

From rhetoric to reality: which resilience, why resilience, and whose resilience in spatial planning?

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Abstract

This paper analyses contrasting academic understandings of 'equilibrium resilience' and 'evolutionary resilience' and investigates how these nuances are reflected within both policy and practice. We reveal that there is a lack of clarity in policy, where these differences are not acknowledged with resilience mainly discussed as a singular, vague, but optimistic aim. This opaque political treatment of the term and the lack of guidance has affected practice by privileging an equilibrist interpretation over more transformative, evolutionary measures. In short, resilience within spatial planning is characterised by a simple return to normality that is more analogous with planning norms, engineered responses, dominant interests, and techno-managerial trends. The paper argues that, although presented as a possible paradigm shift, resilience policy and practice underpin existing behaviour and normalise risk. It leaves unaddressed wider sociocultural concerns and instead emerges as a narrow, regressive, technological frame centred on reactive measures at the building scale.

Keywords: resilience, spatial planning, equilibrium, ecology, adaptation, policy

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Introduction

‘Resilience’ has been rapidly appropriated and cascaded through many public and social policy initiatives, emerging as a common reference point in the vocabulary of politicians and policy-makers alike. Similarly, academic interest has arisen across a range of seemingly disparate disciplines, reflecting not only its broad rhetorical and intellectual appeal, but also how the concept has become ripe for theoretical interrogation and practical analysis. Given its widespread requisition throughout the political arena and its related influence upon people and places the concept warrants thorough deconstruction and analysis from a spatial planning perspective.

Superficially ‘resilience’ is an undoubtedly agreeable ‘motherhood and apple-pie’ notion. To argue that society, the economy, cities or infrastructure should be less resilient is illogical, akin to a planner suggesting that development should be ‘unsustainable’ or a politician arguing against ‘progress’. This servile acceptability and burgeoning normalisation has proven instrumental to its rapid incorporation into the contemporary lexicon of academics and policy makers. Resilience instinctively appears incontestable, portraying a desirable, aspirational goal relevant to practically any given issue. The development of the concept has also laden resilience with multiple meanings providing considerable scope for interpretation (Brand and Jax, 2007) and widening its potential application. This pliable, and essentially optimistic character of resilience, has aided its transferability whilst arguably facilitating an initial resistance to critique, particularly from the political sphere where the concept has rapidly gained currency in recent years. However, this lack of normative contention should not immunise the concept from being uncritically unpacked, automatically promoted or unthinkingly employed.

A number of conceptual nuances associated with resilience have been explored in academic literature. Recent editions of *Planning Theory & Practice*, the *Cambridge Journal of Regions, Economy and Society*, and *Planning Practice and Research* collated a series of reflections on the theme of resilience and how it has provided a context for a broad range of inter-related administrative programmes. Urging a 'cautionary note' with regard to current frames of reference for the term (Porter and Davoudi, 2012), and citing the 'contested' nature of the concept (O'Hare and White, forthcoming), such collections acknowledge that resilience has both regressive and progressive potentialities.

Several analyses express optimism regarding the transformative capacity of certain forms of resilience. For example, Davoudi (2012a) has been careful not to dismiss the qualities of framing devices such as resilience, whilst the work of Amin (2013), though acknowledging the neoliberal undertones of many articulations of resilience and preparedness, has similarly drawn attention toward competing interpretations of anticipatory regimes more closely aligned with social democratic principles (namely in Sweden). These, and similar accounts (Yamane, 2009), stress that strategies of resilience are not necessarily pre-disposed to merely bounce-back to a pre-shock normality, and that they are not pre-determined to privilege the status-quo and underwrite asymmetric social and economic circumstances.

Yet despite optimism from some quarters, it is clear that the rapid political ascent of the term raises important questions concerning how resilience is understood, what it is designed to achieve and how this may translate into practice. This has become all the more pertinent given how resilience has emerged both as a backdrop onto which broader societal values and norms have been projected, and more specifically as a policy foci with the potential to influence spatial forms and social processes. Moreover, it is suggested that it has naturalistic strains that

‘demand acquiescence’ (Neocleous, 2013: 7) creating an ideological trope that argues for the citizen to merely adapt to the normal demands of capital and the state, rather than via more transformative measures. As Gleeson (2012: 938) explains, uncritical urban determinism such as this “leads ineluctably to prescriptions, including policy, that deny and thus mask the play of social power”. It is within this context that this research is situated.

Much of this important emerging critique examines conceptual nuances (Davoudi 2012a), spatial locations (Amin 2013), sectoral issues (Bristow 2012) or thematic investigations (Funfgeld and McEvoy 2012) - all of which are helping to provide clarity to a slippery concept. This paper differs from previous studies by conducting a broad meta-analysis of resilience policy from different sectors to examine how resilience is understood by policy-makers and practitioners and how the different resilience discourses shape and influence planning practice. This empirical approach provides a wider, more encompassing perspective than has been provided so far and enabling conclusions to be drawn about the relationship between the concept and spatial planning policy and practice more generally.

