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**‘Scarcity’ in Times of Plenty:
Water, Governance and Everyday Politics in Metro Manila
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Abstract

Do water crises have the potential to contribute to social and political unrest in cities, especially in the Global South? To address this question, this paper draws on 60 interviews, 8 focus group discussions and a survey of 800 urban poor households in Metro Manila. Analysis suggests that access to water for these households is rife with vulnerability. In other words, scarcity is not natural as much as produced through economic and political decisions. These pre-existing entitlements determine the scale of suffering during times of water crises. In 2019, as the entire population of Metro Manila experienced a water crisis, urban poor households suffered disproportionately. While people coped individually by altering their behavior, discontent was palpable among communities, highlighting that individual grievances were at the cusp of entering the social realm. This analysis is supported by discussions in political ecology, contentious politics, and governance and informality in cities in the Global South.

Introduction

Thinking about the social and political effects of water crises in cities in the Global South is a challenging exercise in many ways. At the same time that these concerns inhabit a place in the future, they are rooted in the present and the past. Thus, although almost two billion people will be living in water stressed cities by 2050, it is not as if people do not experience limited access to water, especially those who are underprivileged. That, water crises may exacerbate pre-existing vulnerability of marginalized populations is a tenable argument (Sen 1981). But could they also contribute to social and political discontent?

Seemingly straightforward, the question provides no easy answers. How does one establish causality between water crises and political unrest? Especially considering that for many in cities in the Global South, water scarcity is a part of daily living. Mismanagement of dwindling natural resources, when combined with inequitable distribution, makes service provision the weak link. In fact, in service provision contestation and

(or) collaboration take place among multiple players— and in some instances, criminal and (or) political violence accompanies these dynamics. How does one separate the effects of water crises from these ground realities? And how may political unrest manifest in such a case?

Although not always explicitly stated, at least four propositions are key to unpacking the scarcity-unrest equation.

The first issue is that of methodological preferences—mapping paths between water crises and unrest is premised on a structural approach in which depleting resources engender grievances among populations that may in turn result in violent political expression including conflict. Yet, water crises do not unfold in isolation; they interact with dynamic antecedent social, economic and political processes of any society. This is particularly relevant within the context of cities that represent complex adaptive systems. Relational approaches may be better suited to make sense of these interactions (Tilly 2001). Through identifying mechanisms at individual and group level, scholarship suggests that we may be able to open the black box of macro narratives (Hedström and Swedberg 1998). Thus, unless we develop granular explanations at micro and meso levels, macro causal narratives are bound to miss key pieces of the puzzle.

Second, scarcity (water in this case) is understood in terms of natural depletion of resources. Yet, scarcity is not natural as much as produced through economic, social, and political decisions over time. Unless we expand the concept of scarcity to include the architecture of pre-existing entitlements in a society (Adger and Kelly 1999), we may miss the topography of inequality shaped by historical legacies, ethnic, racial, class, gender, religion or other identities (Heynen, Kaika, and Swyngedouw 2006b; Zimmer 2010). This conceptualization of scarcity as a constructed phenomenon animates discussions with questions about distribution of resources, alerting us to the politics of who gets what and why as well as to the role of governments, processes of capital formation, and contextual details of a society.

The third issue is about management of resources. It is argued that poor performance of government institutions results in inefficient and inequitable distribution of resources. This conceptualization in turn creates space for a debate on public versus private management of sources. Privatization of water delivery is a notable example. While many criticize this formulation, citing it as an apolitical and techno-managerial approach to questions that are intrinsically political, i.e., who gets what and why, the problem is not only that political questions are brushed aside in this reasoning. Based on normative discussions of rational-legal orders and traditional roles associated with formal governments, this narrative is generally understood as the divide between failures of public institutions that could be addressed with private solutions. Yet, public-private binaries are inadequate in explaining historical details of state formation in the Global South where experiences of rule were different from those in the West (Gupta 1995). In many cities in the Global South, informality, understood as existing in relation to the state and as an urban planning logic (Roy 2009b) brings politics back in discussions. Drawing on postcolonial scholarship, informality also provides a lens to map players who traverse porous boundaries between the public and private realms. Be they informal sovereigns

(Hansen 2005) or violent entrepreneurs (Volkov 2002), these players need to be understood in relation to their relationships with those in the legal realm.

The fourth issue is about the scarcity-conflict equation. Premised on theories of civil conflict, linking water scarcity to conflict is a challenging enterprise when explored in the context of cities. Since some cities have histories of criminal and political entrepreneurs employing violence as a regulatory mechanism integral to dynamics of governance and politics (Arias and Goldstein 2010; Davis 2010b), disentangling adverse effects of scarcity to expressions of social and political unrest including conflict is fraught with methodological challenges. Inequality may also be entrenched in societies. Grievances simmer among disenfranchised groups but may not result in social unrest. At the same time, access to basic services is not always ensured by the state. Underprivileged sections of society make claims to secure access to basic services through everyday practices, such as reaching out to political or community leaders for assistance or visiting a government office (Kruks-Wisner 2018). These quotidian acts are essential to understanding everyday living at the grassroots (Scott 1985; Bayat 2000; Graham and MacFarlane 2015; Ranganathan 2013; Streule et al. 2020; Simone 2005). It is in these seemingly mundane acts and interactions among groups and individuals that we may trace if social boundaries are changing (Tilly 2004), bringing coalitions of disenfranchised groups together to learn from each other to, say, get access to water, or to organize ways for expressions of contention. This focus on everyday acts of claim-making allows for conceptualizing scarcity as not leading to conflict but potentially leading to a spectrum of contention (McAdam, Tarrow, and Tilly 1996). As social movement scholars suggest (McAdam, Tarrow, and Tilly 2001), expressions of contention, ranging from social movements to strike waves and more ‘result from similar mechanisms and processes...[W]e can learn more about all of them by comparing their dynamics than by looking at each on its own.’ This relational understanding provides a window in human responses and interactions at the micro and meso levels that in turn determine macro-outcomes including social and political expressions.

This paper addresses these concerns. It makes the case for shifting the focus from whether water crises can lead to social and political unrest in cities to understanding ground realities as they relate to access and provision of water to local populations. It is in these spaces that ordinary people are making claims as they seek basic amenities such as water, as well as where multiple players contribute to providing access. These relational interactions are not only the site of everyday politics and governance, but they are also where social boundaries among social groups are ever-changing (Tilly 2004). By developing limited explanations (Hedström and Swedberg 1998), this mechanism-based approach allows for keeping the diversity of contexts as they relate to societies and cities where outcomes may vary depending on the concatenation of mechanisms (McAdam, Tarrow, and Tilly 1996, 2001).

Based on the case study of Metro Manila and wider scholarship, this paper develops these ideas in more detail. Analysis is based on primary data that was collected during fieldwork in 2019 and 2020 and includes focus group discussions with urban poor communities and NGO members (n=8), a survey of urban

poor households (n=800), and semi-structured interviews of private water providers including water syndicates, NGO members, community organizers, academics, and government officials at varying levels (n=60). With data collection and analysis still ongoing, this document lives up to its classification as a working paper.

The remaining paper is organized as follows. The first section presents a brief discussion of literature followed by the proposed approach in the second section. The third section lays out analysis from the case study. The fourth section presents the conclusion.

1. Discussions in Literature: A Brief Review

Thinking about the social and political consequences of water crises in cities in the Global South is not a straightforward affair. For one, it is premised on the assumption that scarcity is an external stressor impinging on an otherwise steady, if not abundant supply of water. In many cities, however, access to water is scarce even during ‘normal’ times. In fact, not having access may be a default scenario for marginalized populations. And yet, water crises resulting from climate-related risks present a serious concern (McDonald et al. 2014; Desbureaux and Rodella 2018). Since the question cuts across thematic boundaries, I draw on multiple literatures for a brief review along three distinct intellectual terrains, namely, producing scarcity, governing scarcity, and the scarcity-conflict equation.

1-1. Producing Scarcity

Discussions on scarcity can be divided into political and apolitical approaches (Robbins 2011). Political ecological perspectives represent political approaches. Drawing on the concept of social-ecological systems (SEs), which suggests that social and natural systems are tightly coupled (Ostrom 2009), political ecological perspectives highlight the centrality of power in bearing significant effects on SEs and their outcomes (Epstein et al. 2014). That is, ecological conditions are shaped by political processes benefiting few at the cost of the many. This distribution sharpens pre-existing inequalities or creates new ones highlighting unequal entitlements in society (Adger and Kelly 1999; Sen 1981; Ribot 2010).

