

How to Think about Regional Development Agencies as a Sociologist

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Abstract: Regional Development Agencies (RDAs) have the paramount role in development and implementation of regional development strategies. Due to the European Union principle of subsidiarity they are firmly embedded in multi-level strategic processes. However, although strategic processes are social processes, RDAs have rarely been the subject of sociological research. In this study, we conceptualize RDAs as social actors operating at the two intersections, first of global (mega)-trends and local micro-contexts and second as the intermediary between stakeholders in the regional innovation system. RDAs as social actors are agents of path-shaping. As they are operating in conditions of high complexity and can only make ‘choice within constraints’ they can perform this role only indirectly. They do it firstly, by employing reflexive and careful contextual intervention in institutions, social networks and cognitive frames to shape choices and constraints of other actors and secondly, by engaging and moderating strategic discourse.

Key words: Regional development agencies, regional innovation systems, path-shaping, social fields, constraints, global trends

INTRODUCTION

Globalization within its scope and most of all its speed, introduced a whole new aspect to the underlying forces of societal changes. The extent and scope of boundaries between local and global are becoming reduced and the boundaries per se are becoming blurred. As the global economic crisis which started in 2007 clearly demonstrated, global conditions can profoundly influence localities all over the world with very short delay. In these conditions, regional innovation systems are the “regional immune systems”, enabling regions to deal successfully with these challenges. At the same time, well-functioning regional innovation systems are also the key mechanism by which even relatively minor local innovations can influence the global environment and become its important part.

MATERIALS AND METHODS

In the context of European “multi-spatial meta-governance” (Jessop, 2007), Regional Development Agencies (RDAs) have emerged as a vital element of regional innovation systems and as the paramount instrument of regional policy-making. RDAs are generally considered as having one of the main roles in managing regional development (Bellini *et al.*, 2012). This includes development and implementation of current smart specialization strategies, especially, since, smart specialization framework is at the end of the day,

particularly concerned with regions. To perform these tasks successfully, they have to develop substantial level of strategic competences such as distinctive knowledge assets, adequate human resources to manage global relations and intra-regional networking skills (Bellini *et al.*, 2012) allowing them to maintain sufficient responsiveness to global contingencies (Sparrow and Hodgkinson, 2006) confronting not only RDAs but other elements of regional innovation systems as well.

RDAs are operating in complex social settings at the intersection of global (mega) trends and locality-specific micro-contexts. Furthermore, they are operating as intermediary between stakeholders, different functional parts of regional innovation systems with often divergent interests. These settings are constantly changing in response to globalizing processes which are enhanced with the technological development (Castells, 2011; Urry, 2003) and as a result of market-driven and informal coordination within regional innovation systems, resulting in never-ending circle of increasing social complexity. This dynamics entails continuous coordination with local, national and transnational levels and coordination and search for common interests with a multitude of actors (business, politics, public administration, civil society, trade unions, knowledge institutions, various intermediaries, etc.) with their own specific goals, bounded rationality and at times shifting loyalties and perspectives. It is therefore, not surprising that it is relatively difficult to establish successful regional innovation system, a system of different actors, usually

private and public firms, universities, think-tanks and governmental agencies (Salamonsen, 2015). It is mainly through participation in and management of regional innovation systems where RDAs exercise their (in)ability to participate in the adjustment of social contexts to global environment.

The key segments of the context in which they operate are social. The processes that influence shaping of their environment are social, although, information technology can enhance them significantly. RDAs are social actors influenced by the social forces. The main challenges and obstacles to RDAs success in steering regional development are social in nature. Consequently, sociology seems to be well equipped to analyze and explain RDAs and the way they perform their tasks. However, in spite of their immense importance and pervasive presence in regional development, RDAs have mostly been researched by economic geographers, economists, political scientists and regional researchers who are following advice to “need to refocus on what RDAs actually do rather on what they are (or look like)” (Bellini *et al.*, 2012). Sociologists somehow failed to recognize the importance of research on these phenomena as evidenced by curious and surprising under representation in regional studies.

