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The politics of resilient cities: whose resilience and whose city?

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It is vital to acknowledge the socio-political complexity of the deployment of the term 'resilience' and to develop a more unified set of expectations for the professions and disciplines that use it. Applied to cities, resilience is particularly problematic, yet also retains promise. Like resilience, the term 'city' is also subject to multiple contending definitions, depending on the scale and on whether the focus is on physical spaces or social communities. Due to cities and city-regions being organized in ways that both produce and reflect underlying socio-economic disparities, some parts are much more resilient than others and therefore vulnerability is often linked to both topography and income. Uneven resilience threatens the ability of cities as a whole to function economically, socially and politically. Resilience can only remain useful as a concept and as progressive practice if it is explicitly associated with the need to improve the life prospects of disadvantaged groups. This dimension is often lost in definitions of resilience drawn from engineering and ecology, but remains central to conceptualizations linked to social psychology. To improve the prospects of cities proactively (and reactively), there is a need to unify the insights from the multiple professions and disciplines that use 'resilience'.

Keywords: disaster recovery, equity, resilience, resilient cities, social justice, urban planning and design, urban politics

Introduction

When applying the idea of resilience to the complex social ecology of a city, it is important to ask exactly what researchers and professionals mean when they link these concepts. This entails being careful about clarifying what is meant by 'resilient' and, equally, what is connoted when researchers talk about a 'city'. References to cities can be about smaller subunits – such as neighbourhoods, districts or boroughs – or about jurisdictions encompassing some distinct municipal unit of governance (e.g. the City of Paris) or can, more broadly, be about larger polycentric city-regions. Similarly, use of the term *city* can be focused on its physical landscapes and attributes or on the highly differentiated social space of its inhabitants. 'Resilience', in turn, is both a concept and a practice, increasingly deployed to link concerns about community development and disaster preparation to large global challenges such as climate change that will have significant consequences not just for the 'globe' but for specific underserved communities in specific vulnerable places. Resilience is, simultaneously, a theory about how systems can behave across scales, a practice

or proactive approach to planning systems that applies across social spaces, and an analytical tool that enables researchers to examine how and why some systems are able to respond to disruption.

Socio-environmental resilience can be conceived and practised at a variety of scales and configurations – ranging outward from individuals to households, communities, neighbourhoods, firms, civil society institutions, governance structures, and infrastructure networks, as well as to supra-urban forces of sub-national regional hinterlands and even multinational regions. As a consequence, the significance of resilience depends on whose resilience is being described. One must ask: Resilience for whom and against what? Many different entities (e.g. individuals, communities, academic disciplines, professional fields, governments, corporations) all seek to claim the term. How do they decide whose resilience to care about? And whose resilience is omitted in the process? In the context of urban planning practice, environmentalists, government officials, disaster planners and economic development scholars each claim the concept of resilience for

divergent purposes. Is there some common core to resilience as a concept that can keep it useful as a guide for urban practice?

Burgeoning of resilience

In recent years, the term 'resilience' has increasingly found favour in several fields (Vale, 2011). It has been embraced by planners and urbanists as a way to describe the ability of cities to respond to systemic threats. But 'resilience' also has an established resonance in fields ranging from engineering to ecology to psychology, and it is increasingly applied to business and economics, to information technology networks, and even to what in the US has come to be called 'homeland security' (Ginzburg & the AAP, 2006; Hollnagel, Woods, & Leveson, 2006; Mitchell & Townsend, 2005; Pickett, Cadenasso, & Grove, 2004; Rodin, 2013; Sheffi, 2007; Vale & Campanella, 2005; Välikangas, 2010; Walker & Salt, 2006).

Many different fields actually deploy resilience in a similar way, viewing it as a way to conceptualize response to disturbance. Management analysts use resilience as a measure of an organization's ability to recover from a disruption to a headquarters or to some key element in a supply chain and to return to 'business as usual'. Economists measure resilience with regard to the ability of a place to recover from the loss of an industry or key employer. Psychologists have long used 'resilience' to describe the capacity of certain kinds of individuals to withstand major traumatic events and to continue to function effectively. Information technology (IT) professionals see resilience as a measure of how well a communications network can cope with the disruption of service, epitomized by a massive power failure. National security personnel also see resilience in terms of large systems, and seek new ways to ensure robust communications even after a massive disruption, whether caused by a hurricane, a cyber-attack or a terrorist.

In short, management analysts and economists focus on some threat or change to an important node, one that has been designated in advance. IT professionals look at networks and emphasize redundancy to compensate for loss, as do national security personnel, who have an added interest in how processes are related and can create chains of disruption or recovery.