On the other hand, apolitical approaches conceptualize scarcity through a nature-society dichotomy. As human populations grow, their increasing consumption leads to environmental scarcity and degradation beyond renewal (Malthus 1992; Ehrlich 1968; Hardin 1968; Meadows et al. 1972). Based on this premise, the predicament is dire in developing countries that have growing populations and scarce environmental goods. Similar thinking is at work in studies on cities in the Global South where increasing populations and resultant increased energy consumption and challenges for infrastructure and governance etc. are viewed with concern for sustainable development and environmental resources. This argument is countered by

reasoning that market dynamics may manage growing consumption patterns, or that, societies may manage finite resources by better financial management and technological advancement (Robbins 2011). Ostrom's work is groundbreaking in this regard as not only does she challenge the Tragedy of the Commons argument, but she also questions the nature-society dichotomy. Embedding her work in SESs, in which interaction between the two triggers 'feedback loops, abrupt change, turbulence, and increased exposure to new types of risk' (Reyers et al. 2018). Ostrom (2009) suggests that collective responses could lead to resilient systems. In other words, even in places that are considered underdeveloped, people may find ways to work together in managing common resources without central authority.

While Ostrom and others counter the argument of the Tragedy of the Commons effectively (Ostrom, Walker, and Gardner 1992; Ostrom 1993, 2009; Feeny et al. 1990; Hanna, Folke, and Maler 1996), politics loses centrality in environmental commons debates. Some argue that the seemingly analytical objectivity of the 'overpopulation' argument distracts from the real concern of social inequity through maldistribution of resources between developed and developing countries (Harvey 1974; Smith 1984). Others go as far as to say that ignoring appropriation of communal capital from local societies and into the hands of local and foreign elites places the burden of sustainability at the doors of the dispossessed (Muldavin 1996; Robbins 2011).

Bringing these concerns to cities, Urban Political Ecology (UPE) investigates 'who produces what ...for whom' (Heynen, Kaika, and Swyngedouw 2006b). In this approach, there is nothing unnatural about cities (Harvey 1996); in fact, the urban illustrates social ecological relations through mobilization of market-driven processes, linking the local to global social-ecological relations (Harvey 1996; Merrifield 2002; Heynen, Kaika, and Swyngedouw 2006a). When it comes to urbanization, the common point of UPE with apolitical approaches is that both perceive it as indicative of increasing consumption and environmental challenges. However, while apolitical approaches identify increasing populations and consumption as the problem, UPE presents a different understanding in two distinct ways. One, the modern city is conceptualized as a 'hybrid' or 'cyborg' with fusion of nature and society (Latour 2004; Gandy 2005; Swyngedouw 2006). This perspective turns the concept of urbanizing nature through technical and engineering solutions on its head, instead pointing out how nature is part of social and political processes (Swyngedouw 2006). Two, UPE places the blame squarely on capital accumulation, which turns the city into 'a metabolic socio-environmental process that stretches from the immediate environment to the remotest corners of the globe' (Heynen et al. 2006, p.5). UPE thus politicizes socio-ecological processes employed in the service of capitalist flows by raising the question 'why are "things as such" produced in the way they are—and to whose potential benefit' (Kirsch and Mitchell 2004). From this vantage point, water helps 'narrate [the] many interrelated tales of the city: the story of its people, and the socio-ecological processes that produce the urban and its spaces of privilege and exclusion' (Swyngedouw 1996). In this

conceptualization, water scarcity is not as much about natural depletion of resources as providing a window in ‘power geometries’ (Swyngedouw 2006).

Although UPE scholarship has blazed new pathways through its contributions, it faces conceptual and methodological challenges (Zimmer 2010; Heynen 2014, 2015). For one, urban processes are explained through a Euro-centric lens, leaving limited space for readings of other cities in non-Western contexts. It is in these regions that cities are growing rapidly, and environmental challenges are adding up, thus meriting more focus (Myers 2008). This is not to question the generalizability of concepts as much as point out that varying historical, material, cultural, societal, and political (among others) contexts may contribute to new epistemologies situated in time and space (Robinson 2002; Roy 2009a). Scholarship from cities in the Global South attests to this reasoning in multiple ways. For instance, employing infrastructure—an important lens in the UPE literature, is challenging when it comes to making sense of realities in Lagos and other cities in the Global South as in many of these places, infrastructure never constituted the experience of the majority (Gandy 2005). Similarly, in many postcolonial cities, urban spaces were partitioned for use of the colonizers and the colonized, leading to different cityscapes within a city. In some if not many places, these patterns have persisted over time. Cities in the Global South thus offer rich examples of ‘a plurality of Political Ecologies’ existing parallel to each other (Zimmer 2010, p.350).

Moreover, despite that UPE draws on poststructural approaches (Castree 2001; Demeritt 2001; Latour 2004; Escobar 1996; Heynen 2014), the foundational understanding of capital accumulation remains sacrosanct (Lawhon, Ernstson, and Silver 2014; Castree and MacMillan 2001). Scholarship from cities in the Global South, however, suggests that while capitalism is important, it is not the only source of power. Building on scholarship on cities in Africa (Simone 2004; Myers 2008; Pieterse 2008) as well as feminist, postcolonial and poststructuralist theories, Lawhon et al. (2014) propose developing a ‘situated UPE’. The concept expands understanding of power from class relations to ‘other forms of identity (such as race and gender), discursive power and knowledge claims’, and explains it as ‘residing nowhere but enacted everywhere’ (Lawhon, Ernstson, and Silver 2014).

Building on this critique is the point that, within discussions of processes of capital accumulation in UPE, human beings are considered mainly as bearer of labor power. Yet, human beings also have the capacity to enact other ways of being in the world (Gidwani 2004). This approach is in line with urban theory in general in which Marxist analysis of accumulation is a dominant narrative, but, which in applying wholesale for universal accounts of urbanization may overlook themes of ‘political struggle and subject making through which space is lived and negotiated’ (Roy 2009a, 2017). In other words, this narrow focus may miss human agency, messy politics of everyday that defies categorization, and claim-making by subaltern groups (Bayat 2000; Simone 2004; Holston 2008; Mbembe and Nuttal 2004; Appadurai 2001), as well as interests and power relations among different actors when it comes to understanding cities through UPE (Zimmer 2010).

1-2. Governing Scarcity

In apolitical readings of scarcity, mismanagement of resources is credited to poor performance of governments, which in turn could be fixed by techno-managerial solutions. Emblematic of this reasoning, good governance agendas as espoused by international institutions remain influential. They are based on deep normative expectations associated with clear boundaries between public and private, legal and illegal, and functions of government institutions (Johnston 2014; Migdal, Kohli, and Shue 1994). In many instances, the charge of mismanagement of resources, corruption, lack of technical know-how etc. justified privatization to achieve development objectives (Bakker 2008).

Adopting the ideal type of rational-legal state as the yardstick to evaluate processes in other parts of the world bears far-reaching consequences. An obvious one is that places falling short of these standards may be deemed as failed or 'fragile' states (or, cities), necessitating interventions including privatization. In the case of water provision, it is the foundation upon which conventional explanations of public, private and corporate water providers rests. Yet, these terms hardly capture the complicated nature of ground realities of water provision in many countries. For instance, the term 'corporate' refers not only to the private sector but also to government suppliers who may be organized in formal management hierarchies (Bakker 2010). Similarly, 'private' provision also includes unregulated small-scale water providers who work alongside community organizations, which could be nongovernmental and not-for-profit (ibid, p.25).

Scholarship, however, points out the contested nature of the notions of 'public' and 'private' realms. In European experiences of state formation, boundaries between public-private and state-society sharpened over time (Johnston 2014). Emblematic of a rational-legal order, the state and its institutions represented a cohesive whole. Yet, in non-Western contexts, in particular in postcolonial states (Gupta 1995; Hansen 2005; Lund 2006; Olivier de Sardan 2008; Arias 2017), scholarship suggests the disaggregated nature of the state. These readings curb the impulse to accept the notions of 'public' and 'private' and 'formal' and 'informal' as bounded categories like established truths. They suggest that acknowledging historical differences is not questioning the normative ideals of legitimacy and accountability associated with the idea of the state as much as to carve out space for other experiences (Roy 2009a; Comaroff and Comaroff 2012). At a methodological level, the ideal type as envisioned by Weber was never intended to present definitive blueprints of reality as much as outline mental maps to guide understanding of particular contexts (De Herdt and Olivier de Sardan 2015; Jackson 2010). From this vantage point that emphasizes contextualizing experiences of state formation as well as discursive constructions of the ideas of state, formal-informal, and public-private realms (Gupta 1995), scholars highlight the negotiated nature of states (Müller 2012) as well as the distributed nature of sovereign power among local forms of authority (Hansen 2005).

