



'Don't call me resilient again!': the New Urban Agenda as Immunology ... or ... what happens when communities refuse to be vaccinated with 'Smart Cities' and Indicators

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ABSTRACT The Habitat III Conference's New Urban Agenda hails a "*paradigm shift*" for pursuing the Sustainable Development Goals (SDGs). However, the **new** call for "*safe, resilient, sustainable and inclusive cities*" remains path dependent on **old** methodological tools (e.g. indicators), techno-managerial solutions (e.g. smart cities), and institutional frameworks of an ecological modernization paradigm that did not work. Pursuing a new urban paradigm within this old framework can only act as immunology: it vaccinates citizens and environments so that they can take larger doses of inequality and degradation in the future; it mediates the effects of global socio-environmental inequality, but does little towards alleviating it. Indeed, an increasing number of communities across the world now decline these immunological offers. Instead, they rupture path dependency and establish effective alternative methods for accessing housing, healthcare, sanitation, etc. I argue that real smart solutions and real social innovation are to be found not in consensus-building exercises, but in these dissensus practices that act as living indicators of what/where urgently needs to be addressed.

KEYWORDS conflict / dissensus / Habitat III / inclusiveness / indicators / New Urban Agenda / political ecology / resilience / safety / smart cities / social innovation / sustainability / Sustainable Development Goal 11

I. GREENING BY NUMBERS: INDICATORS AND SMART TECHNOLOGIES AS TOTEMS OF THE CONTINUOUSLY FRUSTRATED PROMISE FOR ECOLOGICAL MODERNIZATION

In May 2016 the Dutch environmental group *Milieudefensie* reported that poor air quality in parts of Amsterdam, Maastricht and Rotterdam was breaking EU standards, exposing citizens to hazardous levels of pollution.⁽¹⁾ One month later, newspapers featured an article on a new example of smart technology, the TreeWifi: a birdhouse that responds to air pollution and glows green, giving passersby free Wi-Fi, but only when the air quality is high. The Dutch designer/inventor Joris Lam said that he was driven by the wish "*to find a simple way to make air pollution visible to citizens in a way that people just understand on an emotional level,*

1. *Dutch News* (2016), "Dutch Air Quality Breaks EU Standards in Some Cities", 11 May, accessed 11 May 2016 at <http://www.dutchnews.nl/news/archives/2016/05/dutch-air-quality-breaks-eu-standards-in-some-cities/>.

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rather than having to dig through data and maps".⁽²⁾ However, the title of the newspaper article featuring the TreeWifi promised far more than just an understanding at an emotional level. The title suggested that the TreeWifi could be part of a solution to air pollution: "Can 'smart' birdhouses help improve air quality in Amsterdam?" it asked.

The media and policymakers love smart cities and smart technologies. These technologies collect and feed data into environmental monitoring frameworks; they make it easier to report on sustainability indicators; they have become the totem of our commitment to the ecological modernization promise: the promise that by perpetually becoming technologically smarter, by continuously monitoring and improving our sustainability reporting and indicators, we will eventually counteract our own global socio-environmental mess. For example, the Sendai Framework for Disaster Risk Reduction (2015–2030) stipulates strict requirements for obtaining "the minimum data for [being able to] report to the Framework".⁽³⁾ This means that becoming "smart" enough to be able to collect, enter and validate data at local and national levels is a prerequisite for countries to become part of the development framework. The same logic is followed by private initiatives. The IBM Smarter Cities Challenge Programme equates the need to "control the environment" with the need to "undertake the systematic collection of [relevant] information", and translates the goal "to strengthen collaborative capacity" into a priority to "build a common device for information and data acquisition".⁽⁴⁾

This greening by numbers and indicators, or the translation of socio-environmental issues into 'smart' techno-scientific monitoring and infrastructure technologies,⁽⁵⁾ means that the pursuit of urban sustainable development goals becomes increasingly identified with the pursuit of smart cities. As smart techno-managerial systems are increasingly perceived as a panacea for solving global socio-environmental problems, a direct path dependency (and co-dependency) develops between the pursuit of sustainability frameworks and the pursuit of smart technologies and smart cities.

When a sustainability indicator fails to improve, it provides the opportunity to develop a new smart technology or governance technique that promises to counteract our losses. But this is a repeatedly unfulfillable and repeatedly frustrated promise. Anyone following the evolution of sustainable development research and policy agendas knows full well that smart cities do not equal sustainable cities; that the simple and straightforward answer to the question posed by the newspaper article ("Can 'smart' birdhouses help improve air quality?") is a simple and straightforward "no". Smart birdhouses (or any other smart technology for that matter) cannot improve air quality in Amsterdam (or any other city).

Smart cities and ICTs cannot be the solution because, in fact, they are part of the problem. If we trace the full socio-environmental cycle of smart technologies, we get a better picture of how "sustainable" these technologies really are. Coltan (columbite-tantalite), for example, the metallic ore that is a vital component of all mobile communication circuit boards, is sold at prices that range between US\$ 600 and 3,000 per kilogram. However, over 18 per cent of the world's supply of coltan comes from the Democratic Republic of Congo, and is mined by hand under what the UN repeatedly reports to be a highly organized and systematic exploitation of both local nature and local people.⁽⁶⁾ This is just one of the many examples of how the sustainability of those cities that can

2. Perry, Francesca (2016), "Can 'Smart' Birdhouses Help Improve Air Quality in Amsterdam?", *The Guardian*, 10 June, accessed 7 November 2016 at <https://www.theguardian.com/cities/2016/jun/10/city-links-smart-birdhouses-improve-air-quality-amsterdam>.

3. United Nations Office for Disaster Risk Reduction (2015), *Indicators to Monitor Global Targets of the Sendai Framework for Disaster Risk Reduction 2015-2030: A Technical Review*, Background paper, 27–29 July.

4. Cited in Di Bella, Arturo and Luca Ruggiero, "Néolibéralisme Et Développement Urbain Dans L'italie Du Sud: Le Modèle « IBM Smart City » Dans La Ville De Syracuse", in *Construction Politique Et Sociale Des Territoires Cahier No 5, Penser La Fabrique De La Ville En Temps De Crise(s)*, Citeres, CNRS-Université de Tours, page 66.

5. See reference 4.

6. United Nations (2001), "Security Council Condemns Illegal Exploitation of Democratic Republic of Congo's Natural Resources", *Meetings Coverage and Press Releases*, 4317th and 4318th Meetings (AM and PM).

afford to become “smarter” is directly dependent upon the destruction of environments and livelihoods in other parts of the world.