An analysis was conducted of policy transecting a number of interests related to spatial planning. The policy review consisted of key pieces of UK legislation and policy with a selected survey of European legislation and local authority guidance. The work took place during April 2012, and so includes policy documents to that date and only those that had been uploaded to the website by the webmaster (this can sometimes be variable). UK legislation is predominantly contained on the UK Official Documents website (www.officialdocuments.gov.uk), which houses Command Papers, Select Committee Inquiry reports, Departmental annual reports and Departmental reviews. The search term was ‘resilien*’ (to include resilience; resilient and resiliently) was used as a search term with the

filter 2005 to the present. In total, 823 documents were found to contain the word resilience or a variation in it. These were filtered to include those that were related to planning or environmental management particularly those around land use and defence, water management and climate change adaptation. Where documents were duplicated (for example, if a bill went through a number of revisions) the final piece of legislation on the statute books was looked at. Each document was downloaded and a search performed to look for words relating to “resilience”, “resilient”, “recovery”, “preparation”, “adaptation”, “adapt”, “adaptive”, “capability” and “capacity”. This resulted in 28 documents that made an attempt to define the term “resilience” or its associated terms. The Cabinet Office website provides guidance on key European or sub-national documents and six of these were selected including Preparing Scotland (Scottish Executive 2007) and EUROPE 2020: A strategy for smart, sustainable and inclusive growth (European Commission 2010). The resulting 34 documents were considered to be a large enough sample from which to explore how resilience is understood by policy makers and to explore the implications for practice.

This paper studies the concept of resilience: examining its interpretation; reviewing its infiltration into policy; and analysing its potential impact upon spatial planning. Utilising an extensive literature and policy review and reflecting upon the authors’ research into resilience from urban and environmental perspectives, the paper provides a timely evaluation of the spatial planning implications of the concept. The article compares the pioneering work of Holling (1973) and his two interpretations of resilience: ‘engineering’ and ‘ecological’ both of which are based on a return to equilibrium (Simmie and Martin, 2010), with more contemporary discussions of ‘evolutionary’ resilience which is concerned with more transformative adaptation (Davoudi, 2012a). It uses these contrasting interpretations as an analytical frame to better comprehend how resilience theory becomes manifest in policy and

practice. The article highlights that for resilience to enjoy utility and longevity, fundamental issues connected with its contested conceptual understanding, variable political positioning and resultant application need to be addressed. To discuss these points the paper is structured around three critical questions: *which* resilience (how is it interpreted?); *why* resilience (what is the desired policy focus?); and *whose* resilience (who gains or is privileged?).

Which resilience: *to Rebound or Change?*

To appreciate the intricacies of resilience attention should first turn to the concept's genus and germination. The term's origins can be traced to ecology and natural science (Walker and Cooper, 2011), but resilience has since been adopted by a multitude of broader disciplines, from psychology and psychiatry (Kaplan, 1999) to social and community development (Adger, 2000) to engineering and design (Bosher, 2008). Within spatial planning resilience has been most commonly discussed as a normative concept to build capacity to manage specific risks, including climate change (Communities and Local Government (CLG), 2007a), terrorism (Coaffee and O'Hare, 2008), flooding and drought (White, 2010), and economic and regional decline (Hudson, 2010). Therefore, from relatively discrete beginnings resilience now has potentially profound implications for the theory and practice of spatial planning.

In his influential 1973 paper, Holling distinguished between two notions of resilience. The first was 'engineering resilience', developed from economics, mathematics and physics, which referred to the ability of an ecosystem to return to stability or equilibrium after a disturbance (Holling, 1973; Pickett *et al.*, 2004). Holling also argued that there could also be an 'ecological resilience' concerning the ability to absorb shocks 'and still persist' (1973: 17). He states that these are essentially two contrasting aspects of '*stability*' with engineering resilience concerned

with maintaining efficiency of function whilst ecological resilience relates to maintaining the existence of function (Holling, 1996: 33). Davoudi (2012a: 301) explain the nuances further outlining: “what underpins both perspectives is the belief in the existence of equilibrium in systems, be it a pre-existing one to which a resilient system bounces back (engineering) or a new one to which it bounces forth (ecological)”.

More recently, notions of evolutionary resilience have added to this discourse. This understanding argues against the desirability of a return to equilibrium or an increase in the ability to cope with disturbance and instead advocates a new form and function better equipped to accommodate shocks or stresses (Simmie and Martin, 2010). Here the more evolutionary notion of the need for systemic adaptation to changing normalities is emphasised with the heterogeneous links between social and ecological systems highlighted. This development helped transform the concept into one with wider desirability, having synergies with the uncertain nature of contemporary ‘wicked problems’ (Rittel and Webber, 1973) and concerns regarding the efficacy of traditional techno-scientific managerial approaches to address ‘post-normal’ threats (Funtowicz and Ravetz, 1991) where *‘facts are uncertain, values in dispute, stakes high and decisions urgent’* (Ravetz, 2004: 249). This more holistic, precautionary interpretation focused on engendering system enhancement (see Shaw and Theobald, 2011) has helped underwrite its cross-pollination with integrative properties drawing connections between ecological, physical and social systems proving attractive (Berkes and Folke, 1998; Godschalk, 2003).

Although abstractions of resilience may be translated into the policy arena in a separate manner they can also be utilised in tandem where, for example, a system can recover quickly from a short-term impact and facilitate a longer-term transition to a state less vulnerable to

experiencing such shocks in the first instance. This more complex linking of social-ecological systems provides a useful theoretical frame for problem-setting and problem solving (Wilkinson, 2011). However, as this article will argue, its impact on practice is hampered by fragmentary pressures and opaque definitions.

