations that constitute rural place or the refashioning of relations across space. In this context, Woods and McDonagh apply this

theme in assessing the relative performance of rural firms and the extent that places and firms exhibit a high degree of engagement with international capital/market networks.

Secondly, resilience provides an *alternative policy narrative for rural development policy and practice*, enabling a re-framing of rural development debates. For instance, an evolutionary approach raises issues relating to institutions, leadership, social capital, and social innovation and learning (Davoudi, 2012), implying that people act consciously when faced with a crisis, enabling opportunities for performing 'bounce-forward' resilience through individual, collective and institutional action. In this regard, resilience thinking overlaps with existing debates on deliberative modes of policy-making as a means to develop complex and collaborative networks for adaptive governance (e.g. Booher and Innes, 2010). Through adopting deliberative approaches involving networks of stakeholders, rural development practice can embrace the 'politics of resilience' to explore and 'work through' the central challenge of addressing *the resilience of what, to what and for whom*? (see also Carpenter et al., 2001). Therefore, resilience provides a 'strategic lynchpin' (Shaw, 2012) as collaborative networks explore new and alternative trajectories and path creation. From this perspective, a (renewed) focus on capacity building in rural development practice should be viewed as a key goal in rural place-making strategies alongside more tangible benefits, such as job creation.

A second lesson for rural development from applying a resilience framework is to more fully embed environmental and ecological considerations into rural policy, practices and behaviour. This has two dimensions. The first relates to encouraging a shift towards environmentally sensitive rural lifestyles and consumption patterns. Examples in this regard may include transitioning towards a less carbon intensive lifestyle – perhaps a particular challenge in the context of dispersed geographies of rural settlement and reliance on private transport, but with possibilities relating to localised food hubs (as outlined by Franklin et al., 2011) and local energy provision (Middlemiss and Parrish, 2010). For example, the Scottish Government has increasingly focused attention on low carbon rural futures, including not only the need for a rural land use policy that takes into account renewables but also the need to ensure that carbon (including the cost) is fully factored into decisions about rural land use (The Scottish Government, 2011). The second dimension relates to mobilising the eco-economy (Marsden, 2010; Kitchen and Marsden, 2011), including developing clusters of eco-businesses (Hudson, 2010), developing local benefits from renewable energy schemes (OECD, 2012) and exploring the potential of payments for ecosystem services as a form of endogenous rural development (DEFRA, 2007).

A third lesson for rural development relates to the emphasis within resilience thinking on blending the local and the global in searching for new pathways for local economies. On the one hand, a transition to a more resilient local economy may suggest an increased focus on developing greater local economic closure, for example through a (re)localisation of food supply chains, enhancing local transactions or creating business clusters. However, the rationale for mobilising extra-local resources suggests a more outward-looking approach across spatial boundaries. For instance, urban-rural partnerships and a regionalisation of food supply chains may open new market opportunities and provide alternative pathways than dependency on large supermarkets for food products. In this context, both Hudson (2010) and Morgan and Sonnino (2007) also highlight the importance of public procurement policies in enhancing these types of local and local-regional transactions.

While resilience offers a potential re-framing of rural development, its adoption within policy discourses should also be treated with caution. This is particularly the case when the rhetoric of resilience is translated to a social context with overtones of self-reliance (Davoudi, 2012). As Pike et al. (2010) highlight, examining the ideological and political content and

discourse of resilience debates is crucial, providing the example of the US where resilience narratives are associated with representations of individualism, self-reliance and distrust in government. Similarly, resilience can be mobilised within debates concerning austerity politics and the ongoing cuts to public services leading to a 'sink or swim' stance towards rural communities facing neoliberalising agendas, rather than a wider questioning of neoliberal policy fixes. In this context, there are echoes with earlier debates on the emergence of community-led approaches to rural development in the early 1990s, which led to some commentators highlighting that rural development programmes (such as the EU's LEADER Programme) were being promoted at the same time as a state withdrawal from rural services and a fundamental restructuring of the Common Agricultural Policy (Scott, 2004).

However, these limitations serve to re-emphasise the rationale for a more radical or progressive 'bounce forward' resilience approach, based on adaptability and transformation while deliberating alternative transitions towards sustainable ruralities.