But the problem does not lie only with the full socio-environmental cycle of smart technologies. We are now beginning to assess the full socio-environmental cycle of decades of policy frameworks and governance practices pursuing “green” development agendas through sustainability indicators and “smart” monitoring techniques.⁽⁷⁾ We now have ample evidence that “green” development agendas have been driving new forms of displacement and “environmental/ecological gentrification” in the global South.⁽⁸⁾ A case in point is Amnesty International’s 2015/16 report on migrant labour conditions in the United Arab Emirates, which sheds an entirely different light on the “sustainability” credentials of the “eco-city” Masdar, Abu Dhabi’s showcase for post-carbon urbanization.⁽⁹⁾ The production of Masdar, which has been hailed as the jewel in the crown of eco-modernization, depended not only upon mining for minerals under near-slave labour conditions elsewhere. It was also predicated upon unacceptable local labour conditions (in the United Arab Emirates) on construction sites staffed mainly by underpaid and often uninsured migrants.⁽¹⁰⁾ Similarly, in India, Prime Minister Modi’s programme promoting smart cities as a growth engine for India had highly questionable socio-environmental outcomes, becoming at best a form of “entrepreneurial urbanization”⁽¹¹⁾ that failed to develop an integrated set of alternative policies⁽¹²⁾ that would address, amongst other things, issues related to the country’s colonial past.⁽¹³⁾ Often vested in a rhetoric of enabling radical change, such solutions contribute to ensuring that nothing really changes.

But the perverse outcomes of pursuing sustainability through indicator frameworks and smart technologies are not confined to the global South. Greenberg documents how the famously “ecotopian” San Francisco Bay Area saw its sustainability indexes rise at the same time that it became one of the most expensive and unequal urban areas in the US.⁽¹⁴⁾ Heynen et al.⁽¹⁵⁾ show what greening by numbers and indicators can mean in social practice, when they correlate the inequitable spatial distribution of urban trees in Milwaukee to spatial data on race and ethnicity.

So, overall we have become more savvy vis-à-vis the impact of addressing global socio-environmental ills through the pursuit of “smarter” monitoring technologies and better performance indicators.⁽¹⁶⁾ However, we continue pursuing the development of smarter cities and the design of more sophisticated indicators as if this in itself would have a positive impact on global livelihoods and environments. We keep treating nature as if it were something that could be injected into cities in the form of parks or green roofs, an aesthetic artefact that (like smart technologies) can be planted in cities to increase sustainability and induce harmonious living.⁽¹⁷⁾ We keep equating “smart” cities with “sustainable” or “just” cities.

The New Urban Agenda (NUA) is a case in point. The logic that equates smart cities with sustainable or just cities was already embedded in the preparation documents leading up to the publication of the NUA. One of these, the 2015 report of the United Nations’ Focus Group on Smart Sustainable Cities (FG-SSC),⁽¹⁸⁾ begins by stating that it is “a truth universally acknowledged that a (smart) city in possession of a good ICT infrastructure must also be sustainable” [emphasis added].⁽¹⁹⁾

7. Yigitcanlar, Tan and Sang Ho Lee (2014), “Korean ubiquitous-eco-city: A smart-sustainable urban form or a branding hoax?”, *Technological Forecasting and Social Change* Vol 89, pages 100–114.

8. Pieterse, Edgar (2011), “Recasting Urban Sustainability in the South”, *Development* Vol 54, No 3, pages 309–316; also Martínez-Alier, Juan (1997), “Environmental Justice (Local and Global)”, *Capitalism Nature Socialism* Vol 8, No 1, pages 91–107; and Dooling, Sarah (2009), “Ecological Gentrification: A Research Agenda Exploring Justice in the City”, *International Journal of Urban and Regional Research* Vol 33, No 3, pages 621–639.

9. Cugurullo, Federico (2016), “Urban Eco-Modernisation and the Policy Context of New Eco-City Projects: Where Masdar City Fails and Why”, *Urban Studies* Vol 53, No 11, pages 2417–2433.

10. Amnesty International (2016), *United Arab Emirates Annual Report 2015/16: Migrant Workers’ Rights*.

11. Datta, Ayona (2015), “New Urban Utopias of Postcolonial India: ‘Entrepreneurial Urbanization’ in Dholera Smart City, Gujarat”, *Dialogues in Human Geography* Vol 5, No 1, pages 3–22.

12. Greenfield, Adam (2015), “Zeroville-on-Khambhat, Or: The Clean Slate’s Cost”, *Dialogues in Human Geography* Vol 5, No 1, pages 40–44.

13. Harris, Andrew (2015), “Smart Ventures in Modi’s Urban India”, *Dialogues in Human Geography* Vol 5, No 1, pages 23–26; also Hoelscher, Kristian (2016), “The Evolution of the Smart Cities Agenda in India”, *International Area Studies Review* Vol 19, No 1, pages 28–44.

14. Greenberg, Miriam (2016), “Whose Ecotopia? The Challenge of Equity in Urban

But when and how exactly, through what methods and based upon which evidence, did we reach this “*universally acknowledged truth*”, namely that “smart” cities equal “sustainable” or “just” cities? What the above quote shows is that we have come to take our own myths as truth. We have come to equate “smart” with “sustainable”, because we take our working hypotheses as “the truth”, without evidence. In a nutshell, we have been doing bad science. So, as “smartness” in data collection and monitoring becomes a goal in its own right and a prerequisite for cities to enter development frameworks, the key question is: Could the New Urban Agenda along with the strengthened focus on cities in the SDGs⁽²⁰⁾ change this simplistic and logically flawed debate and practice?

II. THE NEW URBAN AGENDA: CHANGING THE *WHAT* BUT NOT THE *HOW*

The New Urban Agenda for the United Nations Conference on Housing and Sustainable Urban Development (Habitat III) and the inclusion of “*sustainable cities and communities*” as a target goal (Goal 11) in the 2016–2030 SDGs⁽²¹⁾ are together hailed as an acknowledgement of what urban scholars have been systematically arguing and documenting: that we cannot address global socio-environmental problems without addressing urbanization processes.⁽²²⁾ Issues that have been at the centre of urban research for several decades (from housing, urban transportation, sanitation, air quality monitoring and waste management, to cultural and natural urban heritage) are finally included in one way or another in SDG 11’s broader objective to “*make cities and human settlements inclusive, safe, resilient and sustainable*”,⁽²³⁾ an objective that is repeated in the NUA.⁽²⁴⁾

So, certainly, when it comes to **what** needs to change, as Barnett and Parnell⁽²⁵⁾ discuss, the New Urban Agenda does seem to broaden the conceptual framework, given that it recognizes cities not only as problems, but also as opportunities for broad-reaching policy changes.⁽²⁶⁾ However, despite a conceptual shift in **what** cities are and **what** sustainability can mean in this context, when it comes to the **how**, the NUA and the call of SDG 11 to make cities “*safe, resilient, sustainable and inclusive*” appear already to have been hijacked by the same research agendas and the same policy and methodological frameworks of the past. Although the Quito Implementation Plan for the NUA hails a new “*urban paradigm shift*”,⁽²⁷⁾ past methods of questionable efficiency, like the City Prosperity Initiative (CPI), have been resurrected for Habitat III, and are being “*revised and tested ... adapted to the New Urban Agenda and urban SDGs*”. Habitat III’s focus on measuring “*the New Urban Agenda and SDGs*” by enhancing further “*systematic monitoring and reporting*” and establishing more sophisticated and “*customized monitoring mechanisms*”⁽²⁸⁾ builds on the (failed) methods of the past. “*Access to science, technology, and innovation and enhanced knowledge-sharing*” become, once again, the key focus of the NUA,⁽²⁹⁾ and “smart” cities frameworks become more than ever identified with “sustainable” cities (though now also with “resilient”, “inclusive” and “safe” cities). Predictably, the policy and research agendas that begin to emerge out of the NUA are equally dependent on old (tried and often failed) paths, as they remain strikingly and worryingly focused on the same set of questions:

Sustainability Planning”, in Julie Sze (editor), *Situating Sustainability: Sciences/ Humanities/Societies, Scales, and Social Justice*, New York University Press, New York; also Walker, Richard (2009), *The Country in the City: The Greening of the San Francisco Bay Area*, University of Washington Press, Seattle; see also Bouzarovski S and Frankowski J (2016) “Low-carbon gentrification: when climate change encounters residential displacement”. Unpublished manuscript / working paper. Submitted to the *International Journal of Urban and Regional Research* (under review).

