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## Globalizing urban resilience

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### ABSTRACT

Urban resilience, a new urban development and governance agenda, is being rolled out from the top down by a network of public, private, non-profit sector actors forming a global urban resilience complex: producing norms that circulate globally, creating assessment tools rendering urban resilience technical and managerial, and commodifying urban resilience such that private sector involvement becomes integral to urban development planning and governance. The Rockefeller Foundation's 100 Resilience Cities Program is at the center of this complex, working with the World Bank, global consultants, NGOs, and private sector service providers to enroll cities, develop and circulate urban resilience assessment tools, and create a market catalyzed by the notion of a resilience dividend. Notwithstanding the claim of this program being open and inclusive, aspects of its initial operationalization in Jakarta suggest that urban resilience assessment tools preempt alternative understandings of urban resilience and marginalizing voices of the city's most vulnerable populations.

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Urban resilience, circulating in tandem with urban sustainability and smart cities, has developed a powerful momentum to become one of the most influential contemporary concepts influencing the thinking and actions of urban policy makers, international finance organizations, NGOs, community groups and activists across the globe. Urban sustainability already was a major theme by 2000, to be cemented in the UN Sustainable Development Goals publicized in September 2015 (Goal 11: Sustainable cities and communities). Similarly, urban resilience has taken off dramatically since 2002, with smart cities close behind. Sustainability, resilience and smartness are by no means separate, however: The UN's New Urban Agenda, finalized at its Habitat III conference in Quito (October 2016), references all three. All three also share an intuitively positive resonance and feel irresistible, because who can object to achieving sustainability, resilience, or smartness? Their "collective surge" in popularity (Tierney, 2015) has been manufactured and shaped by the conjuncture and agendas of institutions driving their propagation. In this essay we take up one of these, urban resilience, focusing on the actors and institutions endorsing, promoting and pushing this notion as a global urban development and governance agenda. We provide a brief look at how urban resilience is being rolled out from the top down by a dense network of public, private, non-profit sector actors that together form an urban resilience complex, producing

norms that circulate globally, creating assessment tools that render urban resilience technical and managerial, and commodifying urban resilience such that private sector involvement becomes an integral part of urban development planning and governance. In short, what is rolled out is a neoliberal governance agenda in resilience clothing.

## Urban resilience and its critics

To date, the extensive critical academic literature on urban resilience has focused on what the term has come to mean. This is dominated by trenchant critiques, but also includes attempts to uncover its progressive potential. In a meta-analysis of the literature on urban resilience, Meerow and Newell (2016) provide the following working definition:

“Urban resilience refers to the ability of an urban system—and all its constituent socio-ecological and socio-technical networks across temporal and spatial scales—to maintain or rapidly return to desired functions in the face of a disturbance, to adapt to change, and to quickly transform systems that limit current or future adaptive capacity.” (Meerow & Newell, 2016, p. 45)

In this quote, urban resilience’s focus is on adaptation to disturbances, or shocks and stresses. As a number of critics have pointed out, resilience thinking puts emphasis on the need to manage and adapt to current shocks and stresses, rather than seeking to redress or rework existing political and economic formations that are complicit in their production (Evans & Reid, 2013; Watts, 2015; Webber, Leitner, Sheppard, & Colven, 2018). Meerow and Newell (2016) definition also presumes that disturbances are external and beyond influence from within the system. With respect to climate change – often presented as motivating the need to be resilient – this represents a shift in discourse from mitigation to adaptation, privileging the latter. This shift in emphasis towards adapting to prevailing conditions also compromises sustainability’s normative ideal of preserving a particular socio-ecological formation for future generations.