In this study, we contextualise RDAs and provide sociological conceptualization for the benefit of future theoretical and empirical research. First, we outline the key all-pervasive global trends shaping the regional social framework in which RDAs operate. We continue by elaborating on societal complexity and the ways it impacts strategic choices of RDAs who make choices within specific constraints set forward by their environment and elaborate on the question of possibility and mechanisms of path-shaping in such environment. We provide the answer by pinpointing regional innovation systems as the site where RDAs can perform deliberative strategic action and describe the social forces that they can manipulate to shape the regional topography.

Global trends and regional contexts: Four main global trends are outlined by Genov (1997, 2000). Firstly, there is the trend of spreading of instrumental activism with never-ending attempts to coordinate goals and means of action as a type of rational activities aiming for the reduction of complexity. This includes both encouraging and growing a culture of entrepreneurship and innovation (ironically, attempts to reduce complexity only contribute to ‘hyper-complexity’ (Luhmann, 1995), making the task even harder. To address this issue, societies attempt to develop various, sophisticated and most of all complex systems of societal steering with all their material, social and cognitive consequences. The written also refers to the

systems of innovation that can be adequately discussed as social systems). Secondly, there is the trend of individualization, a highly controversial trend, since, it contains an in-built tendency towards conflicts which on the other hand is a major evolutionary achievement. As institutional individualization progresses (as a result of an increasing inability to sufficiently control communications and actors there is a controversial increase in the need for a communitarian counterbalance, evidenced by research on social capital at different levels (Adam and Roncevic, 2003; Westlund and Adam, 2010) it leads to increasing demand and resources for coordination, since, it contributes substantially to societal complexity by contributing to a large pool of options, possibilities and paths. Thirdly, there is a trend towards upgrading of organisational rationality being the result increasing complexity and since, the beginnings of scientific management. It has been evolving through the global proliferation of large industrial organisations and is another attempt to reduce complexity. The complexity management, on the other hand became much more complex and diversified in itself as production processes progressed towards a ‘second industrial divide’ between mass production and flexible specialisation (Piore and Sabel, 1984). The ‘economy of scale’ was either replaced or upgraded with an ‘economy of scope’ which requires high innovative performance. The latter is undoubtedly a major challenge for RDAs within their fundamental functioning. Fourthly, there is the trend of value-normative universalization as a result of fundamentally global nature of the proposed challenges. It is those challenges that demand a positive response to. Both, individual and collective, actors utilise a so-called cultural tool-kit to construct appropriate chains of actions (Swidler, 2001) in their response to global challenges. It is the cultural tool-kit that efficiency in adaptation processes highly depends on. The cognitive frames are also being recognised as a highly important factor in development and consequently as a tool of competitiveness policy (Adam *et al.*, 2005).

As a reaction to global trends, social settings are employing multi-level strategic changes in order to actively and successfully steer societal development. However, relatively few are successful. Very few regions are genuinely ‘active’. To be active implies ability to achieve agreement on proper strategies and to have the control over the implementation of these strategies.

This has very important consequences for the creation and functioning of regional systems of innovations with especially, the RDAs as the key regional instrument of policy-makers and implementers. The RDAs do not follow only their own logic of operation but have to continuously discern and mirror on their bearing

on other actors, engaging in elaborated mechanisms of context specific intervention and nurture systemic discourse. By behaving in such manner it can contribute to development of regional systems of innovation and more importantly, it can contribute to globalisation of local innovation.

High complexity and societal steering: From the perspective of this contribution, two shifts, mutually interrelated are especially, important. First, when contextualising changes in the social environment most researchers are focusing on the role of globalizing processes and technological development (Castells, 2011; Urry, 2003) in increasing complexity. Complexity indeed plays a very important role in research on societal steering. Luhmann's magnum opus is dedicated to the analysis of the situation "when because of imminent constraints in the element's connective capacity, it is no longer possible at any moment to connect every element with every other element" (Luhmann, 1995). Etzioni, analyses how the active society deals with 'the rise of social option's even though he is arising from a wholly different theoretical perspective. The circumstance of complexity is irreducible. This is a crucial defining factor also for actors in regional development. RDAs in their attempts to grasp its complexity through cognisance or planning can only create 'hypercomplexity' (Luhmann, 1995). Some social settings are able to handle problems of adaptation to global trends and others fail. Some adjust quickly to the demand for new complex forms of governance, others fail. The difference lies in the ability to actively grasp the situation.

