

We must look further upstream to enable planetary health-literate urban development



The gap between academic research and real-world practice in urban planning and development is a major barrier to planetary health.¹ By exploring uncertainty and complexity further upstream, we might be able to narrow that gap, and make progress in tackling the urban health crisis.

The term upstreamism is used by public health specialists to highlight how urban environments—the hard infrastructure—affect health downstream. Specifically, it is the quality of the urban environment that affects health, and that quality is determined even further upstream by the people in control of the development and management of human habitats.^{2,3} The urban environment can therefore be more usefully described as midstream (panel).

Achievement of healthy urban habitats is without doubt a complex challenge, which will require action at a systems level. Such an approach means working not only vertically via specialists and horizontally via interdisciplinary generalists, but also holistically.^{4,5} Planetary health must become integral to core global drivers of health such as education, equality, healthy technology, and international cooperation, and needs to be prioritised within targeted localised activities. The recent push for impact-focused interdisciplinary and transdisciplinary working practices in research is essential and should continue to expand.

The mechanisms of local urban development decision-making are relatively simple when compared with those of global systems, but they are still complex and messy. In local urban development, numerous disciplines and factors interface, including of course health and environmental sciences, but also economics, politics, corporate governance, risk management, social justice, ethics, law, psychology, and cultural history. Senior executives and other urban governors are the people who make decisions on the basis of multiple variables, both acknowledged and unacknowledged, including their response to variable political priorities. New transdisciplinary research methods that can navigate these complex and uncertain scenarios and model their potential outcomes are needed.

How value is assigned in urban development decision-making (and more widely across most aspects of

governance) is an important part of the equation. Mainstream valuation mechanisms are failing to help reach a sustainable equilibrium. Lord Stern described climate change as “the greatest market failure the world has ever seen”.⁶ “Not everything that can be counted counts, and not everything that counts can be counted” is a quote often attributed to Einstein, and is a concise summary of the predicament. Achieving agreement on valuation is particularly challenging in urban development; the appraisal of narrowly defined financial viability tends to dominate discussions on the value of development proposals. The positive news is that a good deal of progress has been made in the field of environmental economics and in the valuation of that which counts, but is not easy to count, although much more work is needed on making these valuations relevant to decision-makers.

Many calls have been made from both inside and outside the academic community to engage much more fully on the achievement of real-world impact on planetary and human health, yet a substantial disconnection remains between the health world and the urban development world; efforts tend to be targeted at professionals whose limited influence lies midstream. In private sector-led economies (with

Panel: Upstream factors that control the quality of the built environment midstream, and human and planetary health further downstream

Upstream

- Land
- Finance
- Development (delivery)
- Planning permission*

Midstream

- Urban environment
- Professional services
- Citizen behaviour

Downstream

- Human health
- Planetary health

*In market-led economies such as the UK, local government tends to respond to private sector-led development proposals

largely non-interventionist governments), influence resides with local governments to some extent, but the landowners, financiers, and developers are primarily the ones who control the quality of the urban environment, and they themselves are responding to global flows of capital and personnel.⁷ Within this paradigm, downstream assessment mechanisms such as health impact assessments are peripheral to the main drivers of urban development; in any case, the people who work in this area are reporting so-called impact assessment fatigue, a symptom of systemic inertia.⁸

A final challenge relates to time. Cities take a relatively long time to be built, and health outcomes take even longer to manifest. Furthermore, the mechanisms used in academia to assess research impact are not yet sophisticated enough to take this time component into account, an issue shared with the climate change agenda, which has been described by the Governor of the Bank of England, Mark Carney, as the “tragedy of the horizon”.^{9,10} With research funders increasingly seeking evidence of real-world impact, researchers who are interested in helping achieve healthy urban habitats could face frustration in achieving recognition, at least in the short term.

Therefore, at the starting point, a range of interdisciplinary challenges remain when seeking to enable healthy urbanisation: market (valuation) failure, a largely powerless professional class, ineffective assessment mechanisms that are peripheral to the main drivers of development, governance failures, complexity, separation of academia from the real world, and short-termism in research impact assessment.

Academics must urgently explore together this messy, perhaps uncomfortable space; their contribution is essential. Thankfully, a growing number of research funders are increasingly steering us in the right direction, including notably the Wellcome Trust’s Our

Planet Our Health programme, with their support for research on the connection between environment and population health.

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This Comment sets out the context for a 3-year pilot project: Moving Health Upstream in Urban Development. We would like to thank the Wellcome Trust for their generous support in funding the pilot under their ambitious Our Planet Our Health Programme. All authors received grants from the Wellcome Trust.

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- 1 Lawrence RJ. Mind the gap: bridging the divide between knowledge, policy and practice. In: Barton H, Thompson S, Burgess S, Grant M, eds. *The Routledge handbook of planning for health and well-being*. New York, London: Routledge, 2015: 74–84.
- 2 Frumkin H. Welcome & meeting overview: what is planetary health and why now? 2017. <https://planetaryhealthannualmeeting.org/2017-2/howard-frumkin-2017/> (accessed April 29, 2017).
- 3 Williams K. Urban form and infrastructure: a morphological review. *Future of cities: working paper*. 2014. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/324161/14-808-urban-form-and-infrastructure-1.pdf (accessed Oct 16, 2016).
- 4 Rao M, Barten F, Blackshaw N, et al. Urban planning, development and non-communicable diseases. *Plan Pract Res* 2011; **26**: 373–91.
- 5 Bai X, Nath I, Capon A, Hasan N, Jaron D. Health and wellbeing in the changing urban environment: complex challenges, scientific responses, and the way forward. *Curr Opin Environ Sustain* 2012; **4**: 465–72.
- 6 Stern N. The Stern review: the economics of climate change. 2007. <http://www.cambridge.org/ro/academic/subjects/earth-and-environmental-science/climatology-and-climate-change/economics-climate-change-stern-review?format=PB&isbn=9780521700801#YjvrGx3Cvs9P1bsm.97> (accessed July 1, 2008).
- 7 Hoyler M, Lizieri CM, Pain K, et al. European cities in advanced producer services and real estate capital flows: a dynamic perspective. In: Pain K, Van Hamme G, eds. *Changing urban and regional relations in a globalizing world: Europe as a global macro-region*. Cheltenham: Edward Elgar, 2014: 115–37.
- 8 Kemm J. *Health impact assessment: past achievement, current understanding, and future progress*. Oxford: Oxford University Press, 2012.
- 9 Carney M. Breaking the tragedy of the horizon—climate change and financial stability—speech by Mark Carney. 2015. <https://www.bankofengland.co.uk/speech/2015/breaking-the-tragedy-of-the-horizon-climate-change-and-financial-stability> (accessed Sep 15, 2017).
- 10 Greenhalgh T, Raftery J, Hanney S, Glover M. Research impact: a narrative review. *BMC Med* 2016; **14**: 78.