Distinguishing between normative interpretations of *equilibrant* and *evolutionary* resilience (or alternatively ascertaining *which* resilience) is essential to understanding the challenges of policy integration as, critically, they have contrasting aims and outcomes. Equilibrant interpretations are both simplistic and fatalistic; accepting the status quo, leaving unchallenged current norms of behaviour that drive risky behaviour and privileging reactive responses to risk. They are synergous with technocratic or engineering-led approaches that aspire to increase the ability to withstand shocks or ‘bounce back’ and under extreme circumstances can help create cities where, for example, ‘form follows fear’ (Ellin, 1997) with architecture, design and planning dominated by nervousness and paranoia (Flusty, 1994).

Conversely, evolutionary interpretations are perceived as process dominated, in which resilience is considered a broader, more endemic and deliberative practice whereby, for example, the adaptive capacity of cities or communities can be augmented with an emphasis on behavioural or institutional change alongside recovery (Kaplan, 1999; Manyena, 2006). Ecological interpretations hold synergy with the term ‘proactive resilience’ (Dovers and Handmer, 1992) and tend to be progressive and dynamic, challenging existing practices and aspiring for a *new normality*; one better equipped to avoid shocks. Table one summarises the contrasting aims of the two differing understandings of resilience, highlighting the criticality of framing *which* resilience is pertinent within spatial planning; one advocates a preservationist, stable approach, whilst the other pursues a more evolutionary and flexible agenda.

	Equilibrium Resilience	Evolutionary Resilience
Aim	Equilibrant Existing normality Preserve Stability	Adaptive New normality Transform Flexibility

Table one: the contrasting aims of equilibrant and evolutionary resilience.

Whilst distinctions between differing conceptual understandings may be well recognised in academic spheres (Brand and Jax, 2007; Davoudi 2012a; Folke, 2006), in a highly connected and globalised world these nuances must be reflected beyond science to the governance professions. Therefore a central message of this section is that when the concept is used, whether by politicians, policy makers or planners, there is a need for clarity regarding which understanding is referred to, and from there to *why* resilience is perceived to be a desirable policy outcome. It is this issue that the paper addresses next.

Why Resilience: *Atomised or Abstract?*

Society must, we are implored, become more resilient to unexpected events (Cabinet Office, 2008). The past decade has seen resilience be infused throughout policy Furedi (2008) with, for example, the Scottish Executive (2007: 1) stating that ‘*central government’s approach to civil contingency planning is built around the concept of resilience*’. This section is designed to build upon the analysis thus far by examining the policy areas where resilience has been engaged with and investigating how it has been interpreted. This will illuminate both the

political utility of the concept and how equilibrist and evolutionary interpretations frame distinctive policy agendas.

Perhaps unsurprisingly given its slippery nature, it is commonplace for resilience to be used in a generic and aspirational manner. For example, when discussing infrastructure it is vaguely stated that: *'because risks change over time it is necessary to re-evaluate risk and to modify resilience strategies continually'* (Parliamentary Office for Science and Technology, 2010: 2). Where more guidance is provided it is significant that there is a strong bias towards the equilibrist interpretation of resilience; rebound and recovery are at the cornerstone of policies connected with emergency response (CLG, 2008), business (Home Office, 2003), terrorism (HM Government, 2008), defence (House of Commons Defence Committee, 2009), infrastructure (Cabinet Office, 2010), transport (Department for Transport, DECC and Defra, 2011) and climate change (HM Government, 2011a).

For instance, HM Treasury and Defra (2009: 9) suggest that we should: *'design the activity to tolerate a wider range of climate conditions, while retaining the same basic structure and functioning. For example, by building a bridge higher than otherwise would be done'*. Moreover, even where policy appears to discuss resilience in a holistic manner this is usually from a rather narrow engineering interpretation, such as: *'Physical protection may make up an important part of resilience, but it is not the only factor. Resilience is also underpinned by good design of infrastructure networks, effective emergency response, business continuity planning, and recovery arrangements'* (Cabinet Office, 2011a: 5). By comparison evolutionary interpretations of resilience are present to a much lesser extent and are mainly centred on climate change responses beyond hard infrastructure, such as through the provision of green infrastructure (HM Government, 2011b).

With regard to planning, the discipline has also witnessed a gradual infiltration of resilience discourse across its interests, not least for communities, infrastructure and transport networks (see Cabinet Office, 2011b; 2011c; Department for Transport and CLG, 2010). Although the notion is becoming pervasive, definitional precision is rare bar notable exceptions regarding fire and flood risk that assert the necessity of embedding resilient construction in new developments (CLG, 2008; 2010). Beyond simplistic building specific guidance, ‘resilience’ remains an intangible aspiration and, significantly, there is no distinction between equilibrium and evolutionary understandings. Resilience is commonly viewed as a vague, *singular* whole. For instance, a supplement to Planning Policy Statement 1 concerning planning and climate change encourages planners to shape places ‘resilient’ to inevitable climatic change (CLG, 2007a), but with no prescriptive advice given. The *National Planning Policy Framework* adopts a similar tone stating: ‘*Planning plays a key role in helping shape places to secure radical reductions in greenhouse gas emissions, minimising vulnerability and providing resilience to the impacts of climate change*’ (CLG, 2012: 22), but again no definition is provided.