Second, social settings are reacting to global trends by employing multi-level strategic changes. The latter are well elaborated by Jessop's conceptualization (Bob, 2007) of a transition from Keynesian Welfare National State (KWNS) to Schumpeterian Workfare Post-national Regimes (SWPR). Our perspective offers the following traits as most relevant ones: a transferral from the primacy of the national state towards multi-level responsibility for social and economic policies, i.e., the 'post-national relativisation of scale' and a transferral from public interventionism towards different forms of self-organizing governance mechanisms in a 'networked economy' (Bob, 2007) (the remaining are: a shift from first, Keynesian full employment towards Schumpeterian economic intervention and second, a move from a welfares mode of social reproduction towards a workfarist mode, evident in the 'subordination of social policy to the generation of competitiveness', i.e., flexicurity (Bob, 2007)). The shift from public interventionism towards different forms of self-organizing governance mechanisms is very important, since, societies with conditions of high complexity have to focus on the

production of systemic competitiveness (Esser *et al.*, 2013) along with the generation of resources and mobilization of competencies (Karnoe and Garud, 2012). Different forms of governance, like for example network forms of governance, imply autonomous actors in their self-organization and self-coordination are therefore, better equipped for this task. The above written would imply that an actor in an environment which is active and well equipped with resources, networks and well-networked RDAs would be capable of solving complex problems, namely in a situation where traditional actors are very likely to fail.

Steering of societal development is an interdisciplinary research subject and does not fall within the exclusive domain of neither economics nor sociology or any other social science discipline, tackled already by the fathers of different social sciences. While their basic simple questions and dilemmas are by and large rendered obsolete by immense changes in both societal environment (Here we are referring to the processes of globalization, increasing complexity and the shift from a Keynesian welfare national state to a Schumpeterian workfare post-national regime) and recent advances in social research (We are especially, referring to studies of new modes of governance, especially, heterarchical network governance and elaborations on meta-governance), the issue of steering is nevertheless as relevant as it ever was. It is steering that enables the contemporary societies to manage the global flux by adapting and handling technological and social innovations (It cannot be interpreted exclusively as a consequence of internal factors of development (e.g., theories of indigenous growth) or as a consequence of external factors, e.g., theory of imperialism, theory of dependency, theory of dependent development or world systems theory) and this is the way it touches the sole core of the contemporary societies. There are different conceptualizations of international environment, either in terms of constraining 'framework conditions' or even 'megatrends' (e.g., Bakas, 2006). Such understandings can play an important role in limiting strategic choices by both, RDAs and other collective actors. On the other hand, empirical research has clearly showed that "internal social, economic and political structures and actors become vital factors in development and can modify the effects of the international environment." (Van Rossem, 1996; Adam *et al.*, 2005).

When is path-shaping possible? We start this section with two presumptions where the first explains that meta-governance can in some cases, solve problems which cannot be solved by other modes of governance. Secondly, meta-governance can and must be used as a tool where RDAs in their role as a policy maker actively

(co) create regional systems of innovation. To sum up in adapting to global challenges, RDAs have to make use of the meta-governance mechanisms with the goal to reset the social structure, if necessary.