Critics also have highlighted the dominance of varieties of urban resilience that strongly resonate with neoliberal global urbanist agendas or reinforce neoliberal norms, ranging from financial markets to subjectification: “Resilient subjects are not political subjects, but rather subjects whose thoughts and actions center on adjusting to external conditions, who have ‘accepted the imperative not to resist or secure themselves from the dangers they face but instead adapt to their enabling conditions’” (Reid, 2013, p. 355, quoted in Tierney, 2015, p. 1333). MacKinnon and Derickson (2013, 258) draw attention to how urban resilience transposes an ecological conception onto cities, thereby promoting “traits such as growth, competition and self-organization” as natural. This in turn displaces questions of socio-spatial inequalities, making resilience ill suited to promoting “emancipatory social change desired by groups that have employed the term.” (Derickson, 2016, p. 161)

In contrast, some critical scholars also have suggested and speculated about whether and how such neoliberal framings can be contested or re-appropriated in the name of social justice (Derickson, 2016; DeVerteuil & Golubchikov, 2016; Fainstein, 2015; Nelson, 2014). DeVerteuil and Golubchikov (2016, p. 146) do not see urban resilience as “a servile neoliberal creation...” and as necessarily associated with individual and

community responsibility. Nelson (2014) suggests that resilience might be mobilized to foster collective anti-neoliberal actions and the creation of a socio-ecological commons.

Both critics and reformers of urban resilience agree, however, that its almost universal positive valence needs to be confronted with the following questions (Cote & Nightingale, 2012; Cretney, 2014): Who determines what is desirable? Whose resilience is prioritized? Who is included/excluded from the system? Is the resilience of some areas prioritized over others (spatial inequality)? Does enhanced resilience here, reduce resilience elsewhere (spatial connectivity)? As of yet, very few empirical studies exist that provide answers to these questions, but a recent exception is the research by Susan Fainstein (2015, 2018). She critically interrogates the concept of resilience as promoted by the Rockefeller Foundation's 100 Resilient Cities program and its enactment in New York City's resilience policy in the wake of the shock posed by Hurricane Sandy.

Even as critics debate the limits and problems of the concept of resilience, especially urban resilience, it is being rolled out in cities across the globe by a dense network of public, private, non-profit sector actors that together form an urban resilience complex with a global reach – processes that remain under-researched. Like Peck (2017, p. 98) we conceive of a complex as “a multi-dimensional and heterogeneous socio-economic formation: it has some of the characteristics of an industry, but its reach exceeds that; it possesses many of the features of a profession, but remains rather less than that; and it resembles a ‘market’ in some respects, but hardly of the textbook type.” These include supra-national organizations such as UN Habitat and the World Bank, the Rockefeller Foundation and other major US-based philanthropies, global consulting firms such as ARUP and AECOM, finance and ITC companies, as well as international development NGOs such as Mercy Corps and the Overseas Development Institute (ODI). At the center of these activities is the development of technologies to assess, measure and implement urban resilience, notably the Rockefeller Foundation's City Resilience Framework/Index (CRF/CRI), UN Habitat's Resilience Profiling Tool, UNISDR's Disaster Resilience Scorecard, and the World Bank's CityStrength Diagnostic (CSD). These technologies signal the attempts by these actors to produce universal best practices and models of urban resilience.

Since the Rockefeller Foundation has been at the center of creating this complex, an examination of its 100 Resilience Cities Program gives insight into the logics driving these processes.

