



Measuring Resilience in the Assumed City

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Abstract The malleable nature of both the idea of a city and the idea of resilience raises an important question—why measure? Resilience is assumed to be located in the physical infrastructure of specific places or as a quality of the people located there. For disasters, we are often trying to conceptualize, measure, or render legible resilience in physical structures. But what is it that we are trying to measure, and is the idea of a city reflected in these measurements? If cities are organized around something other than resilience, is resilience their natural by-product? What is necessitating the need for increased—and measured—resilience? Using interpretive policy analysis, we explored five well known disaster resilience frameworks (UNDRR’s Making Cities Resilient Campaign, UN-Habitat’s City Resilience Profiling Programme, The World Bank and GFDRR’s Resilient Cities Program, Arup and The Rockefeller Foundation’s City Resilience Index, and The Rockefeller Foundation’s 100 Resilient Cities) to identify the working definition of “city” and of “resilience.” We conclude that if the demand for cities to become more resilient is an acknowledgment of the risk produced by globalized urbanization, then the call itself is an indictment of the current state of our cities.

Keywords City planning and design · Disaster governance · Resilience frameworks · Urban theory

No one, wise Kuublai, knows better than you that the city must never be confused with the words that describe it.
Italo Calvino, *Invisible Cities*

1 Introduction

Over the last decade, a series of measurements seeking to quantify the resilience of cities have been formulated and promoted by elite actors in international disaster risk reduction (DRR). In 2015, when The Rockefeller Foundation’s 100 Resilient Cities campaign unveiled its resilient cities league table, the world learned that Toronto is at the top of the league and Dhaka is at the bottom. Why? The answer to this question is more difficult to determine than might be anticipated, because current advocates of resilient cities are operating on assumptions of what cities—and resilience—are or might be. When we assume the truth of our conclusion about cities before the premise is even fully formed (literally begging the question!), the city becomes an ideological object rather than a physical one.

The “new urban agenda” has emphasized the need for cities to adapt to climate change, protect their infrastructure and assets, and ensure the well-being of their citizens (Robin et al. 2019). As a consequence, many cities around the world now aspire to achieve this level of resilience (Barnett and Parnell 2016). But is it possible for a city to be resilient? Is resilience an outcome? Can a city, as a whole, ever be resilient? Do we need resilience in order to have a city, or does a city require resilience in order to exist?

The World Bank, the IMF, and other international organizations have adopted the concept of resilience as a pathway to (re)building the capacity of financial systems and national economies in the aftermath of disasters. Presenting it as “a panacea for a spectacular variety of

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contemporary social and environmental ills” (Zebrowski 2020, p. 73), the “ideals” of resilience have become almost synonymous with development (Cheek and Chmutina 2021). These ideals have recently been widely adopted by cities all around the world.

It has been argued that in order to promote and mainstream resilience in cities, it is necessary to monitor the effectiveness of resilience measures—and that this can be done through the implementation of indicators (Figueiredo et al. 2018). Yet, as we demonstrate in this article, these indicators do not reflect that cities are, in fact, a manifestation of politics and power. Because of this omission, indicators of resilience fail to answer crucial questions: If cities become resilient, what implications does this enhanced condition have for people living in those resilient cities? Do resilient cities frameworks reinforce the normative and exclude other aspects of a city that may require attention?

This article unpacks how the idea of a city has been shaped within and by urban resilience frameworks—and what implications a wide and somewhat uncritical acceptance has had on the future of cities. Before exploring widely used urban resilience frameworks, we first remind the reader of the theoretical underpinnings of what a city is. We then discuss ideas of urban resilience, and, finally, explore what different resilience frameworks measure and how the ideas of a city are reflected in these measurements.

2 What Constitutes a City?

Setting out with little prior knowledge, one would be hard pressed to find a solid definition of a city. Popular reference sources, such as the online *Merriam-Webster's Dictionary* (Merriam-Webster n.d.), define “city” as “an inhabited place of greater size, population, or importance than a town or village,” or Wikipedia’s internal search engine (Wikipedia 2022) state that a city is “an inhabited place of greater size, population, or importance than a town or village.”

When engaging with theory, we realize that Lefebvre (2003) viewed the city as urbanization’s *fait accompli*. He saw the urban in everything. As the urban was everywhere, the city became no longer an object but was transformed into an idea (Wachsmuth 2014). For Lefebvre, the city is a place of encounter while it is also a site of contestation. As globalized capitalism took hold, urbanization and therefore the city, became the ballast for the capitalist economy. Occupying and producing space is how capitalism has overcome its inherent contradictions. For Lefebvre, the city existed as a series of “implosions and explosions” (2003, p. 14) that left a universal residue in every location touched by humans; and in some cases, locations that have not been

touched, yet. The city is not a physical, confined space with well-ordered borders. It is a process, a physical extension of society.