Why would it be necessary to reset the social structure? Resetting the social is an important issue for numerous reasons, although, this is a task, very difficult to achieve in real life (more on this in Roncevic and Makarovic, 2010). First, very often the alternative institutional arrangements (Nee, 1998) assure the key difference between economic growth, stagnation and recession. This leads to situation where social settings which are not conducive to development, need RDAs to reset relevant institutional arrangements. Secondly, social actors-including RDAs are more or less all the time acting in conditions of incomplete information and mental models where both increase transaction costs (Nee, 1998). Since, transaction costs are highly important part of production and exchange within the framework of contemporary economies they tend to limit change in institutional arrangements. Finally, the situations occur where actors do not obtain the possibility of a free choice but instead they make the, so called 'choices within constraints'. The latter would imply that a number of formal and informal constraints are shaping the selection of options (Nee, 1998). The limited selection of options further restricts their capability to react and engage positively to global trends. Such a situation is implying path-dependency course of strategic choices. To elaborate, process is 'path-dependent' in cases when initial movement in one direction determines future direction, thereby limiting other options.

However, 'choice within constraint's just limits the capability of actors to react and engage but on the other hand constraints can also imply the possibility for 'path-shaping'. For example, Torfing (1998, 2001) in his analysis of institutional reforms of the welfare state (welfare state is without a doubt an example of an institutional arrangement where due to the numerous vital and expensive interests, fast changes are extremely difficult to achieve) explains that changes in terms of path shaping in well-established arrangements (like welfare state) are happening. The policy-makers, along with all different stakeholders have to take into account the numerous complex constellations of interests to be able to achieve 'path shaping' under the mentioned conditions. Moreover, the policy path can also be defined as a relatively stable way to structure a certain social field (Roncevic, 2007, 2012, 2015). Policy path is more than just a method of policy-making for (re) assuring the regulation of objects, processes and actions but it is also a terrain of discourses at which objects of regulation, regulatory agencies and institutional forms of regulation are mutually structuring (Torfing, 1998, 2001).

What are the conditions in which path-shaping is possible? The answer lies in the above mentioned concept

of a social field where path-shaping is possible through changing of it. The change in a social field is possible through the reciprocal influence of institutions, networks and cognitive frames (Beckert, 2010). This is the topography of a social field in which RDAs can and have to, act. There are two facts concerning the existence of social field first, there is no such thing as total discontinuity and second, there is no such thing as institutional vacuum. But nevertheless, path-shaping is recognized a challenging process, due to the facts of facing both the circumstances of 'hyper-rationality' and 'mental residuals' (Offe, 1995).

Within the above mentioned situation, there are two conditions that have to be met in order for actors to achieve purposeful institutional design (Roncevic, 2007, 2012, 2015). First, currently existing arrangements have to be based and left with no legitimacy and no capability to confront the challenges arising from their environment. We can make an example of economic development, naming the cases of Ireland and Finland in the 1980's (Castells and Himanen, 2002) and their responses to profound and lasting economic crisis through seeking a path out of the framework of existing arrangements. Second, alternative option has to be put forward. For that reason such alternative options models are usually not deriving from a specific social context but are rather imported from diverse and more thriving settings being adequately adapted to local conditions. RDAs can contribute to both of the described conditions by moderating public discourse on these settings. RDAs have to have the possibility and the power to influence social forces structuring social fields (institutions, networks and cognitive frames). A necessary step forward in analytical sense is to develop "explanatory frameworks, theories and models, explaining micro foundations of these path-dependent processes" (Kay, 2003). We will move in this direction within the following sections.

RDAs and topography of regional innovation systems: RDAs are operating in regional settings and therefore, the so-called regional innovation systems are perhaps the most obvious ambient where RDAs demonstrate their (in) ability to participate at the adjustment of social contexts to global flux. Any system of innovation is a system of different actors, usually private and public firms, universities and governmental agencies (Salamonsen, 2015) with a main characteristic of regional innovation systems to be geographically narrowed to a scale smaller than national, i.e., regional. The role of regions comes as supplement, since, regions can be perceived as "a territory less than a sovereign state, possessing distinctive supra local administrative, cultural, political or economic power and cohesiveness" (Cooke *et al.*, 1997). Region, therefore is autonomous (not necessarily in political sense) in its set of cultural competences, traditions and the level of

industrialization. Such cultural proximity may contribute towards the development of own levels of innovativeness. Regional innovation system can be understood as infrastructure (Asheim and Gertler, 2005; Asheim *et al.*, 2016) for innovation and has to include, besides actors mentioned above also support institutions (Cooke *et al.*, 1997).

