



# A ROADMAP FOR A NEW MINDSET IN REGIONAL SCIENCE: THE REGIONAL SCIENCE ACADEMY<sup>1</sup>

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## Abstract

This contribution argues that the great many spatial challenges of our world and the emerging spatial dynamics call for new modes of thinking on regional science research. The creation of a Regional Science Academy may be helpful in meeting this novel demand. The much needed radical and new perspective on the future of our space economy is illustrated by a concise challenging exposition on the consequences of the ongoing ‘*New Urban World*’ which might eventually turn into a ‘*Post-Urban World*’. The Regional Science Academy may be instrumental in developing such ideas.

**Keywords:** Regional Science; Spatial Systems; Post-Urban World

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## A 'New Regional Science' Scene

Science knows no borders. Beyond the horizon of any discovery, a new unknown horizon arises. This also holds for regional science. The space economy is a never ending story with hardly predictable performance outcomes for the geography of our world. Regional science faces the challenge to keep up with the spatial dynamics of our world. Scientific research – including regional science research – is an endless search for new findings and insights, for the development of new ideas on the space economy that nobody has ever thought of before. Scientists are in essence Argonauts, who know that the Golden Fleece of final truth does certainly exist somewhere in our world, but who also know that finding the Golden Fleece will require an overdose of intellect, perseverance and luck. The Argonauts – in the Greek mythology – were a team of heroes (comprising amongst others Jason, Heracles, Orpheus, Nestor and Theseus). They knew that their mission could only successfully be completed, if they would be prepared to share their intellectual and creative capital. Science is indeed teamwork based on cognitive capital, social capital and knowledge sharing in order to effectively address the challenges of our world.

Our modern world is indeed exposed to various severe problems, opportunities and intriguing challenges. Examples are: mass migration, fast urbanisation, rising spatial disparities, rapid ageing, environmental decay in urban agglomerations, rise in ethnic tensions, climate change, fear of a decline in safety and security, and so forth.

Clearly, there are not only shadow sides in current social and spatial developments. For example, our planet has created unprecedented conditions for human health and hence for a drastic rise in life expectancy. The average life expectancy of a new born baby was a century ago about 30-40 years. Now it is almost double. Shaping a human world with more sustainable opportunities and a high quality of life for all people in all places is a moral mission of today's generation. Certainly, our societies have over the past decades achieved a lot, but it was never sufficient. Regional science has certainly been instrumental in shaping the foundation for a better and hopefully happier world. But one radical question is: *does this really make a salient difference for spatial quality of our world compared to the past?* It is, for instance, striking that the world's deadliest animals are mosquito's (causing malaria), followed in the second position by humans! *Why can't territories be sustainable promising action spaces for more happiness and peace?* Indeed, the agenda of regional science

is vast and difficult, and needs intensified efforts to make a difference for the future of our world.

## **The Regional Science Academy: Scientific Tasks and Actions on Spatial Systems**

The space on our planet is currently facing a wide variety of socio-economic, ecological and cultural-ethnic challenges – both local and global – which – if not effectively addressed – will have irreversible and far-reaching impacts on human well-being and quality of life in the future. Examples of such megatrends to be urgently taken on board by Regional Science Research are: rapid population growth in developing countries; drastic ageing in the OECD-part of the world; a worldwide rise in migration flows (voluntary and forced); threatening climatological effects (such as sea-level rise and extreme weather conditions); food and water shortage; increasing spatial disparities; emergence of radical and extremist ideological movements with severe territorial and ethnic-cultural implications, and so forth.

The spatial projections of such worldwide trends are increasingly visible on our planet. Examples are: the rapid rise of urbanisation; the unprecedented explosion of mobility in many countries; alarming environmental conditions in dense population centres; paralysis in spatial (urban, regional, transportation and environmental) planning, etc. Clearly, various threats to – and opportunities for – the spatial quality conditions on our earth are frequently mentioned, but insufficiently addressed, and hardly thought through from a solid scientific perspective oriented towards effective solutions. This is clearly witnessed in the lack of a broadly shared strategic research agenda and related actions taken on the spatial future of our world. The reasons for this regrettable situation are manifold, but are certainly related to weak programming mechanisms on future strategic research in the spatial sciences. These feeble elements can be summarized as follows:

- The development of the spatial sciences is mainly based on incremental amendments to existing paradigms;
- A major part of research in the spatial sciences follows standard recipes, and is hampered by methodological path dependence, rather than being encouraged to be innovative;
- There is a lack of systematically organised science-dynamics systems which aim to develop forward-looking research

strategies based on outside – rather than inside – science perspectives from other disciplines;

- Insufficient innovation in the spatial sciences is also caused by the lack of broadly shared mechanisms for societal demand articulation on important questions;
- Unsatisfactory linkage systems prevail in regard to promising developments in other disciplines, such as the trend towards data-driven research or data-driven theory development;
- Lack of sufficient integration of different, but complementary disciplinary perspectives (e.g. geography, regional economics, urban economics, political science, urban planning and architecture, transportation science, urban and rural sociology, environmental science, social health science, real estate and cultural heritage management, demography, geo-science, etc.) leads to weak policy impacts.