Thus, ground realities in many cities in the Global South where multiple players (including political militias, criminal groups, violent entrepreneurs etc.) engaging in functions traditionally associated with a cohesive state are not emblematic of failure of governments. Instead, this literature points out historical

legacies of rule that have persisted over time, as well as the contested nature of informality and illegality that exist in relation to formality and legality. Within the context of cities, urban informality presents a rich trove of literature highlighting these tensions. Ranganathan (2016) writes,

While practitioner approaches have long equated informality with backwardness and underdevelopment—a residual category that should eventually be eliminated through formalization—critical approaches have pointed out the durability of informality, as well as its inextricability with the formal sphere. In addition to being a survival strategy of the poor, informal water practices include profitable enterprises enmeshed in the capitalist economy and the discretionary practices of state-owned utilities and everyday state actors (Ahlers et al. 2014; Ranganathan 2014a). Critical approaches have thus increasingly argued against seeing informality as a stand-alone, homogenous “sector” separate from the formal and have instead suggested that it is a highly internally differentiated mode of metropolitan governance (AlSayyad and Roy 2004; Roy 2005, 2009). Moreover, recent empirical findings from around the world, including from the Global North, have shown the state to be centrally implicated in the production and management of informal urban water (e.g., Hossain 2011; Ranganathan and Balazs 2015) and urban informality more generally (Devlin 2011; McFarlane 2012; Porter et al. 2011). Here, the state itself is itself theorized as a flexible and, at times, informalized entity—one that manipulates the binaries of “legal” and “illegal” in order to prioritize certain interests and consolidate economic and social power.

Whether contested or consolidated, discussions about the nature of the state and its formation are extremely important as they help in problematizing the notions of public and private, formal and informal, and legal and illegal. For a political reading of scarcity, placing these literatures in conversation with debates in (urban) political ecology may be worthwhile in at least two ways. One, in mapping topographies of inequality and power, these contextualized discussions of governance, the state, different actors and their relationships among each other as well as with ordinary people may highlight axes of identity around which social groups may be marginalized. In addition to highlighting the role of capital accumulation processes and class divisions, understanding fault lines crisscrossing societies may serve in some capacity. An understanding at such a deep level may also provide an understanding of how the state, despite not being a unified actor, may still be the final arbiter. From this vantage point, apolitical readings of scarcity fail to capture the richness of local contexts while broadly generalizing conditions as emblematic of corrupt backward cases. Two, a granular understanding of contexts provides the landscape in which ordinary people make claims. It is these sites that are the arena of everyday strategies of survival and may differ from place to place.

1-3. Scarcity- Conflict Equation

Based on differing conceptualizations of production and governance of scarce resources, the scarcity-conflict equation is fraught with challenges when it comes to urban contexts. Climate-related risks may introduce disturbance in the coupled social and ecological systems, but how may they translate into social and political expressions?

We may see glimmerings of the apolitical approach in scarcity-conflict debates that have identified covariation between lack of access to resources and grievances leading to conflict (Homer-Dixon 1999; Kahl 2006), or increasing populations in cities leading to severe challenges for governments resulting in competition over resources. Considering diverse contexts of cities and regions as well as the complex nature of conflict processes, there is little consensus on the form of such contentious futures (Mitlin 2018; Paller 2019). Moreover, the agenda put forth by the micro dynamics of conflict literature (Kalyvas, Shapiro, and Masoud 2008) challenges the notion of conflicts resulting from large phenomena, including scarcity. Similarly, scholarship on contentious politics suggests that conflicts do not unfold overnight—their dynamics evolve over time and not always in a linear manner (Goldstone and McAdam 2001; McAdam, Tarrow, and Tilly 1996, 2001; Tarrow 2007).

The challenge in mapping pathways of social and political unrest resulting from conditions of water stresses is at least twofold. The first is methodological; separating the effects of potential stresses from extant dynamics of criminal and political violence is a difficult task. In some cities in Latin America, for instance, violence levels are comparable to war zones (Schultze-Kraft, Chinchilla, and Moriconi 2018), and yet, they do not fall in the category of civil conflict since criminal actors perpetrating violence do not wish to overthrow governments (Kalyvas 2015). This reasoning is countered by some who suggest that in cities in Latin America experiencing intense criminal violence, the transnational drug trade has configured local political economies. This could be deemed a ‘criminal insurgency’ that delegitimizes state institutions through intense criminal violence perpetrated in service of economic control and autonomy over territory (Grillo 2012; Schedler 2013). No-go zones, violent competition among crime groups, and violence against policing efforts of state actors and spiraling of violence may lead to implosion of the state. Thus even though armed actors do not challenge state authority, they hold the ‘potential to erode the state’s monopoly over the means of coercion’ leading to ‘citizen dissatisfaction...fueling vicious cycle of security privatization and government de-legitimization,’ laying the ‘groundwork for challenging the traditional functions, legitimacy, coercive capacities, and territorial logic of the nation-state’ (Davis 2010a). To that extent, the result is political even if the motives of actors are not so (Beall, Goodfellow, and Rodgers 2013). While insightful, these arguments limit discussions to body counts.

Related to the first challenge is the second one. Even if scholarship may identify negative effects of water crises on local populations, they may not always result in expressions of social and political unrest. In many cities, water crises may be one among the many challenges for local populations. If cities experience

high levels of violence and criminality and yet continue to survive, with the former becoming part of governance and political orders (Müller 2012; Arias 2017; Schultze-Kraft 2019), it is difficult to prove that a water crisis may tip the scales.

This conundrum is not unique. In debates farther away from these themes, scholars posed similar questions when it came to inequality (Tilly 1998). Why does inequality persist in societies? Tilly suggests that the challenge as well as the solution lies in methodological preferences. System theorists may look at large structures while methodological individualists may look at individuals as the locus of explanation. Along with many others, he argues for a relational approach that finds promise in analyzing interactions among people. These ties and relations among social groups is the ‘central stuff of social life’ (Tilly 2002).

Based on this approach, a helpful approach could be to perceiving conflict as a spectrum, with non-violent with expressions of unrest on the one hand, and full-blown violent forms of contention on the other. McAdam et al. (1996, p. 27) argue that there are ‘continuities between movements . . . and revolutions’ and that what path actors take is a matter of choosing ‘the most appropriate response to their resources, their opportunities, and their constraints.’ Goldstone (1998) points out that varied forms of contention such as social movements, rebellions, revolutions, civil conflict, etc. originate from similar processes, but, depending upon interaction with the state, evolve to different outcomes.

Contingent on specific contexts of a city, violent collective action may follow as pre-existing fault lines are sharpened and (or) new ones created.

2. Proposed Argument

Situating it in the rich scholarship on UPE, postcolonial studies, urban informality, governance, and relational approaches, the argument presented in this paper rests on the following postulates.

(i) I adopt a political-ecological understanding that questions the argument of scarcity of resources in terms of absolute availability. Adopting this approach allows for paying attention to social, economic and political decisions that result in (re) producing inequality of access. In a city, this power may be viewed not only through divisions along class relations but also through race, ethnicity or gender etc. (Lawhon, Ernston & Silver 2014, p.508). At the same time, I argue for creating space for climate-related risks as well as urbanization in terms of migration to cities in discussions on scarcity. As significant evidence indicates, the number of water-stressed cities is increasing all over the world.

(ii) Building on discussions about varied experiences of state-making in different parts of the world, while focusing on contemporary realities that may be complex and emergent, I argue for

adopting the analytical lens of governance to map the terrain of players involved in providing access to basic services (water, in this instance). In its general understanding, governance refers to ‘modes of coordinating social action in human society’ (Risse, Börzel, and Draude 2018). Beyond the scope of this paper to provide an in-depth discussion of this concept, I follow in the footsteps of scholarship that calls for paying attention to players and processes beyond ‘pathologies of the state’ (Müller 2018). Adopting this lens allows making sense of relations and interests of various players engaged in dispensing services that may evade usual explanations. For instance, some of these players traverse legal-illegal/public-private realms with ease as they inhabit both worlds, and in this sense may be considered more ‘flexian’ (Wedel 2004, 2005) than operators serving at the behest of political patrons or having relations with government officials at varying levels. At the same time, I draw on urban informality and postcolonial literature that alerts to the fragmented nature of the state that has the power to operate in a state of exception (Roy 2005).

