GLOBALISATION AND REGIONAL STUDIES FOR THE 21ST CENTURY

Beyond 'global pipelines, local buzz'

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Globalisation and regional studies for the 21st century:

Beyond 'global pipelines, local buzz'

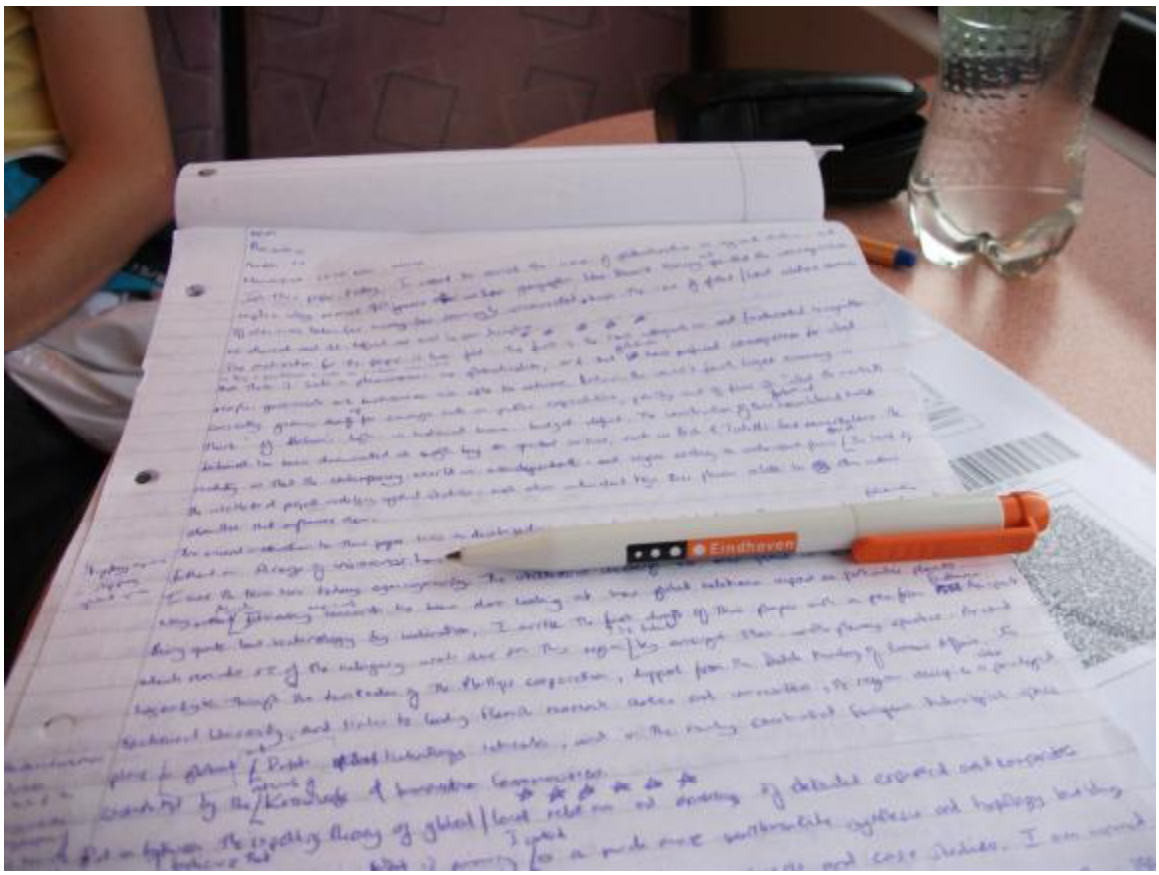
In this paper today, I want to revisit the issue of globalisation in regional studies, and explore why almost forty years after urban geographers like David Harvey pointed out the consequences of decisions taken far away for seemingly unconnected places, the issue of global-local relations remained as ethereal and slippery as ever in our discipline. This paper draws on work I have been undertaking together with a colleague at CHEPS, Adrie Dassen, for the Organisation for Economic Co-operation and Development (OECD) as part of their *Regional Innovation Strategies* projects, and which have separately been published as Benneworth & Dassen (2010) and Benneworth (2010) respectively. I would like to acknowledge the contribution of Karen Maguire & Claire Nauwelaers (both OECD) in this process and the ideas in these working papers. The views expressed in this paper are exclusively and personally those of the author, and any errors or omissions remain his responsibility.

FOREWORD

The motivation for this paper is two-fold. The first is the ubiquitous and fundamental recognition in key practitioner as well as in academic communities that there *is* such a phenomenon as globalisation. Moreover, this recognition encompasses the fact that globalisation has profound consequences for what people, businesses and governments are able to accomplish and their ongoing development. Britain, the world's fourth largest economy, is currently gearing itself up for swingeing cuts in public expenditure, partly out of a fear of "what the markets might think" of Britain's high – in historic terms – state debt and budget deficit. The construction of this globalised neo-liberal market behemoth has been documented at length by its greatest critics, such as Jamie Peck and Adam Tickell. But, nevertheless, the reality remains that the contemporary world is interdependent, and anyone seeking to understand places - after all, the heart of the intellectual project underlying regional studies – must also understand how these places relate to actors elsewhere that influence and determine their opportunities, potentials and future potentials.

The second motivation for this paper was a profound dissatisfaction with the way this globalisation paradigm has dealt with the question of global-local relationships. This dissatisfaction is piqued by the fact that a range of visionary writers have sketched some important dimensions of global-local, or global-regional, relations: I use the term here today synonymously: the intellectual challenge has been posed in a theoretically compelling way. In parallel with that, much interesting empirical work has explored how global relations impact in particular places. Being quite low-technology by inclination, I wrote the first draft of this paper with a ball-point pen from Brainport Eindhoven, which reminds me of intriguing work done on the region of South East Brabant by amongst others, my fellow plenary speaker Arnoud Lagendijk.

Figure 1 Global-local as part of a regional branding exercise.



These analyses trace a complex global network, nestling in the tentacles of the Philips corporation and its spin-offs and suppliers, support from the Dutch Ministry of Economic Affairs, Eindhoven's Technical University. With links to leading Flemish research centres and universities in Flanders and Germany, the region occupies a clearly

privileged places in Dutch and global technology networks. Moreover, the power of this place is demonstrated by its dominant position in the newly constructed European technological space as manifested through the Knowledge and Innovation Communities; Eindhoven is the only Technical University that is participating in all three of these networks.

But in between the compelling theory of global-local relations and an array of detailed empirical and comparative studies, I believe that something is missing. What is missing, I contend, is a synthetic layer between these two levels, building typologies and outlining lead dynamics between the empirics and the theory. There is a need to create categories to link the case studies and concepts that already abound. I am inspired in my thinking here by the author of a paper who is also a keynote speaker at this conference. In 1996, Anne Markusen wrote the paper "Sticky places in slippery space" which created a set of categories to understand how particular places' opportunities within an era of flexible production were determined by their positions in wider (global) production networks. What was so authoritative about this paper was that achieved the 'holy grail' of regional studies, to demonstrate that regions really do matter, by demonstrating that ostensibly similar underlying development processes, (using Storper's phrase 'regional untraded interdependencies') operated in qualitatively different ways in different kinds of places. If we are now in an era in which territorial development is driven by innovation, then understanding these territorial innovation processes also requires understanding not only innovation processes, but also the regional contexts and dynamics of those places. How do Moulaert & Sekia's territorial innovation models function in different kinds of places?

What I argue is the most pressing next step for the development of regional studies is the development of a comparable categorisation of places based on the ways in which innovation is influenced by place-specific variations in global-local relationships. The processes by which innovation is spatially distributed and creates different opportunities for economic and social wellbeing are well-understood. There is likewise a good understanding of the hierarchies of place that inductively seem to emerge from this situation (e.g. Yeung, 2000), which draw on territorialised readings of the product cycle, or with a nod to my fellow keynote, to the geographies of profit cycles (Markusen, 1987), with a hint of world-cities thinking to spice it up (Sassen, 1991).

But what there is not is an understanding of the relationships between actors in different places; there is the pale imitation of a hierarchy, from which relationships can be inferred rather than directly observed. These hierarchies can be regarded as existing within network topologies constituted by relationships between places and actors; these network topologies afford some actors more or less power, and influence industrial and economic dynamics, and are the context within which regional economic policy is implemented. The next step is to be much more explicit about the different kinds of region within these global networks, and their varying capacities for and sensitivities to territorial economic development.

