

Prof. dr John Grin (MSc in physics, 1986; PhD in Defence Technology Assessment, 1990) is a Full Professor in Policy Science, in particular System Innovation, Dept. of Political Science, University of Amsterdam. He is Co-Director (with Marlies Glasius) of the Programme Group Transnational Configurations, Conflicts and Governance, Amsterdam Institute for Social Science Research (AISSR).
John Grin is was co-founder, with Jan Rotmans and Johan Schot of the Dutch Knowledge network on system innovations and transitions (KSI) and a Steering Group member of the international Sustainability Transitions Research Network.

A transnational governance perspective on transitions to sustainability

John Grin

University of Amsterdam - Amsterdam Institute for Social science Research i.grin@uva.nl; www.uva.nl/profiel/j.grin

1. Introduction

Many contemporary crises – including climate change, the financial crises, a variety of pandemics - have in common that they (1) represent the dark side of dominant patterns of socio-economic-technological development, and (2) appear to be very difficult to resolve. Over the past decade, the field of transition studies has sought to understand such problems and ways to resolve them by taking as a point of departure that the persistence of the problems involved (2) may be explained by the fact that (1) implies that these problems originate from practices that are firmly embedded in incumbent societal structures, which have evolved around and tend to privilege dominant societal practices. The fundamental corollary is that, their resolution is bound to involve both innovative practices and structural adaptation. Such a *transition* is a rather fundamental type of transformation as it goes beyond established practices and the structures which have co-evolved with them.

Over the past years, significant insight has been gained into the dynamics of such transitions, as well as into the problems and opportunities of influencing them (e.g. Bauknecht et al, 2006; Meadowcroft, 2007; Van den Bergh et al, 2008; Schot & Geels, 2007; De Haan & Rotmans, 2008; Berkhout et al., 2008; Voß et al. 2009; Grin et al, 2010; Smith et al., 2010; Grin, 2012). Yet, while the fact that the problems on which these issues focus are essentially transnational in nature has been recognized in many empirical studies, it has much less been theorized. This paper seeks to contribute to further conceptualization of the transnational governance of transitions.

More specifically, I will, first, explore how to accommodate the transnational nature of transitions and transition governance into the field's main concepts (section 2). I will then review some recent developments in our understanding of transnational governance so as to explore how a transnational perspective on transition governance may look like (section 3). I will then use the framework thus proposed for a secondary analysis of a case study by Hodson & Marvin (2009), who are amongst the few authors who have attempted to mar transition theory with transnational governance literature.

2. Conceptualizing transitions and transition governance

Let us start by outlining some of the basic concepts from transition studies, and then proceed to develop them so as to better comprise the nature of transitions as phenomena in an essentially transnational society.

Basic concepts of transition theory

One key notion from transition theory is a persistent problem: a problem that is, as it were, the dark side of the practices that fulfil specific needs nut in doing so produce risks and side effects. These

problems are persistent, not only because they are produced by established practices, but also because attempts to resolve these problems through innovative practices tend to be futile because these novel practices too are likely to reproduce incumbent structures.

A second concept is the main heuristic framework to depict how both structures and practices may transform, the multi-level perspective (MLP; Rip & Kemp, 1998; Schot, 1998; Geels, 2005). Put briefly, it conceives of a transition as interference of processes at three levels: innovative practices (niche experiments), structure (the regime), and long-term, exogenous trends (the landscape). Each of these levels may be seen as an assemblage of actors, material infrastructures and objects, discursive elements, and institutional rules. Building on neo-institutional theory, (Geels (2004) proposed that regimes contain three types of rules: 'cognitive'(e.g. guiding principles, goals, problem definitions and search heuristics), regulative (e.g. standards and legal rules) and normative rules (e.g. role relationships, values and behavioural norms). In addition, there are material elements such as infrastructures technological artefacts (e.g. highways and cars). These rules tend to be reproduced in regular practices. Niches are spaces that offer innovative practices ('niche experiments') a chance to develop, by shielding them from the adverse influence of this regime.

A transition may arise if, and only if, these changes going on at these three levels come together in particular ways may mutual reinforcement emerge as a necessary condition for achieving a transition. Much in the same way as in the three 'time scales' of Braudel (1958), these levels differ in terms of the time that typical processes take. Various typologies have been developed on basis of historical research (Schot & Geels 2010) or complex system theory (Rotmans & Loorbach, 2010) for the different routes through which such a process of mutually reinforcing change may result.