15. Heynen, Nik, Harold A Perkins and Parama Roy (2006), “The Political Ecology of Uneven Urban Green Space”, *Urban Affairs Review* Vol 42, No 1, pages 3–25.

16. Komninos, Nicos (2015), *The Age of Intelligent Cities: Smart Environments and Innovation-for-All Strategies*, Routledge, London, 278 pages, page xvi.

17. Kaika, Maria and Erik Swyngedouw (2011), “The Urbanization of Nature: Great Promises, Impasse, and New Beginnings”, in Gary Bridge and Sophie Watson (editors), *The New Blackwell Companion to the City*, Blackwell, Oxford, pages 96–107.

18. FG-SSG is the focus group of the Telecommunication Standardization Sector (ITU-T) of the UN’s International Telecommunication Union (ITU), an agency specialized in ICTs.

19. Araña, Silvia Guzmán and Mythili Menon (2015), *Smart Sustainable Cities: A Guide for City Leaders*, ITU-T Focus Group on Smart Sustainable Cities technical report, page 9.

20. The focus on cities as part of Goal 11 (“*make cities and human settlements inclusive, safe, resilient and sustainable*”) is included in the post-2015 development agenda outcome document, titled *Transforming our world: the 2030 Agenda for Sustainable Development*, agreed by consensus at the informal meeting of the UN plenary on 2 August 2015. This document was adopted

as an annex in United Nations General Assembly (2015), *Draft outcome document of the United Nations summit for the adoption of the post 2015 development agenda*, Sixty-ninth session A/69/L.85, 12 August.

21. <https://sustainabledevelopment.un.org/post2015/transformingourworld>.

22. Keil, Roger (1998), *Los Angeles: Globalization, Urbanization, and Social Struggles*, John Wiley & Sons Ltd, New York.

23. See reference 21; also see <https://sustainabledevelopment.un.org/?menu=1300#>.

24. United Nations Conference on Housing and Sustainable Urban Development (Habitat III) (2016), *Adopted Draft of the New Urban Agenda*, Quito, 17–20 October, accessed 21 November 2016 at <https://www2.habitat3.org/bitcache/99d999fbd0824de50214e99f864459d8081a9be00?vid=591155&diposition=inline&op=view>.

25. Barnett, Clive and Susan Parnell (2016), "Ideas, implementation and indicators: epistemologies of the post-2015 urban agenda", *Environment and Urbanization* Vol 28, No 1, pages 87–98.

26. Buckley, Robert M and Lena Simet (2016), "An Agenda for Habitat III: Urban Perestroika", *Environment and Urbanization* Vol 28, No 1, pages 64–76.

27. United Nations Economic and Social Council (2016a), *Report of the Inter Agency and Expert Group on Sustainable Development Goal Indicators*, E/CN.3/2016/2/Rev.1, Forty-Seventh Session, Statistical Commission, 8–11 March, page 5, accessed 20 October 2016 at <http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-sdgs-rev1-e.pdf>; also United Nations Economic and Social Council (2016b), *Report on the Forty-Seventh Session (8 -11 March 2016)*, Economic and Social Council Official Records 2016 Supplement No 4, Statistical Commission, E/2016/24 -E/CN.3/2016/34, New York.

- How can we model the best set of indicators to monitor “sustainability”, but now also “inclusiveness”, “safety” and “resilience”?
- How can we best tap into big data, finding the smartest technologies to collect data for our enhanced and ever data-hungry modelling exercises?
- Should we look for top-down or bottom-up solutions?
- Should we trust the market (identified with efficiency and effectiveness) or the people (identified with irrational choices but also with accountability and inclusiveness)?

So, although the NUA shifts the **conceptual framework** within which cities are understood, the key research and political **questions** remain the same; and so do the **methodological tools** and **institutional frameworks**. Despite recognizing cities as processes, and flows of resources, people, environments, goods and services as opportunities rather than problems,⁽³⁰⁾ the key questions posed, and the methodological tools and institutional frameworks proposed, thus far remain the same.

The use of these failed frameworks builds little confidence that the NUA will address the root of the problems. Doing so would necessitate recognizing that the sustainability of one locale may entail the socio-environmental destruction of another; that the successful installation of smart monitoring technologies in Brussels most probably means further socio-environmental destruction in Congo; or that the success of electronics recycling in London most probably means an increase in hazardous electronic waste exports to India.

Now that we can take stock of our significant experience with policy and research experimentation on sustainable development, now that we are aware of the pitfalls of pursuing the perfect set of sustainability indicators and techno-managerial solutions as a means to counteract global urban socio-environmental ills, can we still insist that socio-environmental equality can be reduced to inclusiveness indicators? That social welfare can be reduced to resilience and safety indicators? Or that environmental protection can be reduced to sustainability indicators?

III. SUSTAINABILITY COMING OF AGE: THE END OF INNOCENCE

As noted earlier, we now have sufficient documentation that the policy, institutional and technological experimentation that followed the excitement and optimism of the 1987 Brundtland report did not deliver the “sustainable development” that the report conceptualized. We have documented that the pursuit of the perfect set of sustainability indicators and the pursuit of the perfect techno-managerial solutions to monitor these indicators did not deliver the relief from global socio-environmental ills we had hoped for. We have also witnessed the devastating socio-environmental effects of “rational choice”-led, market-oriented practices. Large-scale privatization programmes left the global South with incomplete infrastructure, destroyed traditional networks of water supply, and depleted public funds.⁽³¹⁾ These programmes failed to such an extent that the World Bank instituted an Inspection Panel to pursue accountability for people negatively affected by the Bank’s own projects.⁽³²⁾ We have now also witnessed, researched and documented

that turning social welfare into a private affair⁽³³⁾ by promoting access to housing education or healthcare through easy access to credit (private loans and mortgages) led to a series of social–environmental disasters, including the US and European subprime mortgage and evictions crisis.⁽³⁴⁾

A generous reading of these failures could label these past practices as *faux frais* (or incidental operating expenses); those early methodological, policy, and technological frameworks can be assigned the alibi of the innocence or naïveté that comes with the experimental and the new; we did not know better back then. But we do know better now. Sustainability has come of age. And the alibi (or innocence) of “the new” offered to past methods and policy tools has run its course. The failures of the past have made us more savvy and more knowledgeable. They should have also made us wise enough to stop claiming that global socio-environmental equality, social welfare or value creation can be reduced to indicators.

