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## EDITORIAL

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# KNOWLEDGE GOVERNANCE: THE SOCIAL DIMENSION OF INNOVATION

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Last year, in a colourful atmosphere of late summer, Prague hosted the participants of the 3<sup>rd</sup> International Conference on Indicators and Concepts of Innovation (ICICI). ICICI 2009 was focused on the issues of social dimensions of innovation. Not only due to an agreeable transitory climate of that time, but mainly due to the accumulated knowledge stock of this conference series and this year's challenging topic, did the discussion offer a rich pattern of issues concerning both the knowledge resources of innovation and the economic, social and cultural implications of their utilisation. The discussion indicated that the shifting of cognitive attention to the notion of innovation, and the efforts to appropriate it in conceptual and empirical terms, offered interesting insights in the ways current societies function while reproducing their knowledge stocks and frameworks and producing new knowledge. If one succeeds in better understanding the knowledge background of innovation as well as the ways it is filtered by an institutional setting and appropriated by social actors, then one can also better understand the ways knowledge is governed. The scope of papers and discussion arguments presented at the conference on the social dimension of innovation has been quite extensive (Müller, Roth, Žák 2010) since this topic is quite new for the field of social studies of innovation. The papers reported about the ways expert knowledge penetrates the public realm, is used

for justifying public projects, and mobilises responsive social action and activities, including diverse interests and knowledge resources. They described regulatory efforts to deal with the impacts of expert systems under democratic regimes, and formulated arguments which are interesting for theorizing on the issue of knowledge governance. Thus, the intersection between the cognitive profile of the conference and the editorial aims of the Central European Journal of Public Policy inspired a special CEJPP issue on the topic of knowledge governance. In the following text I will comment on the papers presented. Before doing so, I will outline briefly the intended cognitive framework of the conference since it has, to a certain extent, influenced the content of the papers presented and may facilitate the reading thereof. I will also refer to the conference discussions addressing some argumentative approaches to the issue of knowledge governance in contemporary societies, which can serve the same purpose.

The cognitive aim of the 3<sup>rd</sup> ICICI was to continue the discussion which took place at the preceding conference meeting (Roth 2009). There, generally speaking, an emerging opinion in the social sciences was reflected: one understood that the study of innovation should not be limited to the technological and economic frameworks, and social issues should be also addressed. For that reason, the 2<sup>nd</sup> ICICI was focused on non-technological and non-economic innovation. The papers presented dealt with innovation in the fields with explicit social frameworks such as social services, where technology plays a limited role and economic resources may be substituted by social engagement. The conference brought interesting knowledge about the management of innovation in such fields and suggested a concept of socially robust innovation. The 3<sup>rd</sup> ICICI continued in this direction and intended to extend the topic to the economic and technological frameworks of innovation as well, where the impact of social resources is less explicit. Of course, such ambition faced the necessity of mastering relevant discussion by means of a productive theoretical framework and relevant empirical support. Nonetheless, one tried to keep to such more general orientation for several reasons. First, the social and cultural impact of current innovations, which are mostly based on available technological and economic resources, clearly exceeds the adaptive capacities of societies, undermining their reflexivity and governance capacities. Second, social sciences play an important role in influencing and shaping such capacities. Their role could be advanced if one was more aware of the state of the art, i.e. of various social studies focused on the issues of innovation and change. Call for papers for the 3<sup>rd</sup> ICICI assumed that a more relevant cognitive background for formulating research problems and undertaking research projects can be found in the economic studies of innovation, the social studies of science and technology and current modernity concepts. Third, the issues of reflexivity

ity and governance should be dealt with in a mutual relationship. Social science knowledge is formed in circulation between social science communities and knowledgeable social actors. Public governance is a part of such circulation, and it cannot function without expertise. One can claim that contemporary innovation policies in EU countries are good examples of such circulation between economic studies of technology and innovation, innovation policy actors and innovating firms. The unintended consequence of this success story is that such understanding has become embedded in both the research concepts and the views of regulatory actors. The disembedding from this cognitive framework in favour of a social and cultural perspective in both social science communities and regulatory agencies proceeds much more slowly than what is necessary for sufficient reflexivity of current practices and issues.