Closely related is the notion of co-evolution, referring to the fact that, historically, regime and practices co-evolve, i.e. shape each other. While contingency is important, this process of co-evolution is often shaped by collective (albeit contested) visions, such as modernization. (Rotmans, 2001; cf. Grin, 2000)

Transition governance

Grin *et al.* (2003; cf. Grin, 2008) has proposed that, given the structural nature of transitions, it is important to further develop the MLP from the perspective of structuration theory. This is particularly necessary in order to attain a proper conception of the interaction between structure and agency – avoiding the traps of both structuralism and voluntarism. From this perspective, the levels represent different levels of structuration and transitions essentially become a matter of (1) redirecting the co-evolution of structure (the regime level) and agency (innovative practices, such as 'transition experiments') towards (2) an orientation which goes beyond the control-mode orientation characterizing 'first' or 'simple' modernity (Beck, 1997) and takes sustainable development as a normative orientation, (3) amidst the turbulence of a variety of exogenous trends.

Crucial in the process of re-orientation is reflexivity, understood as what Voß & Kemp (2006) have called 'second order reflexivity.' While 'first order reflexivity' captures the unconscious and unintended, 'reflex-like', consequences (side effects and risks) of early modernization processes, second order reflexivity is about the self-critical and self-conscious reflection on processes of modernity. It evokes a sense of agency, intention and change. Here actors reflect on and confront not only the self-induced problems of modernity, but also on the regime that underlies the persistence of these problems.

For elaborating this perspective it is useful to operationalize the regime in a way that is more explicitly related to concepts from the field of governance theory. To be sure, a strong point of Geels' depiction is that it draws significant attention to the material dimension of the regime. As for instance recent work by Schot on the influence of such elements on European integration demonstrates, they may have profound impact on societal change. (Schot & Lagendijk, 2008; Misa & Schot, 2005). Infrastructures also connects practices in different loci in the space of flows and the space of places. (Kesselring, 2006) But for understanding governance, it is good to introduce some more concrete concepts that translate the somewhat abstract notion of rules to notions that relate more directly to governance phenomena. Thus, Grin (2010: 231-234; 237-238) has proposed to distinguish, in addition to the material dimension, also a discursive and an institutional dimension. The discursive dimension of the regime comprise the structural principles (Giddens, 1984) or discourses (Hajer, 1995) that structure – in the sense of structuration theory, i.e. through, not determining, agency – practices as well as, as a review literature shows (Grin & Loeber, 2007), reflexive learning and change. The institutional dimension of the regime may be operationalized as the four institutions (sets of resources and rules) that structure much of the processes of modern societies (state, market, civil society and science) and their mutual alignment. That alignment leads to a variety of arrangements. As shown in Grin (2010: 237-248), three may be usefully distinguished as they have both been shaped throughout long-term processes of modernization, and are under pressure as a consequence as a consequence of long term trends such as individualization and globalization, as well as issues such as sustainability:

- The governance system. This comprises what Held (1989) calls "the political domain of society": the setting where actors from the four different institutional realms produce and distribute resources, rules and meaning in order to give direction to society.
- The market system. Also, markets are successful if, and to the extent that, they are
 embedded in a wider market system, in which also the state (policies that help remedy
 market failures) and civil society (shaping and articulating consumer preferences) play crucial
 roles (Lindblom, 2001) as well as, we add, science (constantly giving impulses for novel
 opportunities).
- The innovation system. Innovation studies (for a useful review, see Smits & Kuhlman, 2004) have indicated that organizations do not innovate in isolation but in the context of an innovation system that in diverse ways, facilitate and interconnect heterogeneous actors on various loci.

In Grin (2010: 237-248) I have reviewed of the changes that have been typically going on in these three systems in modern societies in the past decades. At the regime level, major processes of transformation go on in the institutions of state, market, civil society and knowledge, and their mutual alignment. Somewhat schematically, these changes are the effect of two kinds of mechanisms:

- Partly they result from the influence on the regime of landscape-level trends, such as
 individualization and the politicization of side effects (which came together in the emergence
 and activities of new social movements), Europeanization and globalization, and more
 recently also neo-liberalization.
- Partly they emerge from the responses to the challenges which these practices have come to face during the past few decades as a consequence of feedback processes.

In all examples, changes at the regime level often involve some degree of de-differentiation or, more accurately, hybridization and heterogenization. Regimes are moving beyond the differentiations, both between policy domains, national borders and institutional realms as they have historically coevolved in early modernization processes. We may interpret these changes as typical for late modernity.