Engineers and the ecologists have tended to use the term 'resilience' rather differently from one another, and in revealing ways. To engineers and to materials scientists, resilience is a mechanical process of bouncing back from a perturbation, something inherent in the materiality of the disturbed object. To this extent, they share this common professional mindset, rooted in notions of systems that seek equilibrium. Ecologists, concerned

with the long-term viability and nature of ecosystems, are also concerned with resilience as a measure of how much a system can be restored to its original balance following a disruptive event, such as a depletion of fish stocks. As C. S. ('Buzz') Holling first stated in 1973:

> Resilience determines the persistence of relationships within a system and is a measure of the ability of these systems to absorb changes ... and still persist.
>
> (p. 17)

He paired this notion of resilience with the concept of *stability*, defined as:

> the ability of a system to return to an equilibrium state after a temporary disturbance.
>
> (p. 17)

An important distinction in the ecological approach to resilience is the notion that there is a limit to ecological resilience and that once such systems pass this limit they collapse into a qualitatively different state (possibly including species extinction), a new state that is controlled by a different set of processes. It is here that ecologists shift the concept of resilience closer to a non-equilibrium model, one that yields a much more promising metaphor to apply to the interpretation of cities (Pickett *et al.*, 2004).

At a time of enhanced economic insecurity in many parts of the globe, coupled with the growing wariness about terrorist threats and the growing impacts of climate change, it is hardly surprising that a term like resilience has found multiple resonances. A key aspect of urban resilience is responsiveness to sudden changes – unanticipated disruptions – but resilience can also help frame more gradual transformations, helping to guide responses to more predicted (or predictable) matters such as deindustrialization and urban shrinkage.

Who will take control of the term and drive its usage? Will it be driven by the engineer's concept of resilience as a 'bounce back' to some pre-perturbation status quo that is assumed to be more desirable than the present, or will resilience thinking embrace the uncertainties of ecological models, in which a new system may operate with a different hierarchy? Both versions of resilience, however, too easily assume that there is some future steady-state (or a return to a past one). Yet what happens if assumptions about past or future stability are untenable, or if social environments that are stable are also deeply inequitable? Increasingly, citizens face up to a world that, as Donald Schön (Schön, 1971) put it two years before Holling's seminal article, is 'beyond the stable state'.

To some extent, contemporary theories of ecological resilience offer a useful entry point here, by positing

the existence of multiple states of equilibrium. By extension, this accepts the possibility of non-equilibrium in which, as Steward Pickett and colleagues put it:

> resilience is the ability of a system to adapt and adjust to changing internal and external processes.
>
> (Pickett et al., 2004, pp. 373–374)

This may open up useful avenues for applying the concept of resilience to the concept of cities, especially since the ecologist's non-equilibrium version of resilience also emphasizes key questions about the dynamics of system change. Cities, however – and especially city-regions – are always in states of uneasy non-equilibrium (perhaps because a city's state of equilibrium is, paradoxically, the presence of constant or oscillating change) – and the internal and external pressures for urban change come from multiple directions.

Even if ecologists now define resilience as 'the ability of a system to adjust in the face of changing conditions', there is still a great political distance to travel before this insight can be made useful on the contentious terrain of cities. There is a vast and still-growing literature on 'uneven development' and 'social exclusion', and this implies either that most forms of urban equilibrium are illusory or that that such equilibrium as exists is built upon profound inequality. Moreover, the dynamics of any proposed system change are almost always actively contested. Underlying nearly all socio-environmental systems is a struggle for control over what the next state will be – and a corresponding struggle over who will control it. Forty years after Holling first articulated an ecological theory of resilience, researchers are left with additional puzzles about how (or whether) to adapt this theory to explain socio-environmental activity in cities. It is not enough to monitor and measure the magnitude of stress that a system can handle before collapsing into some other system; it also matters which active interventions are deployed to delay or alter that system's change, and it matters who directs the interventions and who are the intended beneficiaries. And, ultimately, it should matter who *actually* benefits from the results.

'Resilient cities' as an emergent but ill-defined framework

In the last several years, the concept of resilient cities has inspired a substantial number of books and articles, and become the organizing concept for multiple academic conferences, research centres, reports and initiatives by major foundations, the United Nations and The World Bank. This does not mean, however, that the central concept is well understood or even consistently defined. Between 2005 and 2013

alone, there have been close to a dozen books with some version of 'resilient city' in the title. The first of these, *The Resilient City: How Modern Cities Recover from Disaster* (2005), which I co-edited, was intended to demonstrate how difficult it is to define the recovery of cities from disasters (though it has been sometimes misinterpreted to have merely asserted the ubiquity of resilience) (Vale & Campanella, 2005). Another volume, *Resilient Cities: Responding to Peak Oil and Climate Change* (Newman, Beatley, & Boyer, 2006), emphasizes a definition of resilience centred on the need to cope with natural resource depletion and a changing planet. That book, in turn, shares a 'Resilient Cities' title with the series of volumes that come from the annual forum sponsored by ICLEI: Local Governments for Sustainability, as well as other volumes from the United Nations and The World Bank and events and networks sponsored by the Rockefeller and MacArthur Foundations (Prasad et al., 2009; UNISDR, 2012).[1]

A different kind of book, *The Resilience of Cities to Terrorist and Other Threats* (Pasman & Kirilov, 2008), examines the 'resilience of cities' through analysis of the capacity of well-engineered buildings to withstand terrorist attacks, while other books such as *The Everyday Resilience of the City* (Coaffee, Wood, & Rogers, 2008) assess a broader set of socio-spatial effects of anti-terrorism on cities. Then there is *Resilient City: The Economic Impact of 9/11* (Chernick, 2005), focused on the economic consequences of the 2001 terrorist attacks on New York City. There is additional scholarship on *Collaborative Resilience* (Goldstein, 2011), which examines community responses to crisis, akin to another volume on *Building Resilience: Social Capital in Disaster Recovery* (Aldrich, 2012). There is even a book on *Public Libraries and Resilient Cities* (Dudley, 2012) – not to mention multiple other volumes that centre on the similarly named concept of 'urban resilience' (see also Blakely & Carbonell, 2012; Coyle, 2011; Meyerowitz, 2002).

