5. European innovation policies from RIS to smart specialization: a policy assemblage perspective

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1. INTRODUCTION

Policy initiatives such as regional innovation strategies are strategically and selectively infused by rationales and imaginaries that resonate with major political and societal shifts. A core example is how the transition from spatial Keynesianism to neoliberal thinking has been accompanied by a discourse of the 'knowledge-based economy', overpowering the more socially oriented notion of the 'information society'. Using the notion of policy assemblage, this chapter advocates a more complex and political reading of the role of rationales and imaginaries. Undertaking an analysis of four decades of regional innovation policy in Europe, we show how a variety of concerns, notably around competitiveness, sustainability and cohesion, have all made their inroads into the substantiation and legitimization of innovation policies. In doing so, we pay attention to the way innovation policies have been shaped by the continuous (re)imagination of European, national and regional spaces in terms of developmental ambitions.

The last four decades have witnessed the rise, peak and modification of regional innovation policy. This is especially noteworthy in Europe, where the EU has taken a leading role in the development and proliferation of innovation-oriented policy ideas and practices. The evolution of EU regional innovation policy has been marked by a number of major trends and shifts. Underlying development perspectives have moved from Keynesian to neoliberal approaches; policy perspectives took on board academic notions of learning and the building of institutional capacity; in terms of governance, a direct nexus was created between the EU and the regional level.

This chapter will discuss this process of evolution by applying a policy assemblage perspective. The concept of assemblage draws on French

post-structural thinking (Anderson and Harrison, 2010; McFarlane, 2009), and has recently been interpreted from a more realist stance by DeLanda (2006). A key point in assemblage theory is that, as a whole, assemblages have capacities that are more than the sum of the capacities of their components. In turn, in becoming part of an assemblage, the components – resources, agents, ideas and so on – retain a spectrum of potentialities and capacities that transcend their specific role in the assemblage. In other words, they continue to present an (often unexpected) source of development as well as change. In assemblage theory, social phenomena do not fall into place according to some predestined design or principle, but they result from hard work invested in producing a more or less coherent whole.

The assemblage perspective is particularly helpful in accounting for the performativity of core concepts and ideas, as well as for shedding light on the complexities of creating effective and legitimate forms of policy practice. Policies consist, on the one hand, of tangible components, that is, concrete measures, budget and resources, domains, rules and procedures, demarcated times and places of action and so on. On the other hand, policies tend to be infused and justified on the basis of less tangible, more fluid aspects, such as prominent ideas and discourses, images and expectations. By thinking in terms of 'policy assemblages' we can observe how policies emerge and become effective through the assembly and aligning of a heterogeneous set of components, of material as well as of expressive kinds. The use of the assemblage perspective allows us also to deal with the ambivalences, frictions and dilemmas stemming from the compound nature of policy making, drawing on notions of policy discourse as well as policy practice. It helps us, moreover, to account for the more technical and political aspects of policy making (Prince, 2010), at different levels.

The chapter is structured as follows. First, a theoretical framework is presented drawing from assemblage theory, notably its distinction between coding and territorialization. Subsequently, a historical account of policy evolution is presented using key documents and evaluations published by EU departments and (funded) organizations dealing with regional innovation policy.

2.   POLICY ASSEMBLAGES

This section sets out our basic conceptual framework. To account for the semiotic and practical sides of policy making, and their intertwinement, we will start with what are generally considered as two core dimensions of

assemblages: coding and territorialization. Coding, which covers the semi-otic (discursive) aspects of policy making, can be divided into two major policy processes: framing and scripting. Territorialization, in turn, deals with the realm of policy practice. Territorialization serves an important aim in dealing with the multi-level, multi-actor and multi-issue characteristics of policy making. In line with our approach, it should be added that we do not suggest that these concepts represent essential aspects of policy making; they are considered primarily useful analytical tools to study policy dynamics. Above all, their significance is epistemological, not ontological.

Coding

The first dimension, coding, deals with the expressive dimension of assemblage (DeLanda, 2006), more specifically the formative–strategic aspect of policy assemblages (Prince, 2010), that is, the development and adoption of discourses to mark out, characterize and legitimize a particular policy. In coding, an important role is played by key signifiers, and the semantic webs woven between and around them, in the form of 'chains of significance'. In our case, innovation is associated with the regional level, and also with notions of economic, social and environmental sustainability. These discursive practices result in the development and institutionalization of what Collier and Ong (2005, p. 11) label 'global forms', phenomena that 'have a distinctive capacity for decontextualisation and recontextualisation, abstractability and movement, across diverse social and cultural situations and spheres of life'.