Changes in the regime have an impact on day-to-day practices. Two important effects may be discerned in all three realms. The first is dedifferentiation, between the four institutional realms (new policy arrangements, the increasing role of innovation systems, new institutional arrangements for corporate governance) as well as within them, including the emergence of multilevel governance (*Re*-spatialization), integral policymaking and interdisciplinary knowledge production (*Re*-specialization).

Not surprisingly, then, practices within the governance, innovation and market systems are becoming much more heterogeneous, while hybrid organizations in between state, market, civil society and knowledge infrastructure increasingly have crucial roles to play. Given this multiplicity, many different outcome of the interactions between changes at the regime and practice levels are conceivable, with different normative orientations. For a transition towards a sustainable society to occur, creative agency is necessary that involves second order reflexivity. We may now understand the latter in terms of transforming normally 'recursive practices' may be transformed through 'discursive will formation'. Fox & Miller's (1996: 91), thus breaking through the 'institutional inheritance' (Healey, 1997) or 'structural inertia' (Linder & Peters, 1995: 133) implied in the in material, institutional an discursive structures that privilege practices which tend to reproduce these problems (Grin et al., 2004; Stirling, 2006). Elsewhere, I have proposed to conceive of the agency involved in second order reflexivity by building on a concept from social theory (Giddens, 1984; Stones, 2005): reflexive monitoring. Reflexive monitoring involves positioning one's own actions, and their (expected) (un-)intended consequences, in between the regime as it has been developing and the regime as it may develop, under influence of exogenous ('landscape') trends as well one's own actions.

3. Transitions and transition governance in transnational society

In order to develop a transnational governance perspective on transitions, let us briefly review some relevant insights from literature. strands of literature that offer useful insight. First Keohane & Victor (2011) have discussed what they call the 'regime complex' surrounding climate change. They show that around climate change not just one regime has emerged but rather a complex of regimes. As the authors show, this regime heterogeneity is a consequence of the heterogeneous nature of climate change issue. The latter is rooted, first, in the fact that it relates to a wide variety of social-economic practices (from car driving to food practices). Solutions thus involve significant innovations in these practices. Second, such changes are likely top work out differently for different societies. It should thus not come as a surprise that the politics thus sparked, yields a heterogeneous regime at the transnational level; as Keohane & Victor argue, this is rather likely to become a permanent feature. This regime complex includes both elements dedicated to climate change and elements from other regimes (such as financial market regulation or WTO regime), that have been co-shaped by the climate change issue.

Regime for sustainability issues more in general are likely to exhibit similar features. Sustainable development, by its nature, involves optimization between at least four dimensions (social, economic, ecological, and international justice). Also, sustainable solutions will more often than not require connections between domains that have become functionally differentiated, in order to close substance cycles, to turn energy consumers into 'prosumers' etc. Finally, both preceding points together are bound to generate politics. Thus, following Keohane & Victor's argument, sustainable transitions will mostly have a heterogeneous nature.

From their article, we thus take with us the following insights:

- The heterogeneous nature of the problem will lead to a regime that is a heterogeneous complex...
- which involves
 - (i) a diversity of arrangements dedicated to the sustainability issue per se each of which is drawn upon to different degrees by different 'clubs' of national and subnational actors;
 - o (ii) a diversity of more generic arrangements that undergo changes related to the sustainability transitions.

What is still missing in this depiction is that Keohane & Victor (2011) leave out regime elements at more distance from the state realm than focus on: while they mention the IPCC, they neglect national and transnational knowledge infrastructures to which it is intimately connected (Kwa, 2005); while they discuss the World Bank, they have much less attention for (emerging) national and transnational arrangements for accounting (Pinkse & Kolk, 2009); and they largely neglect a wide range of multi-stakeholder and voluntary regulation frameworks (Hale & Held, 2011) as well as transnational civil society.

Interesting points of departures are also offered by literature on multilevel governance. To be sure, multi-level here has a different connotation than above, in the context of the multi-level perspective (MLP) from transition studies. Multilevel-governance (MLG) is a way to conceive of governance in the setting that, as we have just discussed, has arisen from contemporary institutional changes, characterized by hybridization and heterogenization of both institutional arrangements and actors, and transgression of boundaries such as those between national and international; public and private and so on. In its more narrow sense, multilevel governance focuses on the role in governance of the state viz-a-viz sub-state actors as well as transnational actors, most notably the EU (e.g. Jordan, 2001; Marks & Hooghe, 2001; Pollitt, 2005). Given the transnational nature of sustainability issues, this is the type of setting in which transition governance is likely to find itself.

