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REGIONS AS LABORATORIES
The Rise of Regional Experimentalism in Europe

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Summary:

With some notable exceptions the regional development debate in Europe has been dominated by exogenous models to such an extent that development tends to be conceived as something that is introduced to, or visited upon, less favoured regions (LFRs) from external donors, be they states or firms. Laudable though it was in social welfare terms, this kind of regional policy did little or nothing to stimulate localised learning, innovation and indigenous development *within* LFRs. Indeed, the latter were considered, and sometimes considered themselves, as passive receptacles for decisions taken elsewhere by others. In some of the most intractable regions   like Sicily and Campania for example - the problems of development are compounded by a corrupt and fatalistic political culture, where people feel themselves to be the powerless victims of circumstance, where local action seems pointless because, as the great novel of the Mezzogiorno put it, everything changes only for things to stay as they are (Lampedusa, 1960). In these inauspicious circumstances the most important item on the developmental agenda is political reform and institutional renewal.

We raise these issues at the outset because the developmental programmes we focus on in this chapter invariably stand or fall on their ability to build social capital, that is a relational infrastructure for collective action which requires trust, voice, reciprocity and a disposition to collaborate for mutually beneficial ends. This focus on relational assets is part of the institutional turn in regional development studies, a conceptual shift which has been triggered in part by growing dissatisfaction with dirigisme and neo-liberalism, the classical development repertoires which sought to privilege either state-led or market-driven processes regardless of time, space and milieu. The institutional perspective echews the bloodless categories of state and market in favour of a more historically-attuned theoretical approach in which the key issues are the quality of the institutional networks which mediate information exchange and knowledge-creation, the capacity for collective action, the potential for interactive learning and the efficacy of voice mechanisms (Sabel, 1994; Amin and Thrift, 1995; Storper, 1997; Morgan, 1997; Cooke and Morgan, 1998; Maskell et al, 1998; Amin, 1999).

In the following sections we examine these issues from a number of different vantage points: in section 2 we examine some institutional dimensions of regional development in Europe; section 3 charts the rise of a new paradigm for regional innovation policy in the European Union (EU); section 4 offers a preliminary assessment of this policy in practice, using Wales as a case study; and section 5 concludes by distilling some of the wider lessons of experimental regionalism in Europe.

1. Introduction

With some notable exceptions the regional development debate in Europe has been dominated by exogenous models to such an extent that development tends to be conceived as something that is introduced to, or visited upon, less favoured regions (LFRs) from external donors, be they states or firms. Laudable though it was in social welfare terms, this kind of regional policy did little or nothing to stimulate localised learning, innovation and indigenous development *within* LFRs. Indeed, the latter were considered, and sometimes considered themselves, as passive receptacles for decisions taken elsewhere by others. In some of the most intractable regions like Sicily and Campania for example - the problems of development are compounded by a corrupt and fatalistic political culture, where people feel themselves to be the powerless victims of circumstance, where local action seems pointless because, as the great novel of the Mezzogiorno put it, everything changes only for things to stay as they are (Lampedusa, 1960). In these inauspicious circumstances the most important item on the developmental agenda is political reform and institutional renewal[1].

We raise these issues at the outset because the developmental programmes we focus on in this chapter invariably stand or fall on their ability to build social capital, that is a relational infrastructure for collective action which requires trust, voice, reciprocity and a disposition to collaborate for mutually beneficial ends. This focus on relational assets is part of the institutional turn in regional development studies, a conceptual shift which has been triggered in part by growing dissatisfaction with dirigisme and neo-liberalism, the classical development repertoires which sought to privilege either state-led or market-driven processes regardless of time, space and milieu. The institutional perspective echews the bloodless categories of state and market in favour of a more historically-attuned theoretical approach in which the key issues are the quality of the institutional networks which mediate information exchange and knowledge-creation, the capacity for collective action, the potential for interactive learning and the efficacy of voice mechanisms (Sabel, 1994; Amin and Thrift, 1995; Storper, 1997; Morgan, 1997; Cooke and Morgan, 1998; Maskell et al, 1998; Amin, 1999).

To avoid confusion it is worth saying that the institutional perspective does not jettison states and markets from its analytical framework in favour of networks of association; rather, it claims that networks have the potential to make both states and markets more effective: in the case of the state by creating a more dynamic policy environment with which it can engage, and in the case of the market by rendering it less of a Hobbesian war of all against all in which firms are inclined towards opportunistic behaviour. For all their differences the classical repertoires of dirigisme and neo-liberalism are paradoxically at one in devaluing the significance of that panoply of intermediary institutions between state and market, such as inter-firm networks, trade associations, chambers of commerce, civic associations, regional development agencies, labour unions and the like. Prosaic as they might seem, these self-organized intermediary institutions have the potential to play a significant role in fostering learning, innovation and development among their respective members and within their respective regions because, taken together, they constitute the institutional basis for collective action.

One of the key questions in regional development today a question which resonates for theory, policy and practice is whether these interactive learning networks evolve organically,

through the repeated transactions of firms and their cognate associations, or whether they can be constructed through judicious public policy.

It goes without saying, perhaps, that core regions of the world economy are well-endowed with robust interactive learning networks, since this is one of the reasons why they became core regions in the first place. What is much more open to question, however, is whether LFRs are able to craft such networks to promote endogenous learning, innovation and development.

It is not that LFRs are without networks, but that these tend to be of a predominantly vertical and asymmetrical character, which render local institutions highly dependent upon state or corporate hierarchies, in contrast to the more dynamic, horizontal networks which tend to form around agents of broadly equivalent status and power (Amin, 1999; Morgan and Nauwelaers, 1999). That vertical networks are less helpful than horizontal networks in solving dilemmas of collective action and promoting localised learning is because:

> *A vertical network, no matter how dense and no matter how important to its participants, cannot sustain social trust and cooperation. Vertical flows of information are often less reliable than horizontal flows, in part because the subordinate husbands information as a hedge against exploitation. More important, sanctions that support norms of reciprocity against the threat of opportunism are less likely to be imposed upwards and less likely to be acceded to, if imposed In the vertical patron-client relationship, characterized by dependence instead of mutuality, opportunism is more likely on the part of both patron (exploitation) and client (shirking) (*Putnam, 1993:174).