All these inadequate elements have been detrimental to a sound and sustainable development of the spatial sciences, including regional science. There is an urgent need for a drastic change and re-orientation in of the design process of innovative science dynamics in regional science. Regional scientists may be expected to take the lead in addressing the major anticipated challenges that have far-reaching implications for the spatial future of our earth.

Against the background of the above-mentioned weaknesses in a systematic design and articulation of a strategic agenda for regional science, recently the idea has been launched – and fortunately broadly accepted – to create a Regional Science Academy, which would act as a fireplace for new ideas on research and teaching, based on a shared scientific responsibility for the future of our planet. It would be service-oriented towards the entire regional science community and help developing a roadmap for research and teaching. Its mission would be:

### **Mission statement**

*The **Regional Science Academy** is a service-oriented scholarly network for rethinking and managing the spatial dynamics of people and socio-economic activities in connected and complex spatial systems of our earth by:*

- developing new interdisciplinary knowledge and knowledge initiatives for strengthening regions and cities as liveable, vital and resilient places;
- creating and exploiting scientific synergy – and related smart governance action – on regional and urban development, from an economic, social, demographic, policy, cultural, logistic, mobility and innovation perspective, at different spatial scale levels.

*Source: Nijkamp and Kourtit (2015)*

This mission would be driven by a long-range strategic vision, which has been formulated as:

### **Corporate vision**

The Regional Science Academy is a strategic spatial knowledge catalyst: it acts as a global intellectual powerhouse for new knowledge network initiatives and scholarly views on regions and cities as vital centrepieces of interconnected spatial systems.

*Source: Nijkamp and Kourtit (2015)*

Clearly, such an ambitious initiative would be action-oriented and serve the interests of regional science scholars worldwide. A provisional list of actions foreseen and planned is:

- A. Think-tank activities on strategic research lines;
- B. Education and training activities in regards to curriculum development;
- C. Data infrastructure activities to support worldwide cooperation;
- D. Other regional science support activities

It goes without saying that the tasks and actions of the Regional Science Academy are vast and manifold, and depend on the efforts of its members. An exhaustive list of activities is impossible to give, but given that strategic foresight activities are a core element of the Regional Science Academy, we will – by way of illustration – offer here one challenging topic that might be relevant for a thorough

fundamental reflection with a view to an operational research agenda, namely the future of urbanisation. A small discussion on this issue may exemplify the ‘brainstorm’ nature of the Regional Science Academy style of strategic thinking.

### **The New Urban World: A Post-Urban World**

It is well known that in our ‘*urban century*’ the majority of people live in urban areas, and that this trend will continue in the decades to come. ‘This megatrend is nowadays often called the ‘*New Urban World*’: the movement of the majority of people towards cities or urban agglomerations is booming, whereas urban areas become the ‘new home of humankind’ (Kourtit 2015, p. 8). Despite the fact that there is still substantial changeability in the levels of urbanization, worldwide urbanization as a structural transformation is still, in particular in the developing world, persistently and rapidly increasing in this century. Consequently, as a result of its dynamism, this trend has, over the decades, re-profiled the circular metabolism of modern cities (see also Kennedy et al. 2007) into a vibrant ‘core place’ for sustainable development for the entire spatial-urban system, influenced by its economic, cultural, political and technological power. This phenomenon is often referred to as the ‘*New Urban World*’ (Kourtit 2015).

‘This ‘*New Urban World*’ symbolises a new phase in the urban landscape of our planet, that is marked by a rapid and structural transformation of settlement patterns of people, firms and activities into urbanized patterns of living, recreating and working as the new dominant locational map of our world’ (Kourtit 2015, p. 8). This means that ‘cities are certainly not crafted in stone, but are a ‘*process*’, always ‘*on the move*’ and continuously ‘*in motion*’, and undergoing a ‘*radical transformation*’ – marked by multifaceted global urban dynamics – in order to create the highest possible and favourable quality of life conditions for multiple actors and stakeholders in cities or urban agglomerations’ (see also Kourtit et al. 2015).

‘The ‘*New Urban World*’ tends to turn into a complex and critical evolutionary organism for spatial development in the future’ (Kourtit 2015, p. 8). Cities are also becoming strategic information systems driven by a multiplicity of interests of actors and stakeholders; they have many appearances (‘*faces*’), they relocate and ‘reaccess’ various resources, and are by no means uniform or identical. The management and governance of such modern, complex and ever-rising urban agglomerations calls for an effective and focused

explanation and comparison of the driving forces of current city dynamics, including the impact of urban attractiveness on urban achievement levels and the implementation of appropriate urban governance measures from the overall perspective of long-range ‘*grand challenges*.’ Cities are becoming a ‘magnetic pull’; they are facing various great challenges and opportunities, but also negative externalities of density. So, there is a need for a drastic re-orientation of the socio-economic fabric and a re-positioning of modern cities (the ‘*urban century*’)’ (Kourtit 2015, p. 9).