### **Rockefeller's 100 resilient cities**

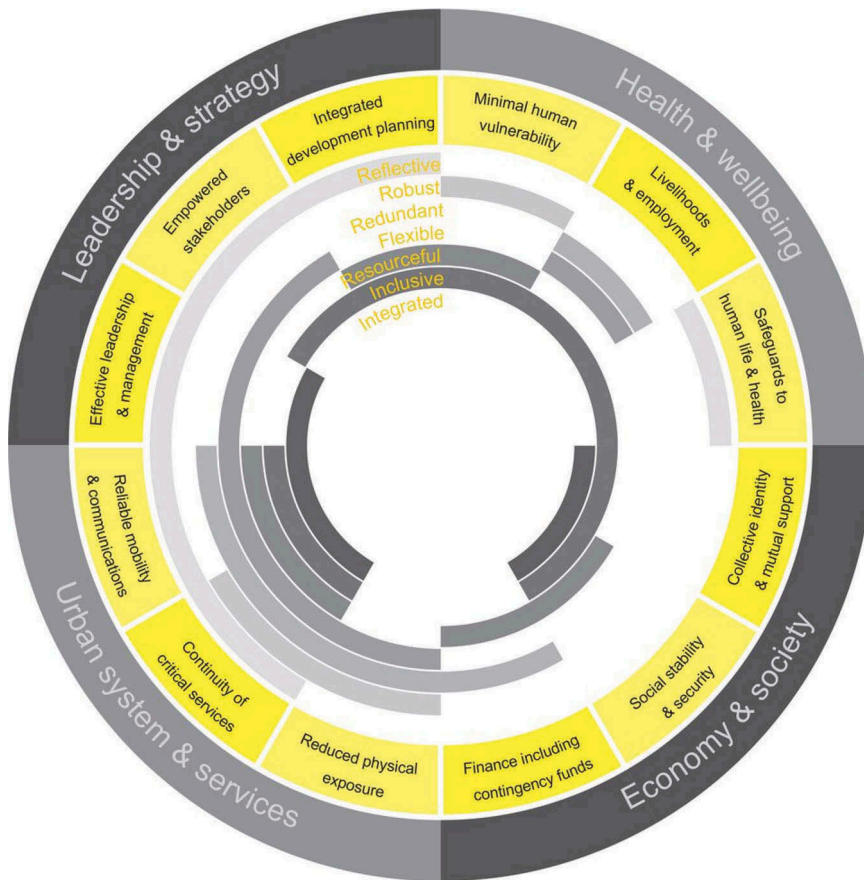
In 2013 the Rockefeller Foundation celebrated the 100 year anniversary of its founding by launching a new initiative: 100 Resilient Cities (100RC), supported by \$100 million of Foundation funding. Rockefeller describes 100RC as “dedicated to helping cities around the world become more resilient to the physical, social and economic challenges that are a growing part of the 21st century.” (<http://www.100resilientcities.org/about-us/>, accessed 12 January 2018). Each of the 100 participating cities – which span the globe and vary in size from megacities such as Jakarta with almost 10 million inhabitants to smaller cities such as Boulder, Colorado with slightly over 100,000 inhabitants – are allocated one million dollars each. Yet set against this claim, we have been unable to trace how much money is being directly allocated to cities versus. to consulting firms that provide services to cities in devising resilience strategies.

100 Resilient Cities defines the meaning of urban resilience as “the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience” (Rockefeller Foundation, 2015). Chronic stresses are those that weaken the fabric of a city on a day-to-day or cyclical basis. Examples include high unemployment, inefficient public transportation systems, endemic violence, and chronic food and water shortages. In contrast, acute shocks are sudden events such as earthquakes, floods, disease outbreaks, and terrorist attacks (ibid). 100RC “sells” resilience to cities across the globe through the following strategies: 1) the delivery of ready-made tools to assess a city’s resilience and of strategic partners to help develop a resilience strategy; 2) the promotion of private sector and public-private partnerships with Rockefeller-designated “platform partners” tasked with implementing the strategy to build resilient cities; 3) providing financial resources to hire a Chief Resilience Officer (CRO) for two years, who is in charge of overseeing the implementation of the city resilience strategy and liaising with cities in the 100 RC network; 4) the prospect and promise of an ensuing resilience dividend; and 5) the sharing of knowledge and best practices across the 100 RC urban network.

### ***The city resilience wheel***

Currently the mainstay of 100RC is the advancement of a best-practice tool for assessing resilience and developing a resilience strategy. Together with the British consulting firm ARUP, the Rockefeller Foundation has been developing a City Resilience Framework (CRF) or Resilient City Index, visualized in the form of a wheel. The framework is based on an urban systems approach that goes beyond ecological aspects of urban resilience to include four sub-systems: Health & Wellbeing, Economy & Society, Infrastructure & Ecosystems, and Leadership & Strategy (see [Figure 1](#)). For each of these subsystems, the wheel also includes a set of goals (in yellow in [Figure 1](#)). For example for Health and Wellbeing these goals are: (a) Minimal human vulnerability; (b) Diverse livelihoods and employment; and (c) Effective safeguards to human health and life. In turn, indicators are identified for each goal: 52 in all. For example, the indicators measuring performance on the goal of Minimal Human Vulnerability are: access to skills and training, business development and innovation, financing mechanisms, protection of livelihood (Rockefeller Foundation, 2015, p. 10).