This literature conceives of these issues by considering them as located in a diffuse, heterogeneous setting formed by institutional arrangements and actors from all institutional realms (state, market, civil society and science) as well as from a variety of scalar levels (subnational, national and transnational). As outlined by e.g. Benz (2000), while both are about governance that involves different scales, MLG must be understood as fundamentally different from federalism. Much more than the features of the policy 'games' (practices in our terminology) and arenas (arrangements), the key difference between both systems concerns the nature of the linkages between the games and arrangements. Contrary to those of federalism, linkages between practices in MLG are much more informal and rather loose: practices in different arrangements do not determine each other, but set

the context for practices in other arrangements. Linkages involve communication rather than by resource dependencies or control. Together they form "a structure which simultaneously creates independent arenas of negotiation, intensifies communication and stimulates learning." (Benz, 2000: 37) As learning is thus nurtured, innovation is more likely to occur.

In short, MLG, brings us

- an understanding of governance in a setting that is typical for sustainability transitions, and structurally matches contemporary realities as outlined in section 2,
- further characterizes that setting as consisting of loosely linked practices
- and draws attention to the conditions for and potential of creative, innovative agency implied in such a setting.

Yet, like Keohane & Victor's analysis, it remains more focused on the governance system per se, while for understanding transition governance it is essential to pay also attention to the other fields we discussed in section 2: the market system, the innovation system and civil society.

In this paper, we will draw most extensively especially on a volume by Djelic & Sahlin-Andersson on the institutional dynamics of transnational governance. It comprises, first, the perspective that has emerged from the literatures just cited: transnational governance as involving (i) a regime, consisting of a heterogeneous set of loosely coupled elements; (ii) a set of, again loosely coupled practices from different realms and levels; and (iii) a potential for creative agency, drawing on and linking in contextually sensible different regime elements and practices. Second, it pays much more serious attention to non-state actors and associate arrangements. Last, but not least, this volume discusses an issue which is of prominent interest for transition governance: "transnational governance in the making." While they share world society literature's (Meyer et al, 1997; Finnemore, 1993; Finnemore & Sikkink, 1998) emphasis on the need to consider governance as embedded in culture, norms and institutions, they wish to understand better how arrangements are constructed and practices emerge. Also, following Djelic & Quack (2003), they also wish to understand better how transnational regimes and practices not only shape national practices and structures, but also how the former are partly produced by the former.

While, of course, also Keohane & Victor contribute to the former point, Djelic & Sahlin-Andersson take a broader perspective that is particularly interesting from the viewpoint of transition governance. Loosely building on the work of Bourdieu (1977), they propose a "revisited" field concept (2006: 22 ff) to capture the realities of multi-level governance. It refers to spatial topographies which are more fluid than traditional distinctions between levels would suggest; and relational topographies that connect individuals, organizations and actors. Fields are battlefields where the features of these relational topographies are being fought out. And fields are also structured by transnational institutional forces: scientization, marketization, formal organizing, moral rationalization and a reinvented (more deliberative, bottom-up) democratization. These forces are not neutral, but take me

anings to a diversity of practices, and give rise to practices which privilege particular meanings. ¹

It is interesting to mention here that the efforts that Keohane and Victor mention as arising from the climate change regime complex indeed involve regulation (transnational and bilateral agreementsd), the establishment of a scientific basis (e.g. IPCC), marketization (ew.g. World Bank Protoype Carbon Gund and the

On basis of a variety of chapters that analyze these forces as well as the interaction between (emerging) practices of governance, Djelic & Sahlin-Andersson (2006: 375-397) arrive at conclusions that are peculiarly interesting from the perspective of transition governance. From that perspective, the most salient are the following. One key conclusion is that, however fluid the world of multilevel governance may look at the surface, at a deeper level it appears that structured and ordered through these forces. These forces are on the one hand constitutive of actors: they enrol, as it were, actors in particular practices. Through institutionalization of these forces into 'meta-rules' (North, 2005), regimes are formed and transformed. These practices and structures are related to each other, across traditional borders of states and institutional realms: the relational and spatial dimensions of the field. From a longue durée perspective, these forces may also be seen as the aggregate effect of the co-evolution of earlier practices and the regime elements that emerged around them. It is not difficult to see this as the transnational analogy of transition dynamics at the three elements distinguished in the multilevel perspective from transition theory. Indeed, Djelic & Sahlin-Andersson (2006: 395) propose a three tier picture, comprising governance practices, embedded in topographies of actors and structural elements, and a deeper ('dark') layer of structuring forces.

