ELEPHANT
IN THE LAB

INTERVIEW

Science for cities: overcoming borders

Short title	Science for cities: overcoming borders.
Long title	Why is scientific advice to cities a global matter?
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Why do we need scientific advice for cities based on urban research? Why is it not only a local, but also a global matter?

Scientific advice for cities cannot be seen as a local issue, particularly because sustainable development is a global matter itself and needs a common approach. There's quite a long list of grand challenges of the United Nations and respective initiatives to tackle them: Framework on natural disaster reduction, UN Cape Town plan on data, New Urban Agenda and all of the SDGs. In all of these it's very clearly communicated that there is a strong demand for effective and plausible scientific evidence upon which to act; and it has to be applicable in different parts of the world. Naturally global scale agendas require knowledge from the local level from the city administration, local governments and local actors. For example, if we aim to reduce the number of deaths by car accidents, we need to converge knowledge about the situation on the local level in extremely diverse cities. In practice, there are hundreds of formalised networks of cities that ensure such cooperation, which are producing evidence about cities and then try to place them in global affairs.

These networks work pretty well within their domains. Sometimes they serve as a resource to address global problems, which some cities were slow at addressing themselves, or that haven't been on their agenda before. In a sense, these networks are a proof that cities can work on things collaboratively on an international scale. And this is true for scientific collaboration as well, especially when we speak about getting people together and acting upon evidence. A good example is the C40[1] network, which is committed to addressing climate change.

Nearly 30 percent, the correct number is 29%, of city networks (Acuto, 2016) work on environmental questions, primarily climate change, which is an issue that has been strongly connected to scientific consensus and scientific processes. For example, the IPCC (International governmental Panel on Climate Change) proves that the whole conversation of keeping the global warming below 1.5 degrees is a scientifically infused conversation.

You are an expert on urban planning. Based on your experience, what are the main problems/impediments that you encounter when working on a global scope (with international partners)?

We just finished an international expert panel on "Science and the Future of Cities" supported by *Nature Sustainability* on this theme. There a selected group of 30 eminent scientists from Global North *and* South discussed the role of science in implementing global commitments like the SDGs and the New Urban Agenda and you could clearly hear in panel discussions (Acuto et al., 2018) how policymakers struggle to rely on the sciences, and the scientists struggle to be policy relevant without starting to act as consultants and lobbyists and maintaining some degree of

[1] The C40 network connects 94 of the world's greatest cities to take bold climate action, leading the way towards a healthier and more sustainable future.

independence. We organized this panel to define mechanisms of cooperation on the science-policy interface and find out, how we could actually work together.

Now, the key thing that came out is that the unavailability of science is not a problem, it's rather problematic that the distribution of scientific outputs are unbalanced, so you have a massive and quite substantial capacity difference between the Global South and the Global North. In many cases you have relevant data, but it is owned or produced by the private sector. Then some countries have world class universities that are not connected to their city governments that are in average situated 4 or 5 kilometers down the road. So, the biggest problem in linking urban research to politics is the uneven development of sciences, but also the machinery of putting science into policy and the interplay between public and private.

In one of your articles, you speak about the importance of data driven decisions in urban planning and data exchange between countries. Are the necessary facilities - e.g. a suitable infrastructure - in place to enable such a cooperation?

It is quite clear that there is appetite for data. We call it "the informed cities paradigm" (Acuto, 2018) as in the classic line from Michael Bloomberg: "If you can't measure it, you can't manage it". Now, the question is: do cities have the capacity to a) produce data, b) do something with the data, meaning to analyze and mobilize the data, or c) are we still very dependent on the private sector providing consultancy information? There are some great examples that prove it's possible to produce and work with data without commercial actors. The city of Chicago, the city of Seoul, Melbourne have opened up their data. But often, in reality, most cities don't have the data capacity, so they rely on something else and that something else tends to be sort of consultancy driven, which brings a market perspective into the game.

The logical solution to this dilemma is building better data capacities within cities, but that is not enough. Another solution is introducing better science policy mechanisms or structures. For instance, we talked about the possibility of appointing chief scientific advisers or constructing urban observatories. A great example is the UN-Habitat's GUO (Global Urban Observatory)[2], many urban observatories have been set up in cities around the world, as in Mexico City's Laboratorio para la Ciudad or Johannesburg's Gauteng City Region Observatory. It's a costly option, but very efficient. Especially, when a formalised partnership with the closest university is also organized, which relies on the city for data collection and so on. The trick behind this endeavour is that if you connect to the university, it will most likely be linked to other universities, so you are tapping in a network of networks.

Your activity goes beyond academic research, you are quite engaged third-mission-activities that connect science with other societal groups (political decision makers e.g.). Which

[2] The GUO (Global Urban Observatory) unit is a specialized statistical unit in charge of global monitoring urban development. This includes building capacities of national governments, establishing local, regional and global mechanisms for urban monitoring.

stakeholders - from the private sector, civil society, politics - are involved in this process? What are the main challenges for scientific policy advice on the international scope when we deal with global issues like climate change?

It's a mix of academics, private sector initiatives and even philanthropic actors. Many times you don't notice academics explicitly and right away, because researchers in that case start playing a bit of a consultancy role. There are some very tangible examples, for instance the C40 Cities 2015 reports *Climate Action in Megacities* and *Powering Climate Action*, developed ahead of the Paris conference that led to the latest agreement on climate change, involved such university-private sector-cities collaborative element. It led by Arup as a consultancy firm, managed by the C40 secretariat as an internationally-funded NGO, with research from my laboratory and Arup's Climate and Energy group, reaching out to cities and business on the ground. I would argue the report itself was still academically sound, although other non-academic stakeholders were involved, and most importantly put emphasis on evidence-based decision-making in cities. The best way to provide politics with expertise is organizing such multi-stakeholder platforms, in which representatives of the private sector, philanthropies like the Ford or Bloomberg Foundation, government officials, scientist and other relevant parties are involved. The trick is finding a suitable format in order to put them all together and start working towards a shared objective without betraying principles of scientific accountability and social values.

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