In contrast to the classical repertoires of dirigisme and neo-liberalism, which have little or nothing to say about trust, voice and reciprocity relational assets which lubricate successful networks - the institutional perspective insists that these intangible resources merit as much attention as tangible resources (Cooke and Morgan, 1998).

In the following sections we examine these issues from a number of different vantage points: in section 2 we examine some institutional dimensions of regional development in Europe; section 3 charts the rise of a new paradigm for regional innovation policy in the European Union (EU); section 4 offers a preliminary assessment of this policy in practice, using Wales as a case study; and section 5 concludes by distilling some of the wider lessons of experimental regionalism in Europe.

2. Institutions, Innovation and Regional Experimentalism

Nowhere has the regional role in innovation been more forcefully championed than in the EU, where the European Commission is seeking to address not just the symptoms of uneven development (like high unemployment rates and low GDP per capita), but also its causes (one of which is the LFRs weak innovation capacity). The rationale for this strategy is not merely an attempt to redress inter-regional disparities in the Union, a social welfare goal; it is also an attempt to redress the EU s innovation deficit vis-à-vis the US and Japan, a developmental goal. The Commission believes that, relative to its two principal competitors, the EU has a poor record in converting its scientific and technological expertise into commercially successful products and services, a problem it attributes to shortcomings in transferring knowledge from laboratory to industry, from firm to firm and region to region, a problem of networking capacity (CEC, 1993). Although this problem varies across countries and regions on the one hand and industries and firms on the other, it is especially acute in the LFRs.

Unlike previous EU regional development programmes, which were inordinately biased towards supply-side initiatives, like infrastructural schemes for example, the new generation of regional innovation policies represents a radical departure in two ways: first, they address themselves to the demand-side problems of local firms and, second, they aim to tackle the problems of institutional inertia in the LFRs by sponsoring a new, consensus-based process of interactive learning within and between the public and private sectors (Morgan, 1997). Elsewhere we have argued that these new regional innovation policies signal a serious attempt, on the part of policy-makers and practitioners alike, to address the problems which have been identified in the institutional perspective on regional development (Morgan and Nauwelaers, 1999). In particular these new policies seek to engage with the most obdurate institutional problems (like voice-formation, cooperation and collective action) which have exercised a long line of developmental theorists from Albert Hirschman onwards.

The Art of Voice

It is a measure of Hirschman s colossal achievement that, forty years on, his work continues to resonate in development circles around the world. The definition of development which he proposed in 1958 remains as important today, for both analysis and policy, as it was when it first appeared. In contrast to the narrow and static definition offered by prevailing neo-classical economic theory, Hirschman argued that:

> *development depends not so much on finding optimal combinations for given resources and factors of production as on calling forth and enlisting for development purposes resources and abilities that are hidden, scattered, or badly utilized (*Hirschman, 1958:5).

The great merit of this conception, which treats resources as latent and conditionally available rather than outright absent or scarce, is that it directs attention to the essential dynamic and strategic aspects of the development process.

In contrast to theories which stressed the scarcity of conventional factors like capital, education and entrepreneurial skills for example Hirschman argued that these scarce factors could be reduced to one, more basic scarcity, namely the basic deficiency in organization . In particular he identified a shortage of the cooperative component of entrepreneurship which, among other things, involved the art of agreement-reaching, conflict resolution and cooperation-enlisting activity, all of which were important because the fundamental problem of development consists in generating and energizing human action in a certain direction (Hirschman, 1958;25). To unlock institutional inertia, and call forth untapped resources, this analysis highlights the need to look for what Hirschman called pressures and inducement mechanisms that might elicit and mobilise these resources for development purposes.

Although Hirschman was principally concerned with under-developed countries, his analysis remains pertinent to the innovation deficit of LFRs in developed countries, particularly as regards the role of agreement-reaching and cooperation-enlisting mechanisms. In the context of LFRs, where firms tend to see themselves in atomistic terms and where, consequently, there are low levels of social capital (eg norms of trust and reciprocity), the most significant innovation will be to develop voice-based mechanisms through which firms and public agencies can learn to cooperate to explore joint solutions to common problems.

This is easier said than done, of course, especially in an environment where low-trust and exit-centred behaviour are the prevailing norms, provoking a vicious circle in which opportunisn begets low-trust and this in turn reinforces opportunism.

The literature on trust suggests that the parties to high-trust relationships enjoy at least three important benefits: (1) they are able to economize on time and effort because it is extremely efficient to be able to rely on the word of one s partner (2) they are better placed to cope with uncertainty because, while it does not eliminate risk, trust reduces risk and discloses possibilities for action which would have been unattractive otherwise and (3) they have a greater capacity for learning because they are party to thicker and richer information flows (Cooke and Morgan, 1998).

If we accept that trust does indeed confer these benefits, this raises a question which perplexes theorists and practitioners alike, namely: how is it secured in the first place? Most of the literature on trust seems to fall into two, equally inadequate, categories. The existence of high-trust relationships is either attributed to cultural norms , which assumes precisely what needs to be explained, or it is reduced to calculative action , which exaggerates the parties capacity for gauging the precise benefits of cooperation in advance. A more useful approach would recognise that trust is neither an outcome derived from calculation nor a norm traced to culture, but a disposition which is **learned** and reinforced through successful collaboration, such that trust is a by-product of success rather than a pre-condition for it (Powell, 1996).

Building trust therefore requires a constant dialogue between the parties so that interests and perceptions can be better aligned. Here it is worth revisiting Hirschman s concept of voice, which he defined as any attempt to change, rather than to escape from, an objectionable state of affairs (Hirschman, 1970:30).