Why then, despite the fact that we know too well that policy, economic, institutional and techno-managerial frameworks have been proven not to work, do we keep picking our policy, governance and research tools from the same old armory? Why, despite knowing that agendas driven by techno-managerial solutions do not work, do we keep pursuing them? Why, despite knowing that market-driven solutions do not work as “one size fits all” panaceas, do we keep advocating for them as the most efficient and effective?⁽³⁵⁾ Is it not about time we thought differently? Time we changed questions and methods? But, perhaps most importantly, is it not time we changed our interlocutors?

IV. CHANGING INTERLOCUTORS? THE POLICY RELEVANCE OF DISSENSUS AND OF PRESUMING POSITIONS OF EQUALITY IN AN INCREASINGLY UNEQUAL WORLD

Now that our age of innocence is over, we cannot afford (socially or environmentally) to remain path dependent on failed methods and policy frameworks. So, what if we took the failures of the past seriously? What if, instead of pursuing path dependency, instead of continuing to pursue “safe, sustainable, resilient and inclusive cities” through the design of indicators and smart monitoring solutions, we tried instead to break away from fixed policy paths? What if, alongside changing the conceptual framework within which we understand cities, we also changed our research questions, our methodological tools and our institutional frameworks?

But in order to change tools, methods and questions, we need to change interlocutors.⁽³⁶⁾ We need to focus on **who** has been silenced in the design and delivery of past sustainable development agendas and goals, and **why**. We need to erase assumptions of primacy, and listen to, and engage with, subjects beyond the usual suspects of urban environmental change; beyond consultants, planners, designers, policymakers, market advocates, technocrats and NGOs.

So instead of trying to build **consensus** over the NUA amongst the usual suspects and invited participants, imagine focusing on monitoring **dissensus** instead. Imagine focusing on where, how, why, and by whom **conflict** and disagreement are generated. Imagine no longer ignoring the new research and policy questions that emerging practices of dissensus raise. As I demonstrate in the sections that follow, if we were to do this,

28. Habitat III Programme (2016), *Measuring the New Urban Agenda and Sustainable Development Goals: the City Prosperity Initiative*, Tuesday 18th Session, accessed 21 October 2016 at <https://habitat3.org/programme/measuring-the-new-urban-agenda-and-sustainable-development-goals-the-city-prosperity-initiative/>.

29. See reference 24, Article 126, page 17.

30. See reference 25.

31. Hall, David, Emanuele Lobina and Robin de la Motte, “Public Resistance to Privatisation in Water and Energy”, *Development in Practice* Vol 15, Nos 3–4, pages 286–301.

32. Wollmann, Hellmut and Gérard Marcou (editors) (2010), *The Provision of Public Services in Europe: Between State, Local Government and Market*, Edward Elgar, Cheltenham, UK and Northampton, USA.

33. Crouch, Colin (2009), “Privatised Keynesianism: An Unacknowledged Policy Regime”, *The British Journal of Politics & International Relations* Vol 11, No 3, pages 382–399.

34. Desmond, Matthew (2012), “Eviction and the Reproduction of Urban Poverty”, *American Journal of Sociology* Vol 118, No 1, pages 88–133; also García Lamarca, Melissa and Maria Kaika (2016), “Mortgaged Lives”: The Biopolitics of Debt and Housing Financialisation”, *Transactions of the Institute of British Geographers* Vol 41, No 3, pages 313–327.

35. Satterthwaite, David (2016), “A new urban agenda?”, *Environment and Urbanization* Vol 28, No 1, pages 3–12.

36. Kaika, Maria (2003), “The Water Framework Directive: A New Directive for a Changing Social, Political and Economic European Framework”, *European Planning Studies* Vol 11, No 3, pages 303–320.

we might find that resilience, safety, sustainability and inclusiveness are **not** the issues we should be focusing our agendas on.

a. Beyond resilience

The NUA and Habitat III take resilience seriously and advocate directing human resources, research funding and policy innovation towards capturing the ever-elusive missing parameters that would perfect our resilient cities models. But instead, we might shift focus and take seriously the words of Tracie Washington, President of the Louisiana Justice Institute, who requested that policymakers and the media stop calling Hurricane Katrina and BP Oil spill victims “resilient”. “*Stop calling me resilient*” was the loud cry of the public campaign she launched and disseminated across New Orleans. Objecting to the way the media and policymakers continuously praised her community for its resilience, Washington explained:

“every time you say, “Oh, they’re resilient, [it actually] means you can do something else, [something] new to [my community]. ... We were not born to be resilient; we are *conditioned* to be resilient. I don’t want to be resilient [I want to] fix the things that [create the need for us to] be resilient [in the first place]” [emphasis added].⁽³⁷⁾

Indeed, Washington’s objection to being called “resilient” speaks directly to current definitions and practices of resilience. For example, the Rockefeller Foundation’s City Resilience Index, a programme prepared in collaboration with Arup consultancy, defines city resilience as “*the capability of cities to function, so that the people living and working with cities – particularly the poor and vulnerable – survive and thrive no matter what stresses or shocks they encounter*”.⁽³⁸⁾

But if we took Tracie Washington’s objection seriously, we would stop focusing on how to make citizens more resilient “*no matter what stresses they encounter*”, as this would only mean that they can take more suffering, deprivation or environmental degradation in the future. If we took this statement seriously, we would need to focus instead on identifying the actors and processes that produce the **need** to build resilience in the first place. And we would try to change these factors instead.

In recent years, a growing body of critical academic and policy research on resilience has documented the need to incorporate social processes (including the complex role of communities, leadership, social learning, networks, institutions, etc.) into future methodology design and policy practices for resilience building.⁽³⁹⁾ This body of research has brought significant critical insight; but it also leads to broader questions about the very possibility to fully model the dynamics of global social–ecological change, and to deliver socio-environmental justice through techno-managerial solutions. These broader and more critical questions, however, remain absent from the current NUA framework for resilience building.

b. Beyond inclusiveness

A similar approach to that for “resilient cities”, and similar methods and frameworks, also applies to the way “inclusive”, “safe” and “sustainable”

37. Feldman, Josh (2015), “MSNBC Guest: Stop Using the Word ‘Resilient’ to Describe Katrina Victims”, *Mediaite*, 29 August.

38. Arup and The Rockefeller Foundation (2014), *City Resilience Index, City Resilience Framework*, Ove Arup & Partners International Limited, page 3.