A second key insight is that behind these dynamic s are actors, seeking to influence these processes and struggling with each other on that. Spatial levels "largely become discursive practices at the disposal of actors, as they take place in national, sub-national governance games." (Djelic & Sahlin-Andersson, 2006: 387) Yet, with meta-rules stabilizing and institutionalizing over time (partly 'behind the backs' of the actors), they get an increasing flavour of 'self-evidence', so that second order reflexivity becomes less likely. This of course implies a 'first mover advantage' for those engaged in the early struggles around a particular issue.

Closely related, the editors identify what actors may be especially important as such. First, there are new actors, including novel networks. 'New' may refer here to novel characteristics of actors, or to actors that are new in the sense that they previously hardly were involved in governance. Other key actors involved are transnational communities of interest. ²

Fourth, the editors show that the dialectic between the meta-rules being shaped *versus* shaping the actors and their interactions differ between areas. In a chapter on central bankers, the existing network remained largely closed; the international competition opened itself strategically up at some point to co-opt critics from civil society; and in the areas of international forestry and of corporate social responsibility, networks appear to progressively open up. As Voß & Kemp (2006) have argued, this process of what they call "opening up and closing down" is quintessential to transition governance. Djelic & Sahlin-Andersson's analysis show a similar dynamic in transnational governance, and suggests that the precise ratio between opening up and closing down is an outcome of situated political struggle.

4. Transnational transition governance: lessons from London for further research

Let us illustrate these notions through exploring one case of an important type of 'new' actors: cities and urban networks. As Hodson & Marvin (2010) point out at length, especially, world cities (Sassen,

Kyoto Clean Development Mechanism) and moral rationalization (e,g the California policies for promoting reduced emission.

To be sure, as Djelic and Sahlin-Andersson emphasize, nation-states remain important actors, and international organizations often provide the arenas around which innovative multilevel governance may flourish.

2001; Brenner & Keil, 2006) such as London, Tokyo, San Francisco, Paris, Berlin and Melbourne ,that are nodal points of both transnational and national networks, are currently seeking 'systemic changes.' A variety of ecological and social problems come together, in concentrated form as it were, in cities. In addition, cities feel a need to distinguish themselves so as to improve and nurture their 'competitive position' in world society and global economy. This being one expression of Djelic & Sahlin-Andersson's 'marketization' force, another expression that, over the past decades, has created pressure to systemic change are the problems associated with earlier liberalization of key urban infrastructures. Finally, cities comprise political, policy and business elites and decision-makers and to a lesser extent including NGO sand environmental justice groups that, each by itself and especially jointly, may push for and help develop novel practices.

Against this background, cities themselves tend to feel significant urgency to deal with problems, and often also national governments prioritize cities as places where these problems should be dealt with, and where innovative responses could be developed that also otherwise might promote the national interest. Also, there is constant pressure to pay sufficient attention to protect, in the era of climate change and global resources problems, the nodal points of global infrastructures. (Hodson & Marvin, 2010: 478-479)

World cities indeed consider the transnational and networks in which they are nodes as entities that are open for construction. As Brenner has argued, cities are glocal places, key loci in multi-level governance settings where "regionally scale institutions are being planned, promoted and constructed as a means to secure place-specific locational advantages." (Brenner, 1999: 440). As Betsill & Bulkeley (2005: 154) have found, this "scaling of political authority" in and of itself may be "a highly contested process", contribution to the battlefield which of Djelic & Sahlin-Andersson predict within and between practices of transnational governance. Hodson & Marvin (2009) add that one common element to world cities' strategies is to create intermediaries between actor from the various networks in which they find themselves. These intermediaries, by positioning actors vis-a-vis each other, are to bring together and mediate various interests and flows of ideas, knowledge and resources. As such they may be seen as an expression of another underlying force distinguished by of Djelic & Sahlin-Andersson: the tendency to 'organize the world.

In analysing more precisely the work done by these intermediaries, Hodson & Marvin have employed transition theory. The main difference between their account and the one above, is that while they have pointed out what paying attention to (diversity of) place may contribute to transition theory (see also Hodson & Marvin, 2010), they have not elaborated what, in a transnational setting, precisely constitutes the three levels of the MLP and the associate transition dynamics. Let us see what our extension of transition theory, drawing on the work of Djelic & Sahlin-Andersson, may bring us in terms of both additional insight and questions for further research, when we use it for a secondary analysis of case study: attempts to introduce a hydrogen economy in London.