Although exit and voice tend to be seen as alternative reaction mechanisms to institutional problems, Hirschman was quite clear that they could also be complementary, in the sense that the voice option is strengthened by the threat of exit. However, voice would seem to be the richer of the two mechanisms because once you have exited, you have lost the opportunity to use voice, but not vice versa; in some situations, exit will therefore be a reaction of last resort after voice has failed (Hirschman, 1970:37). While exit seems to be the less costly, and more flexible option, it is not without costs: for example, it is difficult to see how firms can forge interactive learning relationships with their suppliers if they are forever switching from one to another for the sake of short term cost savings. In other words the costs of voice, like reduced flexibility, need to be balanced against the benefits, like the greater potential for interactive learning.

Hirschman s original formulation has been rightly criticized for assuming that voice is a ready alternative to exit, a criticism he later accepted along with the charge that there are other reactions besides exit and voice, like passivity, resignation and withdrawal (Hirschman, 1986). Far from being readily available, voice-formation requires investment, of both time and resources, if it is to be a viable alternative to exit. Whereas exit involves a clean break, voice is essentially an **art** constantly evolving in new directions (Hirschman, 1970:43).

Contemporary theories of learning, innovation and development continue to grapple with the problems identified by Hirschman, particularly the problem of voice-formation. Recent examples would be Sabel s work on learning by monitoring , which highlights the role of **discussion** as the process through which parties come to reinterpret themselves and their relation to each other by elaborating a common understanding of the world (Sabel, 1994). Then there is Piore s hermeneutic perspective, where the problems of orchestration and cooperation are likened to a series of intersecting **conversations** in which the key issues are who talks to whom and what they talk about (Piore, 1995). Finally, Storper has emphasised the significance of soft factors, like **talk** and **confidence**, in building the relationships of the institutionalised learning economy (Storper, 1997).

Storper tentatively suggests that, under certain conditions, talk and confidence are more likely to succeed when they are geographically localised and that small, repeated and low cost experiments can help to induce interactive learning between parties in an environment which has hitherto been characterised by distrust or antipathy (Storper, 1997).

These issues lie at the heart of the regional innovation experiments which are taking place in Europe today, and these carry implications far beyond the confines of the regions directly involved in this process of experimentation (Sabel, 1995; Cooke and Morgan, 1998).

Devolution and Regional Experimentalism

Even if we accept that discussion, talk and conversation are important for building relational assets, this still leaves unresolved the question as to who is to assume the responsiblity for animating these conversations and for deciding who talks to whom and what they talk about? In principle this role could be performed by regional development agencies, chambers of commerce or even a large, locally hegemonic firm, though none of these organizations commands the political legitimacy nor the moral authority of a democratically elected regional government (Morgan and Nauwelaers, 1999). Piore is in no doubt where the responsibility for this task lies:

> *The role of public policy and political leadership is to orchestrate those conversations, initiating discussions among previously isolated groups, guiding them through disagreements and misunderstandings that might otherwise lead conversation to break off, introducing new topics for discussion and debate* (Piore, 1995:138).

Although this assumes that the public authorities in the region are competent to fulfil this role of animateur, a truly heroic assumption in some LFRs, it nevertheless helps us to understand that devolution to regional tiers of the state is important for developmental purposes principally because it creates the opportunity for orchestrating more meaningful discussions and conversations between public and private sectors within the region. The regional level is now deemed to be an important arena in which to design and deliver policies to foster learning, innovation and development because it is said to be the basic level at which there is a natural solidarity and where relations are easily forged (European Commission, 1995). While this may be broadly correct, the main problem with such a view is that it naively assumes that spatial proximity is a sufficient condition for forging interactive learning networks, when the evidence suggests that these have to be actively constructed through conscious and painstaking efforts on the part of firms and public agencies (Cooke and Morgan, 1998).

Suitably empowered, however, the regional level would seem to possess two potential assets which make it a suitable level at which to engage in the kind of support envisaged by the Commission. First, it is able to act on **local knowledge**, part of which is tacit, concerning the calibre of firms, the formal and informal linkages between them, the quality of the labour force and the capacity of the institutions which deliver technical, commercial and training services. Second, the regional level is perhaps the most appropriate for building **social capital** because this is the level at which regular face-to-face interactions   one of the (necessary) conditions for trust-building   can be sustained over time. The literature on trust and cooperation suggests that these are more likely to occur where there is a strong possibility that the agents will meet again, in other words where the shadow of the future looms large over the present (Luhmann, 1979; Axelrod, 1984).

What needs to be emphasised, however, is that these are potential assets which need to be mobilised through conscious political action because, contrary to what the Commission seems to think, they do not exist in some primordial form at the regional level.

These assets will need to be utilised if LFRs are to develop more effective systems of enterprise support services because, at the moment, they fail to touch some 80% of the SME population in the EU (European Commission, 1995). Low service take-up is related to the fact that most services are are dleivered in a crude supply-side fashion by an enterprise support industry that finds it easier to offer a standard menu of services which has been designed for, rather than with, local firms. Indeed, in some cases the priorities of regional service providers are radically at odds with the priorities of the firms in the region, a fatal mismatch which suggests that the former are more interested in working to their own agendas.

The problems of supply-side bias and standard service menus also reflect the fact that public agencies in LFRs often lack the skills to engage in interactive service provision, one reason why they have a credibility problem vis-à-vis the corporate sector (Morgan, 1996). The challenge of interactive service provision, in which the aim is to develop services *with* rather than for local firms to enhance the latter s absorptive capacity, cannot be met through traditional supply-side regional policy; that is to say, technology centres and the like are not likely to resolve the innovation deficit in LFRs if local firms are unable or unwilling to utilise these services   the cathedrals in the desert syndrome. Hence one of the most important tasks in LFRs is to stimulate conversations between providers and users to ensure that enterprise support services are driven by the requirements of local firms rather than the bureaucratic needs of the delivery agencies. Regional experimentalism, which aims to alleviate these problems by stimulating new and more purposeful conversations, can play an important part in overcoming the crisis of regional institutions that currently accompanies and echoes the confusion in the firms it is meant to address (Sabel, 1995). To be effective, however, the lessons of regional experimentalism need to be acknowledged and disseminated by national and supra-national authorities in the EU, a point to which we return in the final section.