5. Conclusion

Resilience has become a much debated concept within social sciences in recent years, as ideas around ecological resilience have been increasingly transferred to debates surrounding the social-ecological interface, disaster management, and more recently, the economic geography literature as the resilience discourse becomes applied to the current economic crisis. However, perhaps the current appeal in the literature surrounding resilience lies in its ability to encompass the interlocking challenge of peak oil and climate change (North, 2010), alongside global economic uncertainty and crisis. In this sense, resilience approaches enable the social dimension of sustainability to be elaborated in relation to the ecological system (Folke et al., 2007). For example, some rural actors, communities and economies may demonstrate high levels of capacity to cope with the current economic crisis, but that adaptive capacity may be at the expense of ecosystem services or contribute to further climate change, such as a growing intensification of productivism or a further intensification of a carbon-based economy. The challenge, therefore, is to increase societal well-being while sustaining ecological services and enabling a transition to a more (not less) sustainable future.

While its adoption across a range of disciplines suggests that we are at risk of 'concept stretching' (Shaw, 2012), in this paper, I argue that resilience thinking does provide a useful conceptual lens for rural studies and rural development. Although 'bounce back' resilience appears conservative and a 'business as usual' response to crisis, the evolutionary approach to resilience potentially provides a more transformative and therefore empowering agenda. The evolutionary perspective challenges both actors and researchers to look beyond ideal sustainability conditions (Davidson, 2010) to instead explore an evolutionary transition towards more sustainable ruralities. This may be along diverse and multiple pathways and also enables us to question suboptimal or less sustainable development paths that may become locked-in because of entrenched interests, support for the status-quo, an absence of leadership and adaptive capacity, or a loss of collective agency. Therefore, resilience emerges as a useful conceptual lens to examine evolutionary trajectories of development within rural localities as demonstrated by Wilson (2010, 2012a). Furthermore, resilience thinking offers an opportunity to re-frame rural development policy and practice. This includes moving beyond its current endogenous development accent to embrace the mobilisation of both local and extra-local resources, new modes of policy-making based on adaptive collaborative networks and an embedding of the environment into rural development in terms of developing the eco-economy (Marsden, 2010) and reducing the ecological footprint of rural lifestyles and consumption patterns.

In this context, a number of themes are currently under-researched in the literature and require further attention. Firstly, while much of the academic literature advocates a resilience approach, there needs to be an increasing focus on examining resilience-in-practice (Wilkinson, 2012) particularly in relation to governance practices that enable the performance of resilience. This includes an exploration of the role of governance institutions in enhancing or undermining resilience and the role of social innovation in performing resilience beyond-the-state that may be experimenting in pathways as an alternative to a focus on economic growth. Thirdly, more research is needed to understand the ability of rural places/actors to mobilise extra-local resources to participate in the globalised economy, while the capacity of places/actors to steer these wider processes to their benefit should be a critical issue for further research. This suggests the need not only to explore rural resilience in a local context but also to explore local-regional interactions and within processes of globalisation (Wilson, 2012a). Finally, more attention should be given to understanding how environmental concerns can be more effectively integrated into rural development practices. While Marsden (2010) demonstrates the potential of developing 'webs' of eco-businesses, additional research is required to understand the role of eco-innovation among rural firms (including farms), networking processes and institutional capacity.

Short Biography

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References

Adger, N. (2000). Social and ecological resilience: are they related? *Progress in Human Geography* 24, pp. 347–364.

Adger, W. N. (2003). Social capital, collective action, and adaptation to climate change. *Economic Geography* 79(4), pp. 387–404.

Adger, W. N. (2006). Vulnerability. *Global Environmental Change* 16, pp. 268–281.

Adger, W. N., Quinn, T., Lorenzoni, I., Murphy, C., Sweeney, J. (2013a). Changing social contracts in climate change adaptation. *Nature Climate Change* 3.

Adger, W. N., Barnett, J., Brown, K., Marshall, N., O'Brien, K. (2013b). Cultural dimensions of climate change impacts and adaptation. *Nature Climate Change* 3, pp. 112–117.

Aiken, G. (2012). Community transitions to low carbon futures in the transition towns network (TTN). *Geography Compass* 6(2), pp. 89–99.

Bailey, I., Hopkins, B. and Wilson, G. (2010). Some things old, some things new: the spatial representations and politics of change of the peak oil relocalisation movement. *Geoforum* 41, pp. 595–605.