In this case, there were two different alliances. As Hodson & Marvin (2009) show, for both it are their their and their intermediary which provide orientation to collective action. The first alliance, under auspices of Mayor Keith Livingstone, is keen to position London as a world leader in re-fashioning 'progressive' governance so as to deal with issues like climate change, air quality and congestion while respecting and improving social justice. Its vision brought together low-emission vehicles, cleaner fuels (through community level and other small scale combined heat and power systems) and

low-emission zones in specific parts of the city so as to make London a 'leading city of sustainable energy', thus also contributing to the British economy. The intermediary created by this alliance was the so-called London Hydrogen Partnership (LHP), which comprised relevant officials from the Greater London authority and national government, as well as national and regional representatives of business, industry and academia. It was explicitly set up as an intermediary to promote activities within London. It had a well-structured organogram, including a deliberative Forum , task groups (stationary applications, transport applications; infrastructure and renewables; safety and regulation; skills, training and communications). It is not difficult to recognize how forces like organization, scientization and marketization come to expression in this arrangement. Also, the emphasis on community and small scale activities indicates a touch of reinvented democratization, while attention for social justice and the framing of the programme as a 'progressive solutions' to the city's inhabitants problems reflect some concern with moral rationalization.

The second alliance consisted of a variety of enterprises, including two major car producers and BP, united in a project co-sponsored by the European Commission: the Clean Urban Transport Europe (CUTE) project. It wished to promote European collaboration and sought to contribute to European competitiveness. The alliances was organized a as a public-private partnership. Its vision comprised working, integrated assemblages of hydrogen using cars plus facilities and infrastructure for producing, storing and distributing hydrogen; and a variety of cities as demonstration site to try out different configurations, under different operating conditions. This vision largely synthesized the views and interests of commercial and transnational actors, and much less those of cities: its explicit point of departure was that support and involvement of major commercial parties was quintessential to develop options, which then could be brought to cities. Here especially marketization and scientization come to expression.

The first alliance managed to raise some public attention, but was not able to translate its vision into real steps that would actually demonstrated progressive governance new style; transnational corporations viewed it as a 'talking shop.' The CUTE alliance was more successful when it started to choose London as a demonstration site for its vision. This was done through loose linkages, such as the Mayors prominent public support for CUTE, the participation in CUTE of the Bus Company and the presence of representatives from various CUTE partiers in the LHP Steering Group. Realizing that a demonstration would only work when their vision was elaborated so as to fit the contingencies of London and contribute to developing its position in the competition on the European and global level, they asked the City fort its desires and aspirations and adapted their plans to that. 'Reactions' to the initiatives would be carefully measures, in pre-meditated ways, in order to inform a next generation to improve social acceptance. Yet, the other side of that coin was that local agency hardly had a role to play. Social justice as a consideration, as well as the earlier attention to community and small scale initiatives virtually disappeared in the process.

5. Conclusions

What may we learn from this case study? First, as Hodson & Marvin (2009: 531) note, a diversity of visions supported by different alliances of actors from this particular multi-level field; we find clash and synthesis of interests both within and between these alliances. Second, while Hodson & Marvin point out that intermediaries are clearly important, we are now able to understand more of the precise organizational forms and the visions: the two alliances and their visions are influenced by

structural forces: marketization, organization and scientitization. The very differences between the alliances and their visions also shows that the agency of these alliances, shaped by their visions and intermediaries, had significant impact. While Djelic & Sahlin-Andersson emphasize this dialectic between structuring forces and agency, this feature of our case suggests that agency may have a decisive impact.

But how to explain the fact that the outcome reflects much more the CUTE vision and objectives than that of the Mayor progressive governance alliance? How come, that the bottom-up dimension and social justice orientation got lost so easily? An easy, and undoubtedly partially valid, explanation would refer to the differentials between the two alliances in terms of the financial, knowledge and other resources they could draw on. But it is also true that, from the onset, the Mayor hardly did anything to provide outside support for 'his' objectives and values - he did not, for instance, set up the LHP as a forum that also provided voice to citizens, communities and NGOs, and neither did he promote his moral objectives as prominently as the objectives that pertained to economic benefits and the city's competitive position. And even when his initiative was more or less taken over, he did not refer to the fact that in many cases around the globe, the strategy followed by the CUTE alliance brings a dead end, whenever its implementation violates key values and identities of the population - although this might have had some effect, as industries have become more sensitive to this point through such things as the Brent Spar affair. Is this just another sign of the weak knees of New Labour, as critics like Mark Bevir (2010) would claim? Are some of Djelic & Sahlin-Andersson's forces inherently more powerful in shaping meta-rules than others? And: would it have helped if there had been some bottom-up initiatives, such as encountered in e.g. transition towns? Comparative studies that could shed light on these issues could obviously help us develop additional understanding of the conditions, limitations and potential of transnational transition governance.