(iii) I argue for de-linking the scarcity-conflict argument to consider varying forms of political expression that may or may not culminate into conflict. As scholars of conflict, social movements and revolutions point out, these are not frequent occurrences and fester over a period of time before turning into violent contention (McAdam, Tarrow, and Tilly 1996). Depleting water resources are not adequate on their own to mobilize social and political groups along a society’s fault lines. This approach broadens the spectrum of contention to include contentious competition over resources (Paller 2019), tenuous equilibria in a society that may mask unrest, including exacerbating of previous and new grievances (Hussain 2016), or even conflict. By no means, the only possibilities, this premise widens the terrain to include violent and nonviolent forms of political expression that may destabilize a political system.

Appended to this perspective and building on the conceptual work on struggles at the grassroots of society, I suggest looking through the analytical lens of claim-making as it relates to seeking access to basic services by ordinary citizens. Daily acts of claim-making at micro and meso levels may include working with players like NGOs, visiting government offices etc. and may be considered as ‘fundamental political acts through which citizens forge and navigate their relationship to the state’ (Kruks-Wisner 2018, p.4). It is here that social boundaries may expand to bring coalitions of aggrieved together for social and political expressions or where social groups may learn from each other (Tilly 2004).

Making sense of relations and interests of various players engaged in governance as well as the ways people experience vulnerability and attempt to subvert it cracks the window open in understanding the dynamics of power and everyday modes of resistance over time and space. Such an approach may ‘not only bring about visible, material cities, but also different social constructions and meanings of cities, or “invisible cities”’ (Zimmer 2010). It is here that existing concepts in

multiple literatures may be placed in conversation to map the ways scarcity is experienced and governed.

(iv) Lastly, I adopt mechanisms (Merton 1968; Elster 1989; Elster 1998; Mahoney 2001; Hedström and Swedberg 1998) as the preferred explanatory strategy to develop limited explanations of complex ground realities in cities. By mechanisms, I mean ‘delimited sorts of events that change relations among specified sets of elements in identical or closely similar ways over a variety of situations’ (McAdam, Tarrow, and Tilly 2001, p.24).

3. Case Study (Metro Manila): Data and Analysis

3-1. Data Sources

Data sources for the case study include primary and secondary sources. Primary sources include focus group discussions with urban poor communities, members of water cooperatives and NGO members (n=8), and semi-structured interviews (n=60) with NGO members, academics, government officials at varying levels and offices, community organizers, and water providers including those running syndicates and members of water cooperatives. These interviews were carried out during fieldwork in 2019 and 2020 and are still ongoing through social media platforms to collect more data.

In addition, through collaboration with two co-authors,¹ a survey of urban poor households was carried out (n=800). Carried out during the time of a pandemic (COVID-19) in 2020, the survey team observed safety and health protocols set by the government of the Philippines. The sites of the survey were as follows: Pasay City, Caloocan City, San Jose Del Monte City, Malabon City, and Quezon City. Six urban communities living in these cities that are either a part of Metro Manila (itself comprising of 17 small cities) or adjacent to Metro Manila formed the study population. The criteria of selecting communities were as follows:

- a. Urban poor households
- b. Experiencing some form of water informality
- c. Living in informal settlements/housing
- d. Living in/around Metro Manila
- e. Having access to communities through facilitation by community organizers and an NGO²

¹ Co-authors of the survey include Dr. Carmeli C. Chaves, Professor at the University of the Philippines (School of Urban and Regional Planning) and the Institute of Popular Democracy (IPD), an NGO based in Metro Manila.

² the Institute of Popular Democracy (IPD).

- f. The definition of ‘community’ in this survey was not derived from theory as much as by the respondents and wider population of the communities themselves. In all instances, there were organized home-member associations water cooperative, or community organizers working on issues of importance to the communities.
- g. At the request of respondents, the names of communities are not shared.

Systematic random sampling was carried out to prevent bias in data collection. The sampling frame consisted of members of water cooperatives, identified by local community representatives working with IPD in five communities, in addition to the communities in the community in Quezon city that were identified by a local community organizer. Pilot tests were carried out in all communities one time to refine the questionnaire. Enumerators chose pilot test interviewees who had the most knowledge of water issues as well as were reliable and long standing members of the community. The survey questionnaire was translated into Tagalog (from English), and survey responses were translated from Tagalog (to English). Survey data analysis was done through Excel, SPSS, R, and NVivo. Analysis is in preliminary stages since data collection was completed by end of January 2021.

3-2. Case Study: Metro Manila

In the course of fieldwork, I visited informal settlements in and around Metro Manila. Everywhere I went, I asked, ‘Do you experience challenges in accessing water? If so, what are your coping strategies?’

‘Why is this important?’ My friend, a bright-eyed young woman working for an NGO, asked me. The directness of the question threw me off. I struggled to come up with equal acuity— ‘Because, I want to map a ‘before’ picture of the conditions that people are living in before they experience scarcity.’ My friend was left unimpressed. ‘But they *already* experience scarcity! I can tell you this right now.’

She was right of course. The chances of someone not getting access to clean, affordable and regular water for daily needs are higher if one is poor and living in an informal settlement in Metro Manila.

Yet in 2019, residents did experience a water crisis resulting from low water levels in Angat Dam, the water reservoir catering to 96 percent of the population in Metro Manila. La Mesa Dam, which typically covers the deficit failed to cover the gap in supply as well (Lee et al. 2020). Experts have long warned that although water is abundant in the Philippines, it is approaching critical limits.³ Some credit it to poor water management, rural-to-urban migration, and deteriorating ground and surface water (Pulhin et al. 2018). Experts predict that by 2025, groundwater resources will be unable to meet the water needs of major cities including Metro Manila (Pulhin et al. 2018).

³ Water scarcity in Manila may be masked by the downstream/upstream distribution of water. Angat Dam in the Bulacan province serves most of the water needs of Metro Manila in addition to irrigation needs of farmlands in Bulacan and Pampanga provinces. In times of low water levels, the needs of Metro Manila are prioritized over farmers. In times when typhoons may raise water levels, water is released in farmlands causing flooding as happened during the 2004 El Nino. (Hall, Abansi, and Lizada 2018).

It was obvious to anyone that the water crisis in 2019 was bound to bear political effects. So, it was with public hearings of top officials of the two private concessionaires, Maynilad and Manila Water, as well as the government agency responsible for monitoring them, the Metropolitan Water Works and Sewerage System (MWSS). The President weighed in as well with strong warnings to those responsible for managing the water needs of the city.

Yet, not getting regular access to water is more of a ‘normal’ for many in informal settlements. Understanding the nature of their plight or coping responses during this time cannot be explained without taking in account scarcity produced and experienced in times of plenty.

3-3. (Produced Scarcity)

No money, no water.

We don't have access to water yet.

We can't afford to have water connection because we need to pay off our previous debt first.

—Open-ended responses in the survey

Contributing 52% of manufacturing (Migo et al. 2018), Metro Manila is home to at least 13 million residents,¹ and among the most densely populated parts of the country. With its contribution to a third of the GDP, it is an attractive destination for migrants and important to the economy and politics of the Philippines. On paper, the majority of dwellers of Metro Manila have access to regular water. And yet, stepping out in urban poor communities, whether within the hair breadth of the jurisdiction of Metro Manila or in the heart of it, one is bound to notice multiple cityscapes. For the urban poor living in informal settlements or even in resettlement sites, getting access to water in ‘non-crisis’ times is not a guaranteed right.

This scarcity is not ‘natural’ as much as having been produced by political and economic decisions over time. It has to be understood beyond privatization debates and further past in the history of the state in which the poor were considered second class citizens. Magno and Parnell (2015) in their study of race, class and rights from colonial to postcolonial times suggest that colonial modes of governance ‘racialized Filipinos as underdeveloped and threatening’. While not much changed for the poor, the colonizers were replaced by the elite in the postcolonial state. Other studies support this narrative of the poor as being considered backward, even immoral, and a ‘different kind of people’ (Kusaka 2017; Garrido 2019). It is within this broader understanding of rights as a citizen (or lack thereof) that we may understand that the water infrastructure, inherited from the colonial times (Cuaresma 2006), did not serve the needs of the poor.

Those living in low-income settlements and informal housing along garbage dumps, water ways and other such available land were poorly served, if at all (Cheng 2014).