Castells (1977) contends that understanding the structures that underlie urban forms is not just a question of perspective—it is that structure itself that needs to be defined and understood. This effort to get at the underlying structures of urbanization sought to expose the relationship between a society and the underlying spatial relationships. It aimed at a critical analysis of how the historical particularities in which a city was produced could inform us about the global characteristics of capitalist industrialization.

Castells (1977) depicted the city as an interdependence of activities and administration. It is not defined by walls, or city limits, or districts, but rather by a sphere of economic domination that sees the activities of a given area transform themselves in service to a larger economic construct. Castells’ work overlaps with Logan and Molotch’s (2007) research on the idea of urban growth machines; here cities are in competition with each other for resources, funding, and locations of capital production.

Urbanization and industrialization can act as part of the same process, but their relationship to one another is not linear. This nonlinear cooperation of urban growth and industrial impact is asymmetrical (Castells 1977). Although they work to create interdependent urban areas and industrialized societies, these urban and industrial processes at the same time produce inequalities. These inequalities become evident in spatial relationships. Colonial, imperial, and capitalist relationships are all expressions of the nonlinear, asymmetrical relationship of industrial urbanization.

Often the city itself has been viewed as a problem (Park et al. 1984), although by viewing the city as a unit we are supposed to be positioned to solve issues within the city that will act as correctives for the larger urbanized world. Yet in the scholarship of Lefebvre and Castells, we can see that without addressing larger structural issues, a focus on viewing the issues facing a city as a singular unit lacks real analytical depth. Additionally, failing to investigate the historical particularities of an area before laying out a universal idea of the urban leaves us without any necessary specificity (Castells 1977). This is not contradictory, but it is complex. Viewed too closely, a city is ungeneralizable. Examined from too far away, a city becomes meaningless. Yet, no matter what the magnification, the definition itself is too fuzzy for precise analysis. We are able to see the world as connected through global patterns of industrialization, capitalism, and urbanization. While urbanization is global, it does not produce one singular, unilateral effect. Historical context and societal particulars must be understood and elaborated on. This is particularly important as it

has implications for the way we now interpret and measure urban resilience, which has been largely introduced in its current form by the promoters of neoliberalism, such as the World Bank (Peck 2010), as will be discussed later in the article.

Through the creative destruction¹ of globalized urbanization, the city is a constantly fluctuating unbound entity, subject to the vibrations of nonlocalized finance capital and subject to speculative investment (Harvey 2001). This is true not just of individual cities as such, but also the broader phenomenon of urbanization. While individual cities have unique and specific histories and contexts, they are enmeshed in the greater urbanizing global context. It might be true that space is not a thing, but rather a relationship, yet it is simultaneously true that those relationships do manifest themselves in space. The label that is applied to this construct is weighted in ideology as well as tradition. It is possible to view the city as the node at which these pathways of transient globalized financialization intersect (Sassen 2011). However, this would fail to include other amalgamations of structures and other gatherings of humans that we refer to as cities. Large-scale refugee camps might, in the end, be a product of our globalized economy, but they are most likely not a node in which financialized capital moves. And yet they may present themselves very much as a city. Likewise, the obduracy of a city, or at least an area historically referred to as a city, means that the label can exist once the economy has moved on. Humans and buildings do not react as quickly as worldwide markets.

If, as Harvey (1996, p. 50) contended, it is true that “The thing we call a city is the outcome of a process we call urbanization,” then where do we draw our boundaries? Of what use are these boundaries to us in any case? If the concept of the city is ideological, the border between the urban and rural is nonsensical. If we move away from a description of settlement types as our characterization of a city and move towards settlement patterns, does the city then become a moving target, or simply the description of an ever-changing phenomenon?

There are more recent contestations of this idea of the city. Ananya Roy (2015) posed the question “What is critical about critical urban theory?” by showing that a city is, mainly, what a city does. Administrative districts are

aware of their own existence and organize accordingly. City administrators know and understand their limits and roles. Local bureaucracies measure boundaries and implement policies based within them. This is an important consideration. Can we still speculate that the city is an ideological construct if it is also an administrative district? Can we adopt Lefebvre’s definition of the city (2003), noted earlier, as an implosion/explosion resulting in globalized urbanism while we still elect people to be mayors (who are then charged with the task of making cities resilient)?

It may seem a bit of a dodge to answer “yes” to all of the above. However, we can see that the city works on all these levels. It is an ideology. It is an implosion/explosion of globalized urbanism. It is “an administrative category that creates distinctive governed populations” (Roy 2015, p. 420). One reason the city as a category can exist on all those levels is that our systems of measurement never specify what exactly they mean when they discuss cities. Such lack of specificity has manifested itself in the way we understand—and attempt to measure—the resilience of a city.