The coding of policy assemblages comprises two major discursive practices: framing and scripting. This division corresponds with Torfing's observation (2011, p. 1881) that discursive practices 'are not only *staging* the choice and interaction of the relevant policy actors, but also seem to be *scripting* their actions'. Framing starts with associating a policy with selected key signifiers and their chains of signification, thus relating to the 'grand' or meta-stories about societal and economic prospects and development, as well as about what constitutes legitimate and effective policy making. Building on this semantic position, particular policy frames or rationales are developed and invoked that connect specific 'policy problems' to specific sets of solutions, where especially the latter are prone to evolve into 'global forms'. So to address the gap between advantaged and disadvantaged regions, the latter should implement regional innovation and clustering strategies, approaches that have developed and circulated across the globe. Framing also plays an important role in legitimizing a policy by grafting policy rationales onto what are called

'derived theoretical rationales' (Laranja et al., 2008). Policies are deemed to be prudent because they are underwritten, and refined, by academic 'evidence'.

The other face of policy coding is scripting. Scripting assigns particular roles and tasks to policy actors, thus enabling as well as constraining the processes of subject and strategy formation. More specifically, scripting details how the chain of agents and organizations extending from the initiating 'policy makers' to the final 'policy takers' is organized. How are agents expected to be linked in terms of strategic, programmatic and evaluative activities? How is the interaction with stakeholders envisaged? How do chains of legitimacy and accountability take shape? What role is assigned to different levels of administration? Summarizing, where framing explains the 'what' and 'why' of policy making – which solution addresses which problem, on the basis of which policy and derived theoretical rationales – scripting details the 'how' and 'who' – which steps to take and which roles to play by which organization. The latter helps, to quote Shore and Wright (1997, p. 35), to understand 'how policies work as instruments of governance, as ideological vehicles, and as agents for constructing subjectivities and organizing people within systems of power and authority'.

Territorialization

Now we turn to the second dimension of policy assemblage, territorialization. This concerns practical–organizational aspects of assemblages in material and institutional terms. The crux of territorialization is not so much the aspect of spatial demarcation (although this also plays a certain role), but the setting in place and linking together of all kinds of resources, creating what can be seen considered as a marking and creation of an 'organizational space'. Territorialization involves the building of actor networks and their stabilization and marking in the wider space of policy making (Latour, 2005). Territorialization entails, in other words, the 'everyday' practice of policy making and implementation, involving the creation and bringing together of a variety of organizational–logistical resources and mechanisms. In relation to coding, territorialization thus presents acts of concretizing and contextualization, of overcoming the many hurdles confronted by policies when they are put 'in practice'.

However, territorialization does not just follow coding. On the contrary, in many cases coding entails the capturing of an emerging, apparently successful, policy practice, turning it into a decontextualized, expressive form (DeLanda, 2006). While certain details of policy making may be premeditated on the basis of abstract thinking, global policy forms

generally originate from concrete practices, in which the latter often come to feature as 'success stories'. In the case of regional innovation and cluster policies, examples of such 'success stories' are Silicon Valley, Baden-Württemberg, Rhône-Alpes, among others. Decontextualization and coding allow frames and scripts to travel and engender policy making elsewhere, thus contributing to the strength and proliferation of a global policy form. What emerges is thus not only a policy form but also a policy geography. The latter consists of policy locales, each manifesting its own forms of coding and territorialization, as well as diffusion channels and relay networks connecting the locales at higher scales.

The geographical dimension, including a notion of scale, greatly adds to the complexity of policy-making processes. The channels of policy transfer present, in terms of Latour (2005), mediators rather than 'simple' intermediaries. As mediators they play an important role in modifying global forms and geography of policy making (Lagendijk and Cornford, 2000). Such mediators consist of a wide variety of actors, networks and circuits, including leading policy entrepreneurs, gurus, thinks tanks and policy research centres (Thrift, 1997), and international policy networks, as well as broader social and media networks that support what Thrift and Olds (1996) have aptly labelled the 'cultural circuit of capital'. These mediators all present assemblages themselves, with different kinds and degrees of territorialization that help ideas, scripts and resources to travel.

What thus emerges, in geographical terms, is a topology of nested assemblages. A basic distinction can be made between two levels. First, policy locales constitute the centres of policy making and implementation, such as regions in the case of regional policy making. Here, policy assemblages serve to put policies into practice, mustering knowledge and resources, building institutional capacities, engaging with stakeholders, and measuring and communicating impact. Second, policy transfer networks and organizations engage in the circulation and mediation of codings – frames and scripts – abstracted from, as well as infusing, policy locales. In turn, the mediation at the policy transfer level is also coded, by providing a language to assess, compare and steer policy practices at the level of locales. This coding contains the understanding of policy making in terms of, for instance, 'best practices' or 'how-to' manuals of policy implementation (Prince, 2010), learning protocols, funding criteria, calculative techniques such as benchmarking, impact assessments and, through aggregation and interpretation, reviews and foresight. Such understanding is often advanced, moreover, by charismatic experts and successful international consultants. Coding is, in turn, substantiated and justified through the building of chains of signification with core political

ambitions (often masquerading as 'societal' ambitions) such as competitiveness, cohesion and sustainability.