The purpose of the City Resilience Framework (CFR), and its Resilience Wheel, is to encourage urban policy makers to visualize the city as made up of different subsystems, to identify the shocks and stresses that these different sub-systems are facing, to assess their resilience needs, and to use indicators for measuring and monitoring resilience. This systems framework proves seductive, since it promises to address the complexities faced by cities in an increasingly interconnected and uncertain world (Watts, 2015). The City Resilience Framework is heralded as a tool for governing this uncertainty and unpredictability. The framework does not provide instructions about what needs to be done to fulfill these indicators and thus urban resilience, over and above cities being instructed to use strategic partners to prepare a strategic plan. Besides identifying indicators, the Framework also lists seven qualities of urban governance that are supposed to enable cities to respond



**Figure 1.** The city resilience wheel.

Source: (Rockefeller Foundation, 2015, p. 9)

and adapt to shocks and stresses more rapidly, readily and resiliently. According to the Rockefeller Foundation (2015, p. 5) urban governance needs to be:

- (1) Flexible – willing and able to adopt alternative strategies in response to changing circumstances
- (2) Redundant – spare capacity purposively created to accommodate disruption
- (3) Robust – be a well-conceived, constructed, and managed system
- (4) Resourceful – recognize alternative ways of using resources
- (5) Reflective – use past experiences to inform future decisions
- (6) Inclusive – prioritize broad consultation to create a sense of shared ownership in decision making
- (7) Integrated – bring together a distinct range of systems and institutions

The qualities of inclusiveness and integration are vaguely related to concerns of equity and justice: addressing the needs of the most vulnerable, but also notions of collective planning. However, as interpreted by ARUP (2015) in its Resilience

Framework they boil down to good governance and effective leadership: “Inclusive and integrated relate to the processes of good governance and effective leadership that ensure investments and actions are appropriate, address the needs of the most vulnerable and collectively create a resilient city – for everyone”. This is part of the “win-win” thinking that is more generally embedded within the resilience framework: it is presumed that everyone gains from resilience.

### **Commodification – towards an urban resilience market**

As mentioned above, a major constituent element of 100RC is the promotion of private sector and public-private partnerships in building resilient cities. Millennial philanthropy (Mitchell & Sparke, 2016), supra-national organizations, and global consultancies and other global corporations have taken the lead in spreading an urban resilience gospel that is perfectly attuned to neoliberal urbanism. In this public-private cooperation spirit, The Rockefeller Foundation has set about to commodify urban resilience by creating a market. The initial step has been to incentivize cities to participate in the network, and to contract with consultants to advise cities on developing an urban resilience strategy.

Particularly noteworthy are the close formal and informal relationships linking Rockefeller with global consultancies such as AECOM and ARUP. Rockefeller contracted development of The Resilient Cities Framework with ARUP, which has branched out from its engineering origin to a highly diversified portfolio of global reach known for its eco-cities initiatives. Rather than developing their own resilience strategy, Rockefeller encourages cities to enroll private sector strategic partners such as global consultancies (e.g. AECOM, ARUP), non-profit organizations (The Urban Land Institute) international NGOs (Mercy Corps, ODI) in developing their resilience strategy and plans. AECOM and ARUP seem to be the preferred global consultancies for the development of resilience plans within the 100RC program, with AECOM operating as strategic partner for about one third of members of the 100RC network.

With a Framework and the crafting of resilience strategies underway, the next step has been to create a context within which private sector firms are willing to join the complex, such as companies on Rockefeller’s list of platform partners that stand ready to work with cities on implementing the strategy. A large number of global consultancies, finance, ITC and infrastructure companies have been recruited or have volunteered as platform partners whose expertise is supposed to be utilized in implementing the resilience strategy. As of October 2017, 100RC included almost 90 platform partners, including public, private, academic and non-profit sectors.<sup>1</sup> According to the Rockefeller Foundation: “Throughout the platform we are facilitating a process by which cities help inform and build the market across different sectors for resilience specific services and solutions.”

While the CRF provides a framework for creating markets for resilience related services, more recently some of the major “complex” players have also sought to create a market for investment in urban resilience initiatives. Judith Rodin, president at the time of The Rockefeller Foundation, has played a key role in incentivizing the creation of this market through the notion of a resilience dividend, in her book *The Resilience Dividend* (Rodin, 2014). Resonating with the language of finance, she argues that investing in



resilience-related projects renders a dividend, in the form of multiple co-benefits for the current and future well being of cities, even in the absence of external shocks.

