

Urban Networks, Learning And Innovation

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For more than a decade, the OECD has encouraged research and debate on the concept of learning regions, and its relevance to policy interventions intended to promote economic and social development. CRITICAL (City-Regions as Intelligent Territories: Inclusion, Competitiveness and Learning), a European-funded project, has contributed to research on this and related ideas, focusing on five 'city-regions'. The CRITICAL research team involved researchers from universities in each of Tampere, Finland; Dublin in Ireland; Dortmund in Germany; Newcastle-on-Tyne in England; and additionally, from Melbourne, Australia.

The project examined the kinds of learning that occur in different types of networks, and their implications for innovation. In the European cities, case studies were conducted on eight networks in various sectors (such as small-medium enterprises, cultural development, training for socially excluded groups, community, sustainability), while four case studies were conducted in Melbourne. The case studies encompassed a mix of informal and formal networks, and explored both systematic learning initiatives and serendipitous activities (see Charles and Duke 2006 for more on the project).

In the analysis of the case studies, a number of key themes emerged, including the direct implications of learning in networks for economic development, for enhancing cosmopolitan identity, for encouraging sustainability, for enhancing social cohesion, and for governance. The last of these emerged as a key issue in the analysis of the Melbourne cities, where the formal responsibilities and boundaries associated with state and local government (and federal policy, in some cases) were inappropriate for addressing key urban issues, and development coherent policy and program interventions.

THE 'CRITICAL' CONTEXT

The main objective in CRITICAL was to apply the concepts of a knowledge, or learning, society within the context of city regions, in order to assess how knowledge and learning can be utilised by cities within integrated strategies for their future development. It was anticipated that such an approach would need to be able to incorporate holistic approaches to collective learning, competitiveness, sustainability and cohesion.

Much has been written about knowledge and learning and its role in social and economic development, and more particularly in the consequences for the development of particular places (see for example Knight, 1995, Lever, 2002,). Consequently there are places that are economically successful which are claimed to exhibit the characteristics of learning regions or learning cities (Keeble et al 1999, OECD, 2001), and many city and regional authorities have set their sights on strategies to develop knowledge-based activities, or to create learning communities (see Longworth 2006). We wish to examine these claims and strategies in the context of what Amin and Graham (1997) have termed the ordinary city - examining the role of knowledge and learning networks in cities that are not the paradigmatic success stories from which the new theories are developed.

The underlying framework for the understanding of processes of urban change and the regional role of major cities was developed particularly to understand changes and policy challenges in regional capitals as opposed to global cities, notably in city-regions of between 1 and 3 million population (Charles et al 1999). The framework had an explicitly city-region perspective, and identified five main elements or challenges to be addressed in policy:

- ◆ Knowledge and economic competitiveness
- ◆ Image and cosmopolitanism
- ◆ Social cohesion
- ◆ Sustainability
- ◆ Governance

Each of these elements was seen to be inter-related and had to be addressed at the city-region level if the city was to be successful in meeting the challenges facing it, and ensuring coherence in policy. Each of the elements has also been subject to considerable policy innovation in recent years at city-region and at micro scales within cities, and each is subject to considerable opportunities for the application of new technologies, especially ICTs. The problem for city administrations is to disentangle what works successfully and to see how a coherent and integrated strategy can be developed.

In 2004, discussions with researchers at RMIT University led to the proposition that Melbourne become a fifth city in the CRITICAL project, with the research activities being led by a team based at RMIT University. While Melbourne is a considerably larger city than the others involved in the project, it fits the criterion in the Australian context of an 'ordinary' city. Compared with Sydney, which has attracted increasing attention as a 'headquarters' city, a rapidly growing population and international investment, Melbourne has not been regarded as a 'paradigmatic success story'. Melbourne is not such a globally significant city, but has a substantial proportion of the Australian population, and faces many challenges relevant to the other CRITICAL cities. The project was of interest to the RMIT University researchers because of their particular

interest in urban and regional development questions, and in the significance of learning and knowledge generation as key ingredients in innovation.

This paper draws on the overall CRITICAL analysis of governance issues in the five city-regions to explore particularly the issues which arose in Melbourne, as the one Australian city involved with the project. The analysis has implications for debate on urban government in Australia, and for particular policy interventions.

MELBOURNE CASE STUDIES

The case studies of three networks provide insights into different aspects of the dynamics which are shaping fundamental political, economic and social issues for Melbourne's evolution as a city-region. They also offered an opportunity to explore links between learning and knowledge generation, and governance issues.

1. The Northern Industry, Education and Training Link (NIETL)

This network had a strong formal component, and was formed in the 1980s in the face of decisions by the federal and state Governments to reduce tariffs and otherwise open Australian companies to the global economy. This prompted significant concern about industrial decline, with very serious consequences for residents and businesses in the northern suburbs of Melbourne, where there was a very strong concentration of large, medium and small manufacturing businesses.