39. Notably the work of: Manyena, S B (2006), “The Concept of Resilience Revisited”, *Disasters* Vol 30, No 4, pages 433–450; also Bouzarovski, S, J Salukvadze and M Gentile (2011), “A Socially Resilient Urban Transition? The Contested Landscapes of Apartment Building Extensions in Two Post-Communist Cities”, *Urban Studies* Vol 48, No 13, pages 2689–2714; Folke, Carl (2006),

cities are addressed in the NUA. The release (in August 2015) of the UN General Assembly document *Transforming our world: the 2030 Agenda for Sustainable Development* was immediately followed by the mandate to the Interagency and Expert Group for Sustainable Development Goal Indicators (IAEG-SDGIs) to develop a “global indicator framework” that would “encompass all 17 SDGs and 169 targets in a balanced and integrated manner”.⁽⁴⁰⁾

The global indicator framework was adopted in March 2016. This means that even before the New Urban Agenda draft was published (on 10 September 2016) for discussion at Habitat III,⁽⁴¹⁾ the methodological frameworks and policy tools for the pursuit of the SDGs had already been determined and based upon previous policy and methodology paths. Indeed, during the March 2016 Statistical Commission meeting in New York, different groups⁽⁴²⁾ disputed the parameters and processes that drove the formulation of the “new” indicator framework. However, there was little contestation or broader debate about the rationale for following a methodology, based on indicator frameworks, that had been proven to fail, as the best means forward to achieve the 2016–2030 Sustainable Development Goals. Equally, the open consultation period (19–28 September 2016) that followed, mainly comprised of an invitation for suggestions “on possible refinements for a limited set of indicators in the Global Indicator Framework for the Sustainable Development Goals”.⁽⁴³⁾

But what would happen if, instead of asking the usual interlocutors to refine the usual “inclusiveness”, “safety”, “sustainability” or “resilience” indicators, we actually took seriously the increasing number of citizens and communities that refuse to be merely “included” in predefined policy frameworks and refuse to participate in fulfilling “inclusiveness” indicators? What if we took seriously the acts of the Rosieni community, in Rosia Montana, Romania, who refused to be included in discussions over how a new mining project that would destroy their environment and livelihoods could be made more “sustainable” and more “beneficial” for their community? In fact, the Rosieni did accept the original invitation to sit around the negotiating table with the mining company and state authorities. But they soon realized that this only legitimized the injustice of existing practices and reproduced fixed roles and power positions. When invited to be “included”, there was already a clear role assigned to them: not that of the equal co-decision maker in setting development goals and allocating resources, but that of the subordinate subject, who is only allowed to choose from a set menu of monetary or other compensatory practices in return for the destruction of her/his livelihood and environment.⁽⁴⁴⁾

Or what if, instead of adding the quest for the perfect “inclusiveness” indicators to the quest for the perfect “sustainability” indicators, we took seriously the practices of the Platform for Mortgage Affected People (PAH) in Spain, who – like the Rosieni – make a point of not accepting their “inclusion” in pre-designed policy frameworks? The PAH was formed in 2009 to support families in Spain (over 300,000 by now) evicted by banks because they could not repay their mortgage debt.⁽⁴⁵⁾ The PAH does not accept the role of the state or banks as powerful authorities that can evict and subsequently “include” evicted citizens in discussions about housing. Instead, the PAH establishes housing as an indisputable and undeniable right for all. It contends that when this right is not granted, it is not to be negotiated through consensus-building frameworks. It is to be taken.

“Resilience: The Emergence of a Perspective for Social–Ecological Systems Analyses”, *Global Environmental Change* Vol 16, No 3, pages 253–267; Olsson, P, V Galaz and W J Boonstra (2014), “Sustainability Transformations: A Resilience Perspective”, *Ecology and Society* Vol 19, No 4, page 1; Petrova, Saska (2014), *Communities in Transition: Protected Nature and Local People in Eastern and Central Europe*, Ashgate, Aldershot; Johnson, Cassidy and Sophie Blackburn (2014), “Advocacy for urban resilience: UNISDR’s Making Cities Resilient Campaign”, *Environment and Urbanization* Vol 26, No 1, pages 29–52; Odemerho, Francis O (2015), “Building climate change resilience through bottom-up adaptation to flood risk in Warri, Nigeria”, *Environment and Urbanization* Vol 27, No 1, pages 139–160; Gunderson, Lance H and C S Holling (editors) (2002), *Panarchy: Understanding Transformations in Human and Natural Systems*, Island Press, Washington, DC; Pelling, Mark (2011), *Adaptation to Climate Change: From Resilience to Transformation*, Routledge, London; Brown, Anna, Ashvin Dayal and Cristina Rumbaitis Del Rio (2012), “From practice to theory: emerging lessons from Asia for building urban climate change resilience”, *Environment and Urbanization* Vol 24, No 2, pages 531–556; Satterthwaite, David and David Dodman (2013), “Towards resilience and transformation for cities within a finite planet”, *Environment and Urbanization* Vol 25, No 2, pages 291–298; Orach, Kirill and Maja Schlüter (2016), “Uncovering the Political Dimension of Social–Ecological Systems: Contributions from Policy Process Frameworks”, *Global Environmental Change* Vol 40, pages 13–25; López-Marrero, Tania and Petra Tschakert (2011), “From theory to practice: building more resilient communities in flood-prone areas”, *Environment and Urbanization* Vol 23, No 1, pages 229–249; and Smit, Barry and Johanna Wandel (2006), “Adaptation, Adaptive Capacity and Vulnerability”, *Global*

Environmental Change Vol 16, No 3, pages 282–292.

40. See reference 27, United Nations Economic and Social Council (2016a and 2016b).

41. Meeting held on 8–11 March 2016 at the UN headquarters in New York. See reference 27, United Nations Economic and Social Council (2016a and 2016b)

42. Muchhala reports that the LDCs group, represented by Bangladesh in 2016, raised problems with (amongst others) “indicator 17.8.1, “Proportion of individuals using the Internet”, as it “does not capture target 17.8 which is to “Fully operationalize the technology bank and science, technology and innovation capacity-building mechanism for least developed countries by 2017 and enhance the use of enabling technology, in particular information and communications technology””. The G77 and China group of 134 developing countries, represented by Thailand, was reported to have stressed that “the indicators should be faithful to the SDGs and should not reinterpret its targets”. And the European Union, represented by the Netherlands, stressed “methodological advancement and international comparability” and “the importance of placing indicators in the technical domain”. Muchhala, Bhumika (2016), “DG indicators challenged by many UN member states”, *TWN Info Service on Health Issues*, 24 March, accessed 20 October 2016 at <http://www.twn.my/title2/health.info/2016/h1160304.htm>.

43. <http://unstats.un.org/sdgs/iaeg-sdgs/open-consultation-4/>, accessed 19 October 2016.

44. Velicu, Irina and Maria Kaika (2015), “Undoing Environmental Justice: Re-Imagining Equality in the Rosia Montana Anti-Mining Movement”, *Geoforum*, DOI: 10.1016/j.geoforum.2015.10.012.

45. See reference 34, García Lamarca and Kaika (2016).

46. Patel, Sheela, Jockin Arputham and Sheridan Bartlett

The PAH takes back this right for those who are evicted in three distinct ways: first, by trying to stop evictions by legal means, thus making evictions a costly act for the state and for banks; second, by providing strong physical opposition formed by the presence of citizens during the actual evictions; and third, by occupying empty buildings owned by banks and re-housing evicted families there. In short, the PAH actively promotes a process that not only re-houses, but also re-dignifies, evicted people by making them political beings again.

c. Beyond false sustainability dilemmas (market versus public management)

Finally, what if we took the debate and policy agendas on sustainability beyond the persistent false dichotomy of market efficiency vs public accountability? We could take seriously Patel et al’s.⁽⁴⁶⁾ paper on the methods of the Indian Alliance in Mumbai, which for over 30 years has been developing community practices for housing provision that operate outside and beyond both state and market mechanisms.