In his work on African cities, AbduMaliq Simone has shown that a city is not just administrative districts, enumerated populations, or the ever extending products of society; rather it is the lives of the people concentrated in an area. Simone writes “...it is always possible to do something different in and with the city than is specified by these domains of power while, at the same time, acting as if one remains operative inevitably only within them” (2004, p. 409). This “act” is, of course, dependent upon people—people acting in groups and as individuals. If we consider the city in these terms, then what is meant by measurements of resilience on the city scale? If a city is what the people do, and the people are capable of functioning in varied ways—both apparently in line with and simultaneously contrary to domains of power—then what is being measured, and what constitutes resilience?

3 Resilient Cities

A subject of significant academic attention and debate, resilience is perhaps one of the most contested concepts in disaster scholarship (as well as in other disciplines!) (Rogers 2015; Humbert and Joseph 2019; Chandler 2020; Joseph 2021; Sou 2021; Wakefield et al. 2021). We will not rehearse the evolution of the concept as this has been sufficiently covered in the literature (for example, Mayena 2006; Alexander 2013; Gaillard and Jigyasu 2016); but in the context of disasters, in a normative sense, we maintain resilience is both a desired outcome and a process leading to a desired outcome, with the definitions largely focussing

¹ Creative destruction is the means by which economic systems, governmental regimes, or the built environment are dismantled enabling replacement by a new system of arrangement. Marx discussed the idea of annihilation as the means by which capitalism erased the old to bring the new into the world (Marx and Engels 1848). Joseph Schumpeter, writing almost a century later brought this framing into economic thought as creative destruction, wherein movement was generated in the economy through the destruction of what had previously existed (Schumpeter 1942).

on ideas of the ability to self-organize and the capacity to learn, to change, and to adapt, its understandings remaining nebulous and malleable. Some argue that a concept of resilience is also contradictory as well as meaningless in non-Anglophone contexts. Chmutina et al. (2020) and Lizarralde et al. (2020), for instance, show that “resilience” does not reflect local contexts, and its use instead reinforces quasi-imperialist impositions of ideas. Many authors also highlight the current use of the concept, which is predominantly driven by neoliberal ideas of “growing the wealth of the poor” (Bracke 2016, p. 52) and using it as a pathway to (re)build the capacity of financial systems and national economies in the aftermath of disasters, thus reinstating the pre-disaster conditions. Amo-Agyemang (2021) further demonstrates that resilience discourse is rooted in colonial knowledge, subjectivity, and power.

There is also no single definition of a resilient city; in the context of a city, resilience has been defined in relation to climate change, built environment, disasters, engineering, and the city’s capacity to resist/absorb/adapt/transform/recover from and prepare for certain shocks and stresses (Satterthwaite 2013; Sanchez et al. 2018; Wang et al. 2020). Carpenter et al. (2001) remind us that making cities resilient requires considerations of where, when, and how—and most importantly for whom—resilience is implemented. Meerow et al. (2016) identify 25 definitions of urban resilience, some of which are closely linked to the ideas of sustainability, whereas others focus more on disaster risks. By and large, resilience of cities is discussed in the context of acute shocks and chronic stresses, and their implications for the physical and social infrastructure of a city. Boshier (2014, p. 242) suggests that “‘built-in resilience’ can be a quality, a process, and an end-state goal that can intuitively and proactively cope with dynamic changes (in their various natural and man-made guises),” emphasizing that built-in resilience is a quality of a built environment’s capability (in physical, institutional, economic, and social terms) to keep adapting to a range of existing and emergent threats. Sanchez et al. (2018, p. 10) provide an excellent overview of the plurality of understandings of resilience. They argue that such plurality makes urban resilience policies “a complex and evolving field characterised by significant challenges associated with urban governance systems, political pressures, uncertain and emergent nature of threats, speed of change, and the level of complexity of long-lived networks that form cities.” Chmutina et al. (2016, p. 1). note that urban resilience “should not be seen as a consensual concept but rather as an unfolding ethical paradigm through which stakeholders create their own dynamic representation and meanings”; Satterthwaite (2013) suggests that city resilience is strongly influenced by quality of buildings, provision for infrastructure and services available independent

of income (for example, healthcare, education, emergency services) and paid services (for instance, public transport or piped, treated water), early warning systems, whether residents’ incomes are sufficient to invest in resilience (for example, through insurance), availability of safety nets where income is insufficient, and regulatory frameworks that ensure implementation of resilience measures. All these factors contribute towards accumulation or dissipation of urban resilience—however most (if not all) of the “accumulation” is focused on addressing new or increased hazards and threats, and not on addressing the underlying urban issues that make and affect the city in the first place (in fact, some urban resilience building efforts reinforce these issues).