When first established, NIETL meetings encompassed representatives of businesses, local politicians, local and regional policy makers, and education and training providers. Meetings were held at industry sites usually featuring a tour and discussion of the industry and then broader issues and opportunities from which working groups formed. The working groups focussed on development of industry seminars, needs analysis for Industry in the region and on training needs for individual organisations.

After 20 years, NIETL continues to operate, although its form and orientation has been reshaped more than once in that time. One important development occurred when NIETL was combined with another network with overlapping interests. In the wake of amalgamation, the Board is clearly dominated by local government and education representatives. Industry representation is highly valued but difficult to keep at board level. Notwithstanding their underrepresentation, the focus on the industry relationships in the network has continued to be central. However, their absence might mean that more confrontational issues are avoided, and that the education institutions and the local governments do not have to work any more closely.

The case study has demonstrated that learning occurs differently at various levels of the network, and that application of knowledge is an explicit priority in the network (see Badenhorst 2007). Overall, it appears to be 'single loop' learning (see Argyris and Schon 1996), but there are key moments for both individuals and groups where qualitatively new insights do emerge. Such moments might be triggered by changes in federal government policy, or by opportunities created by relocation of major infrastructure, or by decisions by large companies to restructure their operations. In these circumstances, the networks themselves can reform and generate new perspectives on their role and resources.

2. The Port Phillip Drugs Round Table (DRT)

This network was more recent, although it nevertheless had its origins in community development work initiated by a local government worker some 15 years ago. This was focused on developing a municipal Public Health Plan in St Kilda, perhaps the area best known for sex work and illicit drug use in Melbourne. The process brought together local community organisation workers (health, housing, drug and alcohol, psychiatric disability) with each other and with local business people, other municipal workers, police and professionals from larger organisations (such as hospitals). This prompted a phase of energetic encounter and robust debate, which led to some quite different health intervention programs being developed.

In 2001, the Victorian Government, faced with evidence of a dramatic increase in the use of illicit drugs, and particularly of street-based injecting users, identified the municipality of Port Phillip as one of Melbourne's 'hot spots', and granted a substantial sum of money for primary health services for street-based drug users. In Port Phillip, the funding was shared amongst a number of organisations, through the Drugs Round Table, facilitated by the municipality. Alongside the Round Table, a larger and more informal Drugs and Community Partnerships Forum was established, with a particular role in community education and the 'de-stigmatising' of sex workers and illicit drug users.

Learning in this network was shaped strongly by a shared perspective that collaboration was integral to the design of an effective service system, that social inclusion was a core element of a successful service approach, and that in affirming this approach, political and normative differences would have to be made explicit and addressed. While substantial effort went into a process of information sharing, this was less of a priority itself, as laying a foundation for 'double loop' learning (see Argyris and Schon 1996), in which a new framework of understanding about sex workers and illicit drug users could underpin the overall service strategy. Much of the 'double loop' learning resulted from and was generated through activities which encouraged artistic expression and communication. The sense of identity with a larger group associated with the drugs strategy was an important condition for engaging people in learning

processes, and dynamic smaller groups within the larger network generated considerable intensity, at least for a period of time.

3. The Digital Design Cluster

This network emerged in an economic sector which the Victorian Government has identified as being very important to the capacity of the Victoria to maintain and enhance the current economic and social status. While Melbourne has claimed a prestigious place in the Australian design industry for some time, the growing significance of digital design, and early indicators that a considerable part of this industry was taking shape in Sydney, led to initiatives intended to promote the industry in Melbourne.

Compared to the other case studies, this was a relatively informal network. The digital design cluster in Melbourne was clearly in an emergent stage. In part, this followed from the relatively recent formation of many cluster members (about two-thirds were established since 1990) and the newness of the technological paradigm underpinning digital design as an expanding field of operations. It also reflects the relative smallness of the domestic markets involved and the geographically peripheral position of Australia in the expanding global economy. The emerging digital design domain or cluster in Melbourne was characterised by:

- a large number of small and medium sized organisations, with a substantial minority presence of big firms. About a quarter of survey respondents reported annual incomes under \$100,000
- a substantial minority of those who self-identified as cluster members worked in the diverse 'digital media' segment. Education, creative industries and ICT also figured prominently as segment locations
- the dominance of sole traders, small partnerships and private companies
- buoyant profitability and growth optimism
- a tight geographic focus on inner and central Melbourne location
- the dominance of the local market.