Such alignment presents a process of 'overcoding', that is, the homogenizing of a population through a common set of empty or floating signifiers (Colebrook, 2002). Overcoding ensures that the frames and scripts articulated at the level of policy locales are brought in line and resonate with prevailing political perspectives and ambitions. How this works will be the topic of the next section.

(Neoliberal) Overcoding

In the orchestration of policy transfer and overcoding, a crucial role is played by 'central' agents – state and non-state – and the core discourses adopted, articulated and circulated by them. Such agents include national bodies, as well as international organizations to which certain policy responsibilities have been delegated, such as the EU, the OECD and the World Bank, as well as a wide range of think tanks and influential 'experts'. While, as explained before, many agents are involved in policy transfer, public bodies play a fundamental role in providing the main institutional infrastructure for mediation and support, as well as the main policy discourses feeding into overcoding. Dominant trends, such as the upsurge of neoliberal thinking, make inroads through the coordinating and controlling activities of the state and other central agents (Cumbers et al., 2003).

In 'making inroads', however, overcoding does not imply a simple route from dominant ways of thinking to policy practices. On the contrary, overcoding involves intricate discursive practices, in which policy performances are measured up to certain standards following scripts of monitoring and assessment, and codes of articulation. Such standards correspond to core signifiers – for example innovation, competitiveness, cohesion, sustainability – as well as to prevailing policy conventions, for example on financing, project development and management, accountability and evaluation. In other words, not only does territorialization not just follow coding; coding does not simply follow overcoding. As Prince (2010) and Arts and Lagendijk (2009), among others, claim, one should always take account of the 'hard' work of policy making 'on the ground', and the impact of the mediators involved in processes of policy transfer, implementation and monitoring. While policy making is globally integrated through 'neoliberal' practices of policy transfer and 'neoliberal' overcoding, each site will manifest its own form of what Brenner and Theodore (2002) call 'actually existing neoliberalism'.

In assemblage terms, the way in which policy locales are brought in

line with policy overcodes depends on two factors. First, it depends on how strongly local assemblages have become coded, and can be adapted through (re)coding (which is, in turn, a function of their local territorialization). Second, an important role is played by the territorialization of policy transfer, and its capacity to homogenize local codings through the practical work of overcoding. Neoliberal overcodes have been transferred, in particular, by the imposition of specific modes and techniques of accountability, and the accompanying 'control' versions of legitimacy. Such discursive practices have had a great impact on the territorialization of local policy making, for instance through the use of 'objective' input, throughput and output indicators, resulting in what has been characterized as 'technocratization' (Gertler, 2001). If executed successfully, such technocratization greatly enhances the grip of central agents on policy locales. Yet one cannot consider trends towards homogenization as given or self-evident. They can only result from continuous hard work from the centre as well as from all intermediary agents. To what extent this really materializes is a matter, of empirical fact, not a matter of principle.

By charting the conceptual and practical intricacies of overcoding, both top–down and bottom–up, we can also shed light on the political nature of policy making. A first association is that of the political with politics, which would mean with the expressive (interpretive, strategic) side of assemblages. In his account of policy assemblages, Prince (2010) locates the political largely at the level of the formative–strategic aspects of assemblages, that is the realms of 'coding' and 'overcoding'. Coding is political through the way it selects certain ideas, prioritizes certain forms of action and strategies, draws on certain forms of knowledge, and privileges certain actors while excluding others. Frames and scripts, accordingly, are political entities based on closure.

However, in addition to articulating such choices, the political also manifests itself through terms of reference in which such choices are couched, and the techniques through which they are given organizational and material form. This even applies when these terms and techniques appear to be free from contestation and considered self-evident. As argued by Varró (2010b), any vocabulary always comprises a necessarily political view of how a particular issue, such as regional development, relates to particular general interests (however defined). Consensus and self-evidentiality are not givens, but stem from the fact that political discussions generally do not question universalizing notions of the social. Consensus is reached by silencing possible alternative views, while self-evidentiality is achieved by turning policy and derived theoretical rationales into mantra-like narratives (Hillier, 2000). An example is how, in neoliberal thinking, economic 'imperatives' are invoked to promote the 'learning economy', with

emphasis on place-based innovation and competitiveness. Such localized, supply-side orientations obscure the ways cities and regions may have to meet other 'imperatives' – such as the financial crisis through strategies of 'resilience' – as well as the fact that other regional responses may be possible (Ward and Jonas, 2004). Hence the terms of reference required for any political debate to take place, for any politics to be territorialized and coded, can never be self-evident. They always present political forms of closure and silencing.