As these diverse intentions suggest, the single concept of 'resilient cities' can connote a focus on urban security, on economics, on building technology, on specific building types, on counter-terrorism, on communities, on social capital, on natural disasters and on climate change. This suggests either that resilience is excessively malleable as a term, yielding wildly divergent discussions about cities that have little to do with one another, or that the pairing of 'resilient' and 'city' usefully recognizes connections among subjects commonly viewed as unconnected can lead to fruitful insights if viewed together. Right now it seems like a lot of each. There is enough potential convergence and value for practice, however, to suggest that resilience as a concept can resist becoming an empty signifier. To rescue it from the meaninglessness of mere ubiquity will entail efforts to steer multiple definitions

towards some common ground. Fortunately, the multiple disciplines with interest in the concept and the wide-ranging domains proposed for its application all have much to contribute to the understanding of urban transformation.

Making resilience urban

When one attempts to link the concept of *resilience* to socio-environmental systems such as cities, one gets into the realm of planning and urbanism in two somewhat distinct ways. Resilience, in one sense, is an anticipatory venture. Planners and designers ask: What can we do now that will enable us to recover more quickly *if* a sudden perturbation should occur? Or, applied to cities and their neighbourhoods: What designs and policies can be implemented now that will make communities more likely to be energy efficient, environmentally sensitive, broadly affordable, well managed, physically and socially attractive, and equipped to withstand climate change, security threats and other likely disasters? This form of design and planning is resilience as a form of resistance, an effort to strengthen a city in order to anticipate future problems and seek proactive solutions that enhance the quality of both public and private living spaces.

Pursuing this form of resilience is never simple or easy, however. Proactive/preventive resilience entails upfront expense and difficult choices about which parts of the built environment should receive investment and, therefore, which people should benefit. The attempt to enact resilience assumes that officials can and will make decisions about who is at risk and who should be protected. This pre-emptively entails top-down judgments about which locations (and which people living in them) are most vulnerable to hazards – whether those hazards are judged to be natural, anthropogenic, or (as is usual) some combination of the two. Moreover, rapid urban development and redevelopment, seen from the perspective of those most likely to be displaced by it, can itself be seen as another form of hazard. If, for instance, waterfront habitats are presumed to be dangerously vulnerable to future sea-level rise associated with climate change, low-income residents can easily be among the first to be displaced (whereas high-income beachfront homeowners may be afforded greater leeway). Low-income residents and businesses, especially if housed in flimsy structures, can be told (with a modicum of narrowly argued truth) that this displacement is for their own good, yet all too often they find that they are merely replaced by 'higher and better' uses for the land, and that they receive scant compensation for their loss of spatial centrality and valued social networks (Vale & Gray, 2013). A more holistic

view of anticipatory resilience, then, needs to respect and accommodate the full range of affected parties.

Most frequently, perhaps, planning and design operate in a reactive mode. Planners and designers are brought in *after* a disaster (or some other disruptive downturn) has already occurred. Such disasters usually entail acute situations such as an earthquake, hurricane, tsunami or flood (and the effects of the latter may even be exacerbated by poorly constructed or poorly maintained levees and canals that had been previously thought to be proactively resilient practices). In this second sense – reactive resilience – the urban design and planning challenges are centred on questions of retrofit and on strategies for recovery management.

Resilience is a complex concept to transfer to the built environment because it operates in these two distinct modes: proactive/preventive resilience and reactive/restorative resilience. These two modes do not always coincide, which presents difficult political challenges to those who wish to champion the concept. Planning that tries to be both proactive and reactive – striving for better conditions whether or not some particular negative event has occurred – makes that challenge more daunting.

The concept of a 'resilient city' forces engagement with the larger societal questions that nagged Schön: Is there any longer some 'stable state', some status quo, that planners should want our society (our human ecosystem) to maintain or regain? And, if not, how should professionals act? Unfortunately, the mythical pre-perturbation state that many idealize as the goal of 'recovery' is all-too-often not a very just or equitable socio-economic system. An unexamined self-interest is ever-present in efforts to speed and direct recovery of urban systems. It matters a lot who the 'we' is that gets to set the priorities for investment. These priorities reveal which portions of a city (and therefore which residents) the leadership views as needing the most attention at a time of crisis. Their response may vary somewhat depending on whether the crisis has already happened or whether it is cast as an ever-growing threat for the near future. Moreover, different spatial areas and different social groups start from very different baselines, so the resources required to assist people to reach some 'stable state' judged to be acceptable can vary considerably. Resilience takes place across a highly differentiated landscape of risk, and is intimately tied up with deeply political choices that are being made by public and private leaders about how to manage such places.