Members of this cluster reported a strong commitment to innovation, and indicated that collaboration with customers (80 per cent), suppliers (61 per cent) and with universities (50 per cent) had been part of this process particularly with respect to their search for specialist expertise. The informal dynamics and variety in this cluster suggested that policy initiatives had to be flexible. This cluster served to create the conditions for learning to occur, rather than contributing to it collectively.

ISSUES ARISING

The case studies raise a number of issues which were pertinent to the broader CRITICAL agenda. Apart from providing empirical evidence about the forms of

knowledge and learning which are found in the arenas, they illustrated strategies which can enhance learning and knowledge generation in city-regions, and highlight obstacles which can undermine the capacity of city-region institutions to intervene in arenas to enhance learning.

1. 'Regionality' in Australia

Undertaking research on regionally-bounded issues in Australia is complicated from the outset by poor definition of the concept of the 'region'. There is a poor matching of formal regional structures, as determined by each of the levels of Government, federal, state or local. While local government boundaries are used widely as a means of collecting and aggregating data, the level of disaggregation is typically rather general, and rarely reflected in decisions by the Victorian Government about its regional structures. Consequently, regional administrative boundaries vary from government department to government department (health and education, for example), and usually bear little relationship to cultural, economic or social patterns. Local government boundaries have been redefined with relatively little reference to the natural patterning of neighbourhoods or community relationships.

This means that the kind of problematic governance issues identified in other CRITICAL case studies are very real in Melbourne. There are many examples of new kinds of arrangements, mostly informal, emerging to deal with underlying governance issues. There are three layers of examples which need to be distinguished:

- Australia is a highly urbanised country, and a sharp divide has emerged between metropolitan and regional/rural areas over how to address economic and social issues. After the Labor Party surprisingly won Government in Victoria in 1999, it was apparent that this had been achieved because a large proportion of rural voters who voted typically for conservative parties, had swung to support Labor. Subsequently, the Government worked hard to sustain this new constituency in rural areas. However, in the absence of an established or formal mechanism, the Victorian Treasurer arranged to meet regularly and informally with key regional local government authorities, to discuss emerging policy and resource issues;
- it is difficult to define a clear boundary to the Melbourne city-region. Sprawling and diffuse links exist between city and semi-rural areas. *Melbourne 2030*, a strategy for managing the growth of Melbourne through systematic planning guidelines, was adopted in 2002. However, the implementation of the strategy requires cooperation from a wide variety of interest groups, not least a significant number of government authorities, all with relevant lawful powers, and not all of whom would see their interests being shared in the same way. Formal advisory

committees to the Victorian Government have been established, including representatives of the private sector and of community organisations. However, the effective operation of these kinds of governance arrangements requires a level of trust (and confidentiality) that is difficult to engender and to sustain.

- the current local government boundaries in Melbourne encompass diverse neighbourhoods, and in some respects cut across natural and historical linkages. This can mean fractured relationships with community and related organisations, and lack of fit with economic activities and stakeholders. This can be problematic particularly when new issues or industries are emerging, and it is unclear which layer of local or regional government is accountable; in these cases, there is either inaction, partial action, or a new informal governance arrangement is established to manage the development of an appropriate policy response. This can make concerted government action at the regional level very difficult, especially when resources are limited. In frustration, a less formal and 'interests-based' forum might be established to overcome the governance 'deficit'. One example is the formation of the Committee of Melbourne, which has sponsored a range of projects designed to enhance Melbourne's overall infrastructure and policy environment. While it has close relationships with local government, government agencies and politicians, it operates outside a democratic or popularly accountable framework.

2. Networking, Locality and Local Government

The case studies suggest that networks or clusters form in response to specific constraints and possibilities, often framed formally or otherwise in a relatively defined spatial context. They can be a very significant intervention to stimulate initiatives which would otherwise not have been possible. At one level, this might simply reflect the lack of resources of any one stakeholder to act on the scale necessary (investment in new technologies, for example) to begin to establish the conditions for achieving the outcomes which are sought. However, just as frequently, it seems that the networks open up possibilities which might not have even been considered.

Local government, either alone or with others, can be very important in supporting regionally-based networks of organisations and residents who share interests in a particular issue or sector. Networks do not form easily, and can be very demanding of time and resources. Local government has made a significant contribution to the viability of networking, and to supporting its contribution to policy development, and to facilitating grounded action to implement new initiatives, including sponsoring new innovations. Given the importance of personal relationships and less formal aspects of networks, it is not surprising that local government can play such an important role.

While networks can be structured quite differently, there does not appear to be an argument to suggest that one type of structure or another is likely to be more effective. Rather, the phase of development, the nature of the sector, the level of public support and accountability expectations will all affect the nature and dynamic of network formation. So, a hub and spoke model might be more appropriate in the early developmental phase, while a more collective and shared framework will emerge when a network has consolidated and its members have developed a clearer understanding of their relative merits and possible contributions.