Not just the increase in frequency and intensity in hazards and threats has pushed the resilience idea to the top of political urban agendas. For the first time ever, urban resilience has been highlighted in the Sustainable Development Goals (Goal 11: Make cities inclusive, safe, resilient and sustainable). The importance of “resilient cities” features in political rhetoric, usually following a disaster—for example, Barak Obama’s speech on resilience of New Orleans on the 10th anniversary of Hurricane Katrina (Obama 2015) or Scott Morrison’s call for city resilience during the 2020 wildfires (Morrison 2020). The idea of resilient cities—and the narratives of “building back better” that come with it—has become particularly prominent because of the programs introduced by the World Bank, IMF, and, later, various nongovernmental organizations (Cheek and Chmutina 2021). Judith Rodin (2014), a former president of The Rockefeller Foundation (the institutional promoter of the 100 Resilient Cities Campaign), emphasized that resilience will help us cope with contemporary issues that all cities face: urbanization, climate change, and globalization. Rodin, however, has not clarified what exactly is meant by resilience. Instead, what The Rockefeller Foundation (as well as many other international nongovernmental organizations (INGOs), nongovernmental organizations (NGOs), and local governments) proposed is measuring urban resilience.

4 Methodology

The malleable and nebulous nature of both the idea of a city and the idea of resilience, outlined in earlier sections, brings up an important question—why measure? Nevertheless, various frameworks for measuring resilience have been introduced over the past decade, because a measurement baseline is required for policy making. In this article, we look at the most recognized international frameworks to identify the elements that the creators of these frameworks effectively enforce as a proxy for measuring resilience. The

five selected frameworks are: UNDRR's Making Cities Resilience Campaign (UNDRR 2010); UN-Habitat's City Resilience Profiling Programme (UN-Habitat 2018); The World Bank and Global Facility for Disaster Reduction and Recovery's Resilient Cities Program (World Bank and Global Facility for Disaster Reduction and Recovery 2006); Arup's City Resilience Index (Arup 2013), and The Rockefeller Foundation's 100 Resilient Cities programs (The Rockefeller Foundation 2013).

We employed interpretive policy analysis that starts from the assumption that the societal issues that are addressed in policy making have different meanings for different groups of people. This allows us to question the proposed ideas of resilience and to establish intended and unintended consequences that these proposed ideas may have on others. An interpretive analytical approach allows us to explore the ways in which actions and institutions are shaped by meanings (Bevir and Rhodes 2003). In order to identify emergent viewpoints, we examined the frameworks through underlying themes and mapped out the main categories that constitute the characteristics of resilience for these frameworks.

We also analyzed the texts of the frameworks by using the word search function to identify the working definition of "city" and of "resilience." Such content analysis enabled us to draw out patterns and analytical generalizations among the frameworks and helps illustrate the differences and similarities found. Thus we can compare these insights with the theoretical literature. The results of the analysis are summarized in Table 1 and will be discussed in the following sections of the article.

5 Measuring City Resilience

In this section we unpack the frameworks explored in Table 1. We discuss where has been measured, what is being measured, and what the issues might be with these measurements.

5.1 Where is Resilience Being Measured?

One does not need to read Table 1 in detail to realize that only one framework, the Making Cities Resilient Campaign, actually attempts to define a city. Geographical distribution, population size, and socioeconomic profiles of participating cities do not provide an answer either. Ramallah, in Palestine, has a population of 35,140 people. Nairobi in Kenya has a population over 9 million people. Are these both cities? What is the common quality that they share? Is their resilience transcendent of this difference? Is it likely that they have shared vulnerabilities that are constitutive of the idea of a city? Before the program

ended in 2019, 27 (out of 92) cities participating in 100 Resilient Cities program were in either the United States or Canada: is there something particularly resilient about these countries, or is there a specific vulnerability in these cities that is being targeted, or is this simply a confluence of English-speaking countries located on the same continent with an American organization that is heading up this initiative?

Within the same country we have cities as diverse as New Orleans (The Data Center 2020), Berkeley (City of Berkeley 2018), and New York (US Census Bureau 2019). Internationally, the types of cities also vary, with each of the participating cities having their own distinct history, governance, and unique geography. Rome has been referred to as "The Eternal City" for over two-thousand years, whereas Boulder, Colorado was founded around 150 ago; Athens was at the crossroads of the Ancient World, whereas Panama City is at the modern center of international banking and shipping. What is the category that makes each of these recognizable as cities? It does not appear to be the demographics, governance, or history. So perhaps the frameworks are right in not defining a city?