THE GLOBAL-LOCAL CATEGORISATION PROBLEM

To try to bring some clarity to this situation, it is my aim in his paper today to work towards developing a set of global-local development categories for regions. I turn to network theory, and to the idea that in the global knowledge economy, a limiting success factor is connectivity to global networks which provide access to economic resources necessary to secure prosperity. Various types of regions have different kinds of connectivity. This connectivity is in part derived from the kinds of assets that have, such as firms, clusters, universities and research laboratories. But regions are also affected by the dynamics of the particular networks by which those assets are connected to the wider global economy, in terms of the position of the local actors in the wider global hierarchy. These connections may be within hierarchical subcontract relationships, putting out systems, closed intellectual property valorisation or open models of innovation.

This paper tries to take a first step on that journey by dealing with the first two issues, namely the relationship between these global-local hinge institutions and the overall regional structure.

> *How does the nature of these hinges affect opportunities for regional economic development, and how can be begin to categorise the dynamics of various types of regional systems in a global/ local perspective?*

This is clearly a prior step to exploring and categorising regions on the basis of the dynamics of the networks to which they are attached This forms the basis for the

overarching challenge thrown down in this paper. The vision is for a new version of regional studies, that has come to terms with the dynamics of global/ local relationships by systematically analysing these three levels or phases, *viz.* internal regional connectivity, regional/ global hinges, and the dynamics of global production networks.

APPROACH: BIG QUESTIONS, SMALL EXPERIMENT

To achieve this, this paper attempts to make a number of sequential points. The starting point is to establish the existence of the gap in the literature by looking at past treatments of globalisation in regional studies. In the best Marxian traditions, I use a three-stage periodisation of three sequential paradigms, internationalisation, 'glocalisation', Erik Swngedouw's extremely useful concept which emerged at the time of the European Single Market Project, and Harald Bathelt's idea of 'global pipelines, local buzz'.

In the second step, I argue that the contemporary literature has a 'missing middle', between global production networks, technological innovation systems and regional innovation systems. What is not theorised is the role of the region as an interface, and indeed, there is a growing chorus of voices in the literature demanding more attention be paid to these issues, without necessarily coming closer to resolving them, but certainly demonstrating the intractability and non-triviality of the issue.

I then argue, in my third step, that this non-triviality is a consequence of this issue encountering the Markusen criterion (from her 1999 paper), a slipperiness between theoretical constructs and empirical data. Whilst it is possible to combine global and local dynamics within a single heuristic, in order for that heuristic to function, it must be decided *ex ante* whether the global or local dimension is dominant. This *a priori* determination then causes the model to collapse to either a regional or technological innovation system approach, losing precisely the interplay between the two which I argue is necessary. This runs the risk of defaulting to a "Happy Families" story (or its more pessimistic alternative, "Sad Divorces") in which success or failure is explained in *a priori* and highly selective terms of dynamic localities or irresistible global forces rather than an *a posteriori* empirical analysis of global-local dynamics.

This leads to the fourth step in the argument, which is to argue that the use of categorisation of regions allows this issue to be explicitly addressed, even if it is not possible to decisively resolve this issue. The two perspectives, globally-dominant forces and locally-autonomous actors, can be regarded as specific manifestations of a reality in which different kinds of actors are dominant or have power in different kinds of situations. A regional categorisation should therefore seek to reflect the kinds of circumstance when particular actors may have significant agency. Developing a set of categories between concepts and case studies therefore allows these different strands to be woven together to explore how global-local relations influence the dynamics of regional development – our professed object of study, after all – in a truly multi-scalar perspective.

The fifth step is offering a thought experiment, to try to understand in a highly simplified and stylised way, a first cut view of global-regional connectivity in territorial innovation models. Taking a very simplified version of a regional innovation system, the paper considers different kinds of regions in terms of their 'global orientations', the kinds of interventions and developments to which they are most sensitive, and to which they respond most positively. In short, it is to try to categorise regions according to which additional linkage or network could improve their connectivity, given their existing patterns of actors and *their* pre-existing connectivity.

The sixth step is to use the results of this experiment to stylise four classes of regions in terms of their sensitivity and reactivity to the forces of globalisation. This is by no means a certain of stable categorisation, but suggests at least the possibility of developing categories within which to frame regional studies in a global local perspective. The tantalising possibilities that this raises lead to the seventh and final step, which is to argue for a future research agenda based on reclaiming the missing middle of global-local relations in regional studies, and articulating clearly how and why regions matter in an increasingly globalised knowledge economy.

STEP 1: HOW GLOBALISATION CAME TO REGIONAL STUDIES

My first contention is that the antecedent literature has been slowly approaching the issue of global/ local relationships, but the tricky nature of that problem have engendered a particular pattern of activity in which research has demonstrated the existence of the global-local nexus, argued that this raises problems in regional studies and called for more research in this field. What has not taken place is a focus on the question of ***how the region functions as a space of connections*** between primarily regional and global processes, in distinctive ways in different kinds of regions. On some level there is an acceptance that these network interactions between local and global networks influence the dynamics and structures of both the global as well as the local networks. However, this has not led to a focus on the evolving DNA-like dynamic of regional and global networks.

In the first wave of globalisation literature, the scope of regional industrial and economic research began to expand its purview beyond the idea of the region as a territory embedded within national space economies (Holland, 1976). Harvey tied this process of globalisation to the oil crises of the early 1970s, which kicked off the expansion of autonomous financial markets aggressively seeking out the best returns for their investments, the so-called 'petrodollars' markets (1983). At the same time, this triggered a deep industrial crisis which undermined corporatism at the level of the nation state, triggering a broader shift from the Fordist Welfare State towards the idea of the post-Fordist, flexible workface state (Amin, 1994; Harvey, 1989; Peck & Tickell, 2002). This wave of literature was primarily concerned with a discourse arguing for the impacts of the collapse of national systems of economic regulation and the emergence of a new international divisions of labour, in parallel with entrepreneurial (supply-sided) discourses of place development and the challenges of co-ordinating multi-national production (Harvey, 1985). This perspective was strongly rooted in structuralist ontologies, in which regions were powerless in the face of global forces driven by the irresistible engine of capitalist development (Morgan & Sayer, 1987). Although this strand of thinking was not necessarily important in contemporaneous regional studies, the

tools it offered through 'flexibilisation' concepts made this thinking rather important after the event.

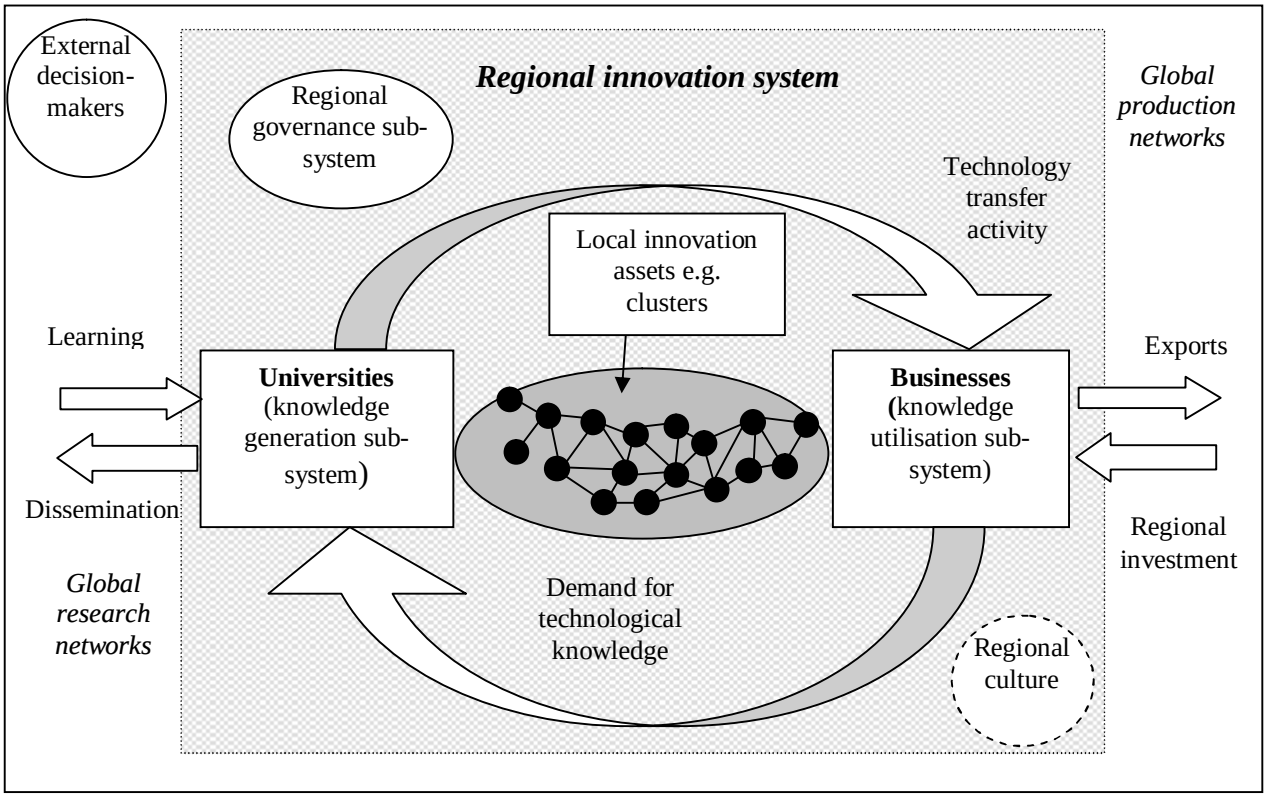
If the first wave could be categorised as structuralist, the second wave of globalisation literature could be regarded as focusing on primarily endogenous variables. Taking its cue from the idea of flexibilisation offered in the shift from Fordist to post-Fordist forms of regulation, emphasis shifted to understanding how regions could mobilise their endogenous capacities to maximise the benefits they received from these investments operating in global market-places (Piore & Sabel, 1984; Moulaert & Swyngedouw, 1991). Much of what we now think of as new regionalism was strongly inspired by this thinking and saw an analogy between the flexible production systems of leading companies such as Benetton and the region as a flexible production space. Much of the territorial innovation models rooted in new regionalism were strongly rooted in the view of the region as a connection of local assets, and saw in local network the potential and opportunities for regions to influence their own destinies in the face of powerful global forces (Morgan *et al.*, 1997).