3. *Experimentalism in European Regional Policy*

One of the clearest expressions of regional experimentalism in policy terms can be found in Article 10 of the European Regional Development Fund (ERDF). Despite accounting for less than 1% of a total ERDF budget of 70 billion ECU for the period 1994-1999, Article 10 funds have been responsible for some of the most innovative policy initiatives to emerge in Europe in recent years[2]. Unlike conventional mechanisms for distributing EU regional policy funds - development programmes negotiated with Member States - Article 10 provides an opportunity for the EU to help establish its own innovative regional pilot studies. That is, Article 10 opens up the possibility for the European Commission to draw upon lessons from policy experiments across European regions and work directly with regional actors to explore new support measures. In addition, and perhaps most importantly, Article 10 also allows for a greater degree of *risk taking* than is typically possible through mainstream EU regional development programmes.   This lack of innovation has been particularly evident in the Monitoring Committees charged with overseeing development programmes at the regional level.

For the most part the expertise of Monitoring Committees reflects the old regional policy era, when traditional infrastructure was the order of the day, rather than the new regional policy era, which is more concerned to promote innovation, the environment, human resources and equal opportunities.

It is worth remembering, however, that while Article 10 provides the means for the EU (in collaboration with regional institutions) to experiment with new policy initiatives, it does not do so in an overly prescriptive manner.

Instead, Article 10 relies on the principle of helping regions to help themselves through initiatives designed to mobilise local knowledge in a process of collective social learning. The philosophy of Article 10 can therefore be summarised in the following terms (Messina, 1997):

> Article 10 is designed to be an experimental laboratory
> its aim is to promote the innovative dimension of regional policy
> it seeks to promote partnership between the private and public sectors
> it enables the internationalisation of regions and local authorities
> it aims to facilitate the transfer of know-how in the technical, economic and scientific fields between the regions of the EU
> the positive results of Article 10 projects should be incorporated in conventional regional policies

In addition to these factors, it should also be noted that Article 10 not only provides an opportunity for the European Commission to engage in policy-related learning; its operating mechanisms also provide a powerful impetus for regional authorities to think strategically about the needs of companies and about the appropriate role for public sector intervention. In this sense then, Article 10 aims to set in train a series of interactive intra- and inter-regional learning processes. These features, we argue below, have been particularly evident in the recently established Article 10 programme: Regional Innovation Strategies (RIS).

The origins of the RIS programme can be seen in the context of the growing realisation that Europe's most prosperous regions have succeeded in appropriating the overwhelming share of EU science and technology resources, the so called Framework Funds. The Commission's own estimates, for example, suggest that some 50 per cent of all research and technological development (RTD) funds have been concentrated in just 12 'islands of innovation' - Amsterdam, Rotterdam, Ile de France, the Ruhr, Frankfurt, Stuttgart, Munich, Lyon, Grenoble and Turin (European Commission, 1996). The explanation for this disparity is to be found in the Commission's use of the principle of 'scientific excellence' - traditionally lacking in LFRs - to guide the distribution of funds. EU policy, in this respect then, has tended to exacerbate rather than redress the socio-economic disparities found in the EU.

In response to these problems, the European Commission's Regional Policy Directorate (DG XVI) launched the STRIDE (Science and Technology for Regional Innovation in Europe) initiative in 1990. In broad terms this programme attempted to address many of the main barriers responsible for poor LFR participation in EU research programmes.

More specifically STRIDE represented an attempt to build innovation and institutional capacity in LFRs by providing assistance for strengthening technology, innovation and research infrastructure, participation in national and international RTD programmes and co-operation between industry and RTD centres.

STRIDE, however, was faced with a number of formidable obstacles to achieving this goal. In particular, follow-up assessments have found that the most peripheral (so-called Objective 1) regions were unable to mobilise sufficient private sector input into projects. Moreover, most sought funds for physical infrastructure at the expense of 'soft' measures intended to foster links or promote training. For Landabaso (1997), the source of these weaknesses can be traced back to two main areas. First, many LFRs lacked understanding of innovation as an interactive process. This led regions to over-invest in university 'science' projects, assuming that this would automatically feed through into the industrial environment. Second, organisations in LFRs lacked the skills and expertise necessary for some of the 'network building' projects supported by STRIDE.

Despite its limitations, STRIDE is now recognised as an important learning experience by DG XVI (Landabaso and Reid, 1999). The Commission learnt, for example, that supporting innovation within LFRs was not simply a matter of providing funds for RTD projects. Rather, they recognised that policies should focus on a more broad-based conception of innovation in terms of managerial skills, quality standards and organisational capacity. They also identified a greater need for new forms of institutional co-operation to design and deliver innovation policies adapted to local circumstances.

These insights formed the basis of the European Commission's successor to STRIDE, launched in 1994 under the name Regional Technology Plan (RTP). The main objectives of the RTP exercise were twofold. In the first place it was designed to encourage LFRs to develop a regional innovation process, in which the regional stakeholders were enjoined to define a commonly agreed, bottom-up strategy attuned to the nuances of their regions. Second, it was hoped that the RTP would provide a framework in which the recipient regions and the Commission could jointly agree a more optimal strategy for future investments in RTD initiatives at the regional level.

The RTP was not, however, viewed as a one-off study; rather it was seen as first and foremost a strategy-making process which could foster dialogue between regional actors. In doing this the Commission anticipated that the exercise might help regional institutions better understand the needs of firms and thereby 'gain experience of interacting between the business community, the public sector and the RTD community by means of stable, informal channels of contact through discussion groups...[thus] establishing a strategic planning *culture* at the regional level' (European Commission, no date). In this sense, RTP was viewed as a vehicle not only for outlining a 'framework for decision making', but also to set precedents and build trust amongst regional stakeholders.

The practical content of the RTP strategy-making process, as set out in the Commission's guidelines, is summarised in table 1 below. It should be noted, however, that these points are indicative; indeed the Commission strongly advised regions to adapt them to their particular circumstances (European Commission, 1997).

Table 1 Key themes of the RTP strategy development process

Theme 1: Assess the strengths and weaknesses of regional firms' RTD capacity and specify their needs, both expressed and latent, for innovation-related services.