In Sri Lanka, for instance, following the devastating tsunami of December 2004 the government favoured construction of luxury coastal hotels, securely built of concrete, to replace rickety low-income fishing villages (Klein, 2007). Such a practice only promulgates

resilience in the narrow sense of durable building construction, but it fails to embrace the broader dimensions of the concept. By accepting only the engineer's definition of resilience, it loses sight of the social psychologist's domain, misses the broader considerations of regional economic well-being, and fails to consider the larger interconnections of the area's social ecology.

Although resilience may be unequally distributed in practice (and may therefore fall short of meeting its potential for equitable engagement), as a concept it nonetheless conveys a commendable sense of urgency and action. In this way, a key advantage of the phrase *resilient city* over the various – and perpetually elusive – invocations of 'sustainability', 'sustainable development' or 'sustainable urbanism' is that resilience is a more explicit challenge to the inadequacy of existing systems. By contrast, sustainability implies that it may be sufficient merely to *sustain* them. Resilience has the added advantage of a long-standing association with the psychology of individual human beings. To be sustainable in human bodily terms can mean merely to be alive, whereas for a human to be perceived as 'resilient' conveys a strength of purpose and capacity to overcome adversity. Similarly, resilience holds advantages over sustainability because it has taken on strong associations with security. Resilience as a concept evokes not just environmental quality but also the capacity to live safely within such improved places. Even though the particular notion of security implied by resilience tends to be more associated with the hardening of spaces against potential attack, the term carries with it an explicit and comforting sense of protection against future hazards, a feature that is less immediately palpable in the term sustainability, even though the latter concept comes with vague reassurances about a commitment to the well-being of future generations.

Nonetheless, if those hearing the term think only of the engineering view of resilience, this term shares the same drawback as sustainability, since it is all too possible to 'bounceback' (or shift into) an untenable situation that is prone to further breakdown and inequity. In this narrow sense, resilience is not always a good thing.

Resilience as a concept offers greater utility as a guide for practice only if a definition can simultaneously encompass multiple dimensions: the notion from psychology that individuals become stronger as a result of challenges, the attention to systems and networks in management and IT, the bounceback described by engineers, and the ecologists' idea that disruption creates dynamic change and may lead to a non-equilibrium outcome. Beyond these, however, resilience theory can only become a viable guide for resilient practice if there is an ethical imperative to ensure that the benefits of urban investment in resilience are equitably shared by those who have suffered the most or who are poised to face such dire consequences in the foreseeable future.

When applied to something as diverse as a city, resilience is necessarily a normative concept. It can certainly be biased towards a status quo that entails profound inequalities but it also can, more progressively, be defined as a practice that actively seeks to overcome such inequity. It is not easy to pursue the latter course. Resilience as a practice is deeply implicated in the systems of governance that existed just prior to a traumatic event. As such, unless superseded by a higher level of political authority, those charged with managing a recovery process are also concerned with efforts to restore the legitimacy of political leaders who, almost inevitably, have received criticism for some aspect of their ability to anticipate or cope with sudden losses. If the chief function of government is to protect citizens from harm, the destruction of densely inhabited cities is the greatest possible challenge to the competence of that authority. However, in cases where a pre-disaster regime could be widely viewed as corrupt or anti-democratic, efforts to restore and support its rule following a disruptive event may reveal an important downside to resilience. Those who govern less democratically may also consider themselves resilient if they have merely managed to perpetuate their own power and authority.

Cities are not uniform landscapes of randomly distributed persons but are, instead, organized in ways that both produce and reflect underlying socio-economic disparities. Therefore, it is almost always over-simplistic to describe an entire city as 'resilient'. Almost every conceivable environmental perturbation is experienced differently within a city, depending on specific locational attributes that, all too often, are in turn distributed to situate those with the most socio-economic vulnerability in the most physically and environmentally vulnerable places. Scarce land and the high cost of housing often force poor residents to live in flood-prone areas of cities. When it comes to a phenomenon like climate change, where adaptation techniques can be very expensive, all of these questions matter even more, especially since climate change yields lots of losers, but not everyone loses equally.

Most societies are not in anything like an ecological equilibrium at the moment just before the latest disaster strikes. Some scientists and engineers may still refer to resilience as returning to 'equilibrium after displacement', but many societies actually face plenty of displacement of the socio-economic sort well before some discrete or dramatic crisis occurs or nameable specific disaster strikes – unless it is a sweeping socio-economic transformation such as de-industrialization or extraordinarily rapid urbanization (as in China). Experts often assert that displacement is in the best

interest of vulnerable residents – and they may some-
times be right – but this does not make it any easier
on those who see others enthusiastically benefitting
from the alternative investment that follows upon
their own forced departure. Ultimately, whatever the
cause, what practitioners too easily call 'recovery' is
experienced in a highly differentiated way by different
individuals and social groups in different spatial
locations. This is why the 'city' aspect of *resilient city*
is at least as hard to conceptualize as the 'resilient' part.