The political significance of 'technical' aspects, moreover, goes beyond mere instrumentalization (scripting and territorialization) of codings. Certain 'technical' choices, such as the use of particular policy standards or methods, or the enrolment of certain capacities, may be informed by specific political ambitions. Such practices may serve to invest a policy with a particular positionality and identity, and to mark out a specific domain for a policy to cover. In the EU, for instance, the ways legitimacy and accountability are understood and practised have a decisive impact on the shaping of European policies regardless of the policy field. So overcoding is supported here through universalizing repertoires of practice and technologies (van Heur, 2008).

A final point is that, given their discursive nature, forms of overcoding are never complete, and always temporary. Indeed, under the surface of consensual languages and universalizing practices, the meanings of the social, spatial and technical continue to be negotiated and contested, even if only at the very margin. One of the key research challenges, therefore, is to detect the rise of alternative forms of territorialization and alternative codings, and see to what extent they assemble the power and acquire the clout to defy and overturn current overcodes. Another possibility is that new overcodes emerge that provide an alternative reading, and hence meaning, of existing practices. Although the latter may simply be a manifestation of 'old wine in new bottles', when such alternative readings gain sufficient appeal they may also provoke a kind of 'paradigm shift'. Both such cases will be examined for the case of regional innovation policy below.

3.   REGIONAL INNOVATION POLICY: EMERGENCE AND CODING

As referred to above, regional innovation policy originates basically from two types of state policies, namely national technology policy and regional (or spatial–economic) policy. In the postwar period, these policies initially evolved as separate fields. This changed when technology policy extended

its scope from 'pure' technology production and circulation to innovation, and when regional policies broadened out from Keynesian redistribution and investment subsidies to business support. One frontier country was France, where these recodings supported the development of a new possible assemblage around the notion of the 'growth pole'. The promotion of state technology development in the periphery (i.e. out of Paris) was combined with a strategy of innovation-oriented business support. Similar initiatives followed in the UK and West Germany (Cooke, 1985). In terms of derived theoretical rationales, an important source of inspiration was the system approach to innovation, as well as the debate on the important seedbed role of SMEs. This was translated in to a 'self-help' policy rationale in which limited resources would serve to boost certain targeted segments of the local economy.

The recoding of the policy form not only affected its substance, but also its institutional and organizational aspects. Zooming in on the performances of local businesses, research institutes and their interaction, the old policy assemblages, with a singular, top–down form of territorialization, became increasingly impractical. Because of regional specificities and complexities, it became clear that detailed national scripts and practices would not work and that innovation policies needed to be shaped at the regional level itself. According to Cooke (1985, p. 259), 'There has to be a regional-level policy development with national government playing coordinative and supportive roles'. This shift downwards started with policy implementation, through providing scope for the practical adaptation of national R&D policies and instruments, focusing on technology development and absorption. Gradually, decentralization also started to cover policy formulation, promoting more decentralized forms of innovation and economic development policy (Ewers and Wettmann, 1980), calling for more 'bespoke' policy approaches (cf. Howells, 2005; Todlting and Trippl, 2005). In addition, the focus on technological innovation was complemented with an interest in management practices, the provision of joint services and sector studies (Bachtler et al., 2003; Molle, 1983). Both the coding and territorialization of innovation policy thus became organized at a regional level, set in a national framework in what can be described as a nested policy assemblage.

The shift to a more 'bottom–up' approach has been justified on the basis of policy rationales supporting collective, strategic forms of regional governance featuring close involvement of the business community. Regional governance should foster public–private collaboration, and invest in a 'soft infrastructure' nurturing networking and trust-building (MacLeod, 2001; IRE, 2008). Rather than the singular focus on large companies, these practices were now targeting other business segments, notably

SMEs. Such regionalized business support and governance modes were underwritten by well-known derived theoretical rationalities combining economic–geographical work on the region (labelled as 'TIM' approaches) and insights into cognitive and interactive aspects of innovation (Loasby, 1998; Boschma, 2005).