Barr, S. and Devine-Wright, P. (2012). Resilient communities: sustainabilities in transition. *Local Environment: The International Journal of Justice and Sustainability* 17(5), pp. 525–532.

Booher, D. and Innes, J. (2010). Governance for resilience: CALFED as a complex adaptive network for resource management. *Ecology and Society* 15 [online] http://www.ecologyandsociety.org/vol15/iss3/art35/.

Boschma, R. and Martin, R. (2007). Editorial: constructing an evolutionary economic geography. *Journal of Economic Geography* 7, pp. 537–548.

Bosworth, G. and Atterton, J. (2012). Entrepreneurial in-migration and neoendogenous rural development. *Rural Sociology* 77, pp. 254–279.

Carpenter, S., Walker, B., Anderies, M. and Abel, N. (2001). From metaphor to measurement: resilience of what to what? *Ecosystems* 4, pp. 765–781.

Connelly, S. (2007) Mapping Sustainable Development as a Contested Concept. *Local Environment: The International Journal of Justice and Sustainability* 12, pp. 259–278.

Darnhofer, I., Fairweather, J. and Moller, H. (2010). Assessing a farm's sustainability: insights from resilience thinking. *International Journal of Agricultural Sustainability* 8, pp. 186–198.

Davidson, D. (2010). The applicability of the concept of resilience to social systems: some sources of optimism and nagging doubts. *Society and Natural Resources* 23, pp. 1135–1149.

Davoudi, S. (2012). Resilience: a bridging concept or a dead end? *Planning Theory & Practice* 13, pp. 299–307.

Davoudi, S. and Porter, L. (2012). The politics of resilience for planning: a cautionary note. *Planning Theory & Practice* 13, pp. 329–333.

Dawley, S., Pike, A. and Tomaney, J. (2010). Towards the resilient region? *Local Economy* 25, pp. 650–667.

DEFRA (2007). *An introductory guide to valuing ecosystem services*. London: DEFRA.

Evans, J. P. (2011). Resilience, ecology and adaptation in the experimental city. *Transactions of the Institute of British Geographers* 36, pp. 223–237.

Folke, C. (2006). Resilience: the emergence of a perspective for social-ecological systems analyses. *Global Environmental Change* 16, pp. 253–267.

Folke, C., Colding, J., Olsson, P. and Hahn T. (2007). Interdependent social-ecological systems and adaptive governance for ecosystem services. In: Pretty, J., Ball A., Benton, T., Guivent, J., Lee, R., Orr, D., Pfeffer, M. and Ward, H. (eds) *The sage handbook of environment and society*. London: Sage.

Forester, J. (2009). Introduction: making a difference in response to Hurricane Katrina. *Planning Theory & Practice* 9, pp. 517–518.

Franklin, A., Newton, J. and McEntee, J. C. (2011). Moving beyond the alternative: sustainable communities, rural resilience and the mainstreaming of local food. *Local Environment: The International Journal of Justice and Sustainability* 16(8), pp. 771–788.

Gallopin, G. (2006). Linkages between vulnerability, resilience, and adaptive capacity. *Global Environmental Change* 16, pp. 293–303.

Gkartzios, M. and Scott, M. (2012). Gentrifying the rural? Planning and market processes in rural Ireland. *International Planning Studies* 17, pp. 253–276.

Gleeson, B. (2008). Waking from the dream: an Australian perspective on urban resilience. *Urban Studies* 45, pp. 2652–2668.

Gotham, K. (2009). Creating liquidity out of spatial fixity: the secondary circuit of capital and the subprime mortgage crisis. *International Journal of Urban and Regional Research* 33, pp. 355–371.

Graugaard, J. D. (2012). A tool for building community resilience? A case study of the Lewes Pound. *Local Environment: The International Journal of Justice and Sustainability* 17(2), pp. 243–260.

Holling, C. S. (1973). Resilience and stability of ecological systems. *Annual Review of Ecology and Systematics* 4. Pp. 1–23.

Holling, C. S. (2001). Understanding the Complexity of Economic, Ecological, and Social Systems. *Ecosystems* 4, pp. 390–405.

Hudson, R. (2010). Resilient regions in an uncertain world: wishful thinking or a practical reality? *Cambridge Journal of Regions, Economy and Society* 3, pp. 11–25.