Castells (1977) cautioned that trying to impose a universal definition of cities was fine as a starting point but ignored the historically and geographically specific conditions that led to the formation of individual cities themselves. If each of these cities is a localized manifestation of a global structure, then examining descriptive statistics will not reveal much. Rather the constitutive medium that connects all these cities is the globalized phenomenon of urbanization. But the question—"why these cities?"—nevertheless remains. What is it about these particular cities that makes them singled out for resilience?

5.2 What is Being Measured?

The urban resilience frameworks summarized in Table 1 broadly cover three themes: governance, society, and planning and design.

Governance receives by far the largest attention in all resilience frameworks. It is closely linked with multiple stakeholders, cooperation of private and public sectors, decision making, and business continuity, as well as with the financing of resilience. It is expected that the process of "building" city resilience is overseen by the efforts of local governments—but this "overseeing" is problematic. Here we need to consider the origin of the frameworks: they are largely created by the private sector (Zebrowski 2020), making consultants potentially politically powerful as they dictate what happens on an urban scale by fostering "appropriate" urban policies and indices (Vogelpohl 2018). Knowledge has become one of today's most important means of production, thus making "expert" advice

Table 1 Overview of resilient cities frameworks and the proposed key qualities of resilient cities

| Framework | Leading body | Description | Definition of resilience | Definition of city | Reasons for introducing the framework | Key qualities of a resilient city |
|--|--------------|---|--|--|--|---|
| <i>Making Cities Resilience Campaign</i> | UNDRR | Supports sustainable urban development by promoting resilience activities and increasing local understanding of disaster risk | The ability of a system, community or society exposed to hazards to resist, absorb, accommodate, adapt to, transform and recover from the effects of a hazard in a timely and efficient manner | <p>“...an engine for economic growth, a haphazard arrangement of physical assets and potential rewards. ...a place of connections. ...offers shelter, safety and a source of livelihood. ... is its housing, its stock of physical assets. ...A city is a physical and cultural arena, a place of political freedom, a source of cultural and intellectual vitality ... at risk from a storm surge, a cyclone, a catastrophic volcanic eruption, or a set of powerful earthquake waves.” “city” refers to urban areas in general, encompassing the responsibility of “local governments” of different scales</p> | <p>Increase in urban population; Cities are lifelines of society; Cities as generators of new risk because of weak urban governance, unplanned urban developments, inappropriate construction, lack of available land for low-income citizens, concentration of economic assets, ecosystems decline; Citizens are vulnerable to natural hazards</p> | <p>Governance: – Capacity building in local government and citizen groups for DRR and preparedness; – Up to date and maintained data on urban risks informing decision making. Society: – A budget for DRR and incentives for homeowners, low-income families, communities, businesses, and the public sector to invest in reducing the risks they face; – Assessment and enhancement of safety of schools and health facilities; – Needs of survivors at the center of post-disaster reconstruction. Planning and design: – Protection of ecosystems and natural buffers to mitigate hazards; – Investment in critical infrastructure to reduce hazards’ impacts; – Installation of early warning systems and improvement of emergency management capacities</p> |

Table 1 continued

| Framework | Leading body | Description | Definition of resilience | Definition of city | Reasons for introducing the framework | Key qualities of a resilient city |
|--|--------------------------|---|---|--------------------|--|--|
| <i>City Resilience Profiling Programme</i> | UN-Habitat | Provides tools for measuring and increasing resilience to multiple hazards, including those associated with climate change | The ability to absorb, adapt, and recover from the shocks and stresses that are likely to happen, transforming itself in a positive way toward sustainability | Not included | Cities face a range of natural and human-made shocks and stresses; Additional and amplified challenges due to rapid urbanization, changing climate and political instability; Understanding of obstacles, challenges and solutions in data, knowledge, innovation, finance, capacity, collaborative approaches, and governance | Governance: Functional vulnerabilities (urban design; service, economic, commercial continuity; regulatory reform; municipal revenue/finance; transport/energy/utility/communications upgrading); Organizational vulnerabilities (urban regulation and legal frameworks; strengthening stakeholder engagements (public, private and civil society); social and economic programming; and jurisdictional mapping). Planning and design: Spatial vulnerabilities (policy and regulation; land readjustment; urban extensions; and capital investment/finance incentives); Physical vulnerabilities (regulation, codes and standards; retrofitting/upgrading bulk and distributive infrastructure; densification; transport; public space) |
| <i>Resilient Cities Program</i> | The World Bank and GFDRR | Help cities increase their ability to prepare for and adapt to changing conditions, as well as to withstand and recover rapidly from disruptions related to climate change, disasters and other systemic shocks | The capacity to plan for and mitigate adverse impacts of disasters and climate change, thus enabling cities to save lives, reduce losses and unlock economic and social potential | Not included | Poorer populations are particularly vulnerable, as they often inhabit more hazard-prone places and lack the means to recover from economic or environmental shocks and stresses; A need for a shift from a primarily siloed, single-stream city-level resilience operations approach to longer term, more comprehensive, multi-disciplinary packages of technical and financial services, building the pipeline for viable projects at the city level | Governance: Enabling environment for Public–Private Partnerships; City competitiveness and economic growth; –Climate mitigation; Finance for resilience (through technical support and expertise); Capital mobilization, private sector development and innovation. Society: Population trends Planning and design; Hazard risk information; Built form |