4.   EU REGIONAL INNOVATION POLICY: ASSEMBLAGE OF RIS/RITTS

Next, enter the EU (then called the European Community). The recoding and reterritorialization of innovation policy highly appealed to the Community, specifically to the directorates responsible for regional and industrial development (now known as DG-Regio and DG-Industry). The coding of 'regional-level policy development' with a supply-side orientation, with central government 'playing coordinative and supportive roles' matched Europe's neoliberal programme of market integration and supply-side-led growth. More specifically, it addressed a major conundrum faced by the Community. For both economic and political reasons, it was paramount that spatial inequalities across Europe be reduced. But how to accomplish this without weakening economic growth, or, even worse, distorting the operation of the free market? How to accomplish, to use Europe's own codings, 'balanced development'? One solution has been to create a highly regimented system of regional policy, geared towards investments in physical infrastructure, notably through overcoding in the form of detailed scripts of resource allocation and usage.

In the case of regional innovation policy, a specific approach was followed. Lured by the 'self-help' rationale and the nested model of policy organization, the Community was able to set apart a small chunk of its regional policy budget under a special arrangement (Article 10 of the European Regional Development Fund). This money was used to fund the drafting and, in part, implementation of regional innovation strategies (initially framed as 'technology plans'). What made this assemblage unique was that it was able to largely bypass, apart from financial–administrative issues, the national level. This allowed the Community to engage in overcoding not only through scripting, but also through framing. The Community thus became a key promoter of framing regions as engines for learning, innovation and 'place-based' economic growth. By supporting regions, and thus business environments rather than individual businesses, the approach could be coded and legitimized as market reform. From a more political stance, what counts for the Community is that policies conform to the (neo)liberal idea that intervention is only warranted in two

cases, namely (1) in the case of market failure and (2) when welfare distribution is found wanting (as in the case of spatial inequalities). Place-based forms of nurturing knowledge development and circulation, targeting SMEs, meet both these conditions (PRO INNO, 2009).

In practical terms, DG-Regio and DG-Industry set up a joint programme supporting regional innovation based on Article 10 and the Community's Innovation Programme. In 1993, corresponding to the two directorates involved, two schemes were launched:

1. Regional Technology Plans (RTP), followed by Regional Innovation Strategies (RIS), destined for less favoured regions (ERDF-assisted NUTS-2 areas, later the 'cohesion regions'), and
2. Regional Innovation and Technology Transfer Strategies (RITTS), open to all (kinds of) regions, with explicit focus on innovation support structures (now known as 'competitiveness regions').

Delivering a small amount of seed money (around €0.5 million, with 50 per cent European support), these schemes funded the establishment of regional structures to initiate and try out regional innovation practices. In line with the Community's policy rationale of 'mainstreaming', that is, the idea that any Community-supported project should result in encoded forms of policy making that can be applied more widely, important aspects of the programme were learning and dissemination. Learning was brought about by scripting a requirement for drawing policy lessons in the RIS/RITTS policy manuals (European Commission, 1996). Dissemination was facilitated by the establishment of a variety of platforms and networks dedicated to interregional learning. This included, in particular, the IRE (Innovating Regions in Europe) network and its Mutual Learning Platform (IRE, 2006). IRE has played a pivotal role in diffusing and advocating the 'RIS/RITTS methodology', framing it as a holistic, system-based approach to regional development.

Documentation from the Innovating Regions in Europe network sheds an interesting light on the coding and territorialization of regional innovation policy in the RIS/RITTS era. The key policy rationale is couched in terms of achieving regional 'excellence' by accumulating strategic intelligence (through foresight and benchmarking scripts) and the exchange of 'good' or 'best practices' for regional knowledge creation and valorization (IRE, 2006; EC, 2008). This approach is underwritten by two derived theoretical rationales. First, the notion of the knowledge economy, drawing from theoretical work on the fundamental role of knowledge in the economy (Jessop, 2009), combined with strategic management thinking (accompanied by SWOT scripts) (Lagendijk, 2007). In

theoretical terms, a fundamental issue here is the shift from a relative to an absolute conceptualization of 'competitiveness' (cf. Porter, 2000). In an absolute view, regional wealth is not based on the relative disposition of resources and levels of productivity, but on knowledge-based distinctiveness. Second, regional excellence and strategic intelligence are shaped by forms of regional governance grafted on to the notion of the 'associational economy' (Cooke and Morgan, 1998). The core claim of the associational economy perspective is that local state, business, educational and support organizations should join forces to develop and implement sector- and innovation-oriented strategies. Such ideas have been elaborated particularly in the context of cluster approaches, featuring cluster mapping, networking strategies, collaborative innovation and institutional capacity-building aiming at (re)orienting a region's sectoral or 'cluster' profile (cf. CLOE, 2007).