Seen this way, the concept of resilience seems destined
to be no more than an optimistic gloss on glaringly per-
sistent inequalities, a 'feel-good' phraseology that
covers up its differential impacts and ignores its
failure to help those who most need assistance. But
what if one asks more of the concept? What if the
various disciplinary definitions of resilience are taken
together in ways that embrace and connect multiple
ways of knowing and doing, each providing some addi-
tive value? If resilience is seen to be an integrated
system in which the well being of all parts is intricately
connected, it becomes possible to view the practice of
resilience – as part of its very definition – as about
improving the life circumstances of the most physically
and socio-economically vulnerable residents. Ulti-
mately, in an interdependent economy, the financial
costs of attending to the most disadvantaged will be
borne by all – either proactively, or retroactively
after disaster strikes. Given this, financially as well as
morally, city resilience must be pursued and measured
holistically.

Situating urban resilience

The value of resilience as an agenda for cities can only
be assessed by considering actual examples of resilience
in action. In the immediate aftermath of the attacks of
11 September 2001, I directed the 'Resilient City'
project at the Massachusetts Institute of Technology
(MIT), which aimed at understanding the ways that
people and places cope with a sudden traumatic dis-
ruption. The research team members did not want to
consider only the impact of 9/11 as it was too soon
to tell, but instead sought to set the 9/11 attacks in a
much broader historical context of other places
facing instances of sudden destruction (whatever the
cause), followed by difficult periods of recovery. The
goal, both in the initial colloquium and in the co-
edited volume that followed, was to try to characterize
'The Resilient City' and to explain 'how modern cities
recover from disaster'. In other words, rather than just
tell the stories of various ways that traumatized cities
and their people had exhibited resilience, the intention
was to create a proto-theory of urban resilience.

In examining the ways that various communities
responded to disaster, the research team found that

many different constituencies defined 'recovery' differ-
ently and prioritized readiness for future threats in
different ways. At the same time, however, these
actors exhibited some common tactics and strategies,
indirectly revealing the operation of resilience-seeking
behaviour even if they did not actually make use of resi-
lience as a term. The stories of communal efforts to
recover collectively suggest that resilience takes place
in at least three domains simultaneously: the physical
restoration of the built environment, the pecuniary res-
toration of the economy, and the emotional resuscita-
tion of individuals and families. In other words,
resilience as experienced on the ground draws upon
insights from several kinds of conceptual resiliences.
What seems to be needed is a definition of resilience
that embraces the need for physical bounceback,
socio-economic networking and psychological recov-
ery. If planners and designers are to be useful in imple-
menting resilience as a form of practice, then they
need to integrate the insights and approaches from
engineers, ecologists, economists and psychologists.
Like the classic story of blind men trying to describe
the elephant, these disparate disciplines have identified
parts of the phenomenon but missed seeing the totality.

Looking at resilience through the lens of the planner/
designer reveals additional dimensions. By identifying
connections among technical processes, socio-econ-
omic systems and human behaviours, the actual mech-
anisms of urban resilience can be revealed. Urban
leaders actively invent the notion of resilience
through a process of social construction that takes
three principal forms:

- efforts to promulgate and manage a dominant nar-
  rative about the state of recovery

- strategies to highlight conspicuous symbolic mile-
  stones of recovery

- negotiation with city residents over the politics of
  redevelopment.

Resilience, when applied to cities, is centred on stories,
symbols and politics – three things that are valued by
the social science side of resilience thinking but often
neglected in the domains of engineering or ecology
where the power of human agency is treated less
centrally.

First, any effort to rebuild after disaster is, in part, an
attempt to develop a dominant story line that is plaus-
ible to both locals and outsiders. Government leaders –
seen to have failed in their duty to protect citizens even
if the destruction could be blamed to some extent on
'natural forces' – need to regain legitimacy and trust.
They tend to do so by making large promises to
'build back better than ever', making sure that the

dominant narrative is constructed around the idea and ideals of progress. Second, when city leaders do build back, they often prioritize particular aspects of the symbolic landscape. By restoring some particularly resonant structure that had been conspicuously damaged, by staging some culturally significant local event that had previously been threatened with cancellation, or by embarking on some other especially visible new project, it becomes possible to celebrate a milestone that shows the distance successfully traversed since some disastrous low point. This is the visual evidence needed to demonstrate 'bounceback'. Finally, in the aftermath of disaster, city leaders often face a crisis of legitimacy, well aware that poor performance could lead to significant electoral challenges to a regime, or even outright revolt. Governments conduct rescue operations, channel emergency funds, and decide upon redevelopment policies first and foremost as humanitarian gestures, but they also do so as a means of saving face and retaining public office (Vale, 2006; Vale & Campanella, 2005).