Janssen, M., Schoon, M., Ke, W. and Borner, K. (2006). Scholarly networks on resilience, vulnerability and adaptation with the human dimensions of global environmental change. *Global Environmental Change* 16, pp. 240–252.

Kitchen, L. and Marsden, T. (2011). Constructing sustainable communities: a theoretical exploration of the bio-economy and eco-economy paradigms. *Local Environment: The International Journal of Justice and Sustainability* 16, pp. 753-769.

Kitson, M., Martin R. and Tyler, P. (2011). The geographies of austerity. *Cambridge Journal of Regions, Economy and Society* 4, pp. 289–302.

Lake, P. (2013). Resistance, Resilience and Restoration. *Ecological Management & Restoration* 14, pp. 20–24.

Leach, M., Rockström, J., Raskin, P., Scoones, I., Stirling, A. C., Smith, A., Thompson, J., Millstone, E., Ely, A., Arond, E., Folke, C. and Olsson, P. (2012). Transforming innovation for sustainability. *Ecology and Society* 17(2), 11 http://dx.doi.org/10.5751/ES-04933-170211

Magis, K. (2010). Community resilience: an indicator of social sustainability. *Society and Natural Resources* 23, pp. 401–416.

Manyena, S. B., O'Brien, G., O'Keefe, P. and Rose, J. (eds) (2011). Disaster resilience: a bounce back or bounce forward ability? *Local Environment: The International Journal of Justice and Sustainability* 16(5), pp. 417–424.

Marsden, T. (2010) Mobilizing the regional eco-economy: evolving webs of agri-food and rural development in the UK. *Cambridge Journal of Regions, Economy and Society* 3, pp. 225–244.

Martin, R. (2012). Regional economic resilience, hysteresis and recessionary shocks. *Journal of Economic Geography* 12, pp. 1–32.
Martin, R. and Sunley, P. (2006). Path dependence and regional economic evolution. *Journal of Economic Geography* 6, pp. 395–437.
Martin, R. and Sunley, P. (2011). The new economic geography and policy relevance. *Journal of Economic Geography* 11, pp. 357–369.
Mathie, A. and Cunningham, G. (2003). From clients to citizens: asset-based community development as a strategy for community-driven development. *Development in Practice* 13, pp. 475–486.
McManus, P., Walmsley, J., Argent, N., Baum, S., Bourke, L., Martin, J., Pritchard, B. and Sorensen, T. (2012). Rural community and rural resilience: what is important to farmers in keeping their country towns alive? *Journal of Rural Studies* 28, pp. 20–29.
Middlemiss, L. and Parrish, B. (2010). Building capacity for low carbon communities: the role of grassroots initiatives. *Energy Policy* 38, pp. 7559–7566.
Morgan, K. (2008). Greening the realm: sustainable food chains and the public plate. *Regional Studies* 42, pp. 1237–1250.
Morgan, K. and Sonnino, R. (2007). Empowering consumers: the creative procurement of school meals in Italy and the UK. *International Journal of Consumer Studies* 31, pp. 19–25.
Murray, M. and Dunn, L. (1995). Capacity building for rural development in the United States. *Journal of Rural Studies* 11, pp. 89–97.
North, P. (2010). Eco-localisation as a progressive response to peak oil and climate change – sympathetic critique. *Geoforum* 41, pp. 585–594.
O'Brien, K., Hayward, B., and Berkes, F. (2009). Rethinking social contracts: building resilience in a changing climate. *Ecology and Society* 14 [online] URL: http://www.ecologyandsociety.org/vol14/iss2/art12/
OECD (2012). *Linking renewable energy to rural development*. Paris: OECD Green Growth Studies, OECD Publishing.
Pendall, R., Foster, K. A. and Cowell, M. (2010). Resilience and regions: building understanding of the metaphor. *Cambridge Journal of Regions, Economy and Society* 3, pp. 71–84.
Pike, A., Dawley, S. and Tomaney, J. (2010). Resilience, adaptation and adaptability. *Cambridge Journal of Regions, Economy and Society* 3, pp. 59–70.
Raco, M. and Street, E. (2012). Resilience planning, economic change and the politics of post-recession development in London and Hong Kong. *Urban Studies* 49(5), pp. 1065–1087.
Ray, C. (1997). Towards a theory of the dialectic of local rural development within the European Union. *Sociologia Ruralis* 37, 345–362.
Resilience Alliance (2010). Assessing resilience in social-ecological systems: workbook for practitioners. *Version 2.0*. [Online] Retrieved on 6th September 2012 from: http://www.resalliance.org/3871.php
Ross, H. and Carter, R. W. (2011). Natural disasters and community resilience. *Australasian Journal of Environmental Management* 18(1), pp. 1–5.
Rumbach, A. (2009). Challenges of disaster response, or what the textbooks don't teach us. *Planning Theory & Practice* 9, pp. 540–551.
dos Santos, F. T. and Partidario, M. R. (2011). SPARK: Strategic Planning Approach for Resilience Keeping. *European Planning Studies* 19(8), pp. 1517–1536.
Scanlon, K., Lunde, J. and Whitehead, C. (2011). Responding to the housing and financial crisis: mortgage lending, mortgage products and government policies. *International Journal of Housing Policy* 1, pp. 23–49.
Schouten, M. A. H., van der Heide, C. M., Heijman, W. J. M. and Opdam, P. F. M. (2012). A resilience-based policy evaluation framework: application to European rural development policies. *Ecological Economics* 81, pp. 165–175.
Scott, M. (2004). Building institutional capacity in rural Northern Ireland: the role of partnership governance in the LEADER II programme. *Journal of Rural Studies* 20(1), pp. 49-59.
Scott, M. (2008). Managing rural change and competing rationalities: insights from conflicting rural storylines and local policy making in Ireland. *Planning Theory and Practice* 9(1), pp. 9–32.
Scott, M., Smith, D., Shucksmith, M., Gallent, N., Halfacree, K., Kilpatrick, S., Johns, S., Vitartas, P., Homisan, M. and Cherrett, T. (2011). Exclusive countrysides? Rural gentrification, consumer preferences and planning. *Planning Theory & Practice* 12(4), pp. 593–625.
Scottish Government (2011). *Low carbon Scotland: meeting the emissions reduction targets 2010–2022*. Edinburgh: Scottish Government.
Shaw, K. (2012). "Reframing" resilience: challenges for planning theory and practice. *Planning Theory & Practice* 13, pp. 208–312.
Shortall, S. (2008). Are rural development programmes socially inclusive? Social inclusion, civic engagement, participation, and social capital: Exploring the differences. *Journal of Rural Studies* 24, pp. 450–457.
Shucksmith, M. (2009). Disintegrated rural development? Neo-endogenous rural development, planning and place-shaping in diffused power contexts. *Sociologia Ruralis* 50, pp. 1–14.

