



Chapter 44: Academics and Nonacademics

Who's Who in Changing the Culture of Knowledge Creation?

Kareem Buyana

Now that urban sustainability is a global goal with the potential to undo the partitioning of disciplines within academic and nonacademic institutions, changes in the culture of knowledge creation are likely to differ in form and scale. Conventionally, urban development is a city-specific issue, limited to finding knowledge on urban forms that make it easier to live and work in the city. But because urban development has become a planetary and complex challenge, sustainability relies on knowledge beyond one's field of comfort. If we use the current economic model of extracting more from nature, it would mean production and consumption that is beyond what the planet can offer and an increase in international resource conflicts. So, how do we ensure less or recyclable use of resources for the same economic output by cities for the entire global population? This is a planetary and complex question, characterized by predictable and unpredictable scenarios; expected and unprecedented overlaps in stakeholder interests; and a multiplicity of solutions that are never completely right, but rarely completely wrong.

Because urban sustainability has posed multiple, interconnected layers of planetary and complex questions, collaborative knowledge creation – that is, knowledge cocreation – is necessary. Knowledge cocreation is a mechanism for solution-focused interfaces between academics and nonacademics (including industry figures, policy-makers, and members of society). The key principle that has defined knowledge cocreation globally is that nonacademics and academics should have an equal chance to contribute to the framing of research questions and to the design methodologies for finding and experimenting with options for urban sustainability. For academics and nonacademics to operate on equal footing requires putting a dent in the power structures that characterize many research processes – wherein academics, in consultation with a particular funding agency, frame the research agenda and use predetermined

methodologies to broaden the understanding of urban sustainability *for*, rather than *with*, nonacademics. By viewing knowledge cocreation as a means of changing the rules and regulations of the game, scientists can be positioned to offer an open hand that invites nonacademics in as coproducers, rather than end-users, of knowledge.

Who is responsible for what in the process of changing the culture of knowledge creation? Is it the academics, nonacademics, or both? I explore this with three synchronized layers of empowerment: (1) individual; (2) institutional; and (3) the empowerment of collaborations. The analysis is both normative and applied, and points to the merits and pitfalls of changing the culture of knowledge creation.

44.1 Individuals

Empowerment of individuals means opening up the space to include all relevant actors (scientists, government officials, industry figures, civil society, and local residents) in the process of cocreating knowledge. For instance, if architects, engineers, and urban sociologists are to collaboratively work with the building industry to create commercially viable developments that enhance tenants' well-being while using scarce but precious metals sparingly, property owners in the city ought to have a front seat at the table. Their contribution would spring from ideas on how to manage properties in ways that reconcile the often-conflicting means of economic, environmental, and social viability. Policy-makers at municipal and central government levels also need to be involved from the start to realize a cohesive policy for the affected sectors. In such a scenario, individual actors would cocreate a sustainable urban design as the boundary object for learning beyond the limits of each person's expertise. Besides creating a personal learning network, individuals would broaden their understanding of a methodology that relies on fewer natural resources to generate buildings that offer equally good economic outputs and lifestyles for tenants. The academics would generate quality criteria for conducting transdisciplinary research on cities and buildings.

However, differences in corporate power and social context can position the elite as the voice for the nonelite and academics as the voice for the nonacademics, thereby minimizing the influence of certain actors on the outcome of the research agenda. This puts academics in a double-agent position; on the one hand, they would care about generating research questions and a methodology that is "scientifically credible," whereas, on the other, they would be expected to ensure that the methodology produces a building design that is valuable to property owners, policy-makers, and tenant representatives. The question, then, is who among the academics or nonacademics is best suited to ensure that

an outcome is scientifically valid and valuable to society, and what such an outcome would look like? Contestations among architects, engineers, and urban sociologists are very likely, and reconciliation of values and preferences among property owners, builders, policy-makers, and tenants is an uphill task.¹

For these reasons, changing the culture of knowledge creation is nonlinear; this nonlinearity makes knowledge cocreation empowering for academics *and* nonacademics in two ways: (1) the nonacademics would learn how multiple disciplines operate alongside each other on a given policy and societal issue and (2) the academics would gain exposure to aggregating multiple policy and societal perspectives – a joint empowerment.

44.2 Institutions

As individual academics and nonacademics participate in coproducing knowledge, they are not acting in a vacuum. They are traversing institutional mandates and governance structures with different rules and regulations, as well as defined boundaries for collaboration. For example, it is possible for researchers in a university to sign a memorandum of understanding with municipal authorities to produce knowledge on governance structures that constrain capacity to plan and implement sustainability projects. However, this is likely to be a *collective* study as opposed to a *collaborative* one because knowledge would be extracted from urban policy-makers and residents using a predetermined framework for undertaking key informant interviews and citizen juries.

Pressing sustainability challenges – climate change, biodiversity loss, and interference in nutrient cycles, for example – are related to industry and societal struggles along gender and class lines, as well as to other patterns of inequality, which sustainability experts may not easily uncover unless policy-makers, industry figures, and the public all have the platform to validate and align their experiences to the issues of social change towards equity and justice. Therefore, depending on how institutional collaborations are designed, they can empower or disempower academics to exchange knowledge beyond the limits of their fields. Who should undo the institutional barriers to changing the culture of knowledge creation? And how should such institutional constraints be overcome? One option is for academics and nonacademics to imagine modalities of engagement that stretch across legal/illegal boundaries and formal/informal administrative routes to garner the support of their institutions. Such sidesteps can change power relationships among institutions and enable individual actors to negotiate a “gray space” between legality and illegality while creatively using the law.

¹ <https://ugecviewpoints.wordpress.com/2016/08/23/transdisciplinary-research-in-urban-africa-a-coat-of-many-blended-colors/>

44.3 Collaborations

Collaborations will require academics that have international research experience and the mentality to operate alongside differing disciplines and worldviews. Therefore, the definition of a global researcher has to change from a person who has conducted international studies with citations by other scholars and multilateral agencies to a person who provides space for voices that transcends the researcher's perspective and who participates in research collaborations that allow both academics and nonacademics in the Global North and South to flourish. While working from such a mindset, academics would work on projects that are valuable to industry and society in both hemispheres as opposed to partitioning international cases along developed/developing country lines. Such a collaboration would be manifest in a study on the feasibility of replacing disposable food containers with reusable containers, judged using criteria that focus on reduced operational cost and customer acceptance for industrial players; cutting down reliance on plastics and metal to attain efficiency in global supply chains; increased access to affordable food containers by school-going girls and boys in the Global South; and creation of jobs for youth that feel excluded by current employment policies. It would be critical for the academics in this research to work with non-academics from both the Global North and South in framing key thematic issues that can constitute a science-policy-practice nexus in the context of sustainable food packaging.

In spite of the complexities associated with science-policy-industry-society interfaces, the culture of creating knowledge in cubicles is dying out, and not all academics are ready to lead or be part of the change. Academic and nonacademic institutions, such as Future Earth, have and will continue to invest in the technical aspects of coproducing knowledge; so, the value system of individuals and institutions within and outside the realm of transdisciplinarity ought to be studied in-depth, as culture and human factors are a precursor to the successful application of methods and tools across scales.

References

- Ambole, L.A. (2016). Understanding Coproduction through Sanitation Intervention Case Studies in South Africa (Doctoral dissertation, Stellenbosch University).
- Campbell, L. K., Svendsen, E.S., Roman, L. (2016). Knowledge Co-production at the Research-Practice Interface: Embedded Case Studies from Urban Forestry. *Environmental Management* (2016) 57: 1262–1280.