One notable issue is the link between planning’s long-standing role in engaging with wider actors and agencies and how resilience can be pursued by inclusive decision making practices. For example, Defra (2012: 250) suggests that: ‘*Resilience in the built environment will depend on widely dispersed decision-making in the public and private sectors and, therefore, poses a particular capacity challenge, which potentially extends beyond the established levers of spatial planning, building regulation and industry best practice*’. Yet this rare evolutionary appearing interpretation, emphasising flexibility, is similarly abstract and lacks guidance to aid practice.

Examining resilience in policy reveals that the political arena tends to take a more simplistic, monistic approach than academia, glossing over the nuances outlined in the previous section. Moreover, there is a notable lack of clarity to aid implementation and in cases where instructional guidance is given the onus is mainly on equilibrist resilience interpretations. Those policy arenas which have engaged with resilience have overwhelmingly focused on the less challenging engineering viewpoint, with the climate change field being the main exception perhaps due to its synergies with evolutionary resilience via the adaptation agenda and the notion of linking human and natural systems. Whilst it may be understandable if infrastructure or emergency response orientated documents adopt an engineered construal, it is striking that this is a *dominant* understanding of resilience in policy. The presence of policy silos and decision making norms underlines this, with institutions seemingly more comfortable at engaging with endogenous, short-term risks.

It should be noted that although academics have routinely identified resilience as a vague notion, when policy documents are analysed this is not precisely the case - equilibrist interpretations appear significantly *less* slippery than evolutionary ones. The analysis of how the concept is utilised reveals that resilience has been appropriated within planning policy in either atomised, equilibrist, engineering interpretations or imprecise evolutionary abstractions lacking instructive guidance. They are rarely discussed in unison as is common in academe. The former is more reactive, short-termist and ultimately achievable, whilst the latter has contrasting characteristics but may be more desirable from a risk management perspective.

The practical realisation of resilience may not be the only aim of the policy however. Symbolically, the deployment of resilience discourses reformulates crises and uncertainty as

not uncontrollable, but an opportunity to pro-actively confront threats and even to provide general betterment. Particularly in circumstances where individuals, communities and businesses can do little to be immunised from risk, resilience - embedded within a language of assurance and comfort - offers hope and confidence. Resilience is therefore opportunistically tailored to fill 'policy windows' yielded in the wake of crises (Kingdon, 1984) or in response to emerging perils. In this vein, the Green Paper 'A Resilient Nation' (Conservatives, 2010) vaguely indicated the need for strategies for increased resilience against numerous twenty-first century threats including violent extremism, cyber terrorism and energy security. Under certain manifestations, then, resilience is a strategy to help govern uncertainty, blunting prospective allegations of mismanagement or inaction frequently levelled at decision makers during times of flux.

The policy transition toward flood resilience, for example, was predated by a series of accusations of managerial failure directed at central government, local authorities and land managers, as seemingly avoidable risks were not averted (White and Richards, 2007). The aspiration for resilience therefore appears part of a cogent political strategy to repackage threats as either rife with uncertainty or with a natural inevitability. For instance, recent policy documents state that the precise effects of climate change are unknown (CLG, 2007a) or that *'flooding cannot be wholly prevented'* (CLG, 2010: 1). Similarly, guidance promoting resilience produced after terrorist attacks describes how risk is omnipresent and unavoidable (Coaffee *et al.*, 2009). This demonstrates a degree of expectation management for populations who expect protection by the state. Projects and policies to 'secure' resilience thus provide a response to complex threats that may have opaque, remote and uncontrollable drivers. Consequently the concept has evolved as a pragmatic tool to potentially deliver endogenous responses to exogenous risks (see for example White, 2008; Shaw and Theobald, 2011).

Resilience strategies promise risks can be ameliorated and where shocks are experienced society can return to ‘normality’ with rapidity and efficiency. Beyond the maintenance of ‘business as usual’, conditions for business that is *better than usual* (London First, 2003) may also be created.

Ideologically, resilience has also become a valuable political strategy facilitating neoliberal shifts in the responsibilities for risk governance from the state toward the private sector and communities, not least given how the costs to manage risks are perceived to be increasing. A reduction or withdrawal of the resources necessary to manage uncertain and societal threats centrally is partly legitimised by parallel narratives of fatalistic complexity, geo-political impasse or even increasing personal ‘freedoms’ in the wake of a retreat of the state. For instance, in 2004 estimates placed the cost of flood risk management to increase from £100m per annum to between £460m and £2,500m by 2080 (Evans *et al.*, 2004), presenting a significant burden on the public purse, creating conditions for wider stakeholders to assume responsibility and for the private sector to commodify flood resilience at a household level (see Bachelor, 2012; Edwards, 2009). Policy documents now advocate that: ‘*Householders and businesses at flood risk should take the appropriate steps to better protect their properties through property level resistance and resilience measures*’ (HM Government, 2011c: 26). Resilience discourses therefore enable risks to be reconfigured to be the remit of multiple stakeholders, including citizens themselves, who have increased access to data, information and private sector products – and most importantly, a heightened responsibility to construct their own ‘resilience’ strategies.