Smit, B. and Wandel, J. (2006). Adaptation, adaptive capacity and vulnerability. *Global Environmental Change* 16, pp. 282–292.

Tompkins, E. L. and Adger, W. N. (2004). Does adaptive management of natural resources enhance resilience to climate change? *Ecology and Society* 9(2), 10. [online] URL: http://www.ecologyandsociety.org/vol9/iss2/art10

Ward, N., Atterton, J., Kim, T.-Y., Lowe, P., Phillipson, J. and Thompson, N. (2005). Universities, the knowledge economy and 'neo-endogenous' rural development. Centre for Rural Economy, Newcastle University, Newcastle, England. Working paper. Retrieved July 13, 2012 (http://www.ncl.ac.uk/cre/publish/working/).

Wilkinson, C. (2011). Social-ecological resilience: insights and issues for planning theory. *Planning Theory* 11(2), pp. 148–169.

Wilkinson, C. (2012). Urban resilience: what does it mean in planning practice? *Planning Theory & Practice* 13, pp. 319–324.

Wilson, G. (2010). Multifunctional 'quality' and rural community resilience. *Transactions of the Institute of British Geographers* 35, pp. 364–381.

Wilson, G. (2012a). *Community resilience and environmental transitions*. London: Earthscan.

Wilson, G. (2012b). Community resilience, globalization, and transitional pathways of decision-making. *Geoforum* http://dx.doi.org/10.1016/j.geoforum.2012.03.008.

Woods, M. and McDonagh, J. (2011). Rural Europe and the World: globalization and rural development. *European Countryside* 3, pp. 153–163.

Yamamoto, D. (2011). Regional resilience: prospects for regional development research. *Geography Compass* 5(10), pp. 723–736.