Or we might take seriously Initiative 136 (K136,) SOSte to NERO, and the broader citizens’ collective that strived to redefine water as neither public nor private, but as *the commons*, in Thessaloniki, Greece. Initiated by the public water company’s trade union as a response to privatization calls, the collective produced new imaginaries that radically changed the framework for negotiating water as the commons and as a global human right. Instead of simply protesting against the pending privatization of the municipal water company, K136 instituted the practices and means for citizens to buy up the water company and make it a citizens’ collective when it came up for privatization. 136 actually refers to the euros that each citizen would need to contribute in order to make their bid possible. “*Buying back the public, 136 euros at a time*” was their motto.

What is most astonishing in this case is that this call did not remain an utopian vision like so many others. The citizens’ alliance did actually raise the capital, and was up there competing against global corporate giants like Suez Water and Merkorot in the public tender for acquiring Thessaloniki’s water company when it came up for sale in 2013. K136 persuaded 20 international investors (including the Bill & Melinda Gates Foundation, a French cooperative bank and the Italian Banca Ethica) to guarantee their bid with 1 billion euros, via the mediation of Robert Apfel (a financier) and Jon Redwood (former advisor to Margaret Thatcher’s privatization programme). By so doing, K136 posed a deep political dilemma to each citizen. Either keep 136 euros as spending power and turn it into 10 jumpers, 5 pairs of shoes, a smartphone, etc., or turn these 136 euros into real capital – that is, into the ability to make decisions over the use, management and allocation of water resources in their city.

Although their bid was ruled “illegal” by the Hellenic Republic’s Asset Development Fund S.A. (TAYPIEA), the citizens’ alliance for water did halt the bidding process by taking this decision to court, and prevented the privatization of the municipal water company after an internationally publicized referendum. The practices of the citizens’ water movement (K136, SOSte to NERO, and allied NGOs) are so radical because they turned citizens from indebted powerless objects into potentially powerful decision makers who can reclaim their commons by producing alternative means of allocating and managing resources.

V. THE NUA AS IMMUNOLOGY: BUT WHAT IF COMMUNITIES REFUSE TO BE VACCINATED?

The examples described in the previous sections are part of a wide-spreading social dissensus – that is, of the proliferation of practices of dissent, dissatisfaction and disagreement across the world. What these practices have in common is that they point clearly to exactly what is wrong with focusing on concepts like resilience, safety, inclusiveness and sustainability as development goals and as means of delivering global socio-environmental equality. Namely, all four concepts are attributes that can only be allocated/handed down: from those in power to those in need. And as such, they fail – by design – to address questions related to the conditions that made it necessary for people and environments to seek resilience, safety and sustainability in the first place.

The best these practices can do is act as immunology⁽⁴⁷⁾: they vaccinate people and environments alike so that they are able to take larger doses of inequality and environmental degradation in the future. Pursuing these goals can perhaps mediate some of the consequences of global socio-environmental inequality. But it does little towards alleviating inequality per se.

Such immunological practices are precisely the framework within which we have been pursuing sustainable development up until now. They are the essence of an ecological modernization that has been proven not to work. The pursuit of goals through indicators and smart technologies might occasionally contribute to counteracting some of the effects of global socio-environmental inequality, but cannot offer long-term solutions to local or global socio-environmental problems.

It is thus not surprising that an increasing number of citizens and communities across the world are refusing to participate in immunological practices. They refuse the offer to be made resilient, included, safe or sustainable. They refuse to be part of monitoring exercises. Instead, they demand equality; and they generate equality. What the practices and methods mentioned in the previous sections share is that they establish new **hows** when it comes to making communities safe, resilient, sustainable or included. The actors involved refuse to be “included” because they demand more. They demand to be co-decision makers in setting development goals, and in changing institutional practices and frameworks. And they act upon this demand. They establish alternative practices and methods, alternative hows. And they do this by presuming a position of equality in an increasingly unequal world.⁽⁴⁸⁾

When Tracie Washington spread the message “Don’t call me resilient!” all over New Orleans, this was a clear statement that she (and her community) were not prepared to be further immunized this way. They demanded to become part of making the decisions that change the practices that created the need to build resilience in the first place. When George Archontopoulos (the Greek water coalition spokespeople) offered a T-shirt featuring the water coalition’s anti-privatization motto to the CEO of Suez Water (a bidder for Thessaloniki’s water company), stating that all she would get from Greece was that T-shirt, he transcended his own everyday existence as a public water company employee. In this act, he created and enacted a position of equality vis-à-vis the CEO of one of the most powerful global water corporations because he assumed this equality. Instead of sitting around the

(2016), “We beat the path by walking: how the women of Mahila Milan in India learned to plan, design, finance and build housing”, *Environment and Urbanization* Vol 28, No 1, pages 223–240.

47. Esposito, Roberto (2013), *Terms of the Political: Community, Immunity, Biopolitics*, Fordham University Press, New York; see also Swyngedouw, Erik and Henrik Ernstson (submitted paper), “O Tempora o Mores! Interrupting the Anthropo-obScene”, Paper submitted to *Theory, Culture & Society*.

48. Swyngedouw, Erik (2011), “Interrogating Post-Democratization: Reclaiming Egalitarian Political Spaces”, *Political Geography* Vol 30, No 7, pages 270–280; also Swyngedouw, Erik (2014), “Where Is the Political? Insurgent Mobilisations and the incipient ‘Return of the Political’”, *Space and Polity* Vol 18, No 2, pages 122–136; Kaika, Maria (2012), “The Economic Crisis Seen from the Everyday: Europe’s Nouveau Poor and the Global Affective Implications of a ‘Local’ Debt Crisis”, *City* Vol 16, No 4, pages

422–430; and Kaika, Maria and Lazaros Karaliotas (2016), "The Spatialization of Democratic Politics: Insights from Indignant Squares", *European Urban and Regional Studies* Vol 23, No 4, pages 556–570.

49. Bronowski, J (1956), *Science and Human Values*, Julian Messner, New York.

50. Rancière, Jaques (1995), *La Méésentente - Politique Et Philosophie*, Editions Galilée, Paris.

51. Wilson, David and Roger Keil (2008), "The Real Creative Class", *Social and Cultural Geography* Vol 9, No 8, pages 841–847.

52. See reference 28.

table to negotiate how he and his colleagues would be made "resilient" in the face of anticipated redundancies and salary cuts after privatization, he, his colleagues and the broader citizens' coalition took the question of rights to water a step beyond the pursuit of resilience, safety and sustainability.

VI. IN SEARCH OF THE REAL SMART CITY: DISSENSUS AS A LIVING INDICATOR

"Has there ever been a society which has died of dissent? Several have died of conformity in our lifetime."⁽⁴⁹⁾

The movements and actors described in this article are a few among many across the world establishing new methods that rupture previous subordinate positions⁽⁵⁰⁾ and practices. The knowledge and methods they develop do not fit into existing agendas and debates, which are dominated by the design of indicators or management and monitoring technologies in pursuit of sustainable development goals. But if we are looking for **real** smart solutions and **real** social innovation, here they are – in the methods, practices and narratives these movements institute, and in the alternative ways they establish of managing the commons.⁽⁵¹⁾

As alternative practices and methods proliferate across the world, as people refuse to take up pre-prescribed development practices or pre-determined immunological protocols, this is a mature and opportune moment to pay attention to socio-environmental innovations and methods forged not out of social consensus, but out of social dissensus (e.g. out of wide-spreading practices of dissent).