In addition to the close links in codings with the academic debate, what has made European regional policy particularly successful is its territorialization. Within the highly complex, politicized, volatile context of the European Community/Union, RIS/RITTS managed to carve out its own organizational space, with its own boundaries. At the Community level, it managed to do this by promoting the political and administrative proliferation of regional and cohesion policies, coupling a 'strong' story – innovation, balanced development, self-help – with a small budget and lean organization. As explained, its special position allowed it to largely bypass the national level, so that central coding (like the RIS/RITTS scripts) could be applied directly to the regional level. At the latter level, moreover, territorialization occurred by the setting up of dedicated organizational units engaged in the drafting, submitting and implementing of regional plans. In many cases entire regional governance structures were established to grasp the expanding opportunities offered by European regional policy. Finally, across Europe, a wide range of actors, including politicians at different governance levels, academics, research centres and business representatives jumped on to the bandwagon of regional innovation policy, facilitating the build-up of resources and further infusing and disseminating the concept and practice.

5. EUROPEAN REGIONAL INNOVATION POLICY UNDER CHALLENGE

While successful, the coding and territorialization of RIS has been contested on various fronts. What makes the chains of significance intriguing is how they connect absolute competitiveness – based on producing and

using distinctive knowledge – and collaboration – through the exchange of knowledge. From a broader policy perspective, this raises a critical issue of how policy makers, notably at the local level, are motivated to serve the general interest. To put it bluntly, if regional agents realize that a certain practice proves to be effective, would they then not be tempted to protect this form of knowledge, rather than 'mainstreaming' it? IRE and other bodies involved in regional policy have been addressing this issue to some extent, by discussing the role and meaning of knowledge and by discussing and scripting the build-up and exchange of 'best practice' (IRE, 2008). More generally, policy makers and students have stressed that there is no magic bullet, that each practice requires local adaptation and implementation and monitoring. Best practice is thus about learning, not copying (IRE, 2006, 2008). In recent debates on the evaluation of regional and cohesion policies, a call has been made for moving away from success stories to learning from both success and failure (Reid, 2008). Yet pregnant questions remain. If achieving distinctiveness in the knowledge economy is so paramount, to what extent can the circulation of 'best practices' among regions really make a difference?

Even if 'best practices' circulate, the question arises to what extent they can infuse the catching up of laggard regions. According to Oughton et al. (2002), catching up may be inhibited by what they call the 'innovation paradox'. The policy rationale of 'self-help' is based on the idea that subsidies and assistance given to laggard regions will help them to substantially increase their learning and innovation capacities. Yet the extent to which this takes place depends on the region's absorptive capacity for turning external resources into effective plans, projects and measures. As Oughton et al. (2002) observe, this capacity is often lacking, thus undermining the very idea of 'self-help'. Moreover, even when basic capacities are present, it takes a long time from building up a local governance structure and 'soft infrastructure' to producing world-class excellence and distinctiveness. In general, many regional plans and initiatives pursue the same dreams of becoming the next hot-spot in biotech, ICT or business services. From a political perspective, what is at stake here is the modernist view in which places, although with differences in time, all march along the same path towards an envisaged optimum level of wealth (Massey, 2005).

Another fundamental issue is the understanding of the region. In the 1990s, the coding of regional significance reached such a prominence that it presented a high degree of closure. The result was that in both academic and policy circles, the region became the focal point of the debate. Alternative views thus had to start with challenging the dominance of the region. In line with the competition–collaboration conundrum explained above, this started with refuting the idea that lagging areas and poorer

communities would benefit from an approach pitting regions against each other in their search for 'excellence' (Amin and Thrift, 1993). Not only was this model considered flawed from a political stance, it was also criticized for universalizing an exceptional model of spatial–economic development, that of the archetypal Marshallian district or high-tech agglomeration. This prompted a call for considering the 'non-local' aspects of regional development, and, in a more sophisticated way, the understanding of the region in 'relational' terms. The latter seeks to avoid what Sassen (2006), in her usage of assemblage, calls the 'endogeneity trap'. Rather than seeing the region as a bounded entity primarily constituted through internal mechanisms, the region is considered as a fragment, with potentially some degree of coherence, in a world in which most entities and processes are organized at other scales and in other settings. On reflection, it may be striking how much hard work the debate has been investing in loosening the regional straitjacket, in view of the widespread evidence for and recognition of other spatialities (Varró, 2010a). In our view, the effort it takes to unlock the debate vindicates the significance of closure and the political nature of understanding spatialities.

