

Contours and conflicts in scale: Science, knowledge and urban development

Local Economy

26(8) 715–720

© The Author(s) 2011

Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav

DOI: 10.1177/0269094211422192

lec.sagepub.com



Tim May

University of Salford, UK

Beth Perry

University of Salford, UK

Abstract

Increasing attention is being focused upon the roles of cities in knowledge-based development in the context of debates around the relationships between science, technology and innovation and economic growth. The article argues that underlying assumptions and expectations of knowledge, space and place are important in understanding the content and form of responses within different places. The example of the English Science Cities is drawn upon to highlight issues over dominant knowledge-based discourses and the potential for alternative responses to be formulated. Pressures for knowledge-based success are mediated through national contexts, informed by existing paradigms and assumptions, and their effects are varied according to governance structures. Without proper political consideration of the dynamics between knowledge, science and place, more inclusive and sustainable initiatives for knowledge-based growth will not be forthcoming.

Keywords

globalization, knowledge, place, policy, space

Introduction

During the early part of the 21st century we have witnessed a dominant knowledge paradigm that is shaped by a confident neo-liberalism which does not appear to have been dented by the recent financial crisis. That paradigm has come to influence middle-ground European social democratic ideologies, leaving one commentator to claim that all in the political spectrum,

aside from the ‘extreme ends’, are now playing one game: ‘it is called capitalism’ (Burton-Jones, 2001: 234).

From an historical point of view, knowledge production has a well-established role in economic development. However, what

Corresponding author:

Tim May, Centre for Sustainable Urban and Regional Futures (SURF), University of Salford, 1st Floor, 113–115 Portland Street, Manchester M1 6DW, UK.

Email: t.may@salford.ac.uk

we now see is an acceleration of this relationship: knowledge is a panacea to specific economic problems, leading to the emergence of a more instrumental role for science in urban development. No longer working in the service of interest-free illumination, it has become bound up with the very reproduction of the economy with places such as the university characterized as being to the 'information economy what coal mines were to the industrial economy' (Castells and Hall, 1994: 231).

A variety of case studies have been undertaken on how different cities are approaching the challenges of knowledge-based growth: from Eindhoven to Barcelona to Holon and Singapore. We find an emphasis on different pathways to development, success factors, historical trajectories and the consequences and limitations of various strategies. Dynamics have been illuminated in relation to the conflation between creative, digital and knowledge economies, a narrow focus on particular forms of knowledge and the sociocultural consequences of dominant approaches.

What is missing from these accounts is a specific emphasis on the overall framing of debates, and how the gap between national aspirations and local conditions limits the capacities and capabilities of cities to work towards alternative knowledge-based futures. Greater attention needs to be given not only to governance arrangements within the knowledge economy, but to the alignment between national policies and local priorities and conditions. Without this in place, consideration of the realities of how to make changes in places becomes secondary to empty political slogans.

In this article it is our aim to address this deficit. For this purpose we draw upon work conducted by the Centre for Sustainable Urban Regeneration Futures (SURF) between 2002 and 2010, and in particular we examine the Science Cities initiative. We cannot describe these

developments fully, but draw out a series of issues concerning the relations between the national and local in terms of governance, knowledge and urban development. We supplement these with work that we have conducted in Europe on building science regions and cities, the role of universities in socio-economic development and urban innovation programmes (see May, 2011; May with Perry, 2011; May and Perry, 2006, 2007; Perry, 2007).

The Science Cities initiative: Global aspirations and urban locations

The development of science cities

Behind the idea of a 'science city' or 'knowledge capital' is the ubiquitous exemplar of Silicon Valley. Caught up in the demands of global capital and the flows of knowledge and skills from one creative city to another, the late 1990s and early 2000s saw a rush to embrace science and knowledge for urban development. In the UK, policy trends and academic debates coalesced to provide a fertile context for science and knowledge-based urban development.

Cities came to believe not only that their futures were dependent on knowledge, skills and creativity, but also that they needed to aspire to global excellence and world-class status in a symbolic game of positioning dominated by elite places. In response to these pressures, a range of bottom-up initiatives emerged, catalysed by local partners, regional development agencies, universities and businesses. These included 'Science City York' (1998) and 'Manchester: Knowledge Capital' (2002). National government then became involved with the first three Science Cities – Manchester, Newcastle and York – being announced in December 2004 by the then Chancellor of the Exchequer, Gordon Brown, in his pre-budget report. This was

followed in 2005 by a further three cities: Birmingham, Bristol and Nottingham.