Finally, a possibility that emerges *ad absurdum* is that it would have helped, if the transnational innovation and market system had been more influenced by bottom-up initiatives and desires, so that forces like marketization and scientifization would ne endowed with a different normative meaning. May be the increasing number of major players that really re-orient their strategic priorities and associate R&DF strategies provider opportunities for research on that hypotheses as well. It would be worthwhile, given what we know on the influence of the "third sector" (transnational NGOs, think tanks, pressure groups a.s.o) on policy learning between different loci. (e.g. Stone, 2000; 2004)

References

- Bauknecht et al, 2006. Jan-Peter Voß, Dierk Bauknecht & René Kemp (Eds) Reflexive governance for sustainable development. (Cheltenham: Edward Elgar, 2006).
- Beck, Ulrich (1997).
- Benz, Arthur (2000): Two types of multi-level governance: Intergovernmental relations in German and EU regional policy, *Regional & Federal Studies*, vol 10, no.3, p. 21-44

- Betsill, Michele; Harriet Bulkeley (2006). "Cities and the Multi-level Governance of Global Climate Change". *Global Governance* 12: 141–159.
- Frans Berkhout, David Angel, Anna Wieczorek Special Issue, on 'Sustainability transitions in developing Asia: are alternative pathways likely', of *Technological Forecasting and Social Change* (Vol 76, no.2, p.75-213)
- Bourdieu, Pierre (1977). Outline of a theory of practice. Cambridge: Cambridge University Press.
- Brenner, Neil & Robert Keil (2006). The Global Cities Reader. London: Routledge.
- Brenner, N. 1999. Globalisation and reterritorialisation: the re-scaling of urban governance in the European Union. *Urban Studies* 36, no. 3: 431–451.
- Bulkeley, H., and M. Betsill. 2005. Rethinking sustainable cities: multilevel governance and the 'urban' politics of climate change. *Environmental Politics* 14: 42–63.
- De Haan & Rotmans, 2008;
- Marie-Laure Djelic and Sigrid Quack (2003). *Globalization and Institutions. Redefining the Rules of the Economic Game*. Cheltenham: Edward Elgar.
- Djelic, Marie-Laure & Kerstin Sahlin-Andersson (2011). *Transnational Governance. Institutional Dynamics of Regulation.* Cambridge: Cambridge UP.
- Elzen, Boelie, Frank W. Geels, Peter S. Hoffman, and Ken Green. "Socio-technical scenarios as a tool for transition policy: an example from the traffic and transport domain", in Elzen, Boelie, Frank W. Geels, and Ken Green (eds.) System Innovation and the Transition to Sustainability. Theory, Evidence and Policy. (Cheltenham: Edward Elgar. 2005).
- Finnemore, Martha (1993); 'International Organizations as Teachers of Norms: The United Nations Educational, Scientific, and Cultural Organization and Science Policy', *International Organization* Vol. 47, No. 4 (Autumn, 1993), pp. 565-59
- Finnemore, Martha & Kathryn Sikkink (1998). International Norm Dynamics and Political Change'. *International Organization* Vol. 52, No. 4, p. 887-917
- Fox, Charles J. & Hugh T. Miller (1996). *Postmodern public administration. Toward discourse*. London, 1996.
- Grin, John (2000). 'Vision assessment to support shaping 21st century society? Technology assessment as a tool for political judgement,' p. 9-30 in: John Grin & Armin Grunwald (eds.).
 Vision Assessment: Shaping Technology in 21st century society. Towards a repertoire for Technology Assessment. Heidelberg etc.: Springer Verlag.
- Grin, John, Henk van de Graaf & Philip Vergragt (2003). 'Een derde generatie milieubeleid: Een sociologisch perspectief en een beleidswetenschappelijk programma,' Beleidswetenschap, jrg. 17, nr. 1, p. 51-72.
- Geels, Frank W.. *Technological Transitions and System Innovations: A Co-Evolutionary and Socio-Technical Analysis.* (Cheltenham: Edward Elgar, 2005).
- Geels, Frank W. and Johan W. Schot. "Typology of sociotechnical transition pathways", Research Policy, 36 (3): 399–417 (2007).
- Geels, F.W. and J.W. Schot (2010) "The dynamics of transitions: a sociohisotrical perspective". Part I (p. 11-101) in Grin, John, Jan Rotmans and Johan Schot (in collaboration