Although a deficit of definitional precision may frustrate the realisation of resilience, ironically this nebulous character may prove appealing to policy makers who can promote a vague view

of resilience in generic terms to multiple audiences. In reality, the use of resilience in policy may well be a ‘coping mechanism’, not so much for managing *shocks* as detailed in the literature, but rather as a strategy of *governance* to address pervasive feelings of inaction when decision makers are faced with uncertainty, anxiety and complexity. It can reassert authority and provide an association with the positive characteristics of the concept rather than influence practice. Table two enhances table one, linking the aims of equilibrist and evolutionary resilience with their differing policy foci.

	Equilibrist Resilience	Evolutionary Resilience
Aim	Equilibrist Existing normality Preserve Stability	Adaptive New normality Transform Flexibility
Focus	Endogenous Short-term Reactive Atomised	Exogenous Medium to long-term Proactive Abstract

Table two: the differing aims and foci of equilibrist and evolutionary resilience.

The ‘fuzzy’ nature of resilience, defined as ‘characterizations lacking conceptual clarity and difficult to operationalize’ (Markusen, 2003: 702) may have facilitated an upload of the concept into the easy, strategic rhetoric of policy domains (Pendall *et al.*, 2010), but it is as yet unclear what the outcomes may be when translated to the practical and place-orientated context of

spatial planning. The conceptual anomalies concerning *which* resilience and *why* inevitably lay the foundation for interpretation problems. The following section explores these implications in more depth.

Whose Resilience: *From Rhetoric to Reality?*

The need for partnerships, collaboration and a shared interpretation is viewed as essential to achieving resilience (Cole and Marzell, 2010). However, given the term's incoherency and the contrasting contexts within which the diverse cast of actors operate, there is no reified view of how different planning approaches may lead to alternative outcomes. The pursuance of resilience across policy areas and at the building, community, city, regional or national scale proclaims a degree of integrative logic, yet planning approaches will differ dependent upon *which* resilience is promoted. Equilibrist approaches demand a degree of vertical coherence across scales, whilst evolutionary interpretations are more horizontally integrated across sectors. Yet, if resilience is to be successful then clarity is needed over its intended interpretation and desired outcomes – or more simply *resilience for whom?*

Techno-rational or Socio-cultural?

'Shocks' are destabilising not just in terms of their immediate impacts on society and commerce, but because they expose the imperfections and frailties of 'ways of life' (Johnson, 2002). These perils not only threaten to undermine the fluent operation of economic, social and infrastructural networks, but pose a broader threat to the state's ability to govern, to protect people and to regulate the complex systems and interactions that compose the contemporary world. In response, authorities have identified resilience as an effort to generate *governability*, making the concept both a rhetorical device and mobilising concept to exert a degree of control

over the seemingly ‘uncontrollable’; a way of managing knowledge deficits; or more simply a strategy to redress uncertainty.

Analogously, the provision of certainty is presented as one of the fundamental aspirations of statutory planning systems, including transparent policy processes, clear procedures or set timescales for decisions (Tewdwr-Jones, 1999). Within planning the notion of resilience is identified as a method to manage unexpected shocks, being orientated towards either engineering dominated techno-rational functions or more evolutionary socio-cultural roles. The former can maintain or even increase certainty, where a focus on engineering or design enabled recovery can easily merge with existing procedures, but these may be reactive and short-termist. Counter-intuitively, the latter may *amplify* insecurity as current institutions, processes and guidelines may be subject to change and even challenge the ability of planning to provide much needed certainty. Indeed, Gleeson (2008: 2658) argues that resilient urbanism: ‘*should relinquish any belief in - certainly any aestheticised desire for - a stabilised, end-state urban system....The living must accept the inevitability of evolution, the necessity of adaptation, and embrace the hope of resilience*’.

When considering how resilience is manifest in planning policy, divergent interpretations are critical, as the certainty central to the nature of planning appears to resist more abstract evolutionary approaches but comfortably embrace equilibrist engineering solutions. This is reinforced by how planning has mainly seconded resilience within a techno-rational frame, and its related hazard management and emergency response fields. Both the risk-based approach and the common disaster cycle of response, recovery, mitigation and preparedness help to cast planning as procedural and reactive, which may not be effective at breaking the ‘cycle’ and could even be maladaptive (Barnett and O’Neill, 2010). This facilitates the domination of engineering agendas overemphasising *responses* to peril, and relegating efforts to reduce their

socio-cultural drivers. In other words, risk is not averted and instead contingency and recovery plans are developed. This view links with a techno-rational form of planning which is familiar and comfortable for policy makers. Moreover, the reliance on long-held quantitative modelling and evidence-based approaches in spatial planning also predisposes engineered outcomes. These approaches work well within closed, static systems but may be difficult to apply within more complex social-cultural systems that effectively render 'equilibrium' an impossibility.

The techno-rational response to threats also emphasises the role of the expert and promotes strategies which may be unpalatable to the public. For example, would citizens argue *for* the commodification of flood resilience now promoted throughout Europe (White, 2010) or do they simply want state protection? Though presented as pro-active and empowering (CLG, 2011a), the selective emphasising of engineered characteristics of resilience, such as rebound, can therefore be used to pursue regressive policy outcomes leaving vulnerable citizens and communities exposed to risk.