The birth of the Science Cities initiative reflected differing rationales. A strong scientific-economic rationale for investing in science and technology was evident, along with the attribution of value to increased investments in scientific research in order to compete in the global knowledge economy. Thus national endorsement of an urban dimension to the challenges of knowledge-based growth was driven by globally-oriented concerns over scientific-technological development. Underpinned by globally excellent criteria as judged by international peer-review, science came to 'see' cities as places of funding, while cities 'saw' science as relevant for inward investment and growth.

With these rationales circulating, the Science Cities announced that they were to spearhead the UK's efforts to build clusters of scientific excellence in support of the knowledge economy. They built local coalitions that recognized the potential overlaps between science, knowledge and urban development across a range of different policy domains. They established the Science Cities Policy Development Consortium between the six cities with a remit to share experiences, build an evidence base, interchange with all parts of central government, consider joint projects, develop the brand and keep under review the possibility of extending the consortium to include other cities. A three-fold approach then followed, comprising representation, learning and development, in which they sought to influence and shape national government, share best practice through regular meetings and develop individual approaches. A process of annual summits was instigated, at which different elements of the above could be discussed and the brand and profile established and promoted.

Following the second Science Cities summit in May 2006, a cross-departmental meeting of the Treasury, Department of

Trade and Industry, Department for Communities and Local Government and Department for Education and Skills took place. The differences in orientation between each department were clear: the Department of Trade and Industry focused on knowledge exploitation and transfer; the Department for Education and Skills emphasized science education and skills; and the Department for Communities and Local Government expressed concern that the initiative should not create an exclusive and privileged club. The latter, seen in the light of the absence of clear criteria for the cities, informed the reluctance of national departments to offer dedicated financial support for the initiative. From a Treasury point of view, individual departments could choose how (or whether) to represent Science Cities in their submissions to subsequent spending reviews. In addition, the particular privileging of cities (place-based and relevant) sat uncomfortably with national policies on the promotion of science (place-blind and excellent).

Science Cities saw an apparent opportunity: on the one hand, they could meet raised ambitions within the context of existing priorities and resource commitments; while on the other hand, they could seek to define and shape the meaning of a 'science city' within their contexts. In the face of expectation without resource, emphasis turned to how a cross-departmental case and justification could be made. A report was commissioned which looked across national policy contexts and departments and which emphasized the potential for Science Cities to contribute to a range of agendas and public sector agreement targets. This was to form the basis of the submission to the Comprehensive Spending Review.

Underpinning the submission was a debate between and within the Science Cities on its overall purpose, with some in support of directly requesting additional funds, while others supported moving

away from the language of ‘asks’ (demonstrating a dependence that detracted from their innovative responses) towards an emphasis on dialogue and joint working. Critically, the submission illustrated the gap between a narrowly defined scientific-technological paradigm from central government and local aspirations for more holistic approaches. In terms of the possibility of the latter strategy, as the cities responded to central government edicts, the learning between government and the cities themselves became limited. How cities and places were seen varied between the cultures evident in different government departments, regarding how they ‘saw’ place in terms of the relations between policy ambitions and their actual realization in context.

Space and place: Government, symbolism and rhetoric

The development of Science Cities was a peculiarly English initiative shaped by wider economic changes and the broader contours of the devolution/decentralization debate since 1997, culminating in the introduction and ultimate rejection of elected regional assemblies. A redistributive agenda for science, technology and innovation was quickly forgotten. Instead, the argument that local actors were best positioned to determine local priorities and strategies was mobilized in order to diffuse requests for a more balanced economic growth model in England according to national government responsibilities. Acting in the interests of redistributive fairness was placed to one side, instead acting as a catalyst for city-based initiatives without any resource attached. Behind the rhetoric of ‘freedom to innovate’ and the notion of harnessing science through tailored solutions, all in the name of economic progress, there were clear responsibilities without a corresponding commitment to enhance capabilities to deliver.

Warm words remained the currency of successive national representatives. They were keen to emphasize the necessity of cities and regions playing their part in a global race for knowledge-based success. In the process of reconciling national, global and local aspirations, the latter was eclipsed by a dominant rhetoric around product-driven technological fixes, as if social and political contexts were of no importance. While there was some evidence of success, the imbalance in power meant that local ambitions were sacrificed at the altar of an empty global rhetoric which did not admit of the importance of ‘place-making’ in action. The reasons for this state of affairs lay not only in attitudes and assumptions about science, but in presumed relations between scale and place and an absence of understanding how global pressures are mediated through national frameworks which, in turn, affect the capacities and capabilities of cities to exercise control over their own futures.