Unlike methods assembled out of consensus-building exercises performed amongst the usual suspects in the comfort of well-funded frameworks, the methods forged out of dissensus involve painstaking efforts, and emerge when needs are so urgent that citizens are compelled to take on new roles in order to take matters into their own hands. These instances and practices of dissensus can therefore potentially act as **living indicators**, as signposts of what urgently needs to be addressed and where. Potentially, the methods forged out of dissensus can lead to instituting alternative means to tackle global socio-environmental inequality. These emerging imaginaries of people and environments being and working in common may offer far more efficient, direct and effective ways of addressing access to housing, healthcare, education, water and clean air in urban settlements than any set of indicators or techno-managerial solutions can offer.

As emphasis is continuously placed on data collection and "the need to systematically monitor and report on the New Urban Agenda and SDGs' indicators", in order to "support a more informed decision making",⁽⁵²⁾ it becomes an academic, political and socio-environmental responsibility to start asking different sets of questions. It becomes a matter of political urgency to systematically monitor, document and take stock of dissensus-driven practices and methods. If we took these practices seriously, if we worked with these living indicators and methods, we could maybe move beyond stale indicator frameworks and immunological practices, and towards an urgency-driven framework of global socio-environmental equality. We might fail again. We probably will. But at least we will have tried to fail better.

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REFERENCES

- Amnesty International (2016), *United Arab Emirates Annual Report 2015/16: Migrant Workers' Rights*.
- Araña, Silvia Guzmán and Mythili Menon (2015), *Smart Sustainable Cities: A Guide for City Leaders*, ITU-T Focus Group on Smart Sustainable Cities technical report.
- Arup and The Rockefeller Foundation (2014), *City Resilience Index, City Resilience Framework*, Ove Arup & Partners International Limited.
- Barnett, Clive and Susan Parnell (2016), "Ideas, implementation and indicators: epistemologies of the post-2015 urban agenda", *Environment and Urbanization* Vol 28, No 1, pages 87–98.
- Bouzarovski, S, J Salukvadze and M Gentile (2011), "A Socially Resilient Urban Transition? The Contested Landscapes of Apartment Building Extensions in Two Post-Communist Cities", *Urban Studies* Vol 48, No 13, pages 2689–2714.
- Bouzarovski, S and Frankowski J (2016) "Low-carbon gentrification: when climate change encounters residential displacement". Unpublished manuscript /working paper. Submitted to the *International Journal of Urban and Regional Research* August 2016 (under review)
- Bronowski, J (1956), *Science and Human Values*, Julian Messner, New York.
- Brown, Anna, Ashvin Dayal and Cristina Rumbaitis Del Rio (2012), "From practice to theory: emerging lessons from Asia for building urban climate change resilience", *Environment and Urbanization* Vol 24, No 2, pages 531–556.
- Buckley, Robert M and Lena Simet (2016), "An Agenda for Habitat III: Urban Perestroika", *Environment and Urbanization* Vol 28, No 1, pages 64–76.
- Crouch, Colin (2009), "Privatised Keynesianism: An Unacknowledged Policy Regime", *The British Journal of Politics & International Relations* Vol 11, No 3, pages 382–399.
- Cugurullo, Federico (2016), "Urban Eco-Modernisation and the Policy Context of New Eco-City Projects: Where Masdar City Fails and Why", *Urban Studies* Vol 53, No 11, pages 2417–2433.
- Datta, Ayona (2015), "New Urban Utopias of Postcolonial India: 'Entrepreneurial Urbanization' in Dholera Smart City, Gujarat", *Dialogues in Human Geography* Vol 5, No 1, pages 3–22.
- Desmond, Matthew (2012), "Eviction and the Reproduction of Urban Poverty", *American Journal of Sociology* Vol 118, No 1, pages 88–133.
- Di Bella, Arturo and Luca Ruggiero, "Néolibéralisme Et Développement Urbain Dans L'italie Du Sud: Le Modèle « IBM Smart City » Dans La Ville De Syracuse", in *Construction Politique Et Sociale Des Territoires Cahier No 5, Penser La Fabrique De La Ville En Temps De Crise(s)*, Citeres, CNRS-Université de Tours.
- Dooling, Sarah (2009), "Ecological Gentrification: A Research Agenda Exploring Justice in the City", *International Journal of Urban and Regional Research* Vol 33, No 3, pages 621–639.
- Dutch News* (2016), "Dutch Air Quality Breaks EU Standards in Some Cities", 11 May, accessed 11 May 2016 at <http://www.dutchnews.nl/news/archives/2016/05/dutch-air-quality-breaks-eu-standards-in-some-cities/>.
- Eposito, Roberto (2013), *Terms of the Political: Community, Immunity, Biopolitics*, Fordham University Press, New York.
- Feldman, Josh (2015), "MSNBC Guest: Stop Using the Word 'Resilient' to Describe Katrina Victims", *Mediaite*, 29 August.
- Folke, Carl (2006), "Resilience: The Emergence of a Perspective for Social-Ecological Systems Analyses", *Global Environmental Change* Vol 16, No 3, pages 253–267.
- García Lamarca, Melissa and Maria Kaika (2016), "'Mortgaged Lives': The Biopolitics of Debt and Housing Financialisation", *Transactions of the Institute of British Geographers* Vol 41, No 3, pages 313–327.