Managing and governing the fast urban development and transformation at a global scale in the ‘*New Urban World*’ will clearly be one of the biggest challenges in the twenty-first century. Issues like housing policy, infrastructure and logistics, environmental sustainability, urban land use, smart energy use, ageing, human health, social segregation, negative urban externalities and international migration will all require novel insights and policy strategies in order to make the future city ‘*a place 4 all*’ (Kourtit 2015, p. 13).

Next to a great variety of research challenges and tasks, modern urbanisation in the ‘*New Urban World*’ calls also for a fundamental re-orientation in our mindset. There are good reasons to reflect and assume whether and why the ‘*New Urban World*’ is in fact a ‘*Post-Urban World*’. Historically, our towns and cities emerged as small islands in ‘seas of countryside’, while the vast majority of them remained small in the pre-industrial era. The urban-rural relationship was characterised by strong urban dependence on the countryside. The industrial and agricultural revolutions changed this relationship dramatically. Increased agricultural productivity meant that the countryside could feed much larger urban populations. The industrial production in the growing cities became the other side of this new relationship, complemented with an urban-rural exchange at multiple levels compared with the pre-industrial epoch (Westlund 2014).

It is noteworthy that the emergence of the knowledge economy has brought new, fundamental changes in the urban-rural relations. Cities are increasingly becoming more dependent of each other than of the rural areas. Agriculture, which since pre-historic times was the economic base of rural areas and the guarantee for rural settlements, has in many countries reached a productivity level where the need for labour is so small that farmers have even become a small minority of the rural population. Although it is hard to judge whether phenomena such as ‘urban agriculture’ and ‘agricultural fly-in fly-out labour’ will become dominant features, there are clear signs that the urban-rural

relations of the knowledge economy increasingly seem to be characterised by urban independence and rural dependency of urban labour and other urban resources. This is something completely new in world history and prompts fundamental questions on long-range spatial dynamics.

It may be interesting to note here that the German philosopher Georg Wilhelm Friedrich Hegel (1770-1831) developed a dialectical perspective in which a thesis was being met by an antithesis and the two were eventually transformed into something new and 'higher': a *synthesis*. In the framework of Hegel's philosophy, the 'rural' can be considered being the original thesis. The 'urban' emerged as the antithesis. Over the centuries the rural thesis and the urban antithesis have been the two poles of spatial interaction. However, with the emergence of the knowledge economy it may be argued that a synthesis has arisen: a world in which the urban is 'everything' and the traditional urban-rural dichotomy is ceasing to exist. This is what we might call a '*Post-Urban World*', a world in which the '*New Urban World*' has become so dominant, that our planet is almost completely urbanized. Under such circumstances, the 'urban' has lost its discriminating meaning, hence the expression '*Post-Urban World*'.

## Conclusion and Outlook

'The '*New Urban World*' is a recent phenomenon in the rich history of cities. Nowadays does not only more than 50 per cent of the world population live in cities, but also urbanization is still persistently and rapidly increasing (Kourtit 2015). Managing urban development at a global scale in the '*New Urban World*' will clearly be one of the biggest policy and governance challenges in the twenty-first century, and will require novel insights and policy strategies in order to make the future city '*a place 4 all*' (Kourtit 2014, pp. 183). 'The policy and research challenges for modern cities are vast, but proactive policy may find support in the following quotation: '*The city is not only the place where growth occurs, but also the engine of growth itself*' (Duranton 2000). With more people on our planet living in cities, there is a need to look at the economic geography of our world from a broad urban systems perspective. The '*New Urban World*' needs to develop a world perspective and to transcend a local basis, so as to serve the well-being and optimize the urban quality of life of our urban world' (Kourtit 2014, pp. XI).

If the philosophical Hegelian assumption of a '*Post-Urban World*' contains some realism, what will it mean for the future of cities?

A kind of a preliminary answer has already been given above. The urban life and the urban lifestyle will become dominant features of the space economy. In a longer time perspective, more speculative questions arise, however. How will the relationships between increasingly stronger mega-cities and potentially weaker national governments develop? Will we see the emergence of international 'leagues of cities', like the medieval Hanseatic League, but many times more powerful at a global scale? And what are the threats to a sustainable '*Post-Urban World*'? Being a regional scientist will be a very exciting occupation in the coming decades!

Such developments call for new paradigms. 'There is indeed a need for reconsidering and managing the fast dynamics in current urban development patterns in order to sustain and enhance the urban development potential, with a view to the creation of resilient, liveable, inclusive and accessible cities, not only for the present generation but also for future generations' (Kourtit 2015, pp. 272). 'The emerging urban century displays a great pluriformity in urban appearances and growth profiles, but in all cases this new geographical phenomenon poses challenges to policymakers and research all over the world' (Kourtit 2015, pp. 371).

The idea of the Regional Science Academy may be helpful in meeting this demand, by seeking to promote a sustainable future for regional and urban development around the world through scholarly contributions to regional science. Therefore, it aims to generate original (sometimes radical) and creative ideas, concepts and initiatives that benefit regional scientists and society all over the world. This will be a valuable and realistic opportunity and even an urgent necessity for a vibrant research domain in the spatial sciences.

'All the forces in the world are not so powerful as an idea  
whose time has come' – Victor Hugo

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