The problems with this approach were succinctly summarised by Cooke (2005) who coined the phrase the 'spatial envelope' to describe their shortcomings. He highlighted the inclination for regional analyses to focus systematically on the region, and to only selectively explore how extra-regional variables shaped industrial dynamics. One could never be sure of where the agency lay in regional innovation models. The spatial envelope was a specific example of the problems which Markusen was later to highlight in her critique of fuzzy thinking, and the demand for empirical rigour because of the necessary selectivity in the inclusion of global factors. As a consequence, this second wave of 'regions in the global economy' ducked the issue of global local relations, either including them very selectively or making them appear as irresistable forces and background variables against which regions were powerless, leading to rather *deus ex machina* explanations of regional processes.

The third wave of literature came in an attempt to be more specific about how global networks impacted on regional systems, by focusing on the co-ordinating actors within regional innovation systems. Cooke made here a useful conceptual distinction between

knowledge-producing and knowledge exploiting sub-systems which each contained actors within a region who were nevertheless embedded within these wider global networks, as shown in figure 1 below.

Figure 2 A stylised version of global-local connections in regional innovation systems



Source: after Cooke, 2005, author's own design, cf. Benneworth & Hospers, 2007.

A set of 'hinge actors' could therefore be identified, such as universities, lead firms, public laboratories, or multi-nationals who have their own power within these global networks. These hinges therefore could be regarded as acting as 'pipelines' bringing in global innovation resources. As a consequence of their local linkages, they then create a local 'buzz' (Bathelt *et al.*, 2004). In the words of Mikel Landabaso, these hinges are connection points wiring up the regional engine to the global economy, and if you strengthen those connections, then the whole regional economy is more turbo-charged by the global economy, and runs more quickly by bringing in more global fuel into the region. The problem with this wave of literature is that it is very flat, bringing together local and external actors who clearly have different power and possibilities without it

being clear which are the powerful actors, and with the result that there is often an assumption made that global or external actors are intuitively more powerful than local actors (Law, 2004). This raises the question of how to get beyond the scalar ontologies imposed by the particular theorising approaches taen in the evolution of the field.

STEP 2: REGIONS AS LOCAL-DISTANT CONNECTORS

The second step in this process is to offer an admittedly flawed heuristic for fulfilling the global-local challenge, bringing three contemporary literatures together in a model of how global-local interactions could shape regional development, to better understand the concrete dynamics of the 'global pipelines, local buzz' heuristic. The first observation is a huge clamour amongst the literature for a better treatment of global/ local relations in territorial innovation models, and a dissatisfaction with what has currently been achieved.

- Doloreaux and Parto (2008) note that "successful RISS make use of endogenously generated and exogenously available knowledge to strengthen competencies and maintain competitiveness" (p. 14).
- Considering clusters, Wolfe et al. (2005) argue that "[a] key challenge involves the local versus global dimension of cluster development. Clusters are viewed primarily as local phenomena … however, there is increasing evidence … that the external linkages drive the internal dynamics of clusters (p. 3).
- Oïnas & Malecki (2002) argue that "innovation systems may originate in one place … but often they are spread beyond local, regional and even national borders" (p. 113) with as a consequence "it seems increasingly clear that the connections of regional actors to extra regional actors stand as momentous in technological progression"(p. 117).
- Uyarra (2009) criticises regionally-fixed perspectives for assuming "that the sources of regional development are not only endogenous, but also indigenous" (p. 12), leading to an excessively restrictive understanding of the nature of the regional innovation process.

- Gertler & Wolfe (2006) argue that neglecting external actors is a consequence of an excessive reliance on a Porterian (1990) perspective on competitiveness, rooted in strong local markets and vigorous competition between local producers, which is unhelpful for understanding innovation systems which are "not locally self-sufficient in terms of knowledge" (p. 220).

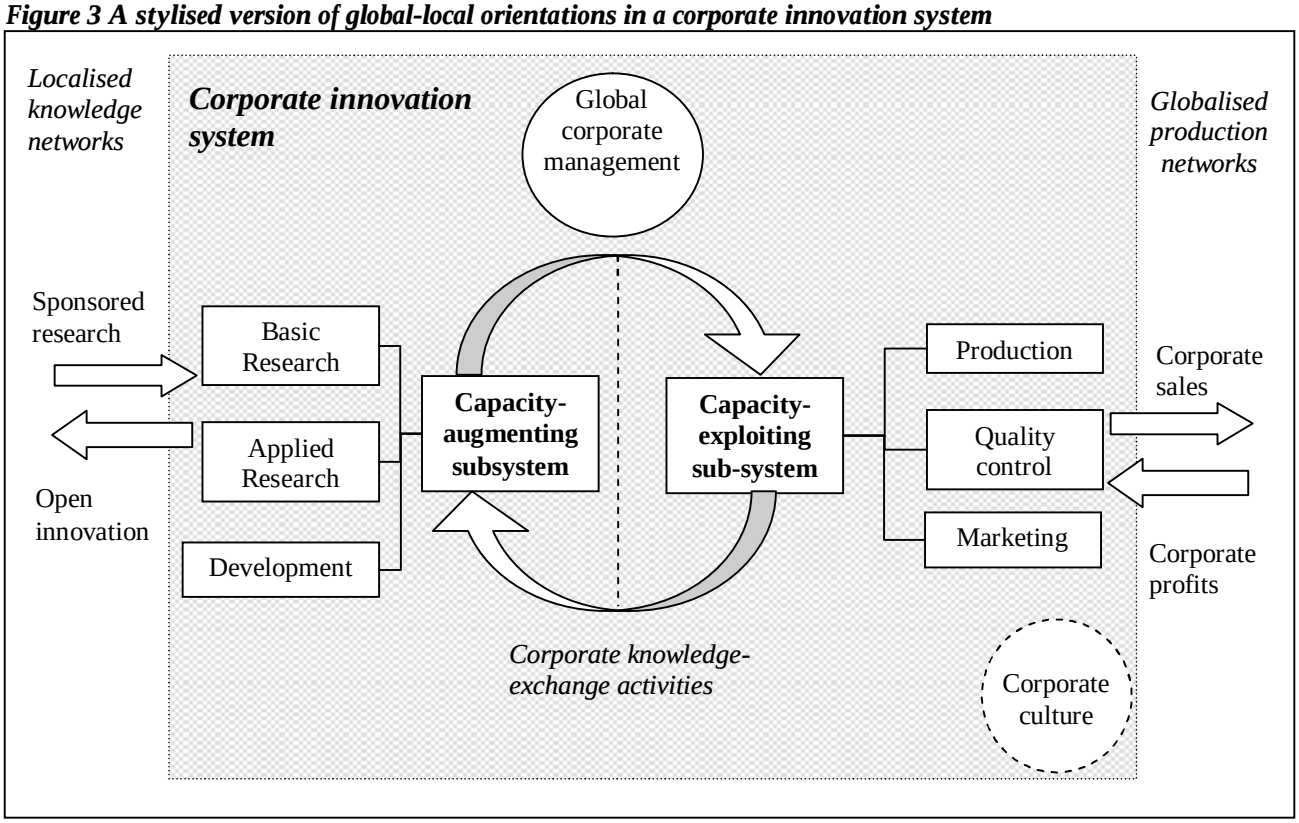
What is striking concerning these various authors is that although they exhort more emphasis on global local relations, what there is not is an effective explanation of how global-local connection building can improve the quality of regional innovation in a way that does not itself fall foul of one of these problems.