Evolutionary resilience is discussed on a broad, socio-cultural basis predicated on seemingly powerful strategic shifts, for instance through efforts to link the natural world with built environments such as those promoted by the climate change adaptation agenda (Shaw *et al.*, 2007). Transformability is key to operationalising this approach but this may challenge institutions - both with regard to their power to enact change and desire for any reform of the current *modus operandi*. Therefore, this understanding may struggle to be realised, as resilience in planning is inclined towards engineering understandings; maintaining normality with activity focused at the building scale, leaving much existing governance and practice uncontested. It is questionable whether spatial planning possesses the ability to influence existing power arrangements and institutions, or more specifically the *conditions* underpinning the current normality, or whether it essentially promotes 'pop up' recovery (Pike *et al.*, 2010).

Although promoted as a key transformative agenda resilience therefore may be relatively powerless; unable to influence socio-cultural agendas and instead confined to the hinterland of regulatory planning through design guidance or building codes. Whilst undoubtedly important, these strategies focus on the time and degree to which a pre-shock normality is resumed through predominantly reactionary closed system approaches acknowledging neither trajectories of change nor the need for regime adjustment in response to threshold exceedance. In other words, the desirable political imperative to appear to pursue evolutionary resilience, may conflict with existing governance tools that underpin techno-rational rather than socio-cultural approaches, significantly diluting the impact of a potentially powerful agenda.

Resilient Buildings or Resilient Societies?

Interpretations of the concept also touch upon issues of scale: techno-rational viewpoints promote resilient buildings; resilient *societies* are more analogous with socio-cultural policies. On a smaller spatial scale, securing resilience often includes engineering alterations to proposals, such as the materials used or building design. Whilst equilibrist views of resilience are reasonable policy outcomes they may perpetuate communities as passive receptacles of risk; 'protected' but potentially locked in a cycle of detriment and recovery in a similar vein to the 'safe development paradox' (Burby, 2006) or the 'escalator effect' (Parker, 1995) within floodplain management. Critically, this understanding divorces *drivers* from *outcomes*, prioritising elasticity and an efficient rebound from shocks. A focus on returning to a fixed equilibrium may be resilient in the short term but have the opposite effect over a longer time period, embedding risk spatially.

However, not only may strategic objectives such as resilient cities, economies or even nations challenge practice, but change at larger spatial scales may have unintended consequences at local levels. For example, evolutionary notions of resilience do not just acknowledge

multifaceted interconnections, but advocate a re-evaluation of existing decision making processes and priorities for space. Although appreciating the effects of resilience over wider scales and sectors is challenging it is critical for understanding the *'interplay between persistence and change, adaptability and transformability. Without the scale definition, resilience and transformation may be in conflict'* (Folke *et al.*, 2010: 6).

Like risk (Beck, 1992), resilience is a political, cultural and social construction. The concept has therefore become open to expert reconstruction generating further challenges for risk governance. Those staking a claim in the concept of resilience experience tensions as stakeholders pull it in potentially conflicting ways. Inevitably, therefore, resilience within planning will have to engage with power as it concerns choices regarding the negotiation of space and the creation of place. For example, whilst the article has already highlighted the problems of a simple return to equilibrium, there are further operational issues such as what any equilibrium should be and for what purpose? Economic or social resilience outcomes may compete and if a sub-optimal equilibrium is pursued it may even make places *less* resilient as methods to respond to an immediate threat may impinge efforts to achieve long-term adaptability. Furthermore, simply returning to a previous position may benefit one sector of an economy at the expense of another, with exposure consequentially amplified or with impacts displaced.

Practical efforts to achieve resilience are frequently facilitated by an emphasis on best practice. With regard to spatial planning and resilience this is focused on the building scale and may include, for example, buildings able to resist fire (CLG 2008), terror attacks (see www.nactso.gov.uk) or to recover quickly from flooding (CLG, 2007b). This design and engineering-led view of resilience is relatively transferable between locations. As the spatial

scale increases, it is, however, difficult to maintain this simple approach and notions of resilient cities emphasise the need to address drivers and work in an interdisciplinary manner (Otto-Zimmermann, 2011), which given the variable geographies, institutions and resources of urban areas may be a strategy that is difficult to reconcile with reductionist measures. Christopherson *et al.* (2010: 9) emphasise this point, stating: *'we should avoid assuming that the same drivers of change are at work everywhere and if we just pull the right levers, the appropriate drivers will respond and deliver the required outcomes'*.

Yet, given recent trends in planning it may be inevitable that there will be efforts to codify resilience through a series of homogenised exemplars which may not reflect spatial differentiations. Indeed equilibrist, engineered approaches may be *'ill-equipped to explain the geographical diversity, variety and unevenness of the resilience of places'* (Pike *et al.*, 2010: 61), whilst evolutionary notions of resilience are more dislocated from space and place and resist exemplification. Where this is attempted, the promotion of best practice may leave *'development dialogue trapped in the abstract, where reports create false expectations, and where regions may be led towards ill-suited programme interventions'* (Bristow, 2010: 161). Beyond discrete individual proposals the concept may be unhelpfully heterogeneous, relating to processes, networks or broader driving forces operating across sectors at multiple scales. Therefore, resilience may be politically packaged as 'placeless' but resist the application of a one-size-fits-all spatial straightjacket, inhibiting transferability.