Theme 2: Identify the key technological and industrial trends affecting the regional economy so as to determine threats and opportunities.

Theme 3: Analyse and assess the region's RTD supply-side infrastructure to determine the degree of 'fit' with the expressed needs of regional firms.

Theme 4: Define the orientations of the main institutional actors with the aim of creating a shared diagnosis of the problems and a widespread discussion of what priorities ought to be addressed in the RTP exercise.

Theme 5: Have the Steering Group, which should be drawn from as wide a constituency as possible, define and disseminate the strategic priorities of the RTP programme and to explain how these are to be met in practice.

Theme 6: Establish a system for continuous monitoring and evaluation so that the main actors have regular feedback on problems as and when they arise.

Source: European Commission, 1994

4. The RTP and RIS exercises: collective learning in practice?

The RTP programme was formally launched in June 1994. Eight regions were selected to pilot the exercise: Limburg (Netherlands), Lorraine (France), Saxony-Anhalt (Germany), Wales (UK), Castilla y León (Spain), Central Macedonia (Greece), Norte (Portugal) and Abruzzo (Italy). In 1996 the exercise was further expanded to include an additional nineteen regions through an open call for proposals. At this point the exercise was renamed RIS in an attempt to encourage regions to pay more attention to the non-technological aspects of innovation. The budget for the RIS exercise now amounts to a maximum of 500,000 ECUs per region, of which 50% is funded by the Commission. The main focus of the discussion below is to explore the extent to which the RTP exercise has been able to stimulate these collective learning processes in practice. In doing this we draw on our experiences of the Wales RTP pilot, an exercise in which we participated as members of the Steering Group. We also provide some

early indications of the relative progress of the Welsh exercise in the light of recent studies from other RIS regions (Tsipouri, 1998; Morgan and Nauwelaers, 1999).

For many years Wales has struggled to cope with the decline of its once dominant coal and steel industries. This period of industrialisation was associated with high levels of social and environmental degradation in the region's industrial heartlands, and crucially, with an underdeveloped indigenous business class (Williams, 1980).

In an attempt to redress these problems, regional policy has been in operation, with varying degrees of success since the early 1930s. A conspicuous feature of these efforts has been the attraction of a large number of inward investors. This strategy, in part, has helped to contribute towards the development of a more diversified economy based on manufacturing and services. Yet despite the recent success in encouraging investment from companies such as Bosch, Sony and LG, and the claims made by several commentators that the region is experiencing somewhat of an economic renaissance, Wales continues to suffer from a number of major structural problems. These include low economic activity rates, below average GDP per head, and a low position in the UK regional wages league table.

In the light of these persistent weaknesses the Welsh Development Agency (WDA) and other support institutions have in recent years begun to experiment (alongside their long-standing inward investment activities) with a range of networking initiatives designed to increase the capacity of indigenous companies to innovate. A prime example of these new departures in regional policy is the EU-sponsored Wales Regional Technology Plan.

In many respects Wales represents an important case-study of the RTP repertoire, not least because it was the first region to petition the European Commission for a regional innovation programme. The region was also actively involved in the early discussions which helped shape the practical content of the programme (Henderson and Thomas, 1999). More recently it has been held up as a model of best practice by the European Commission (see, for example, European Commission, 1998; Arnold et al., 1998). In short, the early stages of this process centred on three main research activities: *desk research*, bringing together various reports and papers on the Welsh economy, its innovative capacity and so on; 350 *Technology Audits* and a *survey of innovation and technology support infrastructure*. Together these elements provided the means by which the Steering Group were able to begin to develop an understanding of the main innovation issues facing firms in Wales. An important part of the process, however, was the 'testing' of these findings with regional firms and support organisations, and exploring, interactively, appropriate solutions.

Feedback from the early research activities was sought in two main ways. First, over 30 *Panel discussions* were held between February and November 1995 with representatives from industry, local government, higher and further education, schools, enterprise agencies, development bodies, trade unions and government. Panels were organised in consultation with regional support providers and brought together existing networks (client groups, for example). The objective here was to encourage *talk* around the key issues and trends facing Wales, and to identify potential responses. In addition to discussions, a special 'one-off' international experts meeting was held to review the RTP process, analysis and conclusions. This was viewed as an important mechanism to guard against parochialism, by seeking an

outside perspective on the RTP.   Many of the experts present at this meeting were, themselves, also involved in RTP exercises elsewhere in Europe.

For this reason the panel helped to further support informal networking amongst RTP regions, as well as allowing participants to benchmark progress and exchange experiences. The value of this exercise has been highlighted by the fact that it is now part of the Commission's guidelines to RIS regions (European Commission, 1997).   The second aspect of the consultation exercise in Wales was the production, distribution and presentation of a Consultative Report (WDA, 1996a).

This outlined, in some detail, the main innovation issues, possible priorities and projects identified through the research and panel meetings. It was launched in January 1996 and circulated widely to firms, organisations and key individuals across the region. In response, well over a 100 organisations provided feedback.

The culmination of the relatively exhaustive consultation process - involving over 1000 organisations - was the launch of an Action Plan in June 1996 by the Secretary of State for Wales (WDA, 1996b). This set out details of 6 priority areas and some sixty-six 'committed' projects where support had been obtained from regional organisations. Of these, the Plan designated a number of 'Flagship Projects', each associated with particular priority areas[3] (see table 2 below). It was envisaged that these would be implemented in the period immediately following the launch of the Action Plan.

Table 2 Priorities and Flagship Projects for the Wales RTP

A culture of innovation is vital for personal and economic success

The Welsh Innovation Challenge: a project to integrate existing innovation award competitions, providing a national profile with improved promotion, publicity and assistance with commercialisation.

Wales must profit from global innovation and technology

The Welsh Optoelectronics Forum: a project to help expand the international networking activities of the region's optoelectronics group.

Companies learn best from each other, therefore supply chains and networks are crucial

Innovative Teaching Company Schemes: an extension of the successful Teaching Company Scheme (technology transfer from the university sector to industry via a two-year graduate placement) to enable companies in particular supply chains address a common innovation need.