- There has been a tendency to focus on supply and value chains within sectors, and not to consider knowledge transfer and stimulation between sectors within a region (*cf.* Bathelt, 2001)
- At the same time, these local-global connections are extremely difficult to grasp, forcing assumptions that co-operation and networking operates relatively smoothly, for example that hub firms do indeed help local SME networks to access global resources (Koschatzky, 2009).
- Describing a system as multi-scalar automatically creates a hierarchy between higher and lower scales, and in the context of studies looking at regions, dwelling on external factors can dis-empower those regional situations, which is unhelpful for those interested in the regional scale (Cooke, 2005).

The fact that no one has yet responded to the challenge might seem to suggest that it is too difficult a problem to solve, but it is my contention that even if it is not directly possible to solve it, it is useful to attempt to solve it, and then to reflect on why it is such an insoluble issue. The basis for these territorial innovation models is that territorial competitiveness is based upon knowledge-spillovers (Moulaert & Sekia, 2003). If knowledge is more readily accessible in a place, then those actors can access those knowledge resources more easily, and that increases the success and scope of their innovative activities.

It is instructive to compare that with thinking on sectoral innovation systems in global production networks which also seek to create knowledge spillovers within these global innovation networks to boost competitiveness (Niosi & Zhegu, 2005). Work on sectoral innovation systems distinguishes between two elements of these systems, the capacity-enhancing and capacity exploiting elements of these technological innovation systems (Mattes, 2006). Knowledge spillovers come primarily from the capacity enhancing elements of global production networks, from innovative cluster, from research laboratories – the precise form varying by the nature of the organisation of that global production network. A stylised version of this is set out in Figure 2 below.

Figure 3 A stylised version of global-local orientations in a corporate innovation system



Source: after Mattes (2006), authors' own design after Benneworth & Hospers, 2007/

STEP 3: SLIPPERY GLOBAL-REGIONAL HEURISTICS

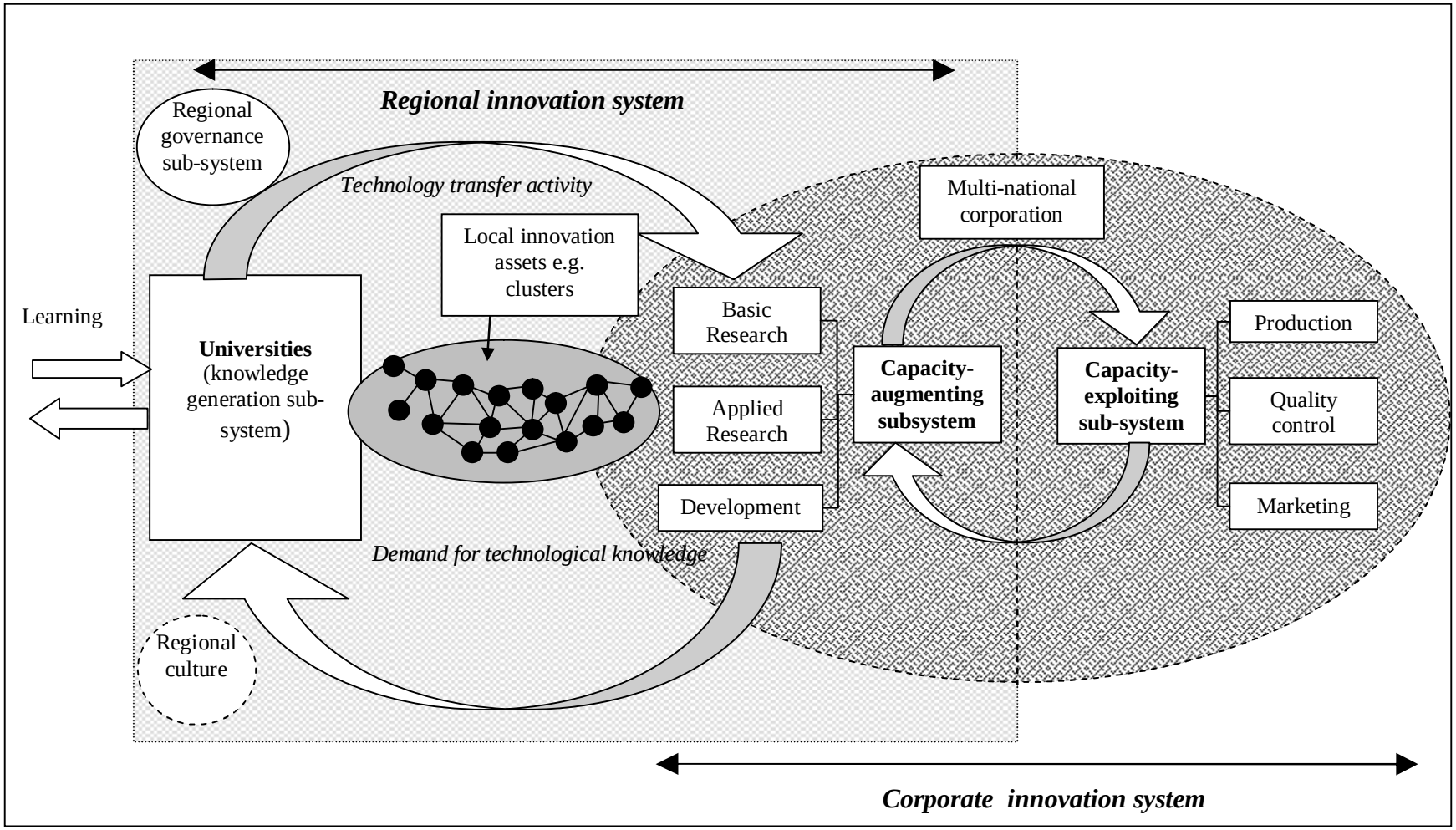
So on the one hand we can see that regions are seeking to benefit from the knowledge spillovers which global production networks can bring to their regions. On the other hand, corporate innovation systems are seeking to improve their competitiveness in

networks by accessing territorial knowledge overspills. "This combination of small firm flexibility and innovative capacity, with large firm access to global markets, theoretically enables regions to escape the dominant logic of convergence and price-based competition" (Christopherson & Clark, 2007, p. 1225).This creates the kind of conditions under which a region can become a space of interdependence for a corporate actor, and no longer subservient to the wishes and demands of that actor (Cox, 1998).

The third element of the model is the dynamic by which these two systems come together in the region to allow the knowledge spillover to take place, to create the mutual benefit between region and wider knowledge production or exploitation network. We already know that the capacity to exploit knowledge spill-overs is dependent on various kinds of proximity between actors in these two sets of networks (Boschma, 2006). We draw here upon Henry Yeung's notion of strategic connectivity, "a time-space contingent convergence of interests and co-operation between two or more groups of actors who otherwise might not act in tandem for a common strategic objective" (2009, p. 14). This allows the heuristic to be offered of the region as a means of strategically co-ordinating and anchoring between RISs and sectoral innovation systems, shown in figure 3 below. A critical part of the model are these local-global connectors, the points of contact between the local and the global knowledge production elements. A generic definition of what constitute these "local and remote connectors" or "global-local hinges, is offered by Oïnas & Malecki:-

> "The actors … are centrally individuals (entrepreneurs, managers, employees, individuals in governmental or semi-governmental bodies, researchers, etc.) with their interpersonal networks (face-to-face, virtual, or a combination of these) and firms (multi-locational/multinational) and their networks of various sorts: (advanced) customers, universities, research institutions, support organizations (such as chambers of commerce, knowledge centers, government bodies, and consultants) … Innovation involving both local and distant relations often center on networks of these actors" (2002, p. 119).