Devoid of this understanding of colonial legacies of rule and differentiated citizenship, it is easy to lay the blame of the urban poor not getting access to water on account of corporate entities managing water delivery.⁴ In doing so, one may run the risk of falling in the same trope of good governance agendas that reduce service delivery to apolitical and technical accounts. This was the premise of privatizing water delivery in Metro Manila—to replace an inefficient institution that was unable to supply water to all residents of Metro Manila and prevent pilferage resulting in revenue losses with efficient privatized supply to a growing urban population (Dumol 2000). To increase coverage, both Manila Water and Maynilad introduced pro-poor water schemes even in settlements where residents did not have a land title. While these schemes have increased coverage to informal settlements, water costs are higher and have led to a ‘persistence of informality’ (Cheng 2014, p. 54).

Most of the urban poor remain outside the net of water availability that is affordable, clean, and regular. For them, access to water is precarious even in times of abundance. Inequality of access is deeply connected with housing and land markets. Private concessionaires responsible for water provision cannot lay down infrastructure in informal settlements as they do not have, what people commonly refer to, as the ‘right of way’—on contested land, laying down water pipes may formalize settlements by implication. Getting water through informal means, residents of informal settlements are caught up in a state of impermanence. They are in a continuous struggle against getting evicted as developers, often times working with powerful families in government and business, claim space for development and commercial projects. On the other hand, to secure votes, local politicians may support residents of informal settlements in their efforts against eviction and moving to resettlement sites far from the city. Access to water for the urban poor, thus, is a complicated issue, wound up in economic and political struggles over the city.

Survey results of the six communities, a combination of informal settlements and resettlement sites illustrate vulnerability of the urban poor as it relates to paying more money as well as not being able to rely on one source of water. The majority of respondents fall below the poverty standards as set by the national census. Analysis suggests that they spend a significant percentage of their incomes, in many instances, daily wage earnings, on purchasing water. These vulnerabilities deepened as a result of the 2019 water crisis.

3-4. (Governing Scarcity)

⁴ Water delivery was privatized in 1997 by transferring the responsibility from the Metropolitan Waterworks and Sewerage System (MWSS), itself established only since 1971, to two private concessionaires, Manila Water Company and Maynilad Water Services. The MWSS became a regulator of the state in the form of the Metropolitan Waterworks and Sewerage System Regulator’s Office (MWSS-RO).

If you have money, you can get a water connection. I know people who have direct water connections, even though they live in the same informal settlement as me. You need to know a person. There's a way to get it. And yet, I don't have a legal connection and neither does my community. Which law is applicable to us?!!

—Anna, a community organizer in one of the interviews⁵

In a few words, Anna identified the layers of complexity involved in not only scarcity as experienced during times of plenty, but also everyday living for the urban poor. Just as for many in countries in the Global South, getting access to water is not guaranteed by the state. Let alone that water delivery has been privatized in Metro Manila. Neither is access to housing ensured; the informal settlement that Anna calls home can be sold by the landowner to a developer if the community fails to pay the asked price. The right to housing is interwoven in the challenge to get access to water—since the land is not owned by the community, private concessionaires responsible for provision fail to provide water. Enter the local syndicate, a specialist in means of coercion, who sells water to a significant section of the community. Even within the informal settlement, there are layers of difference among residents—only some get access to formal means of water. Some of these formal sources are illegally tapped by the syndicate boss for his water business, implying their complicity (voluntary or otherwise) in an illicit enterprise.

This complex terrain of governance is difficult to understand through the binaries of ‘public’ and ‘private’, and state and non-state categories. For instance, although the operations of the water syndicate in Anna’s community are illegal, they engage residents of the community in a web of complicity. On days when there may be visits of a government employee or an official from the private water concessionaire, residents help the syndicate leader in concealing his operations through whatever is deemed necessary. Disruption of his network would translate into disrupted access to water for the community. In his conversation, the syndicate leader contended that if he did not provide water, they would not have water to put out fires in the settlement.⁶ This admission of power as well as the fact that exploitative as it seems, his water operations enable residents to have access to water highlights the gritty realities of living in an informal settlement.

⁵ The name has been changed as the community organizer did not wish to antagonize anyone including landowners, government officials, or other local players in any way. This is not an isolated instance. Contexts in which urban poor make claims are fraught with tensions.

⁶ Fires in informal settlements may spread quickly and are an increasing phenomenon. See for instance, “Firefighting in Manila’s Tinderbox Slums: A Picture Essay”, *The Guardian*, June 25, 2018 <<https://www.theguardian.com/world/2018/jun/25/firefighting-in-manila-tinderbox-slums-a-picture-essay>> (accessed February 15, 2021).

The water syndicate leader may be deemed a ‘private’ player who is carrying out ‘public’ functions that are illegal. At the same time, Anna and her friends referred to the syndicate leader as a local tough guy, an enforcer, a man who operated outside their zone of morality. He is one of the many water providers operating in informal settlements to provide water to residents. His operations are easier to categorize as illegal (tapping water mains of customers of a private concessionaire).

It may be difficult to categorize others as easily. For instance, tanker trucks may be sourcing water from deep wells, which may be licensed through agreement with the National Water Revenue Board, the national institution responsible for water sources of the entire country. Individual entrepreneurs may be laying out water pipelines on riverbanks (deemed public land) to connect their pipeline network with water mains of a private concessionaire. These players determine the price of water for residents, organize water delivery as a business, may engage in violence over control of service areas,⁷ as well as cut off supply of water to those who cannot pay up the costs of purchasing water. As one of the water providers explained,

My boys keep an eye on residents of the community. We give them two warnings. If they do not pay up, supply is cut off. If we see them drinking, supply is cut off. If they have money to spend on alcohol, they have money to spend on water.

Water cooperatives or community-based organizations are another player that provide water to communities through agreements with private concessionaires. While the latter help install bulk meters outside of informal settlement, the water cooperatives are responsible for collection of payments from the community. Other methods include individual meters along public roads and small communal taps where one meter is shared by two to five households (Cheng 2014). Since the start-up costs of laying out water network within the community are outsourced to communities, the price of water is higher for residents of informal settlements, even though the source of the water is a private concessionaire. In case of delayed or non-payments, water supply may be cut off for members. As a result, some may seek recourse through other water sources including refilling stations, deep wells, tanker trucks etc.

These players are left to deal with challenges associated with water provision as well as tensions within the community on their own. Resolution mechanisms vary from one player to the next, depending on the nature of their operations. While a water cooperative, for instance, may seek consensus among its members, an individual entrepreneur may unilaterally make decisions. For instance, one provider recounted extending his business in a Muslim neighborhood by getting the approval of the religious leader in the local mosque as well as providing a share of the revenue from the water business to the local strongman. Similarly, he regularly bribed local police officials and a low-level employee of one of the concessionaires for receiving

⁷ Based on interviews. Syndicates in one of the cities were killing each other over water service areas.

information necessary for running of day-to-day activities. By no means capturing the complete range of players involved in water provision in informal communities, Figure 1 illustrates a slice of this complexity.

Figure 1: Different Types of Water Providers⁸

| Water Provider | Source of water | Agreement/Understanding | Type of Model | Price (per/cubic meter) |
|--|---|--|--|--|
| Water Cooperative | Maynilad/Manila Water provides mother meters (sub-meters to be connected for members) | Agreement with Manila Water/Maynilad | More democratic than the others—decisions by some consensus; <i>accountability to the community. (can be captured by corrupt management)</i> | Variable—set by members of the cooperative. (Examples: PHP 35 per cubic meter; PHP 37.50 per cubic meter etc.) |
| Syndicate (different types depending on their source of water/understanding with the community/other actors) | Tapping of water mains by the individual running the business | Understanding/Agreement with individuals who have Maynilad/Manila Water accounts | Individual decisions, although shared understanding about ground rules with other syndicates about scope of operations | Variable—set by the syndicate leader (Example: PHP 50 per household per week for a household of 2-5 persons). |
| Water Trucks | Wells | Agreement for digging wells with NWRB or local government | Individual decisions | Variable—set by the provider (Example: PHP40 pesos per drum (5 drums=1 cubic meter) |
| Individual water provider | Connecting water pipelines with Manila Water/Maynilad infrastructure. | Agreement/understanding with Manila Water/Maynilad | Individual decisions, problem-solving rather than consultation with others | Variable-- set by the provider (Example:PHP11.40 per cubicmeter) |
| Maynilad/Manila Water | Angat Dam | Agreement with MWSS | Corporate model | Fixed rate-- PHP 28 PHP per cubic meter |

Navigating this terrain, where there are many influencers⁹ including barangay officials, police, politicians, local strongmen, community leaders, NGOs, developers, and corporate interests, is not possible without collaborations. As an informal water provider and community leader explained, ‘whoever controls

⁸ Based on interviews and focus group discussions.