In part because definitions of resilience have been too centred on metaphors from engineering, ecology and business and have failed to incorporate other dimensions, researchers frequently ignore the obvious clues that are visible in the world of practice: the centrality of narrative voice (or lack thereof), architectural symbolism and political favouritism. It is therefore important to examine *who* makes decisions about resilience. This can show how dominant storylines get constructed, which powerful symbols are used to gauge progress, and how political power sets priorities for investment. Will city residents experience merely a resilient politics as usual, or can there be a politics of resilience that embraces a broader array of beneficiaries? Often, citizens ask questions that are both straightforward and remarkably vague: Has New Orleans recovered from Katrina? Will Port-au-Prince (Haiti) recover from the 2010 earthquake? Embedded in such questions is a triply contestable set of terms and assumptions: (1) has the ill-defined entity known as a 'city' embarked on (2) something that can be characterized as a 'recovery' from (3) something that can be understood to have been a 'disaster'?

For the concept of a *resilient city* to be useful in the context of a disaster, this language needs to inspire the research community to unearth this full set of complex buried assumptions, all of which also condition and constrain the pursuits of designers and policy makers. *Who* counts as 'the city'? (And *who* decides who counts as 'the city'?) How should researchers measure *recovery* and whose measurements matter? How should urban residents name and frame the 'disaster' that has occurred, given that the way a disaster gets defined may well reflect its causality and thereby allocate blame? Finally, can 'urban disaster recovery' be measured in a broad enough manner

– encompassing the economy, the building stock, and the emotional well-being of people – to warrant the label 'resilient city'?

Taking post-Katrina New Orleans as an example, it quickly becomes clear that judging resilience depends on where one looks, given that the city's repopulation has taken radically different forms from neighbourhood to neighbourhood in the years since the August 2005 disaster. Is 'New Orleans' resilient even if some of its component neighbourhoods remain half-empty? Is 'the city' resilient even if many of its poorest former citizens have not been able to return? Or, as is the view of some, is the city's resilience actually *dependent* on the departure of many of its most vulnerable residents? Does 'New Orleans' demonstrate resilience when its public housing projects get rebuilt, because this is a sign of investment in the least advantaged? If so, what does it mean if those new developments are now to be for mixed-income 'workforce' housing, rather than the last-chance housing for the city's most impoverished? What happens when low-income public housing is structurally sound but politically vulnerable? Whose New Orleans matters?

Similarly, how should progress towards resilience be benchmarked, given that progress on recovery can be signalled in so many different ways? Is resilience to be measured by the number of cranes that rise above building sites? Is increased economic activity a sufficient proxy for recovery? If so, which economic activity matters most? Is it the restoration of the port, the resurgence of the tourists to the French Quarter, or the fate of those involved with the fishing and shellfish industries? Whose jobs matter most? Finally, is it even clear what kind of disaster New Orleans has faced?

In 2005, Mississippi suffered a violent *hurricane*, but nearby New Orleans chiefly suffered the inundation of a *flood*. This terminology matters because hurricanes are primarily forces of nature but contemporary floods are inextricable from the failures of levees and other infrastructure, put in place by well-meaning human beings. The effect of Katrina upon New Orleans cannot be measured, nor can responsibility be assigned, by terming the disaster a 'hurricane'. More generally, it has become commonplace to observe that few if any 'natural disasters' are wholly natural in their origins (Hartman & Squires, 2006; Spence, 2004; Spence & Kelman, 2004; Steinberg, 2006). Both the disaster itself and the risk and allocation of damage are deeply implicated in societal choices about infrastructure location, residential development patterns and disaster recovery priorities. Given the social and political complexities of disasters, it matters how researchers frame them and what society names them. If the resilience concept is to be

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meaningful as a social and political practice in cities, then it needs to be framed holistically enough to engage the needs of the full range of urban stakeholders.

Looking across the trajectories of a global set of attempts to enact recovery from disaster, it was argued in *The Resilient City* that the engineering version of resilience (epitomized by 'bouncebackability') is the dominant narrative promulgated by city leadership, but this is not necessarily the lived reality. Assertions of bounceback, and even related notions of 'building back better', are political necessities almost to the point of cliché, but cannot hide decisions about who gets helped to bounce back first. When the engineering metaphor for resilience is deployed in a social and political context, it is no longer a descriptor for anything that is in the nature of materials (although it is certainly related to material well-being). Social engineering, as a concept, changes the metaphor because it involves efforts to create and manage a new and different socio-environmental system. It thereby shifts the notion of resilience beyond the engineering worldview and into the domain of the ecologist, but still stops short of engaging the resilience concerns raised by the social psychologist. It is all too easy to talk about 'bouncing back to where we were' without asking which 'we' is counted, and without asking whether 'where we were' is a place to which a return is desirable. The practice side of resilience thinking entails control over discourse, selection and construction of symbolic milestones, and political decisions about (re-)development priorities and sequencing. To implement resilience effectively is to engage, simultaneously, with those who wish to define it as a mechanical process of bouncing back to pre-disaster levels of building and investment, and with those who emphasize the fragile nature of complex systems, and with those who see resilience primarily through supporting the emotional needs of the most vulnerable humans.