- Greenberg, Miriam (2016), "Whose Ecotopia? The Challenge of Equity in Urban Sustainability Planning", in Julie Sze (editor), *Situating Sustainability: Sciences/Humanities/Societies, Scales, and Social Justice*, New York University Press, New York.
- Greenfield, Adam (2015), "Zeroville-on-Khambhat, Or: The Clean Slate's Cost", *Dialogues in Human Geography* Vol 5, No 1, pages 40–44.
- Gunderson, Lance H and C S Holling (editors) (2002), *Panarchy: Understanding Transformations in Human and Natural Systems*, Island Press, Washington, DC.
- Habitat III Programme (2016), *Measuring the New Urban Agenda and Sustainable Development Goals: the City Prosperity Initiative*, Tuesday 18th Session, accessed 21 October 2016 at <https://habitat3.org/programme/measuring-the-new-urban-agenda-and-sustainable-development-goals-the-city-prosperity-initiative/>.
- Hall, David, Emanuele Lobina and Robin de la Motte, "Public Resistance to Privatisation in Water and Energy", *Development in Practice* Vol 15, Nos 3–4, pages 286–301.
- Harris, Andrew (2015), "Smart Ventures in Modi's Urban India", *Dialogues in Human Geography* Vol 5, No 1, pages 23–26.
- Heynen, Nik, Harold A Perkins and Parama Roy (2006), "The Political Ecology of Uneven Urban Green Space", *Urban Affairs Review* Vol 42, No 1, pages 3–25.
- Hoelscher, Kristian (2016), "The Evolution of the Smart Cities Agenda in India", *International Area Studies Review* Vol 19, No 1, pages 28–44.
- Johnson, Cassidy and Sophie Blackburn (2014), "Advocacy for urban resilience: UNISDR's Making Cities Resilient Campaign", *Environment and Urbanization* Vol 26, No 1, pages 29–52.
- Kaika, Maria (2003), "The Water Framework Directive: A New Directive for a Changing Social, Political and Economic European Framework", *European Planning Studies* Vol 11, No 3, pages 303–320.
- Kaika, Maria (2012), "The Economic Crisis Seen from the Everyday: Europe's Nouveau Poor and the Global Affective Implications of a 'Local' Debt Crisis", *City* Vol 16, No 4, pages 422–430.
- Kaika, Maria and Lazaros Karaliotas (2016), "The Spatialization of Democratic Politics: Insights from Indignant Squares", *European Urban and Regional Studies* Vol 23, No 4, pages 556–570.
- Kaika, Maria and Erik Swyngedouw (2011), "The Urbanization of Nature: Great Promises, Impasse, and New Beginnings", in Gary Bridge and Sophie Watson (editors), *The New Blackwell Companion to the City*, Blackwell, Oxford, pages 96–107.
- Keil, Roger (1998), *Los Angeles: Globalization, Urbanization, and Social Struggles*, John Wiley & Sons Ltd, New York.
- Komninos, Nicos (2015), *The Age of Intelligent Cities: Smart Environments and Innovation-for-All Strategies*, Routledge, London, 278 pages.
- López-Marrero, Tania and Petra Tschakert (2011), "From theory to practice: building more resilient communities in flood-prone areas", *Environment and Urbanization* Vol 23, No 1, pages 229–249.
- Manyena, S B (2006), "The Concept of Resilience Revisited", *Disasters* Vol 30, No 4, pages 433–450.
- Martinez-Alier, Juan (1997), "Environmental Justice (Local and Global)", *Capitalism Nature Socialism* Vol 8, No 1, pages 91–107.
- Muchhala, Bhumika (2016), "DG indicators challenged by many UN member states", *TWN Info Service on Health Issues*, 24 March, accessed 20 October 2016 at <http://www.twn.my/title2/health.info/2016/hi160304.htm>.
- Odemerho, Francis O (2015), "Building climate change resilience through bottom-up adaptation to flood risk in Warri, Nigeria", *Environment and Urbanization* Vol 27, No 1, pages 139–160.
- Olsson, P, V Galaz and W J Boonstra (2014), "Sustainability Transformations: A Resilience Perspective", *Ecology and Society* Vol 19, No 4.
- Orach, Kirill and Maja Schlüter (2016), "Uncovering the Political Dimension of Social-Ecological Systems: Contributions from Policy Process Frameworks", *Global Environmental Change* Vol 40, pages 13–25.
- Patel, Sheela, Jockin Arputham and Sheridan Bartlett (2016), "We beat the path by walking: how the women of Mahila Milan in India learned to plan, design, finance and build housing", *Environment and Urbanization* Vol 28, No 1, pages 223–240.
- Pelling, Mark (2011), *Adaptation to Climate Change: From Resilience to Transformation*, Routledge, London.
- Perry, Francesca (2016), "Can 'Smart' Birdhouses Help Improve Air Quality in Amsterdam?", *The Guardian*, 10 June, accessed 7 November 2016 at <https://www.theguardian.com/cities/2016/jun/10/city-links-smart-birdhouses-improve-air-quality-amsterdam>.
- Petrova, Saska (2014), *Communities in Transition: Protected Nature and Local People in Eastern and Central Europe*, Ashgate, Aldershot.
- Pieterse, Edgar (2011), "Recasting Urban Sustainability in the South", *Development* Vol 54, No 3, pages 309–316.
- Rancière, Jaques (1995), *La Mésentente - Politique Et Philosophie*, Editions Galilée, Paris.
- Satterthwaite, David (2016), "A new urban agenda?", *Environment and Urbanization* Vol 28, No 1, pages 3–12.
- Satterthwaite, David and David Dodman (2013), "Towards resilience and transformation for cities within a finite planet", *Environment and Urbanization* Vol 25, No 2, pages 291–298.

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- Smit, Barry and Johanna Wandel (2006), "Adaptation, Adaptive Capacity and Vulnerability", *Global Environmental Change* Vol 16, No 3, pages 282–292.
- Swyngedouw, Erik (2011), "Interrogating Post-Democratization: Reclaiming Egalitarian Political Spaces", *Political Geography* Vol 30, No 7, pages 270–280.
- Swyngedouw, Erik (2014), "Where Is the Political? Insurgent Mobilisations and the Incipient "Return of the Political"", *Space and Polity* Vol 18, No 2, pages 122–136.
- Swyngedouw, Erik and Henrik Ernstson (submitted paper), "O Tempora o Mores! Interrupting the Anthro-obScene", Paper submitted to *Theory, Culture & Society*.
- United Nations (2001), "Security Council Condemns Illegal Exploitation of Democratic Republic of Congo's Natural Resources", *Meetings Coverage and Press Releases*, 4317th and 4318th Meetings (AM and PM).
- United Nations Conference on Housing and Sustainable Urban Development (Habitat III) (2016), *Adopted Draft of the New Urban Agenda*, Quito, 17–20 October, accessed 21 November 2016 at <https://www2.habitat3.org/bitcache/99d99fbd0824de50214e99f864459d8081a9be00?vid=591155&disposition=inline&op=view>.
- United Nations Economic and Social Council (2016a), *Report of the Inter Agency and Expert Group on Sustainable Development Goal Indicators*, E/CN.3/2016/2/Rev.1, Forty-Seventh Session, Statistical Commission, 8–11 March, accessed 20 October 2016 at <http://unstats.un.org/unsd/statcom/47th-session/documents/2016-2-sdgs-rev1-e.pdf>.
- United Nations Economic and Social Council (2016b), *Report on the Forty-Seventh Session (8–11 March 2016)*, Economic and Social Council Official Records 2016 Supplement No 4, Statistical Commission, E/2016/24 -E/CN.3/2016/34, New York.
- United Nations General Assembly (2015), *Draft outcome document of the United Nations summit for the adoption of the post 2015 development agenda*, Sixty-ninth session A/69/L.85, 12 August.
- United Nations Office for Disaster Risk Reduction (2015), *Indicators to Monitor Global Targets of the Sendai Framework for Disaster Risk Reduction 2015–2030: A Technical Review*, Background paper, 27–29 July.
- Velicu, Irina and Maria Kaika (2015), "Undoing Environmental Justice: Re-Imagining Equality in the Rosia Montana Anti-Mining Movement", *Geoforum*, DOI: 10.1016/j.geoforum.2015.10.012.
- Walker, Richard (2009), *The Country in the City: The Greening of the San Francisco Bay Area*, University of Washington Press, Seattle.
- Wilson, David and Roger Keil (2008), "The Real Creative Class", *Social and Cultural Geography* Vol 9, No 8, pages 841–847.
- Wollmann, Hellmut and Gérard Marcou (editors) (2010), *The Provision of Public Services in Europe: Between State, Local Government and Market*, Edward Elgar, Cheltenham, UK and Northampton, USA.
- Yigitcanlar, Tan and Sang Ho Lee (2014), "Korean ubiquitous-eco-city: A smart-sustainable urban form or a branding hoax?", *Technological Forecasting and Social Change* Vol 89, pages 100–114.