Important incentives to an assessment of the social dimensions of innovation are coming from economic studies of innovation. Innovation pressure on the current institutional framework has been studied and reflected in the concept of *knowledge-based economy* (Rodrigues 2002, Soete 2006) and the concept of social system of production (Hollingsworth, Boyer 1997). Both perspectives have recognized the importance of a wider institutional framework – one transcending the institutions of the market and the instrumental rationality of economic action – for facilitating innovation as well as a wider scope of social coordination. Both concepts have drawn interest to the study of the regulatory and institutional consequences of innovation-based economic growth. Advances in empirical economic studies of innovation have been clearly transgressed into certain research problems of the social studies of innovation. Research studies organised by the concept of *learning firm* and *learning economy* have identified a series of social issues associated with innovation processes and interpreted them by using sociological key words and concepts (Lundvall 1992, Lundvall, Tomilson 2002, Lundvall 2006). They are good examples of such transgression.

The *social studies of science and technology* (Nowotny at al. 2001, Felt, Wynne 2007) has been available, yet seldom utilised, as another set of useful contributions to the study of the social dimensions of innovation, even though the issue of innovation does not stand as the key problem of this field's research agenda. A closer look at both areas of the social sciences can help us identify common research problems: both areas have headed towards the understanding that both social change and innovations are related to *different sources of knowledge*, which are *embedded* in specific social contexts and whose utilisation requires specific forms of *social action* and communication. For example, studies of innovating firms (Lundvall, Tomilson 2002, Lundvall 2006) have described how their knowledge producing practices are embedded in or-

ganisational patterns, and what role propensity to organisational change plays in the formation of firms' innovation capacities. Studies based on the concept of social production have drawn similar conclusions, describing the interfaces between national innovation resources, their institutional frameworks and the role of innovation in the competitiveness of national economies (Hollingsworth, Boyer 1997). Similar issues have been addressed in the field of the social studies of science and technology: step by step, the role of context in the production of scientific knowledge and its growing social robustness have been reflected in mainstream concepts and gained extensive support based on empirical research. The first unique proposal of a three-stage model of finalisation (Böhme at al. 1978) was later supported by a study of re-institutionalization of the academic sphere (Gibbons et al. 1994) and advanced by a closer description of boundary conditions between science institutions and society (Nowotny at al. 2001). The authors of the latter study claim that changing boundary conditions between science and society, as identified in research activity (*Mode-2* research production), cannot be successfully interpreted without the productive concept of *Mode-2* society (Nowotny at al. 2001).

The necessity of the concept of *Mode-2* society as suggested above focuses attention on the social studies of modernity, and in particular the concept of knowledge society. Reflecting the situation in EU member countries, Felt and Wynne point to the dilemmatic nature of this cognitive issue: "steps should be taken away from the present narrow and exclusive understanding of innovation towards recognising more socially distributed, autonomous and diverse collective forms of enterprise" (2007: 10). The same critical comment can be applied to the story of the Lisbon Strategy. In normative terms, it counts on the interfaces of technological, economic and social factors, but in empirical terms, the situation has been governed by a techno-economic discourse. Social issues usually have been shifted to the background with the argument that their solution is costly. Following his concept of reflexive modernity, Giddens formulates an alternative assessment. He claims that social factors should also be understood as resources, not only costs. However, such an understanding can only emerge if social processes are not only reflected as passive, indirect, dependent factors, but also as active and independent forms of current transformations (Giddens 2007). The service sector can provide us with numerous cases where the techno-economic nature of innovations is constrained, and contours of a clash between passive and active forms of social transformations are emerging. The passive forms are shaped by an industrial mode of knowledge production (with separated positions of knowledge producers and knowledge users): knowledge flows from producers to users, active producers and passive users, organised forms of top-down information flows and the corresponding eco-

conomic and social advantages for respective actors (high status for producers, high wages for actors producing technology and value added). The assessment of the service sector's role in current social transformations is locked in an industrial techno-economic paradigm. Active forms of services have to be identified through understanding the *new roles of technology, knowledge and markets* in relation to increasing competences and activities of users. Innovation resources are thus much more dependent on the variety of interfaces to users, flexible networking and personification of services. "The knowledge in new economy is certainly in part scientific and technological – as the very impact of information technology shows. But even more important are creativity, the testing of new ideas and the opening up of new markets according to changing patterns of demand ... which is met by stylistic appeal, clever design and effective marketing" (Giddens 2007: 179). These are strong arguments for labelling current changes in the economy with the term *knowledge-based economy and services* (Soete 2006, Giddens 2007).