⁹ A term used by a small scale water provider operating in rural areas in the Philippines. He noted that while there are few palms to grease in rural areas, in the cities, there are multiple and overlying authorities, or influencers.

water controls politics.’ With their deep networks in communities, water providers may be perceived by politicians as competition or a valuable resource for ensuring votes (Chng 2012).¹⁰ Similarly, enforcers in a community may also play a role in securing votes for a particular politician by aiding the working of water providers. These enforcers may prevent evictions as they have connections with the local police. Water serves as a site of social, economic and political struggles.

Going beyond the pathologies of the state as envisaged through the lens of the state as a consolidated actor allows for mapping this wide landscape of governance. The categories of public/private and legal/illegal are not adequate in explaining a kind of ‘dirty togetherness’ (Wedel 2003) needed to navigate these almost invisible cityscapes. It is in the activities of these players that the porosity of legality and illegality, and public and private realms is highlighted. As an interviewee explained,

People like this exist all around. The distance is so small between us that we all are living in the same ecosystem.

One could argue that these players do not only fill the gaps left by the working of state institutions, but their very activities are also made possible in the context of the political economy of Metro Manila where informal settlements, class-based divisions reinforced by historical legacies and subsequent government policies, and privatization of water are intersecting to produce conditions of extreme vulnerability for urban poor. Often elided in the analysis of good governance as well as in the ideal type of free market and perfect competition, these asymmetries of power shape the broader contexts (social, institutional, political, economic, cultural etc.) in which legal and illegal activities unfold, and where players may traverse porous boundaries (normative and otherwise) between legality and illegality. From this vantage point, they could be deemed as sources and modes of governance (Müller 2018), as well as provide a political reading of inequalities, winners and losers, and power of players in relation to others (Robbins 2011).

3-5. Making Claims: Experiencing Scarcity

We can only rely on ourselves.

(Politicians) always promise. Life can only change if a person really works hard.

We are just instruments to be used in elections. They don't care about us.

—Open-ended responses in the survey

What do you do in these circumstances?

¹⁰ Based on interviews.

Magtiis... We endure because we must. We maintain good relations with everyone, from the owner of this land, the syndicate that provides water, the barangay captain, the politicians, and anyone else who is involved.

—Anna, a community organizer in one of the interviews

What can one do in such conditions? *Magtiis*, Anna says—what can one do but endure suffering. Yet, enduring hardship does not suggest accepting one's fate as a necessary human condition. Anna points out the importance of establishing relationships with key players to pursue one's goals, including buying the land from the developer so that she can keep living in the area that houses the community. Anna and members of the community are making claims in their pursuit of basic services that, ideally, ought to be provided by the state. They are also organizing through interactions amongst themselves and other players in the licit and the illicit realm.

While presenting a detailed literature review exceeds the scope of this section, three themes stand out as based on evidence from the field that find support in extant scholarship.

The first has to do with making claims on the state by seeking access to basic services through a range of actions, from working with an NGO to going to the government office to enrolling in a training by a government agency. These actions may be considered as 'fundamental political acts through which citizens forge and navigate their relationship to the state' (Kruks-Wisner 2018, p.5) As the preceding sections establish, getting access to water is neither ensured by the state nor by private concessionaires. In this terrain of uncertainty, the urban poor have to rely on their efforts. Through interactions with players engaging in governance including water providers, NGOs, as well as government officials at varying levels, people learn by developing a 'feel for the game' (Bourdieu 1990, p.66). Through observation, experience and shared understanding, they develop repertoires of grounded knowledge that helps in navigating uncertainty in daily life.

The second has to do with organizing of communities through canvassing residents for a cause that addresses their interests. In the case of seeking access to water, it was in the form of water cooperatives, which are community-based organizations. Comprising of members from a community, water cooperatives manage the water commons, reflective of Ostrom's model of self-organized groups managing a common resource. It is a difficult endeavor, beset with challenges of all kinds—from politicians attempting coercion and intimidation and seeking support to antagonism within the community. Organizing a community is hard work.¹¹ Acquired knowledge of the nature of challenges as well as strategies to overcome them may be shared, bringing together members of previously separate communities together (Tilly 2004).

¹¹ Based on interviews.

The third theme has to do with the fact that claim-making, be it through organizing communities or interactions in everyday life, presents a site to map changes in social boundaries. Tracing interactions among urban poor groups as well as with the diverse range of players involved in governance may provide for a dynamic reading of social and political relations.

4. Conclusion

This working paper makes the case for tracing changes in social and political boundaries through a relational lens. By paying attention to sites of everyday claim-making as well as mapping the complexity of water provision through a multitude of players, we may understand the nature of scarcity experienced in seeming abundance by urban poor communities. Such granular explanations may be helpful in addressing the broader concern of whether and how water crises may contribute to expressions of social and political unrest.

References

- Adger, W.N., and P.M. Kelly. 1999. "Social Vulnerability to Climate Change and the Architecture of Entitlements." *Mitigation and Adaptation Strategies for Global Change* 4: 253-266.
- Appadurai, Arjun. 2001. "Deep Democracy: Urban Governmentality and the Horizon of Politics." *Environment & Urbanization* 13 (2): 23-43.
- Arias, Enrique Desmond. 2017. *Criminal Enterprises and Governance in Latin America and the Caribbean*. New York: Cambridge University Press.
- Arias, Enrique Desmond, and Daniel M. Goldstein. 2010. *Violent Democracies in Latin America*. Durham and London: Duke University Press.
- Bakker, K. 2008. "The ambiguity of community: debating alternatives to private-sector provision of urban water supply." *Water Alternatives* 1 (2): 236-252
- . 2010. *Privatizing Water: Governance Failure and the World's Urban Water Crisis*. Ithaca and London: Cornell University Press.
- Bayat, Asef. 2000. "From Dangerous Classes' to Quiet Rebels' Politics of the Urban Subaltern in the Global South." *International Sociology* 15 (3): 533-557.
- Bourdieu, Pierre. 1990. *The Logic of Practice*. Cambridge: Polity Press.

- Beall, J., T. Goodfellow, and D. Rodgers. 2013. "Cities and Conflict in Fragile States in the Developing World." *Urban Studies* 50 (15): 3065-3083.
- Castree, Noel. 2001. "Socializing Nature: Theory, Practice, and Politics." In *Social Nature: Theory, Practice, and Politics*, edited by Noel Castree and Bruce Braun, 1-21. Malden, MA: Blackwell Publishers.
- Castree, Noel, and Tom MacMillan. 2001. "Dissolving Dualisms: Actor-networks and the Reimagination of Nature." In *Social Nature: Theory, Practice, and Politics*, edited by Noel Castree and Braun Bruce, 208-224. Malden: MA: Blackwell Publishers.
- Cheng, D. 2014. "The Persistence of Informality: Small-Scale Water Providers in Manila's Post-Privatization Era." *Water Alternatives* 7 (1): 54-71.
- Chng, N. 2012. "Regulatory Mobilization and Service Delivery at the Edge of the Regulatory State." *Regulation and Governance* 6: 344-361.
- Comaroff, J., and J. L. Comaroff. 2012. "Theory from the South: Or, how Euro-America is Evolving Toward Africa." *Anthropological Forum* 22 (2): 113-131.
- Cuaresma, J.C. 2006. "Is There Water After Privatization? The Case of the Metropolitan Water and Sewerage System." In *Regulation, Privatization and Public Sector Reform*, edited by P. Cook and M. Villamejor-Mendoza, 141-164. Philippines: UP National College of Public Administration and Governance, University of Manchester, and the British Council Philippines.
- Davis, D. E. 2010a. "Irregular Armed Forces, Shifting Patterns Of Commitment, and Fragmented Sovereignty in the Developing World." *Theory and Society* 39 (3/4): 397-413.
- Davis, Diane E. 2010b. "The political and economic origins of violence and insecurity in contemporary Latin America: Past trajectories and future prospects." In *Violent Democracies in Latin America*, edited by Enrique Desmond Arias and Daniel M. Goldstein, 35-62. Durham & London: Duke University Press.
- De Herdt, T., and J-P. Olivier de Sardan. 2015. *Real Governance and Practical Norms in Sub-Saharan Africa: the game of the rules*. Routledge.
- Demeritt, David. 2001. "Being Constructive about Nature " In *Social Nature: Theory, Practice, and Politics*, edited by Noel Castree, 22-40. Oxford: Blackwell Publishers.
- Desbureaux, S., and A-S. Rodella. 2018. "Drought in the City: the Economic Impact of Water Scarcity in Latin American Metropolitan Areas." *World Development* 114: 13-27.
- Dumol, M. 2000. *The Manila Water Concession: A Key Government Official's Diary of the World's Largest Water Privatization*. World Bank (Washington DC).
- Ehrlich, P. R. 1968. *The Population Bomb*. New York: Ballantine Books.
- Elster, J. 1989. *Nuts and bolts for the social sciences*. New York: Cambridge University Press.
- Elster, Jon. 1998. "A plea for mechanisms." In *Social mechanisms: An analytical approach to social theory*, edited by Peter Hedstrom and Richard Swedberg, 45-73. Cambridge: Cambridge University Press.