Finance for innovation must be readily available in Wales

Technology Implementation Funding Programme: a project to identify technology and innovation needs in SMEs and provide part-funding for the acquisition of new technology and consultancy for technical problem-solving.

High quality business and innovation support is essential for Welsh companies

Support Centres for Information Technology and Multimedia: establishment of centres to provide demonstrations of and access to information technology.

Education and training for innovation and technology are vital for the Welsh economy

Bargaining for Skills: a project to assist employers and trade unions in working towards training goals.

Source: WDA (1996a)

While the publication of the Action Plan marked the formal completion of the EC-funded exercise, many elements of the RTP process in Wales have continued to operate in the subsequent period. In particular, the Steering Group has remained in place to ensure that the momentum built up during the RTP was not lost. Perhaps the most significant activity undertaken by the Steering Group in recent years has been to 'revisit' the objectives and priorities set out in the original Action Plan. This monitoring and evaluation exercise, in part, emerged from the growing feeling that the original target of establishing 'a consensus on a

strategy to improve the innovation and technology performance of the Welsh economy' (WDA, 1998) had largely been met.

It was also a product of the 1997 Devolution Referendum which resulted in the establishment of the Welsh Assembly, and the decision to merge the WDA, Land Authority for Wales and the Development Board for Rural Wales in a new 'economic powerhouse' for Wales. These factors, the Group anticipated, could lead to the RTP being 'sidelined' to more immediate concerns within Wales' new institutional structures.

In response to these concerns the Steering Group established a new review process to provide the basis of a revised 'RTP 1998' which could determine progress and contribute towards this strategy debate. In a similar way to the consultation activities which supported the first Action Plan, RTP 1998 sought to generate an iterative and interactive process of discussion and knowledge exchange amongst a broad range of regional organisations.
This incorporated a series of some thirty meeting with over 600 individuals, and largely confirmed the validity of the main priorities set out in table 2 above (WDA, 1998). The review, however, also highlighted the need to further communicate the RTP objectives and priorities to the innovation and technology support community.

How, then, can we assess the Wales RTP exercise? With formidable objectives such as the generation of an innovative culture in Wales, it seems clear that many of the outcomes of the RTP Wales exercise are unlikely to be short-term in nature. A consistent theme from our research (Morgan, 1997; Henderson and Thomas, 1999) however, is that whatever the long-term impact of the RTP and its associated projects, participants feel that the strategy-making process itself has already been a valuable exercise. These benefits primarily fall into three main areas: acquiring a better understanding of the innovation process, best-practice support structures and the needs of firms; new interactions and relationships between regional support organisations; and more inclusive regional policy-making routines in the field of innovation.

Beginning, then, with the claim that the Wales RTP has been able to build new insights and awareness. This process was most evident in the use of interactive activities such as Steering Group meetings, panel discussions and so on, allowing many firms and support institutions to be exposed to new ideas about the needs of firms and the efficacy of different policy mechanisms. Engagement in the process also helped institutions to acquire important empirical confirmation for previous ideas. Participation in the RTP, however, did not simply produce 'cognitive' insights. Many organisations had already begun to *act* on these new understandings, translating them into new forms of organisational activities and behaviour. This was evident in the way that RTP had encouraged the Welsh Office, WDA and DBRW to frame new strategy documents.

The WDA, for example, have now taken the decision to use the 6 priorities of the RTP as a guide for its business development programmes for the period 1998 to 2001. This is likely to ensure that future initiatives are designed with RTP priorities in mind.

Yet while it seems clear that the RTP has helped to raise awareness and understanding of the innovation process amongst innovation and technology support institutions in Wales, a key

question yet to be resolved is whether the ideas contained within the RTP have actually been diffused sufficiently beyond the individuals and organisations represented at the Steering Group level.

To answer this question fully would require more research; but if nothing else the RTP does appear to have forced many key regional actors to (re)consider their operational priorities in the light of the issues raised during the process. Whether this learning process ultimately brings about a business support system more in tune with the 'real' needs of firms, though, will be a product of the ability of Steering Group members and other regional actors to bring more depth to the process by communicating it further.

Moving on to the second main aspect of the RTP 'learning process' identified above: the creation of new interactions and relationships between regional support organisations. Here, RTP Wales made specific efforts to ensure a regional consensus by encouraging interactive dialogue between a wide cross-section of actors. Particularly important was the role of the Steering Group, which provided a 'seedbed' in which many organisations were able to foster such linkages and utilise them in other areas of their work. In this respect the RTP Steering Group and other interactive events represented fora for setting precedents and building confidence between regional actors. An interesting example of relationship-building and learning between support actors occurred during an RTP seminar held specifically for the region's higher education industrial liaison officers (ILOs).

This two-day event represented the first occasion that ILOs from all areas of Wales had been brought together. As such it was widely recognised by participants as a constructive and valuable exercise in terms of learning about each other and helping to encourage stronger bonds within the sector. In particular, the event succeeded in producing a remarkably objective and open discussion about both individual institution and collective weaknesses in innovation support. It also generated discussions about the possibility of organising an electronic forum to facilitate networking in the future. More recently the RTP has begun to implement a range of networking programmes (set out in the Action Plan) designed to stimulate innovation. It is perhaps here, then, that the exercise has the greatest *potential* for generating new interactions amongst firms and between firms and support institutions.

The third domain in which the Wales RTP has impacted on learning processes has been its role in embedding more inclusive regional policy routines. Indeed, amongst many participants there is widespread agreement that the RTP has represented an important break from the past in terms of strategy-making exercises. Perhaps the most prominent example of this has been the way it has shaped the revision of the most recent EU regional development programme for south Wales.

This marked an important change because it allowed the programme, for the first time, to be developed on the basis of a systematic assessment of needs and consensus. Such was the perceived strength of this process, that the regional Monitoring Committee felt sufficiently confident to increase the amount of funding for the 1997-1999 programme devoted to innovation measures.