As Almeida *et al.* (2011) state it; Regional Innovation System (RIS) is the concept which has become and will continue being the key concept when addressing the topic of regional development. The concept derives from the concept of 'National innovation system' put together by Lundvall (2016) and we cannot pass the great conceptualization by Saviotti (1997) that any innovation system that can be defined as set of actors which interact among themselves with main objective in generation of innovation. Other definitions go as stated, Asheim and Coenen (2005) "constellation of industrial clusters surrounded by innovation supporting organizations" whereas (Cooke *et al.*, 1997) define regional innovation system as systems in which firms and other organizations are systematically engaged in interactive learning through an institutional milieu characterized by embeddedness. The first definition supports the importance of interactions among actors in order to create a regional innovation system, the second emphasizes the importance of clusters and the latter views the regional innovation system very loosely and mainly in terms of interactive learning and knowledge. Furthermore, regional innovation systems are shaped by tradition, existing industries and inherent knowledge basis (Salamonsen, 2015), also supported by geographical aspect, since, regions are in geographical sense subordinate to national states. All the above mentioned are recognitions of settings where not only individuals, organizations and institutions post innovation but an important contribution to innovation capability is put forward by interactions among the three.

But what is the role that RDAs can occupy and at what level their engagement can contribute towards development of a regional innovation system? We determine RDAs as possible activators or members of the network who can be or become an intermediary between the universities, industries and policy makers. It is in the nature of the RDA to operate as a support institution where the support is predominantly aimed to facilitation of relations among actors or (re) creation of it.

Following modern innovation theory elaborated by Lundvall (2016), two sets of assumptions are important in modern economy: knowledge and learning. Knowledge, fundamentally differs from other assets in economy and "learning is predominantly interactive and therefore, socially embedded process which cannot be understood without taking into consideration its institutional and cultural context" (Lundvall, 2016). In post-Fordist economy, knowledge is the most important resource

and learning is the most essential process. Innovation as processes (De la Mothe and Paquet, 1998) is network-shaped and a complex multilogue which weaves various partners together and more importantly, it emphasizes the interaction between three major dimensions (the cognitive space, the capabilities/absorptive capacity of firms and the governance of the communities of practice) as key roles in innovation process.

Substantial elements of knowledge are therefore not concealed in R&D departments of companies as it was suggested by the linear model of innovation (Godin, 2011) but are freely floating around, stored in 'cognitive space' between actors of innovative processes. With knowledge perceived as process and 'freely floating around' it is proximity of actors (Almeida *et al.*, 2011), understood also as 'density of network' that is the main characteristic shaping the nature of tacit knowledge. Additionally, tacit knowledge is "best shared through face-to-face interactions between partners who already share some basic commonalities: the same language, common 'codes' of communication and shared conventions and norms (Asheim and Gertler, 2005). The stated above is what Beckert (2010) elaborates as cognitive frames and the latter is the term, we ought to use in the sections bellow. It is the organizations themselves making sure the differences among them exist mainly due to ability to detect and absorb such knowledge.

Innovation activities as Porter and Stern (2001) are saying are not solely internal but also external. By external they describe the favourable environment of institutions and social processes. So, to really understand innovation processes, we have to identify broader social processes and understand how these are influenced by the relationship between actors in a system of innovation. As already elaborated, we consider the main actors within a system of innovation the following: individuals, organizations and institutions. This derives from the recognition about a system of innovation as primarily a social system. As said, innovation processes are shaped by learning and knowledge between different actors in settings where actors meet (Beckert, 2010) and where interactions occur. One could broadly diagnose the system of innovation with the concept of triple helix (Marina and Etkowitz, 2013) or even quadruple helix (Carayannis and Campbell, 2012) where civil society (in form of NGOs) are added to the established actors of the triple helix. It is the so-called mode 3 knowledge production system enables those learning processes that allow interactions from top down government, university and industry policies and practices on the one hand and bottom-up civil society and grassroots movement's initiatives on the other hand. Priorities of all actors get to interact and engage with each other (*ibid.*).