The policy side, on the other hand, has manifested similar trends of zooming out and connecting to other scales. An important moment was the EU's Lisbon Strategy, in which innovation became the core aspiration for a much wider set of EU policies, and which led to three major trends of policy integration. First, cohesion policies and Community programmes such as Interreg had to commit much larger budgets to innovation-oriented programmes (EC, 2006). Second, industrial and regional policies were more intertwined through the elaboration of 'place-based' cluster approaches (Barca, 2009). Third, an idea was launched to connect research policy (including the European Research Area) to 'place-based' innovation approaches (Soete, 2009). These moves presented a wish to build a stronger alignment of regional policy, industrial policy and research policy, in view of the Lisbon Agenda's main ambitions to strengthen the Union's competitiveness and cohesion (Tewdwr-Jones and Morais Mourato, 2005).

6.   TOWARDS 'SMART SPECIALIZATION'

As a result of these various changes, regional innovation policy has turned from a hotchpotch of local projects to an embedding of initiatives in a broader multi-level and multi-sector governance context, with a completely different form of territorialization. Also in response to the eastwards expansion, after 2000 the RIS programme focused on

the accession countries, promoting learning between regions from 'old' and 'new' member states. A final round of RIS was launched in 2005, and the IRE network shut down in 2008. The learning and knowledge exchange approach was embedded within the new programme of DG-Regio, 'Regions for Economic Change' (RfEC) (EC, 2006). By sharing excellence, RfEC seeks to contribute to internal 'balanced development' and the Union's overall competitiveness, in line with the RIS-RITTS programme. Other RIS-RITTS elements, such as the support for networking, have been continued in the context of the PRO INNO innovation policy initiative of DG Enterprise & Industry (PRO INNO, 2009).

Compared with the hard work needed in the academic debate to move away from a regional straitjacket, policy recoding and reterritorialization has occurred more smoothly. This can be attributed to the fact that, as described above, regional innovation policy has always been part of a nested configuration of policy assemblages. As explained above, the relative autonomy that EU regional innovation policy enjoyed in the 1990s was more a matter of territorialization than of coding, more a matter of practice than of principle. Policy rationales such as streamlining (i.e. focusing on the core aims of competitiveness and cohesion) and policy integration (aligning different domains) served to justify a transition to another policy form. A concrete reason for recoding reterritorialization and overhaul of regional and cohesion policy, moreover, was the massive eastwards expansion undertaken in 2000, which radically changed the inequality map of the Union (Bachtler et al., 2003; Bachtler et al., 2007).

In addition to these territorial aspects, recoding has also been accompanied by changing political views on the regional problem. Although the debates on the issues are still ongoing, two developments are particularly noteworthy. The first concerns a move towards a more differentiated view on regional 'opportunities'. In part inspired by debates on the spatial concentration of core economic activities within major agglomeration and along major axes, a differentiated view starts with an acceptance that only a limited number of regions can be at the frontier of research and innovation. Accordingly, non-core regions need to find alternative routes to position themselves in the knowledge economy. Adopting an evolutionary approach, Foray (2006) and Soete (2009) thus make a case for 'smart specialization'. Rather than targeting similar clusters or technology segments, regions should explore individually how promising technologies can be applied to views of local capabilities and scope for enduring market potential. Differentiation entails a basic distinction between 'leading' regions that primarily engage in the valorization of new, frontier technology, and 'follower' regions searching for specific combinations and applications meeting market opportunities. This should be accompanied by an

'unbounded' view of the regional economy, taking into account the critical role played by external economic and research linkages, and the position of regions in 'global' value chains.

Such 'unboundedness' not only bears on the economic but also the governance dimension. A second move concerns the position of the region in spatial governance structures. This debate focuses on the question to what extent one should move from the existing division of responsibilities between spatial levels to a division and alignment of tasks (Soete, 2009). Breaking with the principle of keeping a strict separation of political and administrative responsibilities, as implied by the EU principle of subsidiarity, a task-based model is based on a process of mutual recognition and blending of strengths and opportunities at different levels. If such a flexible model of vertical coordination and collaboration is applied to regional innovation policy, the latter is recoded and reterritorialized in quite fundamental ways. Regions should no longer be considered as generic laboratories producing 'best practices' to be mainstreamed to the community at large. Instead, regional innovation practices should become strategically tied to specific (combinatory) research and innovation networks and programmes at (inter)national levels. Smart specialization in research networks and value chains, in other words, should be accompanied by smart specialization in a multi-level governance approach to innovation. Instead of focusing on 'best practices', policy should focus on an assessment of missing strategic connections and other development constraints (Soete, 2009).