Outside the region's EU development programme the impact of the RTP process has also been felt in other strategy-making exercises in the region. Notable, here, has been the 'spill-over' effect on the Wales Information Society[4] programme launched in July 1997. This has adopted a similar inclusive and interactive learning approach to strategy-building (Osmond, no date). It has also incorporated several individuals from the RTP's Management Unit and Steering Group in an attempt to transfer some of the skills and capabilities acquired during the process. Elsewhere the recent RTP consultation exercise has also revealed the desire, on the part of organisations in mid and north west Wales, to explore the possibility of establishing sub-regional strategy exercises to complement the all-Wales RTP. These developments have been acknowledged in RTP 1998, which includes a further pledge to 'work with local authorities, the private sector, Training and Enterprise Councils, the 'economic powerhouse', higher and further education and others to relate the RTP to local needs and circumstances' (WDA, 1998).

It is difficult to say, yet, whether these experiences represent a shift towards the new, inclusive 'culture of strategic decision making' anticipated by the European Commission. Indeed, the recent work of Phelps et al. (1998) suggests that in the area of inward investment promotion there is just cause for caution, not least because of the hierarchical and selective nature of strategic collaboration evidenced in the attraction of the LG plant to Wales, the largest inward investment project in Europe. What our research has revealed, though, is a broad desire for the *future* (regional) policy of the Welsh Assembly to adopt a philosophy of inclusive interactive learning.

Before moving on, it is important to try and set the Wales RTP experience in the wider context of RIS exercises undertaken elsewhere in Europe. The first point that should be made here relates to the diversity of regions and institutional terrains in which RIS exercises have been established. Perhaps unsurprisingly, given the bottom up, locally-attuned nature of the exercises, this diversity has produced wide variations in the nature of the processes and subsequent efforts to implement the strategies.

Many, for example, were led by institutions with a high degree of regional autonomy. Others with less autonomy, however, relied on leadership from local actors such as universities, development agencies and so on. Likewise, process activities varied across participant regions. This was most evident in the timing and arrangements surrounding the research, consultation and implementation activities in each region. What subsequent research has revealed, however, is that few RTP or RIS regions have adopted the rather linear process anticipated in the Commission's guidelines (Nauwelaers et al., 1996). Indeed, most have been characterised by high levels of overlap and feedback between the various activities.

Thus, in Limburg, for example, pilot projects were implemented early on in the process, alongside discussion and research, as a means of demonstrating intent and providing experimental feedback on particular project mechanisms which could later be implemented. Others, like Wales, however, chose to view implementation as the end product of a lengthy series of discussion and consultation exercises. In the light of this diversity it seems clear that we should talk not of a single, best practice model, but of rich diversity and context specificity.

Fortunately, this insight has been weaved into the first major independent evaluation to be undertaken of the RTP and RIS exercise (Arnold et al., 1998).

In short, the results of this study suggest that gains can invariably be divided into two main areas (broadly corresponding with our earlier framework used in the Welsh case-study): first, the creation of a regional forum that improves informal rules and facilitates consensual policy-making; and second, the adoption and implementation of new forms of needs based innovation policy. According to Tsipouri (1998) most of the participant regions have managed to achieve the first outcome, while only a handful have been able to succeed in terms of the second. In this respect, then, it is probably best to say that the programme has enabled most regions to build capacities in the form of relational assets, knowledge acquisition and new thinking. It is less clear, though, whether other regions have been able to achieve results, in terms of shaping the activities and strategies of support institutions, in the way Wales has been able.

The findings of the EU evaluation conclude by suggesting that the RIS exercise tends to work best in regions which have a high degree of regional autonomy. This, it is argued, can enable regional administrations (as participants in the exercise) to plan and implement priorities without conflicting demands and barriers from the national level. In the absence of this link between the strategy and policy-making, the exercise has been short-circuited in a number of regions. In Lorraine, for example, Nauwelaers (1999) has described how despite facilitating an intra-regional learning process, the strategy largely became subsumed within a broader national policy agenda in a way which diluted both its scope and emphasis.

A more general feature of the RIS planning process was its inability to ensure that poorly performing institutional structures and policy routines were addressed. Instead, in many cases RIS exercises tended to favour current activities, actors and regional priorities (Tsipouri, 1998). In Wales, for example, this was evident in the way that emphasis was given to working with existing resources and actors to understand the needs of firms, while relatively little attention was given to restructuring or terminating poorly performing or unnecessary initiatives. The explanation for this weakness rests with the presence of pre-existing policy communities and institutions and the need for RIS to build inclusive support for the exercise. These factors, together, can create the conditions in which the discussions within a RIS exercise become limited to incremental rather than radical changes in structures and priorities.

A further issue highlighted in the EU evaluation was that gains from the RIS process tended to be easier to achieve (and detect) in those regions which embraced the ethos of experimental learning.

That is, those regions which saw the exercise as an opportunity to facilitate new linkages and learning between actors, rather than simply a source of funds for existing activities, were likely to achieve most from their RIS exercises. This is perhaps an obvious condition, but one which nonetheless contributed towards the failure of a number of exercises to either mobilise

significant regional support, or produce a workable strategy document at the end of the 18 month period (Tsipouri, 1998). This attests to the fact that economic development problems can often be deeply ingrained, requiring much longer time frames to build sufficient relational assets.

Despite these potential areas of weakness, it seems clear from our own experiences and recent evaluations that RIS holds significant promise for LFRs. The outcomes possible through this programme, however, are not necessarily those of traditional regional policy; instead they appear to be primarily centred around softer intangibles such as trust, reciprocity and the resulting institutional routines. In addressing these issues further, we now move on to examine the wider implications of these new departures in EU regional policy.

5. Conclusions and Implications

In this chapter we have argued that a radically new kind of regional policy is emerging in the EU in which the accent is on collective learning and institutional innovation rather than upon basic infrastructure provision. We have also argued that these new regional innovation policies signal the most determined effort to date to build social capital, by which we mean a relational infrastructure for collective action predicated on trust, reciprocity and the disposition to collaborate to achieve mutually beneficial ends. In short this constitutes a form of regional experimentalism which aims to create mechanisms and structures through which local agents can begin to develop new and more purposeful conversations about joint solutions to common problems as a prelude to building more robust and more sophisticated forms of institutionalized voice. Modest as they are, these are nevertheless important steps in institutional capacity building for regions which have hitherto looked almost exclusively for exogenous solutions to their internal problems.

