



INTER-, TRANS- AND MULTI-DISCIPLINARY

We consider “Urbanism” a multidisciplinary area of research and practice, gathering urban design, spatial planning, data analysis and modelling, urban studies and sustainable technology, among others. Each area of knowledge asks different (but complementary) questions anchored on different ontology and epistemology. Different questions demand different methods to answer them. Sometimes, the same question can be answered from different perspectives. The Methodology Sheets give an overview of methods used in Urbanism.

WHAT DOES THIS METHOD ‘DO’?

There is a huge discussion about whether Urbanism is a “discipline”, a “perspective” or a “practice”. In the Netherlands, there is a tradition of combining spatial planning, urban design and infrastructural technology in what the Dutch call *Stedebouw* (the construction of place), later changed to *Stedenbouw* (the construction of cities) or simply Urbanism. This tradition

stems from a particularly difficult territory where it was necessary to “build” the land and conquer it from the sea, from rivers and from marshes. The Rhine–Meuse–Scheldt Delta is one of the densest and most prosperous places in Europe, and is an astonishing feat of engineering and (sustainable) urbanisation. Whoever tells you that “urbanism has failed in the

Netherlands” is out of their minds! This unique environment triggered the development of a unique planning and design culture that has delivered some of the most liveable places on Earth. But just like urbanisation in the Delta, Urbanism is a patchwork of different disciplines working together. So, what’s Urbanism and is it inter-, trans- or multi-disciplinary?

WHY DO WE NEED THIS METHOD?



Multidisciplinary research is research in which tools from different sciences and disciplines are used to find an explanation for the question being addressed. It is easy to see that urban development, including what we call “urbanism”, cannot rely on one single discipline or practice (so, Urbanism cannot rely only on either urban design or spatial planning taken in isolation), because the complexity of urban problems demands cooperation among different disciplines. We believe that Urbanism is **multidisciplinary**, but it strives to become **transdisciplinary**. For the University of Utrecht (2021, n.p.), **transdisciplinary** research produces knowledge that goes beyond the existing disciplines, often drawing from ‘inter-disciplines’, which are hybrid fields that emerge around particular issues, such as sustainability science. There is a huge debate about what constitutes transdisciplinary research, but for Utrecht “there is broad consensus around seeking to value and integrate the knowledge from non-academic stakeholders”. This implies “processes of mutual learning between science and society, (...) which embodies a mission of science with society rather than for society” (Seidl et al. 2013). For that, it builds on established methods to produce ‘reliable knowledge’, but goes beyond that to generate ‘socially-robust knowledge’ (Nowotny et al. 2003). This double accountability makes transdisciplinary research both exciting and challenging!” (Utrecht University, 2021, n.p.)

URBANISM IS MULTIDISCIPLINARY

LIMITATIONS



Knowledge production at universities and research institutes has traditionally relied on the knowledge of experts. At this very moment, you are studying to become an expert yourself. Expertise means having specialised knowledge or skills on a certain field of knowledge or practice. Communicative rationality theory and several connected areas of knowledge that emerged in the 1960s have challenged this model, in the sense that knowledge produced by a single group of people tends to be biased, skewed or unaware of alternative kinds of knowledge. This is why engaging stakeholders as co-producers of knowledge has become so crucial in urban development and urban studies. For the University of Utrecht (2021, n.p.):

“Transdisciplinary research means engaging stakeholders in significant ways throughout the research process, rather than collecting data, informing stakeholders or valorising knowledge afterwards. It is not just communication and outreach – It is not telling people about your research in one-way communication such as through media articles, interviews or presentations, nor is it simply providing advice as an expert. It is not just extractive research – It is not the process of gathering data about societal actors through surveys, interviews, observation and other methods. Both communication and data collection can be a part of a more interactive transdisciplinary process; however, a transdisciplinary process as a whole is about co-producing knowledge with external actors in ways that enable them to shape the research and that values their knowledge”.

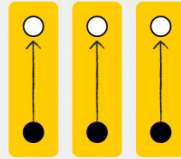
MULTI-PERSPECTIVE KNOWLEDGE

HOW DO YOU DO IT?



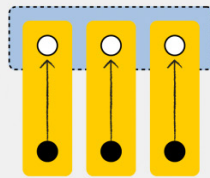
Schematic representation of transdisciplinary research. Adapted from Morton et al. (2015), originally from Tress et al. (2005).
Source: University of Utrecht (2021), Transdisciplinary Field Guide, What is transdisciplinary research? Available from: <https://www.uu.nl/en/research/transdisciplinary-field-guide/get-started/what-is-transdisciplinary-research>

- Goal, shared knowledge
- Discipline
- ⦿ Stakeholder participants
- Academic knowledge
- Conventional knowledge
- Thematic umbrella



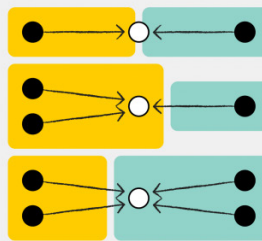
DISCIPLINARY

- Within one academic discipline
- Disciplinary goal setting
- Develops new disciplinary knowledge



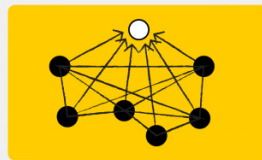
MULTIDISCIPLINARY

- Multiple disciplines
- Multiple disciplinary goals set under one thematic umbrella



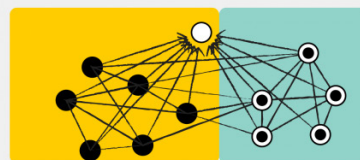
PARTICIPATORY

- Academic and non academic participants
- Knowledge exchange without integration



INTERDISCIPLINARY

- Crosses disciplinary boundaries
- Develops integrated knowledge
- Draws from and contributes to 'interdisciplines'



TRANSDISCIPLINARY

- Crosses disciplinary and sectorial boundaries
- Common goal setting
- Develops integrated knowledge for science and society
- Draws from and contributes to 'interdisciplines'

FURTHER READING



Nowotny, H. (2003). "Democratising expertise and socially robust knowledge," Science and Public Policy, Oxford University Press, vol. 30(3), 151-156.

Roos, R., & Frank, A. (2016). Educating spatial planners for the age of cocreation: the need to risk community, science and practice involvement in planning programmes and curricula. Planning Practice & Research, 31(5), 473-485.

Seidl, R., Brand, F.S., Stauffacher, M. et al. (2013) Science with Society in the Anthropocene. AMBIO 42, 5-12 (2013). <https://doi.org/10.1007/s13280-012-0363-5>

Tasdemir, C., Gazo, R. (2020). Integrating sustainability into higher education curriculum through a transdisciplinary perspective, Journal of Cleaner Production, 265. <https://doi.org/10.1016/j.jclepro.2020.121759>.

[jclepro.2020.121759](https://doi.org/10.1016/j.jclepro.2020.121759).

University of Utrecht (2021), Transdisciplinary Field Guide: What is transdisciplinary research? Available from: <https://www.uu.nl/en/research/transdisciplinary-field-guide/get-started/what-is-transdisciplinary-research>