Table 1 continued

| Framework | Leading body | Description | Definition of resilience | Definition of city | Reasons for introducing the framework | Key qualities of a resilient city |
|------------------------------|--|---|---|--------------------|---|--|
| <i>City Resilience Index</i> | Arup and The Rockefeller Foundation | Provides principles, indicators and practices to assess and promote resilience, highlighting the importance of a comprehensive and holistic framework to enhance the function of cities in a system | The capacity of individuals, communities, and systems to adapt, survive, and grow in the face of stress and shocks, and even transform when conditions require it | Not included | A wide range of natural and man-made (<i>sic</i>) pressures that have the potential to cause significant disruption, at their worst leading to cascading social breakdown; Growing diversity of hazards, increasing complexity of cities, and uncertainty associated with climate change, globalization, and rapid urbanization | <p>Governance: Leadership and strategy (promote leadership and management; empower stakeholders; long-term integrated planning). Society: Health and well-being (meet basic needs; safeguard livelihoods and employment; and ensure public health services are provided); Economy and society (promote cohesive and engaged communities; ensure social stability, security, and justice; foster economic prosperity); Planning and design: Infrastructure and environment (enhance and provide protective natural and human assets)</p> |
| <i>100 Resilient Cities</i> | Rockefeller Foundation 92 participating cities | Assists cities in developing new resilience strategies and supports the hiring of a Chief Resilience Officer for each participating city | 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 | Not included | Physical, social, and economic challenges that are a growing part of the 21st century | <p>Governance: Reflectiveness (“using past experience to inform future decisions”); Resourcefulness (“recognizing alternative ways to use resources”); Robustness (“well-conceived, constructed and managed systems”); – Integration (“bring together a range of distinct systems and institutions”); Society: Inclusiveness (“prioritize broad consultation to create a sense of shared ownership in decision-making”); Planning and design: Redundancy (“spare capacity purposefully created to accommodate disruption”); Flexibility (“willingness and ability to adopt alternative strategies in response to changing circumstances”)</p> |

GFDRR Global Facility for Disaster Reduction and Recovery, UNDRR United Nations Office for Disaster Risk Reduction

indispensable in political and economic decisions. As urban governance has become more and more corporationalized (Mirowski 2013), the influence of management consultants on urban political decisions is also increasing. Paradoxically, the consultants do not have legitimacy of their own: they are not elected by citizens, have no real budget for action, and do not represent constituents—but they gain prominence through “selling” their “expert technical knowledge.” Such “rule of experts” is at the heart of the neoliberal agenda; Friedrich Hayek, the major theorist of classical liberalism, himself tried to create a “climate of opinion” (Hayek 1948) that made neoliberal transformation unavoidable. Peck (2010) describes this process well: first the experts invent and disseminate new vocabulary for describing urban problems; then they are able to summon buy-in for new urban projects, and this consequently leads to the expert advice becoming a policy. The new vocabulary creates a new discourse that makes certain groups legitimate and compelling—while producing the opposite effect in other (often marginalized) groups. These peripheral communities, therefore, do not accept the discourse and, consequently, do not participate in a broader political urban debate. As “expert advice” is often seen as nonpolitical, many of the measurements, indicators, and resultant policies are no longer seen as the results of political decisions. The “local” problems are thus pointed out, and instead of challenging larger societal systems that are the root of the problems, resilience rhetoric focuses on individual responsibility and promotes local austerity policies instead of federal financial support (Peck 2010; Vogelpohl 2018). It is thus pertinent to ask—whose interests are being served by making a city resilient?

Society focuses on “vulnerable” populations, health and well-being, prosperity, and inclusiveness. Society, while acknowledged in all frameworks as the reason for introducing the framework, was not explicitly acknowledged as a factor that should be considered as a part of the “resilience building” process. Some organizations, for example the Global Fund for Disaster Risk Reduction (GFDRR), have separate programs on societal resilience; others focus on certain aspects of social resilience (for example, health and well-being) without addressing the actual root causes of societal vulnerability. This causes serious problems if we look at resilience in relation to recent disasters (given that all frameworks highlight disasters as a core driver for “resilience building”). In the 15 years from Hurricane Katrina to 2020, the City of New Orleans—one of the 100 Resilient Cities campaign poster cities—lost 92,974 Black residents (Williams 2020). In these same 15 years, over 350 miles of levees, flood walls, gates, and pumps have been built to protect the City of New Orleans (Schwartz and Schleifstein 2018). This includes the USD 1.1 billion West Closure Complex, which as of 2020, is the largest