What we see in the Science Cities initiative is a tendency manifest not only in the approach of the last Labour government, but also in the coalition government and Whitehall culture: that is, holding places to account according to measures that do not consider the contexts in which the policy is enacted through, for example, targets and output-focused measures of apparent success. What is now more pronounced is the panacea of markets as solutions to problems and a hollowing-out of public goods and services, along with the idea of bottom-up initiatives with piecemeal, rather than systemic, solutions to issues. To move beyond this requires governance frameworks with real capabilities in our cities.

Empty ideological gestures towards the ‘Big Society’, whose symbolism of empowerment avoids the realities of existing social inequalities, is yet another way of avoiding systematic consideration of the relationship between the aspirations of government

policy and their realization in particular places. Another still is the privileging of particular locations, which leaves some spaces obscured by the shadow of dominant places. Despite the evident inequalities within London itself, this is what continues to shape relations between the capital and city-regional nodes in England. It is within this symbolic politics of exemplary places and deficient spaces that persists to this day that the Science Cities initiative was born.

Particular cities are heralded as emblematic of what can be achieved, and thus serve as models for others to emulate (see May and Marvin 2009; Perry 2008). It is as if governmental support is not important, as they become nothing more than the logical locations for economic aspiration, leaving the myth of global capital as inherently mobile and indiscriminate, intact. References to growth and opportunity, without any sensitivity to context and capability, are then permitted an uninterrupted path to localized responsibilities.

Typically, we see how cities are differentially positioned as lagging behind, leading to a view that such places are characterized by second-rate thinking and practice. It is no wonder, then, that urban politicians and managers are not able to publicly admit that their activities run up against the harsh realities of the present, instead speaking incessantly of 'moving forward'. A falsity then flows through different scales of action: localism can harness the benefits of globalization, despite the latter relying upon the inequalities that are evident in the former.

Central government can then frame its role as creating 'opportunities' for places to judge themselves according to how imaginatively they respond, without recourse to resources, as this would see them as 'dependent' and not 'innovative'. Anything less than full embrace of the promise of opportunities in an imaginary future is seen as a challenge or the reactivation of an apparently outdated politics of need. This allows

exemplary politics a free reign and holds up privileged places in the name of improving other spaces. Thus evaluation of place-based performance depends on an ability to demonstrate outcomes according to nationally conceived performance indicators – and context-sensitivity thereby evaporates in an ideology manifest in the busy work of comparison through counting.

Conclusion

Pressures for knowledge-based success are driven by a frenetic search for competitive advantage informed by a globalized ideology. That same tendency is replicated in the pursuit of scientific success as judged by peer review. In both instances we find that place and content is a passive entity in which things are expected to happen, but the capabilities needed to make them happen are of secondary consideration.

The logic of neo-liberalism does not place an importance on context. Why? Because to do so is to undermine the pursuit of universal growth patterns, replicated in a narrow economic orthodoxy that sees space as absolute rather than relational. Yet there is a symbiosis between action and context, each shaping the other, and it is this that we need to consider in knowledge-based urban development. How cities can play a role in building capabilities and democratically shaping sustainable pathways is central to our futures. However, 'what' cities should do, rather than 'how' they are expected to do it, remains dominant. It is this gap that needs to be addressed if any meaningful change is to occur in our cities.

Funding

This article is based on work funded by the Science Cities Consortium, Economic and Social Research Council and the Contact partnership of the Greater Manchester Universities.

References

- Burton-Jones A (2001) *Knowledge Capitalism: Business, Work, and Learning in the New Economy*. Oxford: Oxford University Press.
- Castells M and Hall P (1994) *Technopoles of the World*. London: Routledge.
- May T (2011) Urban knowledge arenas: Dynamics, tensions and potentials. *International Journal of Knowledge-based Development* 2(2): 132–147.
- May T and Marvin S (2009) Elected Regional Assemblies: Lessons for better policy making. In: Sandford M (ed.) *The Northern Veto*. Manchester: Manchester University Press, 167–185.
- May T and Perry B (2006) Cities, knowledge and universities: Transformations in the image of the intangible. *Social Epistemology* 20(3–4): 259–282.
- May T and Perry B (2007) *Realizing the Potential of Science Cities: Evidence, Practice and Policy Lessons*. Report to Science Cities Consortium, March. Available at: www.surf-salford.ac.uk/cms/resources/uploads/File/Annex.pdf.
- May T with Perry B (2011) *Social Research and Reflexivity: Content, Consequences and Context*. London: SAGE.
- Perry B (2007) The multi-level governance of science policy in England. *Regional Studies* 41(8): 1051–1067.
- Perry B (2008) Academic knowledge and urban development: Theory, policy and practice. In: Yigitcanlar T, Velibeyoglu K and Baum S (eds) *Knowledge-Based Urban Development. Planning and Applications in the Information Era*. London: IGI Global, 21–41.