The necessity to develop the concept of *Mode-2* society can be also supported by the current social science debate about the nature of modernity. The structure-agency approach seems, in my view, to be a productive one, since it offers a good interpretative framework for the study of contemporary institutions and their changes. The position of A. Giddens in this perspective has been mentioned above. One can add the debate about the nature of reflexivity, which outlines the role of different types of knowledge in the governance of contemporary societies (Beck, Giddens, Lash 1994). A similar contribution has been played by the concepts of knowledge economy and society which are built on the idea of D. Bell that contemporary (post-industrial) societies are shaped by the axial principle of codification of abstract knowledge (Bell 1973). An interesting interpretative position in the debate about knowledge societies has been taken by N. Stehr (1994, 2007). He stresses the (new) role of *knowledge as a capacity of action* (thus reflecting the trend of individuation), and he also points to important structural changes: (i) the growth of households' welfare, (ii) the growth of the scale and scope of education and practical knowledge in social action, and (iii) the separation of consumption from production.

With the above reference to N. Stehr's contribution to the current debate about the problems of knowledge societies, I would like to conclude the first part of my introductory comment which has intended to make the reader familiar with the conceptual background of ICICI 2009. The same author offers to me a chance to proceed to the next point, i.e. to present the articles in this issue of the CEJPP. It is an article of N. Stehr which opens the discussion about the problems of knowledge governance. It presents an interpretative framework for the discussion of this issue in a theoretical perspective. The general

framework of the author's approach and his arguments have been mentioned above. In the article, he discusses dilemmas of knowledge governance: the relationships between expert knowledge and everyday (lay) knowledge, the expert community and the civil society, public and private knowledge, production and distribution of knowledge, and cognitive distance and cognitive proximity between expertise and everyday knowledge. While discussing these dilemmas he suggests research issues the study of which can help us understand the "co-existence" or mutual balancing of the dilemmatic factors. The first of these issues concerns the role of the actor. He/she is not a lay person but a knowledgeable one, participating in knowledge formation while using it to enable his/her action. Due to the actor's active cognitive role, an important source of knowledge emerges: enabling knowledge. In this perspective, the tensions between public and private forms of knowledge appropriation as well as the relationship between the scientific community and the civil society can also be cleared. Furthermore, by paying more attention to extensive knowledge diffusion in current societies and reflexive utilisation of knowledge by actors, one can gain a more diversified and richer picture about the boundary conditions between science and society. In such a perspective, the shortcomings of the current institutional setting, the shape of autonomy for science, as well as its authority under democratic political rule can be better outlined. Thus, the cognitive distance between experts and citizens, which seems an insurmountable obstacle for democratic rule in complex societies, can be reflected in a more constructive perspective. It rather becomes a space of competing knowledge claims, i.e. a sphere of knowledge politics where new knowledge is authorized within public discourse. The author stresses that social sciences play a crucial role in the governance of the above-outlined process of democratisation of knowledge claims. Social science knowledge is not only important for assessing the different roles institutions play in knowledge governance but also for deconstructing the social embeddedness of underlying knowledge and constructing meanings that facilitate the process of democratization of knowledge governance.

The following articles approach the issue of knowledge governance from the perspective of current research projects which study in more detail the boundary conditions between expert systems and civil society. They either focus on the public realm, including governmental and non-governmental organisations, or on expert systems and research organisations. *Julia Backhaus* steps into the discussion with the article "*Intermediaries as Innovating Actors: Towards a Transition to a More Sustainable Energy System*". Outlining the role of intermediaries in the changes of institutions with different functional orientations, she presents the outcome of her study of the energy system and its possible transition to an energy-saving pattern. The empirical study focused on

the wide scope of “energy intermediaries”, the social environment of their activity and their effects on possible changes in the behaviour of energy consumers. Her findings point, in particular, to an important role of demand side management which is lagging behind in the changing relationship between production and consumption.