pump station in the world (Goldsmith et al. 2012). We must ask the question: how is this reflected in the way we measure resilience, and more importantly how do these measures protect the nearly 100,000 Black former residents of New Orleans? If they were displaced temporarily by a hurricane, and displaced more than temporarily by the recovery, are they no longer a part of “the city?” Simply displacing—possibly permanently—marginalized populations, should not be enough to increase resilience within the administrative district of a city, yet measurements allow for this. Similarly, are the measures of resilience examining solely those residents who remain—often through unequal recovery efforts—and declaring that “the city”? If this is the case, then the measures of resilient cities are reifying the unequal environments in which disasters occur, as well as unequal and inadequate recovery. In this case, the idea of New Orleans as a city that only exists as a measurement in its current formation with its current residents writes off 92,974 displaced Black residents. Think of how our conception of the City of New Orleans and the measurements applied to it would change if we regarded these displaced people as also being part of the City of New Orleans. What would we measure? How would we describe it? What would fundamentally change?

Planning and design focus on the relationship between assets, space, and infrastructure, and their improvement through policies and regulations as well as risk mapping and management—while often forgetting that cities are temporal processes shaped by context and history (Cuppini 2018). Through the introduction of “proper” urban policies, the frameworks encourage commodification of city elements, thus making the city even more unequal—although presenting these actions as a consensus among all city stakeholders. Planning and design are presented as much needed demands that support growth and competitiveness, and, therefore, are not political (Vogelpohl 2018). Technocratic urban planning regimes have acted as a method of elite control over the built environment. These have acted as social movements, but as social movements in mirror image to revolutionary movements—as social movements backed by power (Castells 1977). This has resulted in a relocation of the crises of capitalism. This relocation is accomplished either by shifting the crisis temporally—as in housing or real-estate bubbles—or geographically and physically. Resilience frameworks reinforce this by calling for urban planning and design to focus on placemaking as a means for economic growth, job creation, and a rise of real estate values, instead of focusing on improving, for instance, accessibility for the working poor and recognizing the importance of the connection between places and mobilities, immobilities, and power (Sheller 2018). As noted in the previous sections, space is a solidification of relationships of power into material

structures. Thus, planning efforts, whether consciously or not, become bulwarks against any substantial change to the urban environment; at least any change substantial enough to influence the urbanization process. Because of this, we can see deep-rooted interlinking of the physical environment and the economic policy paradigm. The limits to what is possible in terms of urban planning and policy and architectural design illustrate the tight grip that urbanized, global capitalism has on our surroundings.

6 The Problematics of Measuring City Resilience

All three outlined themes are important—but to what extent do they reflect the notion of a resilient city? Carpenter et al. (2001), Levine (2014), and Marlow et al. (2022) among others have raised the question of whether resilience can and should be measured. Few, however, have asked whether what is measured is actually useful for understanding and enhancing the city. Ideally, resilience frameworks should help us to understand where the city and its systems are now, how precarious they are, and what is at stake (Garcia and Vale 2017). In reality, the frameworks can only measure what can be measured, and thus cannot take into account some elements that are vital for a city but that are hard to measure. What we do measure requires a consideration of who is doing the measuring and why.

Resilient cities frameworks feed into the neoliberal dimension of resilience. Measuring resilience creates a “fantasy of mastery” (Bracke, 2016, p. 58) by constructing an illusion of transformation, whereas in actuality, it brings the cities back to the place where there is no trace of a disaster. But this is not because a city is now “strong”—instead, the disaster is permanent, because “resilience is dependent on disaster [...]. It is dialectically bound to such disaster: without disaster, there is no need for resilience” (Bracke, 2016, p. 59). Here, resilience becomes a sort of Machiavellian tool that can produce a lot of harm in the name of a supposedly good cause. This opens up a number of problematics that impact how we understand cities and resilience through the prism of these frameworks.

First, it is important to note that the resilience frameworks in themselves are not public policy instruments; instead, their main intention is to offer a standardized but voluntary approach to management of various issue. However, their impact is significant, and its influence on public policy—and consequently on the way cities operate—is undeniable. At the same time, the frameworks lack a sense of priorities; thus, although describing problems and solutions, they turn into a list of individual goals without a consensus on how to join them together. The conflicting interests of power and class create a

complicated tangle of priorities that cannot be unravelled without examining the underlying structures that drive urban growth (Bottomore 2002; Purcell 2002; Brenner et al. 2012). Understanding this complexity involves addressing the utilization of urban space as a vehicle for the accumulation of capital (Castells 1977; Harvey 1989; Purcell 2002). Neoclassical economic theory viewed cities as concentrated sites of commodification (Brenner et al. 2011; Brenner et al. 2012). This reveals the urban environment as a place of contestation (Harvey 1989; Lefebvre 2003). It also displays how cities maintain themselves or change to preserve this economic paradigm (Brenner and Theodore 2002; Merrifield 2002); however none of these are manifested in the frameworks.