Following to what was said above, systems of innovations in practice can be diagnosed as a broad and dense infrastructure of RDAs, business companies, higher education institutions, R&D institutions, a continuous and sufficient supply of adequately qualified labour force along with a dense network of intermediary institutions (liaison offices, technology transfer offices, etc.) or their functional substitutes (e.g., think-tanks) to foster formal and informal interactions and dissemination of cognitive frames (Welter *et al.*, 2008; Roncevic, 2012). Systems of innovation in their formatting and functioning are very much context-specific processes. Two main responsibilities of the RDAs' are firstly in obtaining the possibility to develop and manage the knowledge about the systems of innovation and secondly, moderation of the processes of its formatting and functioning.

RESULTS AND DISCUSSION

The position of RDA within the topography of a social field: Systems of innovations including regional innovation systems can be both, defined and studied as any other social field. Innovative processes occurring within such systems are social processes where numerous formal and informal interactions and communications between relevant institutions, networks and cognitive frames are taking place. As such, systems of innovations can be named as a social infrastructure within which RDAs can utilise their policy-making efforts when adapting to global trends.

Systematic sociological analysis of systems of innovation appears to be fairly underdeveloped. Political and economic science along with economic and regional geography are guiding the research of the field. Sociology, however has much to offer in the analysis of systems of innovation as social fields constituted by social forces as already discussed by Roncevic (2007, 2012, 2015). Sociological neo-institutionalism offers a lot within the analysis of institutions (Melissa and Hoffman, 2016) while social network analysis appears to be one of the most flourishing areas of sociological research in the past decades (Scott, 2012). Lastly, the sociology of culture (Lizardo and Strand, 2010) delivers us theoretically informed accounts of the role of cognitive frames (under different conceptualisations) in influencing social action.

The success or failure of a locality, region or nation to adjust to global trends depends on its ability to make its relational topography compatible with them (Roncevic, 2007, 2012, 2015). RDAs can play one of important roles when influencing the social forces operating at the micro level. These social forces are relevant in the interplay among institutions, social networks and cognitive frames (Beckert, 2010) forming a relational topography of the social field. This way they are making it more or less

conducive to successful adaptation to global trends by determining the outcome of innovative processes (*ibid*). In this section, we are going to demonstrate the way RDAs can position itself within a system of innovation using the conceptualization and of social fields.

Different conceptualizations of the concept of social field agree that social fields are "being structured by social forces that increase stability in social interaction" (Beckert, 2010). Three social forces are to ensure the stability of the system but Beckert (2010) puts forward the possibility of continuous (re) formation of a social field through changing topography of relations. Since, social fields are not determined by geography but are rather culturally, socially and politically established (Scott, 2012) one can assume there has to be a possibility of steering the topography of relations among the actors of the social field. This is not only a theoretical-analytical assumption but is true also in the case when we are using the concept of social fields as an analytical tool for the analysis of a specific delimited phenomenon, e.g., a regional system of innovation.

What are the mechanisms these social forces use in order to condition regional systems of innovation? These are explained in detail by Beckert (2010) and we are adding own additional comments to it: firstly, institutions as such are to shape the social field by limiting the permitted scope of actions. This goal is reached with application of rules and routines in order to encourage some and discourage other behaviours and actions of actors. Setting an example in managing regional development, we outline the following: obtaining regulation where enough resources and authority are delegated to RDAs in order to establish a functional institutional framework where actors can function according to its rules and using the infrastructure set as facilitator of their actions. The level of strategic approach is based on the importance of the role RDAs obtains.