Table three develops the theme utilised in this article by linking the differing interpretations of resilience with their divergent planning approaches. Analysing the policy landscape, it is clear that resilience initiatives can lead to distinct outcomes, underlining the need to be clear about *which* resilience is relevant and *why* it is desirable. Equilibrist approaches are techno-rational,

have synergies with vertically integrated approaches and mainly resonate with a homogenised focus. They can be effective at the building scale via the development management system, and whilst do not challenge existing governance or practice, may fit very well within existing planning frameworks. Evolutionary resilience outlooks are more tuned to socio-cultural conditions, advocating horizontal integration across sectors. Their multiple equilibria approach links well with forward planning and strategic city-scale or societal dimensions, but their heterogeneity means it may be difficult to translate into practical outcomes.

	Equilibrant Resilience	Evolutionary Resilience
Aim	Equilibrant Existing normality Preserve Stability	Adaptive New normality Transform Flexibility
Focus	Endogenous Short-term Reactive Atomised	Exogenous Medium to long-term Proactive Abstract
Planning Approaches	Techno-rational Vertical integration Building focus Homogeneity	Socio-cultural Horizontal integration Societal focus Heterogeneity

Table three: how the aims and foci of equilibrant and evolutionary resilience demand differing planning approaches.

Discussion and Conclusion

The influence of resilience spans the interests of spatial planning, from communities to infrastructure to built environment sustainability more generally. Resilience has consequently become ‘naturalised’ (see Jessop, 2005) - no longer considered a conceptual tourist in the vocabulary of spatial planning, but accepted and recognised as a key notion to address the uneven ability of places to respond to change.

The issues highlighted in this paper help demonstrate how problematic it is to transfer a concept developed in the natural sciences to the logics of the social sciences, which can map onto broad disciplinary understandings but face difficulties in translation. This legacy still resonates, as in an effort to demonstrate the concept’s relevance and to provide a tangible illustration of its potential practical utility, a range of ecological terminologies, such as sensitivity, thresholds and adaptability may be utilised (Homer-Dixon, 2000) and consequently reinterpreted within disciplinary contexts. Political organizers frequently utilise umbrella concepts designed to draw strange bedfellows together (Markusen, 2003), yet the easy ability of resilience to influence a host of distinct subject areas is not necessarily useful in practice to the extent that there is a viable view that for some resilience should be *‘thrown out in favour of concepts that are more meaningful within disciplinary contexts’* (Chritopherson *et al.*, 2010: 4).

Indeed, the very pliability of the term threatens to undermine its utility and longevity: interpretations of the concept can be seen to be both certain and flexible; preservationist and transformist; reactive and proactive; and homogeneous and heterogeneous. Though these protean qualities can prove valuable at engaging seemingly disparate disciplines, places and spaces, this paper argues that without clarity over conceptual framing in practice resilience will mainly be delivered in its most simple and unchallenging equilibrist, engineered understanding.

Although seductive to policy-makers, resilience has been revealed as inherently ambiguous for practitioners, reinforcing its manifestation as essentially ‘restless’ (Gleeson, 2008). Notwithstanding this conceptual fuzziness, or perhaps, because of it, resilience has been commissioned to support a raft of subsidiary initiatives. It has become a ‘*useful but unspecified metaphor among policymakers in the context of uncertain and disruptive change*’ (Pike *et al.*, 2010: 61), transcending administrative, national and geographical boundaries, and interchangeable between actors, interests and institutions. This rapid emergence may better reflect the term’s rhetorical rather than practical utility. The wide range of contemporary risks threatens not just the ability of states to demonstrate control and governability, but of markets to operate, for capital to be efficiently accumulated and for societies to lend legitimacy to these ensembles. Significantly therefore, resilience may be described as a mechanism better able to promote political *confidence* than practical change, resonating strongly with the social constructivist global ‘securitization’ discourses, which are becoming prevalent at national scales (Aradau, 2009).

Although the concept may appear a neutral, progressive antidote to uncertainty or, like sustainability, a platonic idea of the ‘good’ (Neuman, 2005), the concept should be approached with caution, as whilst theoretically it has potential to depoliticise the dynamics of change (Wilkinson, 2011) in the harsh competition of practice it will bring both ‘winners’ and ‘losers’. Yet there is little recognition of how power dynamics have underwritten its trajectory (Hudson, 2010) and subsequent application. As demonstrated in the previous sections, resilience has a clear ideological if not yet practical power; yet conversely, a key allure of the concept is that it *appears the opposite*: eminently practical and not at all ideological.

The multiple understandings of the ontological and epistemological framing of resilience lay the foundation for differing outcomes. Policy analysis revealed that there is an overwhelming tendency to interpret resilience as an ‘engineered’ response, where risk is countered in an equilibrist, atomised manner with the definitional concerns and socio-cultural aspects mostly unacknowledged. Further, although planning is well placed to pursue the opportunities that disturbance offers and facilitate the collaboration necessary for more evolutionary approaches it is constrained by innate orderly pressures that resist ‘novelty’ (Davoudi 2012b). Even where more ‘adaptive’ language is used it may also be enveloped within an engineered understanding, as may be seen with how the disaster cycle has been engaged with from a narrow emergency response view. It appears that equilibrist resilience has prevailed as it describes a reality more analogous with planning norms, engineered responses, dominant interests and techno-managerialism trends.