- Epstein, Graham, Abigail Bennett, Rebecca Gruby, Acton, Leslie, and Mateja Nenadovic. 2014. "Studying Power with the Social-Ecological System Framework" In *Understanding Society and Natural Resources*, edited by Vaske Jerry J. Manfredo Michael J., Rechkemmer Andreas, Duke Esther A. Springer, Dordrecht.
- Escobar, Arturo. 1996. "Construction Nature: Elements for a Poststructuralist Political Ecology." *Futures* 28 (4): 325-343.
- Feeny, D., F. Berkes, B. J. McCay, and J. M. Acheson. 1990. "The Tragedy of the Commons – 22 years Later" *Human Ecology* 18 (1): 1–19.
- Gandy, Matthew. 2005. "Cyborg Urbanization: Complexity and Monstrosity in the Contemporary City." *International Journal of Urban and Regional Research* 29 (1): 26-49.
- Garrido, Marco. 2019. *The Patchwork City: Class, Space, and Politics in Metro Manila*. Chicago, IL: University of Chicago Press.
- Gidwani, Vinay K. 2004. "The Limits to Capital : Questions of Provenance and Politics." *Antipode* 36: 527-542.
- Goldstone, Jack A. 1998. "Social Movements or Revolutions?: On the Evolution and Outcomes of Collective Action." In *From Contention to Democracy*, edited by Marco Guigni, Doug McAdam and Charles Tilly, 125-145. Boulder, CO: Rowman and Littlefield.
- Goldstone, Jack A., and Doug McAdam. 2001. "Contention in Demographic and Life-Course Context." In *Silence and Voice in the Study of Contentious Politics*, edited by Ronald R. Aminzade, Jack A. Goldstone, Doug McAdam, Elizabeth J. Perry, William H. Sewell Jr., Sidney Tarrow and Charles Tilly, 195-221. Cambridge: Cambridge University Press.
- Graham, Stephen, and Colin MacFarlane. 2015. *Infrastructural Lives: Urban Infrastructure in Context*. London and New York: Routledge.
- Grillo, I. 2012. *El Narco: Inside Mexico's Criminal Insurgency*. New York: Bloomsbury Press.
- Gupta, Akhil. 1995. "Blurred boundaries: The discourse of corruption, the culture of politics, and the imagined state." *American ethnologist* 22 (2): 375-402.
- Hall, R. A., C.L. Abansi, and J.C. Lizada. 2018. "Laws, Institutional Arrangements, and Policy Instruments." In *Water Policy in the Philippines: Issues, Initiatives, and Prospects*, edited by A.C. Rola, J.M. Pulhin and R. A. Hall, 41-64. Springer International Publishing.
- Hanna, S. S., C. Folke, and K.-G. Maler. 1996. *Rights to Nature: Ecological, Economic, Cultural, and Political Principles of Institutions for the Environment*. Washington DC: Island Press.
- Hansen, Thomas Blom. 2005. "Sovereigns beyond the State: On Legality and Authority in Urban India." In *Sovereign Bodies : Citizens, Migrants, and States in the Postcolonial World*, edited by Thomas Blom Hansen and Finn Stepputat. New Jersey: Princeton University Press.
- Hardin, G. 1968. "The Tragedy of the Commons." *Science* 162: 1243–1248.

- Harvey, David. 1974. "Population, Resources and the Ideology of Science " *Economic Geography* 50: 256–77.
- . 1996. *Justice, Nature, and the Geography of Difference*. Oxford: Blackwell.
- Hedström, Peter, and Richard Swedberg. 1998. "Social mechanisms: An introductory essay." In *Social mechanisms: An analytical approach to social theory*, edited by Peter Hedström and Richard Swedberg, 1-31. Cambridge: Cambridge University Press.
- Heynen, N., M. Kaika, and E. Swyngedouw. 2006a. *In the Nature of Cities - Urban Political Ecology and The Politics of Urban Metabolism*. New York: Routledge.
- Heynen, Nik. 2014. "Urban Political Ecology I: The Urban Century." *Progress in Human Geography* 38 (4): 598–604.
- . 2015. "Urban Political Ecology II: The Abolitionist Century." *Progress in Human Geography* 40 (6): 839-845.
- Heynen, Nik, Maria Kaika, and Erik Swyngedouw. 2006b. "Urban Political Ecology: Politicizing the Production of Urban Natures." In *In the Nature of Cities: Urban Political Ecology and the Politics of Urban Metabolism*, edited by Nik Kaika Nik Heynen, Maria and Erik Swyngedouw, 1-19. Abingdon, New York: Routledge.
- Holston, James. 2008. *Insurgent citizenship: Disjunctions of democracy and modernity in Brazil*. Princeton & Oxford: Princeton University Press.
- Homer-Dixon, T. F. 1999. *Environment, Scarcity, and Violence*. Princeton: Princeton University Press.
- Hussain, N. 2016. "Tracing Order in Seeming Chaos: Understanding the Informal and Violent Political Order of Karachi." PhD, Schar School of Policy and Government, George Mason University.
- Jackson, P.T. 2010. *The Conduct of Inquiry in International Relations: Philosophy of Science and Its Implications for the Study of World Politics*. London: Routledge.
- Johnston, Michael. 2014. *Corruption, contention and reform: The power of deep democratization*. New York: Cambridge University Press.
- Kahl, C. 2006. *States, Scarcity, and Civil Strife in the Developing World*. Princeton, NJ: Princeton University Press.
- Kalyvas, Stathis N. 2015. "How Civil Wars Help Explain Organized Crime—and How They Do Not." *Journal of Conflict Resolution* 59 (8): 1517-1540.
- Kalyvas, Stathis N., Ian Shapiro, and Tarek Masoud. 2008. *Order, Conflict, and Violence*. Cambridge: Cambridge University Press.
- Kirsch, Scott, and Don Mitchell. 2004. "The Nature of Things: Dead Labor, Nonhuman Actors, and the Persistence of Marxism." *Antipode* 36: 687-705.
- Kruks-Wisner, Gabrielle. 2018. *Claiming the State: Active Citizenship and Social Welfare in Rural India* Cambridge and New York: Cambridge University Press.

- Kusaka, Wataru. 2017. *Moral Politics in the Philippines: Inequality, Democracy and the Urban Poor*. Singapore: NUS Press in association with Kyoto University Press.
- Latour, Bruno. 2004. *Politics of Nature: How to Bring Sciences Back into Democracy*. Cambridge: Harvard University Press.
- Lawhon, Mary, Henrik Ernstson, and Jonathan Silver. 2014. "Provincializing Urban Political Ecology: Towards a Situated UPE Through African Urbanism." *Antipode* (46): 497-516.
- Lee, H., J. Son, D. Joo, J. Ha, S. Yun, C-H. Lim, and W-K. Lee. 2020. "Sustainable Water Security Based on the SDG Framework: A Case Study of the 2019 Metro Manila Water Crisis." *Sustainability* 12 (17: 6860).
- Lund, Christian. 2006. "Twilight institutions: An introduction." *Development and change* 37 (4): 673-684.
- Magno, C. N., and P. C. Parnell. 2015. "The imperialism of race: class, rights and patronage in the Philippine city." *Race and Class* 56 (3): 69-85.
- Mahoney, James. 2001. "Beyond correlational analysis: Recent innovations in theory and method." *Sociological forum*.
- Malthus, T. R. 1992. *An Essay on the Principle of Population (selected and introduced by D. Winch)*. Cambridge: Cambridge University Press.
- Mbembe, A., and S. Nuttal. 2004. "Writing the world from an African metropolis." *Public Culture* 16: 347–372
- McAdam, Doug, Sidney Tarrow, and Charles Tilly. 1996. "To Map Contentious Politics." *Mobilization: An International Journal* 1 (1): 17 - 34.
- . 2001. *Dynamics of contention. Social Movement Studies*. Cambridge: Cambridge University Press.
- McDonald, R. I., K. Weber, J. Padowski, M. Flörke, C. Schneider, P.A. Green, T. Gleeson, S. Eckman, B. Lehner, D. Balk, T. Boucher, G. Grill, and M. Montgomery. 2014. "Water on an Urban Planet: Urbanization and the Reach of Urban Water Infrastructure." *Global Environmental Change* 27: 96-105.
- Meadows, D. H., D. L. Meadows, J. Randers, and W.W. Behrens III. 1972. *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. New York: Universe Books.
- Merrifield, A. 2002. *Dialectical Urbanism*. New York: Monthly Review Press.
- Merton, R. 1968. *Social Theory and Social Structure*. New York: The Free Press.
- Migdal, Joel S, Atul Kohli, and Vivienne Shue, eds. 1994. *State power and social forces: Domination and transformation in the Third World*. Cambridge and New York: Cambridge University Press.
- Migo, V.P., M.D. Mendoza, C.G. Alfafara, and J.M. Pulhin. 2018. "Industrial Water Use and the Associated Pollution and Disposal Problems in the Philippines." In *Water Policy in the Philippines: Issues, Initiatives, and Prospects*, edited by A.C. Rola, J.M. Pulhin and R.A. Hall, 87-116. Springer International Publishing.