Secondly, social networks conditions credit by delegating the positions of different actors in social space they shape. The emergent quality networks have is predominantly in the ability to limit or enhance the ties with and among specific networks. Adam and Roncevic (2003) state that social networks can lubricate project-based organizations but additionally in properly-functioning systems of innovations there has to be a high level of cooperation among actors. One of the most important actors in such systems can without a doubt be or become also an RDA where its positioning as facilitator of relations can put them on forefront of a successful adaptation to global trends. On the other hand, networks can result very fragile and are also prone to failure (Bob, 2007). According to Castells, networks can be "powered social and organizational networks in ways that allowed their endless expansion and reconfiguration, overcoming the traditional limitations of networking

forms of organization to manage complexity beyond a certain size of network” (2010, 2). For RDAs as in our case, if an RDA is small and understaffed organization, established and operating in systems of innovation which are complex systems with highly intensive knowledge-based operations the above stated can result to be a crippling factor.

Finally, cognitive frames equip actors of a social field with the properly adjusted mental tool-kit. Such tool-kit enables the primarily recognition and later proper behaviour where it comes to interpretations of events designated and highly important for the development of social field. In the case of systems of innovation and its aims and strategies to actively participate at global flux we are speaking about the attitudes towards development, innovation, absorbing new knowledge etc. The role of RDAs in this aspect is to take these frames into account either as enabling or constraining factors or as their policy tools which can be reshaped and used to pursue their goals (Roncovic, 2007, 2012, 2015). Cognitive frames contribute to the structuring of social fields as they are suggesting the best possible social action, although, the final outcome is essentially uncertain (Beckert, 2010) (it was empirically verified that institutions, social networks and cognitive frames structure systems of innovation, hence, observed as social fields-in a way that they support or discourage successful adaptation to global trends (Roncovic and Modic, 2011)).

CONCLUSION

While operating, RDAs have to take into account the outlined interdependences along with global trends, especially when planning and formulating their behaviours. After all, the main role of RDAs is in steering social changes as being most welcomed within regional systems of innovation. Analyzing different levels where the processes of changing the social field are occurring will enable us to determine the level and ways at which RDAs can act along with learning about the mechanisms/tools the RDAs have available for such actions.

What can a specific RDA do to steer successful adaptations to the global challenges as outlined? A simple and clear cut generic answer is not possible but for successful managing of social changes RDAs would have to have at least three qualities: first, as a collective actor it would have to be self-conscious and knowing (Roncovic, 2007, 2012, 2015). Second, it would have to be committed to realization of predefined goals and finally, it would demand access to levers (or powers) which would allow to (re) set the social context.

To sum up at the macro level in terms of societal steering, societies have to develop adaptive mechanisms for steering in conditions of increasing complexity (Roncovic, 2007, 2012, 2015). It is the global trends that

are currently shaping the global flux along with development demands arising from regions which aim at increasing their innovation performance. Establishment of a regional system of innovation in such context is unimaginable without an RDA, properly equipped with the qualities outlined above.

Additionally, at the meso level, RDAs need to have the ability to contribute continuously to the (re)production of technological and social innovations (Roncovic, 2007, 2012, 2015). RDAs are able to actively participate due to their nature of linking actor between other stakeholders within the triple/quadruple helix stakeholders active within regional system of innovation. Additionally, this is also a question of managing a system of innovation and more broadly, any triple/quadruple system. The choice of addressing the issue through the prism of social fields concept results correct, since, social fields can be studied as ‘arenas of social interaction for the exchange of goods and services’ (Beckert, 2010).

Finally, it is at the micro level where RDAs have to be able to condition those social forces that have the main influence over the topography of the social field, i.e., relevant institutions, networks and cognitive frames. It is the ‘invisible set of forces’ (Fourcade, 2007) active in this level that remains as the most important when (re) creating the regional systems of innovation since the individuals are the ones who carry out the tasks-actions either as members of the stakeholders within triple/quadruple helix either as parts of networks. On this level, RDAs as individual and collective actors can actively utilize a so-called cultural tool-kit (Swidler, 2001; Lizardo and Strand, 2010) to construct appropriate chains of actions (Swidler, 1986; Lizardo and Strand, 2010) in their response to global challenges can play a crucial role.

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