*Wouter Mensink* and *Frans J. Birrer* also address the problems of boundary conditions between expert systems and the public. They study the roles of their actors but focus on different facets of the issue. They study larger projects which are associated with numerous stakeholders and face essential (systemic) changes in practices due to the implementation of new technologies. In the article “*The Role of Expectations in Radical System Innovation: The Electronic Health Record, Immoderate Goal or Achievable Necessity?*” they describe such a change (innovation) in Dutch healthcare organisations. They find that the implementation of such a (system) innovation has been marked by the differences and uncertainties which are projected in the expectations (and fears) of numerous stakeholders. Such differences and uncertainties play, indeed, a vital role – they grow in the confrontation of various expectations and hardly can be reconciled by reasoning. Referring to the situation examined and experiences from other countries, the authors identify a set of usual expectations emerging in the formation of larger projects, such as interrelations between quality and efficiency, between the supply side and the demand side, or between a macro picture and a micro understanding of social situations. Based on their findings, the authors recommend a procedure for decontextualizing the expectations and bringing them onto a manageable track.

The other two articles deal with the core knowledge resources of expert systems and their research facilities. In their article “*Unpacking European Living Labs: Analysing Innovation’s Social Dimensions*”, *Benoit Dutilleul*, *Frans A.J. Birrer* and *Wouter Mensink* study the situation of the so-called “Living Laboratories”. They outline the different meanings of this emerging form of research and innovative activities, and suggest a conceptual framework for analysing the social dimensions and dynamics of Living Laboratories. Their research problem is focused on the study of the cognitive and motivational barriers which are emerging among the numerous actors of innovative activities and hindering innovative performance. Their project studied three social configurations: how the Living Lab setting is constructed, how the required stakeholders are brought in contact, and what the specific communication and collaboration challenges are. Based on the outcome of their field study the authors argue that cognitive and social barriers arise not only out of the extensity of stakeholders with distinct aims, but also of their own underlying knowledges. They seek a solution in intensifying the communicative and collaborative interac-

tions through intentional and inventive promotion of all possible contacts among relevant stakeholders. The context of such promotion is discussed in more detail with respect to the possible participation of users in innovative activities and the impact of a competitive market environment on the collaborative demands of innovative actors.

The article “*Expansive Development through the Change Laboratory Method: Example from Finnish Health Care*”, written by *Hannele Keruso*, *Anu Kajamaa* and *Yrjö Engeström* also relates to an expert system situation and a laboratory context, yet in their more subtle social and communicative aspects of reflexivity and learning. The text describes a specific method designed for the development and learning of new practices in organisations and at daily work situations. In theoretical terms, the method is based on the concepts of the cultural-historical activity and expansive learning. A key role in expansive learning is played by the method of double stimulation through which an abstract solution (expanded objects, tools, communities, rules, or division of labour) has to be transformed into a specific device or a sign that is meaningful for a given subject in a given situation. The cognitive effects of the method are demonstrated on a case study – a research project carried out in a surgery unit of a university hospital during the years 2006–2008. The authors describe in detail the procedure and developments of the study and outline the outcome of the project, i.e. the implementation of a new model of leadership and management in the unit.

To conclude my introductory commentary, let me point to some general issues of *public policy* which are – directly or indirectly – addressed by the articles in this issue. First of all, they stress the role of meaning and symbolic power as an important implication (and resource) of expert knowledge production. That is why the *public sphere* has to be addressed. The articles presented indicate well the fact that knowledge governance cannot be successful without an effective role of the public sphere which is not only able to process and absorb the many-sided legitimizing activities but also mobilize their reflexivity and learning. Can such efforts be based on deliberative and communicative competences (in Habermasian terms) only or do they need wider cultural commitments (Alexander 2006, Wickham 2009)? To what extent are cultural commitments able to absorb the uncertainties and fears which are associated with knowledge societies? The articles presented provide evidence of these influences, their mutual penetration and the role of democratic competencies and governance. Another issue concerns the role of action, activity and the ways it is oriented by existing types of action and their institutional support. Here, one can mention the roles of the consumer and the citizen and ask how they are changing in the context of an increasing level of saturation