- Mitlin, D. 2018. "Beyond contention: urban social movements and their multiple approaches to secure transformation." *Environment and Urbanization* 30 (2): 557-574.
- Muldavin, J. S. S. 1996. "The political ecology of agrarian reform in China: The case of Helongjiang Province." In *Liberation Ecologies: Environment, Development, and Social Movements* edited by R. Peet and M. Watts, 227–259. New York: Routledge.
- Myers, G. 2008. "Sustainable Development and Environmental Justice in African Cities." *Geography Compass* 2 (3): 695-708.
- Müller, M-M. 2018. "Governing crime and violence in Latin America." *Global Crime* 19 (3-4): 171-191.
- Müller, Markus-Michael. 2012. *Public security in the negotiated state: Policing in Latin America and beyond*. London: Palgrave Macmillan.
- Olivier de Sardan, Jean-Pierre. 2008. Researching the practical norms of real governance in Africa. In *Discussion paper*.
- Ostrom, E., J. Walker, and R. Gardner. 1992. "Covenants With and Without a Sword: Self-Governance is Possible." *The American Political Science Review* 86 (2): 404-417.
- Ostrom, Eleanor. 2009. "A General Framework for Analyzing Sustainability of Social-Ecological Systems." *Science*: 419-422.
- Ostrom, Elinor. 1993. "A communitarian approach to local governance." *National Civic Review* 82 (3): 226-233.
- Paller, J. 2019. *Democracy in Ghana: Everyday Politics in Urban Africa*. New York: Cambridge University Press.
- Pieterse, E. *City Futures: Confronting the Crisis of Urban Development*. London: Zed Books.
- . 2008. *City Futures: Confronting the Crisis of Urban Development*. London: Zed Books.
- Pulhin, J. M., R. A. Ibabao, A. C. Rola, and R. Victor. 2018. "Water Supply and Demand and the Drivers of Change." In *Water Policy in the Philippines: Issues, Initiatives, and Prospects*, edited by A. C. Rola, J. M. Pulhin and R. A. Hall, 15-40. Springer International Publishing.
- Ranganathan, Malini. 2013. "Paying for Pipes, Claiming Citizenship: Political Agency and Water Reforms at the Urban Periphery." *International Journal of Urban and Regional Research* 38 (2): 590-608.
- . 2016. "Rethinking Urban Water (In)formality." In *Oxford Handbook of Water Politics and Policy*, edited by K. Conca and E. Weinthal, 1-18. Oxford University Press.
- Reyers, B., Folke, C., Moore, M-L. Biggs, R., and V. Galaz. 2018. "Social-Ecological Systems Insights for Navigating the Dynamics of the Anthropocene." *Annual Review of Environment and Resources* 43 (1): 267-289.
- Ribot, Jesse. 2010. "Vulnerability Does not Fall from the Sky: Toward Multiscale, Pro-Poor Climate Policy." In *Social Dimensions of Climate Change: Equity and Vulnerability in a Warming World*, edited by Robin Mearns and Andrew Norton, 47-74. Washington DC: The World Bank.

- Risse, T., T. A. B. Börzel, and A. Draude. 2018. *Oxford Handbook of Governance and Limited Statehood*. Oxford: Oxford University Press.
- Robbins, P. 2011. *Political Ecology: a Critical Introduction* Hoboken: NJ: John Wiley & Sons.
- Robinson, Jennifer. 2002. "Global and world cities: a view from off the map." *International Journal of Urban and Regional Research* 26 (3): 531-554.
- Roy, Ananya. 2005. "Urban informality: Toward an epistemology of planning." *Journal of the American Planning Association* 71 (2): 147-158.
- . 2009a. "The 21st-century metropolis: New geographies of theory." *Regional studies* 43 (6): 819-30.
- . 2009b. "Why India cannot plan its cities: Informality, insurgency and the idiom of urbanization." *Planning theory* 8 (1): 76-87.
- . 2017. "Dis/possessive collectivism: Property and personhood at city's end." *Geoforum* 80: A1-A11.
- Schedler, A. 2013. "Mexico's Civil War Democracy." Paper prepared for presentation at the 109th Annual Meeting of the American Political Science Association (APSA), Chicago.
- Schultze-Kraft, M. 2019. *Crimilegal Orders, Governance and Armed Conflict*. Palgrave Macmillan.
- Schultze-Kraft, M., F.A. Chinchilla, and M. Moriconi. 2018. "New perspectives on crime, violence and insecurity in Latin America." *Crime, Law and Social Change* 69: 465-473.
- Scott, James C. 1985. *Weapons of the Weak: Everyday Forms of Peasant Resistance*. Ithaca: Yale University Press.
- Sen, Amartya. 1981. *Poverty and Famines: an Essay on Entitlement and Deprivation* Oxford: Oxford University Press.
- Simone, Abdou Maliq. 2005. "Introduction: Urban processes and change." In *Urban Africa: Changing contours of survival in the city*, edited by Abdou Maliq Simone and Abdelghani Abouhani, 1-28. London: Zed Books.
- Simone, Abdou Maliq. 2004. *For the City Yet to Come: Changing African Life in Four Cities*. Durham and London: Duke University Press.
- Smith, Neil. 1984. *Uneven Development*. Oxford: Blackwell.
- Streule, Monika, Ozan Karaman, Lindsay Sawyer, and Christian Schmid. 2020. "Popular Urbanization: Conceptualizing Urbanization Processes Beyond Informality." *International Journal of Urban and Regional Research* 44 (4): 652-672.
- Swyngedouw, Erik. 1996. "The City as a Hybrid: On Nature, Society, and Cyborg Urbanization." *Capitalism Nature Socialism* 7 (2): 65-80.
- . 2006. "Circulations and Metabolisms: (Hybrid) Natures and (Cyborg) Cities." *Science as Culture* 15 (2): 105-121.
- Tarrow, Sidney. 2007. "Inside Insurgencies: Politics and Violence in an Age of Civil War." *Perspectives on Politics* 5 (3): 587-600.

- Tilly, Charles. 1998. *Durable Inequality*. Berkeley, Los Angeles, London: University of California Press.
- . 2001. "Mechanisms in Political Processes." *Annual Review of Political Science* 4: 21-41.
- . 2002. *Stories, Identities, and Political Change*. Lanham:MD: Rowman & Littlefield.
- . 2004. "Social Boundary Mechanisms." *Philosophy of the Social Sciences* 34 (2): 211-236.
- Volkov, Vadim. 2002. *Violent Entrepreneurs: the Use of Force in the Making of Russian Capitalism* Ithaca and London: Cornell University Press.
- Wedel, Janine. 2003. "Dirty Togetherness: Institutional Nomads, Networks, and the State-Private Interface in Central and Eastern Europe and the Former Soviet Union." *Polish Sociological Review* (142): 139-159.
- . 2004. "Blurring The State-Private Divide: Flex Organisations and The Decline of Accountability." In *Globalisation, Poverty and Conflict*, edited by M. Spoor. Dordrecht: Springer.
- . 2005. "Flex organizing and the clan-state: Perspectives on crime and corruption in the new Russia." In *Ruling Russia: Law, crime and justice in a changing society*, edited by William Pridemore, 101-116. Lanham, MD: Rowman and Littlefield.
- Zimmer, Anna. 2010. "Urban Political Ecology: Theoretical Concepts, Challenges, and Suggested Future Directions." *Erdkunde* 64 (4): 343-354.