Second, the frameworks’ view of a city—and therefore its resilience—is territorialist. Resilience frameworks presuppose a world that is composed of distinct, bounded settlement types—which are occasionally impacted by disasters (often portrayed in these frameworks as “unexpected events”). In order to do this, space must become analytically frozen. However, if we can recognize the city—as well as the rural—as a creation of ideology, we can move away from measuring settlement types and try to understand the constantly moving, churning process of creative destruction that keeps settlement patterns in a constant, complex, often contradictory process of development. It also helps us realize that disasters are a process of risk creation, instigated in and by society, furthered through systemic oppression and the creation of vulnerabilities present in the everyday interplay between hazards, people, places, and power (O’Keefe et al. 1976; Oliver-Smith 1986; Chmutina and von Meding 2019; Bonilla 2020; Rivera 2020).

This leads us to the final problematic: resilience frameworks, although they offer some possible definitions of a city, largely fail to answer the important question that should underpin any measurement of resilience—what constitutes a city? In many cases, people are being displaced from (not just to) cities, often ending up in camps of various sizes. Do these constitute cities? Do displaced people still belong to the cities they were driven from? Is the city, in this context, even a reality anymore? Are concepts like resilience located in the physical infrastructure of specific places, or are they a quality of the people located there? If the city is the people who live within a certain administrative district, does the city pack up and leave with them? Is there anything that we are trying to conceptualize, measure, or render legible in the physical structures left behind in a location depleted of human population? And what is it that we are trying to make—and measure as—“resilient”?

If we take resilience to be an underlying commonality of all cities, then trying to understand what it is that makes

cities resilient is not exactly the question. Cities might have varying degrees of resilience, but they all share resilience to some extent. Then the question changes from how we understand resilience as a facet of a city, to how we understand cities as facets of resilience. We do not believe that this question can be settled in this article. However, the question itself should be considered when probing the complexities of resilience.

7 Conclusions

This article aimed to unpack the idea of a city shaped within and by urban resilience frameworks; here we did not wish to provide answers but instead ask questions that would challenge wide and somewhat uncritical acceptance of “resilient city” as a way forward. It is thus important to once again ask—What is a city? What is resilience? And are the measurements that are proposed by the powerful leading to the reification of inequalities and therefore actually making cities less resilient? In an announcement on the 100 Resilient Cities Program, The Rockefeller Foundation stated that “cities are reorganizing around the concept of resilience” (The Rockefeller Foundation 2016). This presupposes what cities are, without clarifying the concept. If cities are now reorganizing around the concept of resilience, what were cities organized around previously? More importantly, if they were not organized around the concept of resilience, then why are they still here?

Looking at the concept of resilient cities, is it possible to reverse engineer the concept of a city as not being the category in question, but rather resilience itself? Thinking about it in these terms we can suppose the city, or at least a city, to be the product of resilience? If a concentration of people is transient—for example refugees or evacuees—we should not question the concept of the city in general. What we should do is examine the resilience, or perhaps, the obduracy of this group of people as a static concentration. Looking at it this way, resilient cities are not concentrated urbanization in need of resilience. Rather, cities themselves are an expression of continued and substantial resilience.

In the beginning of this article, we posed a question: how has the idea of a city been shaped by and within urban resilience frameworks? We do not ask this question as a rhetorical exercise, rather we believe that by attempting to answer this question—and ones like it—we can gain a clearer understanding of what is meant by both the concepts of resilient and cities. If cities were organized around something other than resilience before, is resilience a natural by-product of cities themselves? If that is the case, then what is necessitating the need for increased—and measured—resilience? Is it an acceleration in some

“natural” phenomena or is there something about the growth of cities themselves that brings about the need for reorganization? This is not a trivial distinction. It is crucial to critique, criticise, and resist “resilience” as a proposed “solution” to an urban question that involves overtly capitalist logics.

If a call for an increasing need for resilience presupposes a rise in hazards that come from outside the process of urbanization, then the idea of resilient cities is obscuring the social production of risk. If this demand for cities to become more resilient is an acknowledgment of the risk produced by globalized urbanization, then the call itself is an indictment of the current state of our cities. If that is the case, this also would reflect the fact that the resilience that sustained existing cities to this point is somehow in conflict with the newer form of resilience that we have a need to organize around.

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