Figure 4 The embeddedness of regional innovation systems in corporate innovation systems



Source: after figures 1 and 2, author's own design

By bringing these three elements together, we have a heuristic for global-local relations.

> *The region acts as a space which strategically anchors global processes in the region, and links these global flows and processes to regional actors, to ensure that the region is able to acquire the resources that stimulate the growth of the region through these networks.*

These anchoring processes help to make the region a space of dependence for these global networks, they are reliant on it to achieve their own goals, and that dependency increases the power of local actors. This helps to address the issue seen with too many globalisation perspectives that can cast the region as powerless to be battered around by the powerful forces of globalisation.

But the heuristic falls some way short of being a model, because it does not allow any inferences to be derived from it. There is too much interdependence in the heuristic, which leaves it unclear under which conditions strategic anchoring would operate, at least *a priori*. That brings us back to the problem of the 'happy families stories' in which 'regions' are taken to be assemblages of their visible actors rather than a meso-level at which a set of autonomous processes – the strategic anchoring between global and regional networks – operate.

As I drafted this section, I was fortuitously travelling through Brabant, and through the window of the train, near to Nijmegen I could see the former Philips microchip fab. It is tempting to describe what I saw there as a global pipeline; you even see the local buzz, as the early shift drive home to spend in Gelderland and North Brabant their money earned through the sale of mobile devices manufactured in China on the global marketplace. But that story is conceptually unsatisfying – why do NXP stay in the Netherlands? Why does it not move eastwards? And by staying in Nijmegen what power does this give to other regional actors within their own wider networks?

Figure 5 Intuitively attractive global-local clusters?

My contention is that the failure to provide solid answers to these questions is a consequence of the slipperiness of the heuristic. By embodying two quite different scalar perspectives, without being clear which is dominant, it leaves open the possibility that either can be dominant, without specifying the conditions under which that might happen. The challenge is therefore to understand more clearly what are the regional conditions under which particular scalar logics may be dominant, the dynamics of strategic coupling in these contexts, and the consequences that these have for the economic development trajectories of particular regions. It is to this challenge that the following step now turns.

STEP 4: ACTOR DOMINANCE AS VARIABLE, NOT GIVEN

I regard this primarily as a question of inter-scalarity, and in particular the incommensurability between different scales, between the global and the local, which has a tendency to conceptually privilege the global scale (Law, 2004). This is partly a consequence of the different assumptions made at the time that these scales were properly

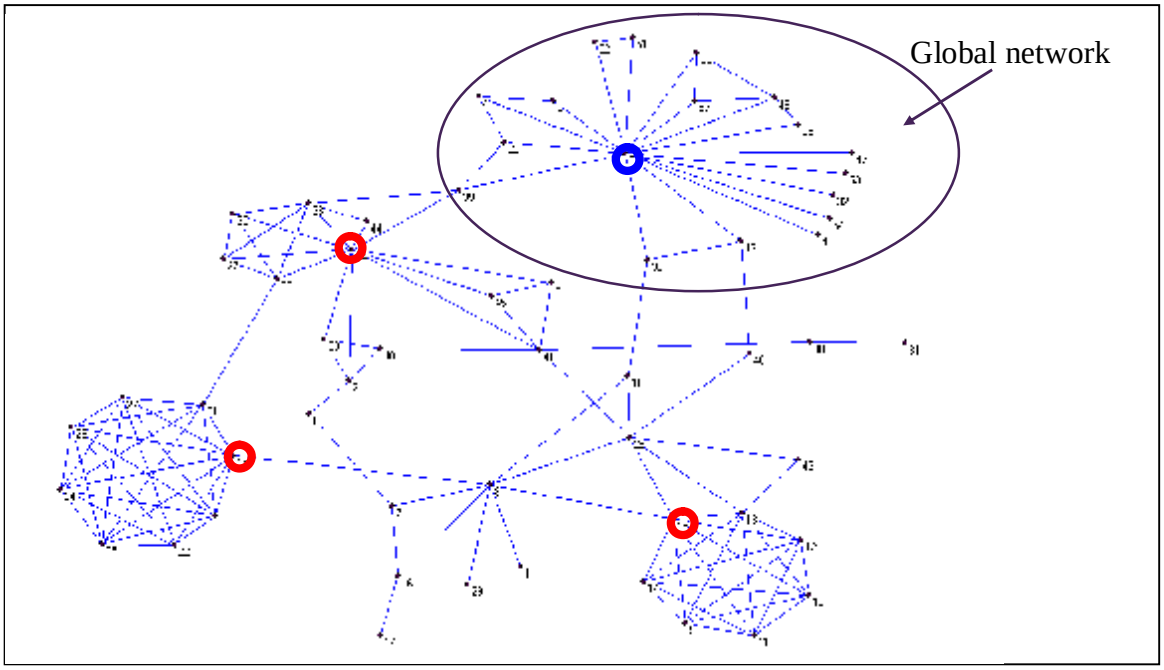
theorised. The first wave – which conceptualised global forces – was clearly a structuralist approach, in which global forces were reified as powerful in order to reveal their existence and allow their further analysis (Harvey, 1985). The thesis of flexibility was specifically posited on a post-structuralist approach within which local actors could have power over 'global' forces, which were in turn revealed as being far less universal and far more globally constructed that suggested by reified structures (Gibson-Graham, 1996; Amin & Palan, 2001). The third wave is based on flattened network arguments in which connections between actors are seen as the determining characteristic rather than positionality and power in those networks.

It is curious, but I argue that there is a narrative construction that sees regions made to seem less powerful than global forces – except where they are self-evidently not, for example those regions that are the 'place to be' in the new knowledge economy (Hudson, 1989; Gertler, 1995). The net effect of this is to take a vulgar structural globalisation perspective and see regional dynamics nested and bound within a possibility set defined by totemic and heroic global forces. So the first step is to reassert the idea of global production networks as networks, comprised of actors, some more powerful than others, but nevertheless interdependent and using networks to secure access to resources to achieve their goals.

Part of a global network may be located within a region and have connection with regional actors. Putting aside for one moment the issue of the comparative power of actors, it is possible to see in a region how strategic anchoring could work: global actors are located in a region because it allows them to more regularly and more easily access resources ('knowledge spillovers') in those regions. Those resources help it to achieve its institutional goals in the context of a broader global production system. At the same time, those network connections help actors access other resources, not those directly from the global firms in the region, in terms of supply contracts and through exchange of employees, but also contact with actors in the global network, which can in turn be converted into real relationships through the innovation network, with the global actor serving as a common reference point to allow regional actors to build proximity and hence substantive connections with actors in other regions, elsewhere in the global production networks. These new connections in turn strengthen the role of that region

within the global network as a whole, and through strengthening those connections, and densifying those regional connections, they serve to upgrade the quality of the regional innovation system. It is possible to represent this in a very simplified model of a set of global-local connections within a region.

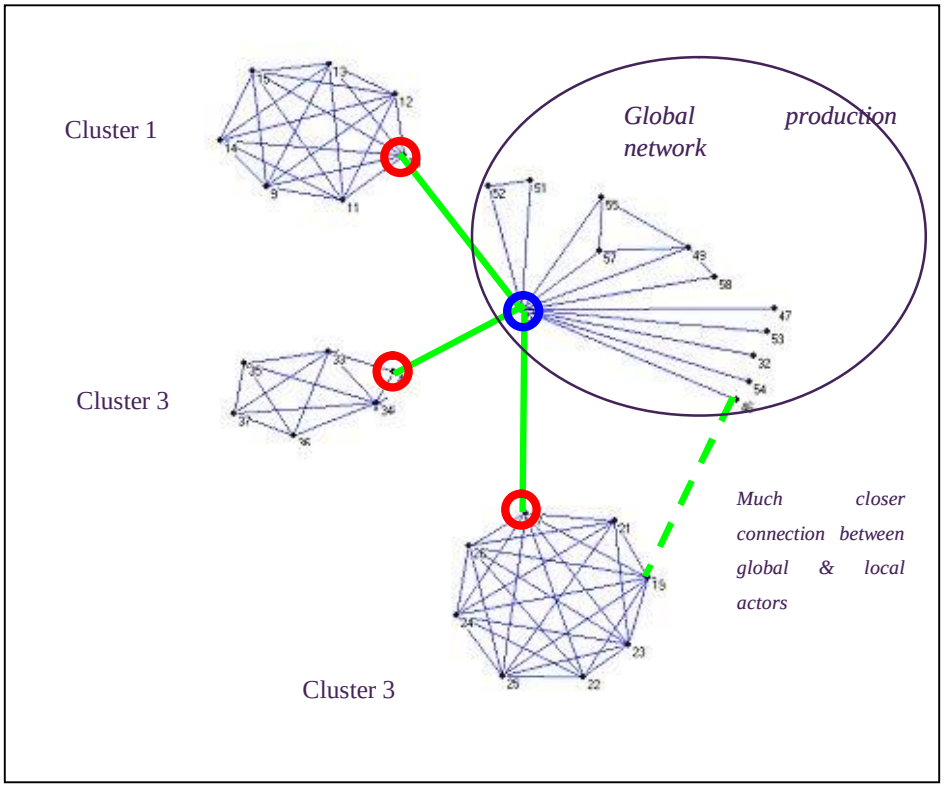
Figure 6 A global network of interconnected actors