Given the ever-widening range of efforts to invoke resilience in cities, it is clear that the term's increasing ubiquity may paradoxically also invite incoherence. If resilience is allowed to become a catchall phrase that does little more than connote a list of good things, it loses all analytical utility. If resilience is neutralized and generalized to the point where it simply connotes efforts to make places 'cleaner, greener, healthier and more inclusive' (as described by one neighbourhood resilience effort in San Francisco), it offers too many criteria that cannot be meaningfully assessed or measured. By contrast, if researchers and practitioners are willing to embrace its virtue as a concept that reveals important interconnections between environmental forces and social institutions, and if they do not shy away from confronting its capacity to open windows into a society's structure of political

power, then the notion of resilience has much to offer those who care about cities and the built environment.

Toward progressive resilience

A recent colloquy in the journal *Planning Theory and Practice* raises many useful critiques of the term 'resilience' while still trying to embrace its value. The lead authors, Libby Porter and Simin Davoudi (2012, p. 329), warn that:

> Based on a simply frequency count, resilience appears to be fast replacing sustainability as the buzzword of the moment. It may well follow a similar fate and become a hollow concept for planning; an empty signifier which can be filled to justify almost any ends.

As with 'sustainability' and 'development', the term 'resilience' may collapse into the meaninglessness that results from having too many meanings. It may be that one word is being asked to take on too many of the world's challenges, encompassing all threats to the economy and the environment wrought by everything from climate change to terrorism, and affecting everything from corporate supply chains to telecommunications infrastructure to the psychological well-being of individuals and communities.

Rather than a cause for dismissal or despair, however, the malleability of resilience ought to be moulded in ways that make it most useful. For resilience to become a vital organizing concept, it has to go beyond the limitations of its earliest engineering and ecological metaphors; instead of steady-state resilience, the value of resilience for understanding cities depends on treating cities as socio-ecological systems that are not stable and must evolve. Keith Shaw, more pointedly, adds that: 'embracing the politics of resilience is central to what the term has to offer'. As Shaw (2012, pp. 309–310) points out, resilience offers the possibility for a non-regressive evolution to a new state – a 'bouncing forward' instead of a bouncing back – so the term carries 'opportunities for political voice, resistance, and the challenging of power structures'. Reframed this way, the notion of a 'resilient city' gains new a new progressive focus. The biggest upside to resilience, however, is the opportunity to turn its flexibility to full advantage by taking seriously the actual interconnections among the various domains that have embraced the same terminology. If all those who use 'resilience' to see the world through a narrow disciplinary lens – whether it be socio-economic, architectural, ecological, infrastructural, cultural, or political – can come to see why the same term applies in interconnected ways in

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the worldviews of others, the term may legitimately serve as a vital and welcome intellectual bridge, both in theory – and more importantly – in practice.

As an example of multiple convergent resiliences, consider the case of Paraisópolis ('Paradise City'), a hilly favela housing approximately 80 000 residents in the southwest of São Paulo, located provocatively adjacent to the high-end condominiums of Morumbi. This intersection of wealth and poverty has been widely photographed (perhaps because the starkness of this boundary is atypical in that city). Confronted with this zone of poverty in a wealthy part of the city, city leaders have negotiated complex compromises with parts of the Paraisópolis community, leaving most of the favela and its social networks intact and even adding a variety of amenities and services, while thus far targeting only the flood-prone lowland part for removal. In its place, they commissioned a multistory concrete frame series of public housing blocks and reworked the lowland topography enough to ensure that the new structures could withstand flooding. Meanwhile, they promised to keep rents in the new housing sufficiently low to affordably accommodate displaced favela dwellers, while also proposing to include ground-level space for commerce that could support resident livelihoods. In short, although it is surely too soon to form a firm judgment on this ongoing project, its proponents clearly embraced a multivalent version of resilience, combining an understanding of building engineering, ecosystem management and social networks with a concern for resident well-being, all conducted under conditions of political unrest and wildly fluctuating levels of urban violence (Vale, 2012).

Despite some successes, however, the practice of implementing a holistic and progressive version of anticipatory resilience remains fraught, even with the looming prospect of climate change. An asymmetric set of priorities exists. Elected and appointed officials need to be focused on short-term and medium-term aspects of their jobs to ensure retention of their positions. This creates difficulties for committing substantial investments of time or funding when the ultimate payoff is long-term and when 'success' is unconvincingly defined as reducing the severity (but perhaps not actually preventing) some future catastrophe. Expending substantial amounts of attention on relocating infrastructure or dangerously sited homes and workplaces, however warranted by the probabilistic forecasts about dire times to come, imposes difficult tradeoffs. Moreover, the tradeoffs are not merely financial but also socio-political. Anticipatory long-term investment in adaptive measures (*e.g.* preparations for such matters as sea-level rise, likely to be accompanied by more frequent tsunamis and extreme storm surges) takes place on an uneven terrain of vulnerability.