But is there a resilience dividend, and how large is it? Both Rockefeller and the World Bank have outsourced and financed the development of metrics and models that are supposed to assess and assemble evidence of the monetary and nonmonetary benefits of investing into resilience-related projects. The Rockefeller Foundation paid the UK-based Overseas Development Institute (ODI) to develop what ODI calls the triple resilience dividend. ODI argues that investments in disaster risk management can yield a triple dividend by: 1) Avoiding losses when disasters strike; 2) unlocking development potential by stimulating innovation and bolstering economic activity in a context of reduced disaster-related background risk for investment; 3) through the synergies of the social, environment and economic co-benefits of disaster risk management investments even if a disasters does not happen for many years. (Tanner et al., 2015). The triple dividend is presented as key to “strengthening the business case for [Disaster Risk Management] investments” (ibid. 10).

Also under contract with the Rockefeller Foundation, the RAND Corporation has developed a Resilience Dividend Valuation Model (RDVM) that “... provide[s] a systematic, ‘structural’ framework for assessing resilience interventions that ultimately create benefits and costs within a system, such as a community or city. While the model is not designed to be a one-size-fits-all tool, it does provide a way to systematically account for the returns to resilience investments across a range of contexts.” (Bond et al., 2017, p. 160). According to Eric Sheppard (personal conversation 2017) the RDVM is “an off-the-shelf application of models of inclusive wealth recently conceived by the Cambridge University economist Partha Dasgupta,” which quantifies the net benefits of urban resilience.

Both of these tools function to mobilize the idea that a resilience dividend exists, which is beneficial for all – humans and the more-than-human world – and can be realized through a market that will deliver a return on investment (see also Mitchell & Sparke, 2016). Yet this ignores the question of social justice, of whether and how any such benefits are distributed within and between cities. It also forecloses alternative understandings of resilience that are already practiced by citizens on the ground, drawing on local and community based perspectives.

## Concluding reflections

Private philanthropy, in this case the Rockefeller Foundation conjoined with supranational and multi-lateral organizations such as the World Bank and the Japan International Cooperation Agency (JICA), global consultancies, finance/ITC companies and international NGOs, now form an urban resilience complex with global reach. These organizations not only dominate the urban resilience discourse globally, but also, through creating and promoting universal urban resilience assessment tools such as the City Resilience Wheel, render questions of urban resilience technical. This reinforces expert-driven, top-down decision-making. Further, it foregrounds the private sector as crucial in making cities more resilient, and promotes this particular model of urban resilience as a superior urban development and governance strategy. Key to this, in turn, is constructing urban resilience as a marketable commodity that renders a Return on Investment.



Yet there is reason to be skeptical that this model can deliver social and environmental justice. As we have shown above, the language of participation and inclusivity is seamlessly present in the urban resilience frameworks circulated by these major players. However, in observations when the 100RC program reached Jakarta, the participatory element is dictated from above, in terms of both who gets to participate and how. At the first agenda-setting resilience strategy workshop in Jakarta (in November 2016), a large group of actors – mostly planners, government officials and representatives of business and some NGOs – were instructed by AECOM about how to use the resilience wheel to identify priority areas. This reduced participation to working within a given framework, with little possibility for participants to develop their own understanding of what urban resilience means to them, or to ask questions about who benefits from urban resilience projects. Tellingly, the large number of actor-stakeholders at the table excluded some of Jakarta's local NGOs known to work with and on behalf of the city's most vulnerable populations.

## Note

1. Examples of platform partners of the 100RC program include: Amec Foster Wheeler (UK multi-national consultancy in engineering and project management), American Geophysical Union, American Institute of Architects, ARUP (British consultancy), Blue Legacy International (Water related non-profit), Urban Land Institute, Siemens, Save the Children, Regents of Climate Action, Ernst & Young – EY (UK global consultancy), ESRI, Fourth Economy (US Community economic development consultancy), Frog Design, City without Slums, EPA, Nature Conservancy, World Wildlife Fund, Asia Foundation, Cisco, CSIRO, Veolia, Watson Foundation (<http://www.100resilientcities.org/partners/>, accessed 12 January 2018).

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