Source: Dassen, 2010

Imagine a region with three clusters and a single global value chain; the firm at the centre of the global value chain can benefit from the knowledge resources in those clusters, and *vice versa*. If this leading firm, here depicted in blue, works with one company in each of the three clusters, it dramatically changes the topology of the regional network but at the same time increases the proximity of firms within the three clusters to actors elsewhere in the global production network. If – and it is a big 'if' – regional partners can develop linkages with these external contacts, then this can help to strengthen the overall regional innovation system, in this case, in reducing the centrality of the large firm to the network, which in turn allows it to demonstrate opportunistic behaviour and restrict the benefits which regional companies are able to get from their own networks (Christopherson and Clark, 2007). This clearly represents a **strategic anchoring** of the firm in the region, if the firm values the knowledge that spills over in these networks.

Figure 7 RIS improvement creating new potential global linkages



Source: author's own design

Strategic anchoring can therefore be understood as the development of regional connections which benefit both the regional environment as much as the wider global networks. That previous example demonstrates a single example of 'strategic anchoring' at work; the challenge is now to understanding global-local anchoring processes in a more systematic way.

STEP 5: A STRATEGIC ANCHORING EXPERIMENT

My argument in essence is that the great challenge for evolutionary economic geography in the coming years is ultimately to better understand – in a more systematic way – these anchoring processes. In particular this should focus on the conditions under which the global elements of economic activity remain anchored in particular regions, with which kinds of attendant consequences for regional economic development processes. That kind of explanation is not going to emerge towards the end of a single keynote

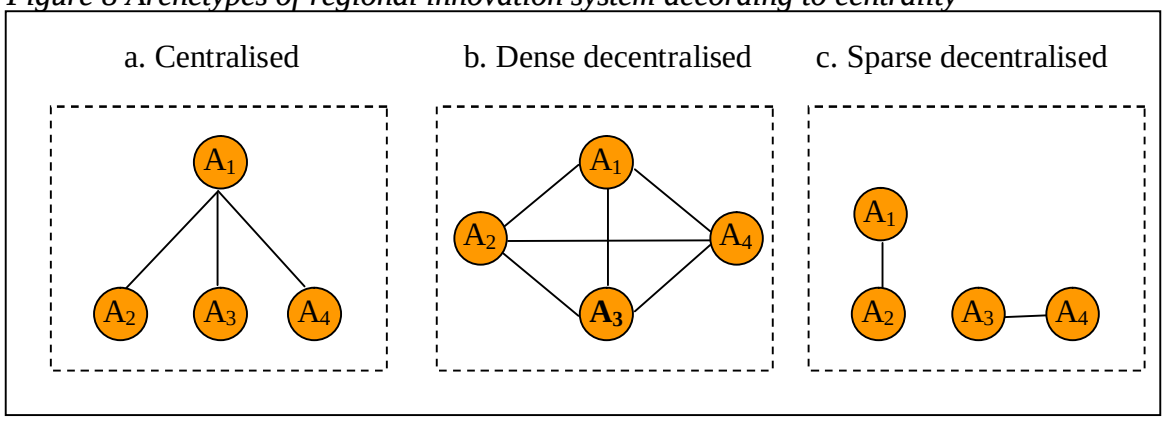
presentation. Rather to et a perspective of some of the key lines of force in this new research landscape, I want to offer a very simple thought experiment and its results as highlighting some of the significant issues in this regard.

The basis of the experiment is to take an enormously simplified global-local innovation network, featuring two kinds of actors, opportunistic and altruistic. Opportunistic actors are those powerful enough and inclined to exploit their network positions to severely limit their contributions to spillover benefits whilst ensuring that they do benefit from spillovers. Altruistic actors are the remainder of the actors within the region, and then there are external actors. We classify the RISs according to three dimensions;-

- **Dependency**: the extent to which there are 'gate-keeping' actors who are able to regulate the access of local firms to global networks.
- **Density**: the extent to which local actors are well networked and can effectively co-operate and collaborate in pursuit of innovation
- **Connectivity**: the extent to which there are innovation actors in the region who have relationships with external actors active in sectoral innovation systems.

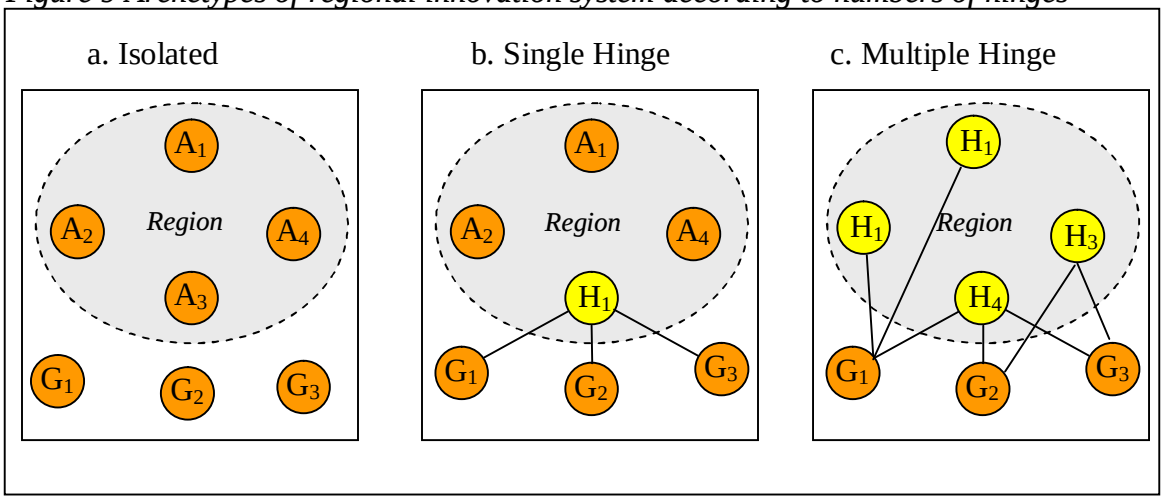
Firstly is the 'centralisation' of the RISs, which is a function of dependency and density: there are three configurations – a centralised RIS is one in which one actor is at the centre of the network, a dense decentralised network is one in which actors are highly connected, and a sparse decentralised network is one in which there are few regional connections. These configurations are shown in figure 6 below.

Figure 8 Archetypes of regional innovation system according to centrality



The other dimension on which we classify the RIS is according to the number of hinges in the region, connecting local actors to global/ external actors. There may be no hinges, making the region isolated, there may be a single hinge, or there may be multiple hinges. These configurations are shown in figure 7 below. One further distinction to make is with opportunistic actors – they can only behave opportunistically where they have a dominant network position, so a single hinge can further be categorised as to whether the hinge actor is opportunistic or altruistic.

Figure 9 Archetypes of regional innovation system according to numbers of hinges



So we have two variables in the model, internal connectivity and the nature of the external connection – is the region already networked or is it fragmented? Is the region already well connected, or is there a dominant actor who 'controls' global relationships? On the basis of these two variables (3x4) it is possible to come up with twelve global-local coupling configurations, and for each it is possible to mathematically calculate what is the single network connection that best improves the overall network connectivity – *both to external as to internal resources*. The twelve configurations are given in the table below, and presented graphically overleaf, the red actors being altruistic, the blue actors opportunistic and the yellow actors global.