of basic needs, education, an increasing role of media in social interaction, and declining power of and trust in existing institutions. Has the *consumer* really become the key actor of contemporary societies? How can their democratic efforts be maintained if current trends are indicating that consumers only have rights and no obligations? What chances for a cultivation of civility and solidarity are available under such circumstances? What about the role of the *citizen*? How can citizenship be perceived under the conditions of uncertainty and risk, which belong to the unintended consequences of modernity? Answers to these questions seem to be crucial for the governability of contemporary societies. One can count on Beck's interpretation that the "knowing about not knowing" can be mastered by realizing the pressure of global threats via bottom-up subcultural activities and can lead to the formation of cosmopolitan citizenship (Beck 1986, Beck 2006). Another interpretation can count on "neurotic" or "prudential" citizenship based on different forms of governmentality in the environment of risk, counting on risk aversion and enemy-oriented and fear-based forms of governance, in the former case, and on the capability of a (educated and well-situated) person to face risks in terms of calculative choice, in the latter case (Walklate, Mythen 2010). Of course, the situation of "knowing about not knowing" can also be mastered by means of trust and governmentality through the formation of trustful environments (Giddens 1990). Here again, one cannot only rely on the interpretations of situated and reflexive actors. Instead, structural and cultural circumstances – both in terms of distribution of power and discursive support – should also be taken into account.

## REFERENCES

- Alexander, J. 2006. *The Civil Sphere*. Oxford: Oxford University Press.
- Beck U., Giddens A., and Lash S. 1994. *Reflexive Modernization. Politics Tradition and Aesthetics in the Modern Social Order*. Cambridge: Polity Press.
- Beck, U. 1986. *Risikogesellschaft, Auf dem Wege in eine andere Moderne*. Frankfurt am M.: Suhrkamp Verlag.
- Beck, U. 2006. *Cosmopolitan Vision*. Cambridge: Polity Press
- Bell D. 1973. *The Coming of Post-Industrial Society. A Venture in Social Forecasting*. New York: Basic Books, Inc.
- Böhme G., Daele W., Hohlfeld R., Krohn W., Schäfer W. and Spengler T. 1978. *Die gesellschaftliche Orientierung des wissenschaftlichen Fortschritts*. Starnberger Studies 1, Frankfurt am M.: Edition Suhrkamp.
- Gibbons, M. et al. (ed.). 1994. *The new production of knowledge. The dynamics of science and research in contemporary societies*. London: Sage, New Delhi: Thousand Oaks.
- Giddens, A. 1990. *Consequences of Modernity*. Cambridge: Polity Press.
- Giddens, A. 2007. *Europe in the Global Age*. Cambridge: Polity Press.

- Lundvall, B.-A. 1992. *National Innovation Systems. Towards a Theory of Innovation and Interactive Learning*. London: Pinter Publishers.
- Lundvall, B.-A. 2006. *Innovation Systems between Policy and Research*. Paper presented at Innovation Pressure Conference, Tampere, March 2006. 27 p.
- Lundvall, B.-A. and Tomilson, M. 2002. International benchmarking as a policy learning tool. In: M. J. Rodrigues (ed.). *The New Knowledge Economy in Europe*. Cheltenham: Edward Elgar, pp. 203–231.
- Müller, K., Roth, S. and Žák, M. 2010. *Social Dimension of Innovation*. Prague: College of Economics and Management (in print).
- Nowotny, H., Scott, P. and Gibbons, M. 2001. *Re-thinking Science. Knowledge and the Public in an Age of Uncertainty*. Cambridge: Polity Press.
- Roth, S. (ed.), 2009. *Non-technological and non-economic innovations. Contribution to a theory of robust innovation*. Bern: Peter Lang.
- Wickham, G. 2010. Sociology, the public sphere, and modern government: a challenge to the dominance of Habermas. *British Journal of Sociology* 61(1): 155–175.
- Walklate, S. and Mythen G. 2010. Agency, reflexivity and risk: cosmopolitan, neurotic or prudential citizen? *British Journal of Sociology* 61(1): 45–62.