3. Learning in Networks

It is real, and it operates at a number of levels. The interesting question is not so much whether learning occurs or is reflected in different kinds of practices, but whether we can understand its part in processes of innovation. In each of the Melbourne networks, a considerable part of the explicit learning is driven by formal information sharing (referred to earlier as 'single loop' learning). This is valued by many participants, at least in the early phase of network development. However, it seems also that this kind of learning is not linked so much with innovation, but with diffusion; in other words, it is related to the increasing adoption of 'better practice' than it is to the generation of new knowledge and to innovation (possibly seen as 'double loop' learning).

The latter kind of learning does occur also, and in these case studies, it is linked closely with the development of a different kind of relationship in the networks. Wenger's concept of communities of practice (Wenger, 1999) is helpful in identifying the kinds of relationship which are most likely to foster knowledge generation; trust, a sense of shared purpose, and a commonly understood means of validation, for example. However, other approaches also provide insights into the critical processes which enable sharing of experience and perspective to evolve so that they contribute to the generation of new knowledge and to innovation (see Argyris and Schon 1996, OECD 2001).

A question remains about the significance of the city-region (or sub-region) in shaping both the impetus for and the character of learning which occurs in networks. Learning occurs also in distributed networks, where spatial connection is not important. In the Melbourne case studies, there was a close identification of the network with a specific spatial context, whether formal or informal. The size and scale of the sub-region within the larger city-region varied from network to network, but the relationship with a defined area does seem important. It points perhaps to the significance of being able to engage in face-to-face interaction and to the complexities and unstated aspects of relationship which are integral to the 'risky' learning which leads to new knowledge and innovation. Food was important in at least three of these networks, as a focus around which formal activities are structured (breakfast meetings, for example), as a means of facilitating the social interaction when

people met informally, and as an acknowledgement of the specific contributions which some people were making.

BROADER CRITICAL CONCLUSIONS RE GOVERNANCE

The broader conclusions of the CRITICAL project team have been consistent with the observations about the Melbourne case studies. Inevitably, these have revolved around questions of 'governance':

Governance is a method/mechanism for dealing with a broad range of problems/conflicts in which actors regularly arrive at mutually satisfactory and binding decisions by negotiating with each other and co-operating in the implementation of these decisions (Schmitter, 2002).

In some shared drafting by members of the team from Tampere, Newcastle and Melbourne (Sotarauta, Dawley and Wilson), a number of aspects of governance questions were reviewed. As Pierre and Peters (2000, 1) state, part of the appeal of governance as a concept is that it links the political system with its environment. Governance is inherently political, involving bargaining and compromise, winners and losers, and ambiguity and uncertainty.

At the simplest level governance is concerned with co-operation which transcends various borders, takes many goals into consideration and is constantly evolving combinations of teams according to situations. Therefore combinations can not only be determined on institutional or regional grounds, but rather on the basis of shared interests and issues, regardless of administrative borders.

Even though new modes for governance have been emerging, policy-making is still quite commonly perceived as a planning procedure in which an effort is made to produce programmes guiding the development of various areas of society. In a state centric approach the main research problem is to what extent the state has the political and institutional capacity to 'steer' and how the role of the state relates to the interests of other influential actors. In a more society-centred approach the focus is on co-ordination and self-governance as such, manifested in different types of networks and partnerships. (Rhodes 1997; quoted in Pierre 2000, 3.)

The modern governance can thus be seen as emerging from socio-political processes on the basis of interaction of relevant actors. It is the effect of different actors on each other and on themselves. Interaction not only reflects complexity but is also complex in itself, dynamic and pluralistic (Sotarauta

1996). Thus in the old sense models of governance cannot be set up, they live and change with the situations. The key question here concerns whether existing or new forms of urban governance can release the learning potential of a city, and hence also reduce the tensions, of co-existence and power sharing in multiple webs of relations (Healey et al. 2002).

We have witnessed the rearticulating of vertical linkages between local, regional, national and supra-national scales of public sector organisations, whilst on the other hand new forms of quasi-institutional arrangements of governance that are organised as horizontal networks between the state and organisations which operate outside and beyond-the-state (Harding 2005: Moulaert et al 2005). Within government itself, there are new efforts to coordinate both policy-making and government service delivery, leading to the new initiatives of 'joined up government' (see Hess and Hess 2007).

As such, in the face of evermore complex social, environmental and economic problems the post-war hierarchical and sectoral (public-private) forms of 'command and control' within urban governments have given way to new forms of governance - partnerships and collaboration - which necessarily blur the former boundaries between public and private sector, between state and markets and communities.

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