Relationships between cities and their inhabitants are changing. Hodson and Marvin (2010: 2) argue that this is *‘not a phenomenon that is happening naturally but is the product of specific social, economic, political and spatial processes, and that these changes have profound implications for the mutual organisation of cities and infrastructure and consequently for the shape of future urbanism’*. Yet, much of the discussion of resilience in policy and practice has an air of inevitability that fails to acknowledge this interconnectivity, essentially becoming an engineered response to the way the world is. Here, the wider processes that both drive risk and enable adaptive change take on an aspirational air that does not mesh well with the realities of spatial planning practice.

Resilience has been revealed to be post-political to the extent that it is framed as an inevitable outcome of capitalism and its associated social and economic paradigms (Swyngedouw, 2009).

Alternative evolutionary approaches are tangential to the policy discussion with outcomes instead focused on consensus and technocratic management. Whilst conceptually presented as a possible paradigm shift, resilience policy may serve to underpin existing practices; consensually accepted into the post-political mainstream with its logical narratives of inevitability and recovery avoiding difficult questions concerning the impacts of capitalism more generally (Klein, 2007) or neoliberal growth agendas central to contemporary spatial planning (Allmendinger and Haughton, 2011).

The pursuit of equilibrist resilience can therefore be seen as deterministically counter-productive, resisting adaptive transformation by suggesting circumstances are inevitable and even reinforcing neoliberal discourses of capitalism that have a tendency to naturalise crises (Evans, 2011). An alternative socio-cultural view, for example, could involve challenging the aspects of capitalism that separate nature from the built environment, exacerbating climatic change and eroding natural capital in cities (Hough, 2006). However, this more radical evolutionary agenda has not yet translated from academia to practice. Embracing risk in a techno-rational manner fails to recognise the critical importance of the underlying structures of neo-liberalism and global capitalism that drive contemporary urbanism (Hodson and Marvin, 2010) underpinning instability and perpetuating the risks to people and places. As Neocleous (2013: 5) explains: *“Neoliberal citizenship is nothing if not a training in resilience as the new technology of the self: a training to withstand whatever crisis capital undergoes and whatever political measures the state carries out to save it.”*

Whilst in some ways this reductionism is a function of applied practice within the complexity of urbanology, it is also a form of ‘crypto positivism that is strongly suggestive of a naturalised human society’ (Gleeson 2012: 938), with the seemingly expansive resilience narratives

described at the start of the paper leading down ever narrowly prescribed spatial pathways as outcomes draw near. This may be a product of how resilience is framed as such a powerful rational logic by the political class, the naturalistic strains of which reinforce the urban determinism so prevalent in modernity that privileges spatial forms over spatial processes (Gleeson 2012; Harvey 1997).

Whilst resilience offers a case for community empowerment, the nature of threats and the inability of citizens to address them appears to privilege expert, technical knowledge. However, resilience is promoted as essentially inclusionary - even empowering – with an added ability to stimulate the private sector in countering vulnerability. Techno-rational narratives applied to individuals argue against the collectivisation of risk, undermining principles of welfare universalism and promoting the individualisation of managerial strategies. This market-orientated responsabilisation transforms people from subjects to active citizens and ‘consumers’, neatly mapping onto self-reliance dimensions of resilience (see Cole and Mazell, 2010). Critically, however, such interpretations depend upon well-informed citizens and the affordable provision of insurance or technology. Therefore neoliberal promotions of personal resilience may be socially regressive given how financial limitations or a lack of capacity will preclude the engagement of many.

There is a perception in policy of resilience as a uniformly positive force, but the findings from this research suggest that this may not carry through to practice, with some intervention strategies and sections of society privileged over others. This approach also creates a *resilience paradox* whereby threats are normalised and reacted to – essentially a product of attempting to apply the ‘laws’ of a naturalistic approach to a subject with an inherent unknowability. The dual meaning discussed in this article is also at the heart of this paradox – what it may promises

to alleviate in political rhetoric it propagates in practice – simultaneously managing the impacts of risks and failing to grapple with those structures that embed it.

Although some posit that the concept of resilience is becoming a '*pervasive idiom of global governance*' (Walker and Cooper, 2011: 144) this paper argues that its influence on spatial planning is rather more muted given the disconnect of more evolutionary notions from the practical outcomes so central to this sphere. We have discussed how there are contrasting interpretations of resilience, and critically that they each have their own drivers, planning approaches and outcomes. We also highlight that the rapid acceptance of resilience has been facilitated by its innate ideological synergy with dominant post-political and neoliberal governance trends centred on complexity, responsabilisation and economics.

In much the same way that Sustainable Development similarly captured the zeitgeist of the late 20th century; resilience may be the perfect symbol of its time: a conveniently nebulous concept incorporating shifting notions of risk and responsibility bounded within a reconstituted governance framework – all of which can engender confidence and potentially facilitate the transfer of costs away from the state to the private sector and communities. As the agenda moves from rhetoric to reality however, if the very same fuzzy qualities which aided its rise remain unaddressed they may serve to undermine the effect of a promising notion to manage change in an uncertain world.

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