Table 1 Possible configurations of regional innovation systems

	No Hinges	**Single Hinge (opportunistic)**	**Single Hinge (altruistic)**	**Diverse Hinges**
Centralised RIS	Local stratification	Brokered configuration	Mediated configuration	Indirect Bridging
Decentralised Dense RIS	Local network	Centralised Brokered Interface	Centralised Mediated Interface	Direct Bridging
Decentralised Sparse RIS	System fragmentation	Centralised fragmented brokered interface	Centralised fragmented mediated interface	Decentralised fragmented interface

On this basis, it is possible to see for each of the twelve archetypes which best improve regional connectivity. In the table above, which shows those ideal improving connections, it is possible to distinguish four modes of strategic embedding, four kinds of similar global-local connectivity which benefit from similar kinds of relationships that help to better anchor global actors and ensure those benefits are diffused into the RIS.

Figure 10 The possible configurations of the ideal type regional innovation systems

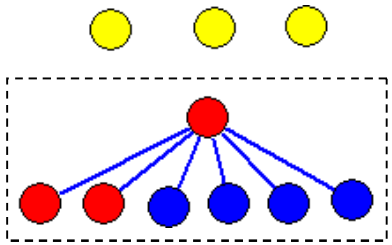
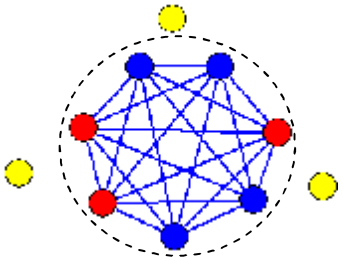
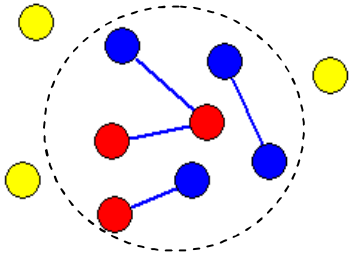
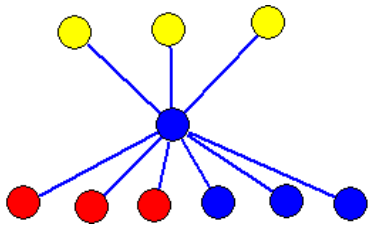
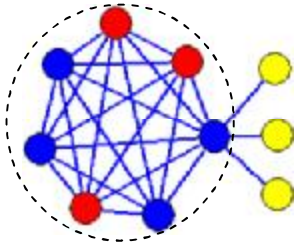
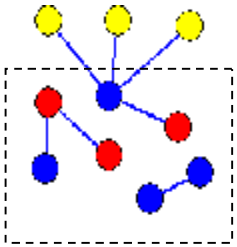
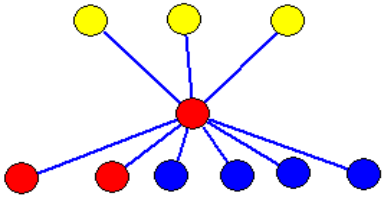
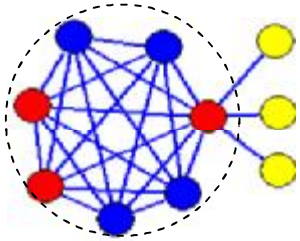
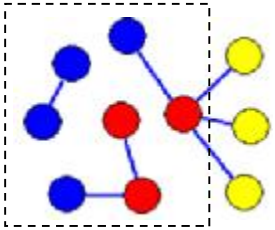
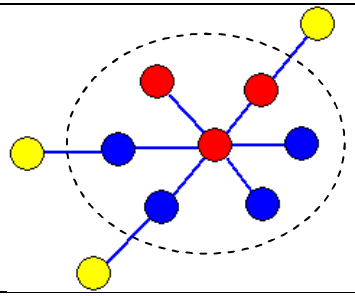
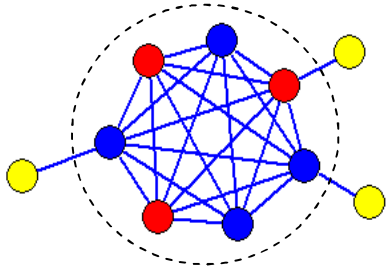
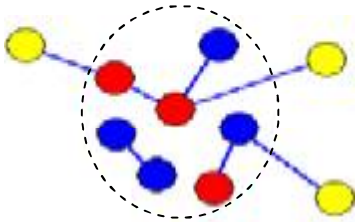
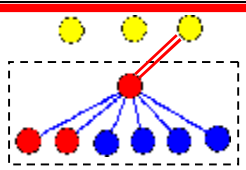
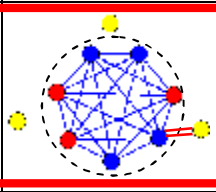
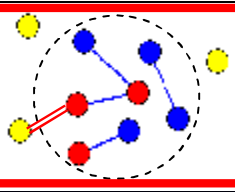
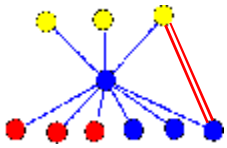
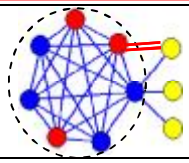
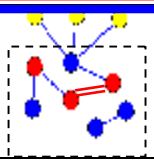
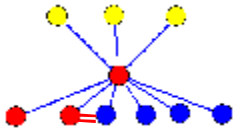
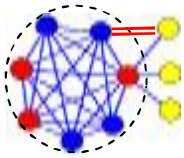
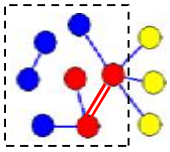
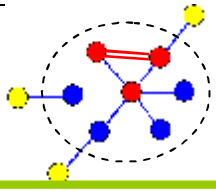
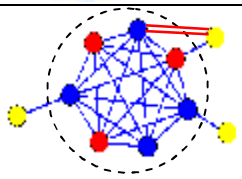
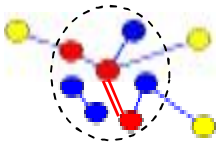
	Centralised RIS	Decentralised Dense RIS	Decentralised Sparse RIS
No Hinges			
Single Hinge (opportunistic)			
Single Hinge (altruistic)			
Diverse Hinges			

Table 2 The optimal network building strategies by network form, grouped

	Centralised RIS	Decentralised Dense RIS	Decentralised Sparse RIS
No Hinges			
Single Hinge (opportunistic)			
Single Hinge (altruistic)			
Diverse Hinges			

STEP 6: TOWARDS A PROVISIONAL CLASSIFICATION

Of course, some interpretation is necessary to convert an abstract and simplified thought experiment into a characterisation of regional sensitivity to global-local relationships. The question is where can a compromise lie that sees the suitable connections build up, and at the same time sees the global actors firmly anchored in the region? The answer is most clear in the case of the regions that have no existing global players in the form of a global hinge: the best change for them is to develop a global pipeline to help regional actors improve their global access, a typical globalisation challenge (the red zone above). Likewise for well-connected regions (the blue zone): the challenge for these regions is in extending the benefits and allowing the creation of 'Jacobs externalities', cross fertilising and creating new sectors and resources that become the basis for competitive advantage, cementing these places' roles as the 'places to be' in particular economic sectors.

These two classes of region are relatively well understood already – they are the best-case and worst-case examples of regional types, totemic sites of the new economy in

Armstrong's sense, and the least successful ones, even those with strong regional networks not necessarily acknowledged as valuable by exteral actors (*cf.* Tödtling & Trippl, 2005). The other two classes are the more interesting examples, where there is already a global/ local interplay, but the dynamic is not immediately evident, as it is where regions are either the place to be, headquartering 'heroic' global companies, or regions that have to accept they are powerless within global networks. Where there are dense clusters and existing global connections, then – curiously enough – the best link is to increase global connectivity – rather than stimulating more local networking. Where there are not strong opportunistic actors, then the best development is for the region to develop internal linkages, and strengthen the existing hinges to ensure that they work optimally as 'global pipelines'. On the basis of the analysis, it is possible to come up with a classification of regions in terms of the main challenges they face in improving their global-local relationships, along with a potential nomenclature for that classification.

- **Connecting globally:** Building a global pipeline: finding a point of connection from the region to key global actors
- **Cluster-building:** Improving local networking to connect more local actors into the growing regional network
- **Sustaining momentum**: Building up new regional hinges with connections to regional firms – building critical mass.
- **Deepening pipelines**: extending hinge connectivity & networks around hub

This raises the issue of how this classification could be used, and there are two observations with salience here. The first is that each of these regions have distinctive weaknesses, strengths and challenges which influence the way that particular innovation-based economic development policies function in these places. But it is worth pointing out at the same time that one archetypes covers several 'types' of region. The second is that policies such as science parks could be tailored to the needs of the region: the idea of 'policy orientation' is given below in the table as a guiding principle for how innovation instruments could be differentially applied on the basis of this classification to different regions. These are both shown in Table 3 below.