In these small regional experiments we can begin to discern a new and more innovative form of governance, the hallmarks of which are interactive, associational and network-based, rather than hierarchical or market-based, the respective governance modes of dirigisme and neo-liberalism. In other words regional experimentalism is concerned not with the scale of state intervention but its mode, not the boundary between state and market but the framework for effective interaction. In associational governance structures, therefore, public and private agents are esteemed primarily for their competence in the network rather than their status in the hierarchy or their power in the market. In this context the debilitating division of labour between conception and execution, between design and delivery, is breaking down as a result of interactive service provision, where services and projects have been jointly defined in an iterative process of producer-user engagement, a process which transcends the impoverished debate as to whether services should be demand-led or supply-driven (Morgan, 1996).

The wider lessons of these regional innovation pilot projects, particularly as regards how to design, deliver, monitor and evaluate, have been compiled in a collective memory bank of good practice in Europe so that regions embarking on the process for the first time can draw on the practical experiences of the pioneers (European Commission, 1997).

These lessons can seem prosaic in the extreme when taken in isolation (like who should assume the lead role in project management, which organizations should be represented on the Steering Committee and how should they report to their constituencies to ensure accountability) but, for regions which have never embraced an associational governance structure, which requires an interactive and consultative policy-making process, these lessons can be invaluable sources of knowledge that simply do not exist in the regional milieu.

Although regional experiments like the RTP and the RIS have triggered some encouraging institutional innovations in their targeted regions the key question which needs to be posed is what constitutes success? To answer this seemingly simple question we need to remember that the ultimate aim of these new regional policies is to raise the innovative capacity of the LFRs and this is necessarily a long term process. Having said that, however, there is one short-term indicator which can be used to monitor the value of these regional experiments and that is the extent to which the key participants, especially the firms, remain involved in a process which they find rewarding even when they are unable to quantify the benefits of involvement because of the intangible nature of these benefits.

This is a useful political indicator of success inasmuch as it signals the collective commitment of the regional stakeholders to an important precedent, namely that the trajectory of development can be shaped through purposeful conversations within the region. On its own, however, this indicator could conceal as much as it reveals if the conversations are a facade for an incestuous, self-referential club of regional notables, in other words not a new beginning but an aimless huddling of elites (Sabel, 1995).

To overcome this danger we need a series of other indicators to assess longer term changes in innovation capacity. Here we can usefully distinguish between linear indicators, which focus on hard outputs (like patents filed, R&D expenditure, level of new product development, workforce qualifications and the like) and interactive indicators (which aim to measure soft processes, like institutional linkages, network formation and information flows etc).   The latter can capture important changes in a region s institutional architecture which are beyond the grasp of more conventional linear indicators (Nauwelaers and Reid, 1995). The first evaluation of the RTP exercise suggests that certain regions, Limburg, Wales and Central Macedonia in particular, have achieved some real success with respect to interactive indicators, though it is too soon to expect much progress on the linear indicators (Arnold et al, 1998).

Another danger is that these new regional policies (which aim to raise innovation capacity) might be judged by the standards of the old regional policies (short-term job creation) and get prematurely jettisoned because they fail to meet these standards. To avoid this danger we need to be clear that more innovation does not necessarily mean more jobs; indeed, some forms of innovation, like process innovation for example, can be job-displacing.

The point to establish here is that innovation-oriented regional policy needs to be flanked by, and complemented with, job-creating regional policy because LFRs need to become more innovative and more cohesive (Morgan and Nauwelaers, 1999). The LFRs cannot regenerate themselves solely through their own efforts, hence regionalists need to appreciate the continuing significance of the national state, particularly in the field of cohesion. This point was

underlined by the European Commission when, referring to the role of member state policies, it said that solidarity in the Union begins at home (European Commission, 1996).

Regional innovation policy, as expressed in the RTP and RIS programmes, clearly has its limits. At present these programmes are small-scale, low-budget experiments which have yet to be fully mainstreamed even in the regions which have pioneered them.

To be effective, therefore, such programmes need to be taken up and extended by national and supra-national authorities in the EU, otherwise they might atrophy for lack of scale and resources. For all that, regional experimentalism might have some lessons for the higher echelons of the state,   particularly as regards governance structures and policy-making processes, where politicians and officials too often think of themselves as tutors rather than learners.

In the UK, for example, one of the government s top civil servants has launched an unprecedented critique of the policy-making process, calling for structures and processes which are uncannily like regional experimentalism. Among other things he argued that policy-making was too hierarchical, too adversarial and insufficiently creative in large part because of the debilitating division between the design and delivery of policy and because officials, too keen to defend turf, often failed to seek knowledge and ideas from outside government (Bichard, 1998).

The European Commission itself is not exempt from such criticisms and it, too, could benefit from some reverse learning by emulating the interactive governance structures and processes pioneered by the regional experiments it has actually sponsored. In the face of the most momentous changes in its history   like the deepening of the Union through economic and monetary union and the widening of the Union through enlargement   the European Commission will have to give greater weight to the principle of subsidiarity, which aims to devolve decision-making to the lowest practical level. The effectiveness of this multi-layer governance system will depend in no small way on each level   regional, national and supra-national   respecting the competence of the others and recognizing their systemic inter-dependence. In other words the successful evolution of this system will depend on how it resolves the tension between the traditional conventions of hierarchy and the new associational practices of regional experimentalism.

Footnotes

[1] A good illustration of this point comes from Naples, the unemployment capital of the Mezzogiorno, where Antonio Bassolino won the election for mayor on a programme which called for a normal and legal city .

[2] In areas such as interregional co-operation, technology for regional development, regional planning and urban policy.

[3] The concept of Flagship projects was one of the suggestions made by the international experts panel.

[4] Part of another EU programme (Regional Information Society Initiatives) funded through Article 10.

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