From an assemblage perspective, such a move will encounter major points of resistance. A first sensitive issue, as already mentioned, is that it will require a decoding of the subsidiarity principle, which presents one of the pillars of the EU's multi-level governance structure at present. In addition, a more flexible approach will not be easy to match with the neoliberal overcodes ruling much of the EU's governance practices. As referred to above, EU policies have become more and more dominated by top–down goal-setting, managerial and financial control, project tendering and evaluation. In terms of accountability and legitimacy politics, this reflects neoliberal preferences for limited state intervention, competition-based forms of governance, financial accountability and performance assessment. The result is a procedural, technocratic relationship between programmes at the EU level and projects at the local level. Multi-level governance, in contrast, requires more long-term vision and strategy making at a central level of policy making, and thus calls for a move towards a more programmatic and longer-term policy approach. Moreover, rather than being imposed solely in a top–down way, such a strategy should be articulated and attuned with visionary as well as

practical developments 'on the ground' (Howells, 2005). A key question is thus whether 'smart specialization' as discussed here can be territorialized under neoliberal overcodes.

7.   CONCLUSION

This chapter started from the acknowledgement that policy design and transfer exhibit a complex, evolutionary pattern of development. To come to terms with this complexity, an approach is required that accounts for both the expressive and material–organizational aspects of policy making, as well as for the critical roles of agency and institutional forms. For this purpose, this chapter has adopted the neo-realist approach of assemblage theory. The evolution of European innovation policy over the last four decades has been disentangled and put in context using the notions of (over)coding and territorialization.

Assemblage theory serves to identify core operators in the construction of social phenomena, without resorting to pre-given theoretical concepts. Significantly, it pays attention to how a phenomenon creates its own space and processes of structuration. European regional innovation policy could emerge and proliferate because of the relative autonomy it managed to enjoy in the 1990s, benefiting from and contributing to a booming academic discourse and policy interest. The combination of the latter helped to dramatically raise the significance of the region in innovation and economic growth. It thus generated the capacity to muster considerable support across Europe, and to forge effective networks of exchange. Yet, in terms of both coding and territorialization, the policy encountered major obstacles. In particular, the regional lens on innovation proved too narrow, and changes of and within the EU's governance structure, as well as political shifts, called for a stronger integration of innovation policies within the broader policy framework of the Union.

The most fundamental change has been a reversal in the roles of innovation and cohesion. In the past, innovation was a seen as a tool for boosting regional development and, in particular, the catching up of laggard regions. Now, cohesion, as well as other policies (research policy, industrial policy), are seen as deliverables for the Lisbon Agenda and its follow-up, Europe 2020. In other words, they are the servants of innovation. Policy integration means that, more than ever before, the chain of signification is now pulled by a single force. And that force is the need for innovation. In our vocabulary, policies, programmes and projects need to be overcoded primarily in terms of innovation, with other ambitions

(sustainability, cohesion) coming in second or third position. This has opened the door for a less critical stance towards spatial inequality, for an acceptance of the 'forces' of agglomeration and concentration that 'inevitably' accompany the rise of centres of global 'expertise' and 'competitiveness'. It is this pivotal issue that drives the current debates on 'smart specialization' and the reform of cohesion policy.

Besides this empirical account, the theoretical contribution of this chapter lies in the conceptualization of the political in policy making. An important political issue is the distribution of wealth across Europe, and specifically the extent to which concentrations of wealth are deemed acceptable or even desirable. Moreover, and in contrast to many policy studies, we locate the political beyond the realm of the expressive. Decisive political aspects may actually be contained within institutional forms, methods of policy practice and in routine forms of action. Tracing these links serves to shed light on the performativity of policy ideas and approaches in a way that considers policy development not just as an evolutionary process based on successful assembly, but as something deeply penetrated by the way political views on what is tolerable and desirable work their way through the machinations of policy making and implementation, in terms of core imaginations and ambitions ('a competitive European space economy'), as well as the measures employed.

Through its fundamentally empirical orientation, in which no *a priori* significance is placed on policy discourse, policy practice or ideologies, the policy assemblage approach presents a fundamentally open perspective. As a result, the policy assemblage perspective may provide a fruitful alternative to more deterministic approaches, such as 'state restructuring' perspectives and structural scalar narratives (Brenner, 2004; Jessop, 2004; Uitermark, 2003). The separation of the material–organizational and the expressive, coding and overcoding, the identification of nested structures of policy making, and the conceptualization of state impact 'at a distance' produces a more subtle empirically grounded approach sensitive to context and contingency. This comes with a risk, however. Without *a priori* ideas of where to look for important phenomena, a researcher may be tempted to select those items that, at face value, appear to be most fitting to explain policy dynamics. Rather than revealing the complex political nature of policy making, this may then lead to a somewhat crude social–evolutionary form of explanation, in which social phenomena are explained primarily in terms of fitting, well-packaged forms of coding and territorialization. There is a pressing need, accordingly, to further elaborate this approach to make it truly stand up to its promises.

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