Table 3 Policy orientations and innovation regions: a summary of the policy orientation archetypes

	Connecting globally	**Sustaining momentum**	**Cluster-building**	**Deepening pipelines**
Archetype for region	Peripheral regions lacking strong research strengths and international connections	Regions with strong local cluster organisations well networked with policy actors	Small groupings of competitive businesses with limited local connectivity	Region dependent on limited number of global production networks/ value chains
Key weakness	Absence of connection to external actors – no external stimulus for innovation	Risk of hollowing out and being left behind by GPNs – maintaining global lead	Regional firms tend to look outwards – contagious local undervaluing of partners	Dominance by a single firm or chain that exploits not supports regional actors
Existing strengths	Latent innovative actors with potential to grow quickly and deliver change	Highly innovative, well networked clusters playing leading role globally	Industrial districts with competitive advantages and global profile	Industrial ecosystem supporting value chains with diversification opportunities
Key challenge	Building a global pipeline: finding connection point from region to key global actors	Building up new regional hinges connected to regional firms – building critical mass.	Improving local networking connecting more local actors to growing regional network	Extending hinge connectivity & networks around hub
Optimal solutions	Helping regional actors take the first steps in international co-operation (collectively?)	Bringing outside actors in, and helping to collectively shape future trends	Channelling innovation support to stimulate growth through regional clusters	Helping second-tier innovators became market leading and shaping
Example regions	Madeira Tallinn, Tartu Estonia Attica, Greece Sardinia, Italy	Île-de-France Baden-Württemburg Flanders, Belgium Toronto, Canada.	Skåne, Sweden Navarra, Spain Auckland, New Zealand Zuid-Holland, Netherlands Nord-Pas-de-Calais	Eindhoven, Netherlands Piemonte, Italy Limburg, Belgium Seattle, USA. North East of England

Source: Benneworth & Dassen (2010).

Beyond that classification, the categorisation leads me to three further observations. The first is that there are apparently different strategic coupling processes in operation in different kinds of region. But these strategic coupling processes have other consequences for the regional as a whole, so in order to understand different regional dynamics, it is necessary to understand the range of strategic coupling processes at play in different kinds of places. The second is that these classifications are not unknown across the breadth of the regional studies literature. However, these regions and their dynamics are usually described in quite different ways, often drawing on different conceptual underpinnings. This leads to the third observation, that therefore better understanding global local dynamics involves being prepared to accept that similar processes in different places may be best described using different conceptual frameworks, not necessarily through a single conceptual framework with a variable set that vary between the different kinds of places. These three observations create a challenge for regional studies in the coming years in order to begin to set out more comprehensively an agenda which deals systematically and rigorously with understanding global-local interactions in innovation-based economic development.

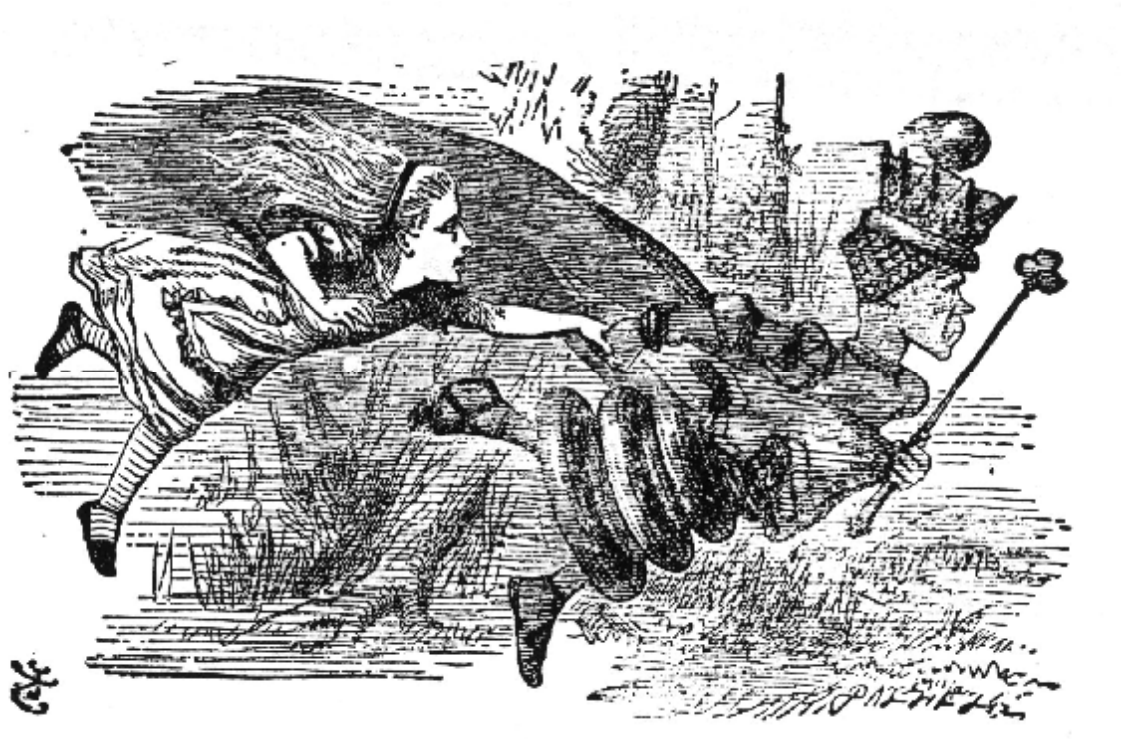
In this paper, I have tried to develop on a very slender empirical base a classification of which processes are operating differentially over space in coupling global and regional actors to territory within a region. It would be unreasonable to claim that this classification is in some way objectively correct – rather it is an attempt to trace out one of the lines of the landscape of the as yet only vaguely visible global-local research agenda for regional studies. My argument is rather that this suggests that this research agenda will involve better understanding these strategic coupling processes along two key dimensions, the connectivity of key regional actors (‘hinges) in other global networks, and regional connectivity and network density.

STEP 7: TOWARDS A FUTURE RESEARCH AGENDA

In taking seven steps to reach my goal, I am reminded of the character of Alice in *Through the Looking Glass*, where Carroll likens each of Alice’s steps in her attempts to return to the real world to that of a pawn progressing along a chess board in an attempt to

become a queen. I have to confess that I have not satisfactorily yet taken that seventh step, and so the spoils will not be for me, but I feel nevertheless that we stand now tantalisingly close to jumping that last brook, and giving us a theory in regional studies that will allows us to move like the Queen backwards and forwards, sideways and diagonally in understanding network connections and their impacts on places. This will provide the basis for systematically understanding the array of inter- and multi-scalar relations that comprise the realities of territorial innovation and development.

Figure 11 The Red Queen bringing Alice to the last of the seven steps



So if the key concept is strategic coupling in global-local relations between different kinds of regional innovation systems and global knowledge production networks, what are the practical implications for this as a future research agenda for territorial innovation in regional studies. I think we can all agree that the call to arms is now complete, and the time is now here for a much more explicit and specific focus on global-local interplay, building concepts, categories and case studies. In particular, these categories need better pinning down, and if they defy deductive definition, then at least an intuitive description of the boundary conditions of this system is necessary. Our understanding of network dynamics need upgrading, taking into account emerging theorisations of the complexity

of actors, the fact that they are not purely economistic, with serendipity and context both playing a role. This suggests that understanding these issues is a multi-disciplinary challenge, and will have to bring together the full range of disciplines involved in regional studies in order to better understand these strategic anchoring processes. There are already some encouraging and interesting issues emerging in a recent OECD working paper from Andrea Bonnacorsi, where he puts forward the idea of unbundling regional innovation policies according to the idea of 'spatial span' of the networks involved.

As the global crisis continues to unfold, and the architecture of global economic power continues its ceaseless mutation and evolution, we stand on the brink of a structural shift as profound as the liberalisation of the post-war national welfare state thirty years ago that unleashed the global economy as we now know it. But these changes only affected the territorial scope of strategic coupling, dis-embedding actors from their regions. Arguably it is the rise of the knowledge economy and the premium on competition through innovation which has driven the territorial consequences in a context made possible by globalisation. This trend is likely to continue in substantially unchanged form in the coming quarter-century, and I thus contend that the global-local paradox, and its successful resolution, will remain one of the pressing concerns for spatial strategies into the 21st century.

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