Lowland cities from New Orleans to Bangkok face high risks of disaster, but even the most vulnerable places distribute their risks unevenly – not just between 'high' and 'low', but also between 'low' and 'lowest'. To insist on anticipatory displacement of the least economically viable residents (in advance of some actual event that forces their removal) will often be met with understandable resistance, and is doubly unfair if this forced removal is quickly followed by new development using more substantial construction that serves a much more upscale set of land uses and persons. If Sri Lanka's coastal fishing villages are vulnerable to future tsunamis, does this mean that fishermen should be relocated inland and away from their livelihood? Is it fair to displace existing inhabitants in order to use the coastline for high-end resort hotels built of more durable materials? Is the goal to make the city resilient for the wealthy at the expense of the poor? Or would it be possible to offer robustly constructed living and working environments for the poor, as well? Genuine efforts to respond to perceived vulnerabilities can all too easily become an excuse for mere opportunism. This is what Naomi Klein (Klein, 2007) more conspiratorially defines as 'disaster capitalism'.

Making sense of the resilience of cities also depends on the nature of the threat – resilience against what, or against whom? Calls for 'resilience' are invoked against a variety of challenges: threats to security, to the economy and to the environment. Cities and their residents are asked to prepare for everything from suicide car bombs to local armed militias to floods, hurricanes and earthquakes. Since some threats are focused on securing groundspace and entryways to buildings whereas others emphasize the need to secure borders or airspace or waterways, it is clear that different threats suggest different responses to the design and habitation of public space. This variety of resiliences makes it all the more difficult to conceive of something as complete as a 'resilient city', but also underscores the extent to which resilient practices must engage with a multiplicity of settings and constituencies. This suggests that resilience-seeking practices will always entail a more continuous process rather than some sort of achieved endpoint. At the same time, however, if researchers and practitioners cannot be explicit about the equity dimension of the endpoint, the processes will lack a moral compass.

Even when framed as a kind of goal-inflected process, anticipatory and reactive resilience are different political projects since they force leaders to set priorities in response to radically different timetables. Reactive resilience is necessarily seen as more urgent because powerful constituents, facing damage that is visceral and visible, insist on rapid action and resource deployment. Even so, anticipating ways to limit future

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problems and responding in real time to actual set-backs are each a necessary form of planning. To be relevant, planners and designers must be empowered to play more than a secondary support role; they must be involved in the selection of strategic priorities, and need to be a voice for equity as well as efficiency. This is a key defining aspect of what it means to be a professional: having sufficient regard and practices for the long-term consequences, for protecting civil society and the wider community (including the vulnerable, those without a voice and 'future generations'), for informing, mediating, assisting and representing different parts of the community (Hill, Lorenz, Dent, & Lützkendorf, 2013; Janda & Parag, 2013).

Adopting a progressive view of urban resilience has implications for the practices of planners and designers. If the socio-political agenda of resilience is tied to constructing a dominant storyline, establishing symbolic milestones, and prioritizing certain kinds of people and places when allocating redevelopment funds, then such challenges need to be approached proactively. At its best, resilience thinking entails a proactive combination of physical changes and policy shifts, a form of urban adaptation that is flexible and responsive while remaining constantly alert to questions of equity.

The concept of a resilient city is both a process and a product (however unfinished), so it operates through a kind of conjoined *design-politics*. This means that those who wish to advance the agenda of a 'resilient city' must do more than judge the design products on the ground; they also must assess the power dynamic that permits new forms of development to be implemented. When researchers test the viability of the resilience concept in explaining actual situations of contested power this reveals resilience to be performative, enacted by people and institutions with varied interests and variable power. The symbolic milestones of a resilient city express a designed politics and its processes encode a politicized design. The key conceptual advantage of a *resilient city* is that it conveys both a process and an end-state vision.

A hard look at a broad range of efforts to address the wide array of the world's urban challenges would indicate that most leaders have so far done little to adapt their cities, or to acknowledge ecological limits and ongoing vulnerabilities when building or rebuilding. In post-disaster situations, the will to rebuild is rooted in efforts to control the recovery storyline in ways that benefit dominant groups, to rely on symbolic acts of rebuilding as a means to signal resolve, and to support a highly politicized redevelopment agenda. Human-dominated social systems are different from ecological systems because of these three things: they rely on the power of human stories, depend on the human capacity to invent powerful symbols to guide action, and rise or fall in accordance with the human ability to exercise political power. As long as citizens insist upon a politically engaged form of resilience, then asking questions about 'whose resilience' and 'whose city?' can contribute usefully to efforts to improve the living conditions in stressed and distressed urban areas.

Acknowledgements

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Endnote

[1] Since 2010, ICLEI: Local Governments for Sustainability has sponsored an annual Resilient Cities forum (see http://resilientcities.iclei.org/) that has yielded a series of *Resilient Cities* books. The Rockefeller Foundation sponsors the Asian Cities Climate Change Resilience Network (ACCCRN), which is part of a larger initiative on 'Developing Climate Change Resilience', while the MacArthur Foundation has a 'Building Resilient Regions' initiative intended to help places 'rebound from or deflect economic shocks' (see http://brr.berkeley.edu/). The theme for the 2013 Joint Congress of the North American and European Planning Schools was 'Planning for Resilient Cities and Regions' (see http://aesop-acspdublin2013.com/).

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The politics of resilient cities: whose resilience and whose city?

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