- with Derk Loorbach and Frank Geels). *Transitions to Sustainable Development. New Directions in the Study of Long term Structural Change*, New York, Routledge.
- Giddens, Anthony (1984). *The Constitution of Society: Outline of the Theory of Structuration*, Berkeley: University of California Press.
- Grin, John (2000). 'Vision assessment to support shaping 21st century society? Technology assessment as a tool for political judgement,' p. 9-30 in: John Grin & Armin Grunwald (eds.).
 Vision Assessment: Shaping Technology in 21st century society. Towards a repertoire for Technology Assessment. Heidelberg etc.: Springer Verlag.
- Grin, John, Francisca Felix, Bram Bos & Sierk Spoelstra (2004). 'Practices for reflexive design: lessons from a Dutch programme on sustainable agriculture.' *Int. J. Foresight and Innovation Policy*, vol. 1, no. 1-2, p. 126-149.
- Grin, John & Anne Loeber (2007). 'Theories of Policy Learning: Agency, Structure and Change', chapter 15 (p. 201-219) in: Frank Fischer, Gerald J. Miller, Mara S. Sidney (eds.), Handbook of Public Policy Analysis. Theory, Politics, and Methods. CRCPress—Taylor & Francis Group.
- John Grin (2008). 'The Multi-Level Perspective and the design of system innovations', chapter 3 (p. 47-80) in: J.C.J.M. van den Bergh & F. Bruinsma (eds. in association with R. Vreeker & A. Idenburg), *Managing the transition to renewable energy: theory and macroregional practice*. Cheltenham, UK: Edward Elgar Publishing.
- Grin, J., J. Rotmans and J. Schot (in collaboration with D. Loorbach and F. Geels). Transitions
 to Sustainable Development. New Directions in the Study of Long term Structural Change,
 New York, Routledge.
- Grin, J. (2010) "Understanding Transitions from a Governance Pespective", Part III (p. 223-314) in: Grin et al. (2010)
- Grin, John (2012) 'The governance of transitions and its politics. Conceptual lessons from the earlier agricultural transition and implications for transition management'. *Int. J. Sustainable Development* Vol 15 (2012) Nos 1-2, p. 72-89.
- Hale, Th. & D. Held (2011; eds.) *Handbook of Transnational Governance. Institutions and Innovations*. Cambridge: Polity Press.
- Healey, Patsy (1997) Collaborative planning. Shaping Places in Fragmented Societies, Houndsmill: Palgrave Macmillan.
- Hodson. Mike & Simon Marvin (2009): Cities mediating technological transitions: understanding visions, intermediation and consequences, *Technology Analysis & Strategic Management*, vol. 1, no. 4, 515-534
- Hodson, Simon & Mike Marvin (2010).'Can cities shape socio-technical transitions and how would we know if they were?', *Research Policy* vol. 39, no. 4, p. 477–485.
- Hooghe, L. & G. Marks, (1999). 'The making of a polity: The struggle over European integration', Ch. 3 (p. 70-97) in Herbert Kitschelt (ed.), *Continuity and Change in Contemporary Capitalism*. Cambridge: Cambridge University Press.
- Jordan, A. (2001) 'The European Union: an evolving system of multi-level governance ... or government?' *Policy and Politics* 29 (2), p. 193-208

- Keohane, Robert O. & David G. Victor (2011). The Regime Complex for Climate Change, Perspectives on Politics, Volume 9, no. 1, p. 7-23
- Krasner, Stephen D. (ed). 1983. International Regimes. Ithaca, NY: Cornell University Press.
- Kwa, Chunglin (2005). Local Ecologies, Global Science: Discourses and Strategies of the International Geosphere-Biosphere Programme, *Social Studies of Science* 35, 923-950.
- Linder, S. H. & Peters, B. G., 1995, The two traditions of institutional designing: dialogue versus decision?, in: D. L. Weimer Ed. *Institutional Design* (Kluwer Academics, Boston) pp 133-158
- Marks, G. & Hooghe, L. (2001). *Multi-level governance and European integration*. Lanham: Rowman & Littlefield Publishers.
- Meadowcroft, 2007;
- Meyer, John W. John Boli, George M. Thomas, and Francisco O. Ramirez (1997). 'World Society and the Nation-State.' *American Journal of Sociology*, Vol. 103, No. 1, p. 144-18
- Misa, Thomas J. and Schot, Johan W., "Inventing Europe: Technology and the Hidden Integration of Europe", *History and Technology*, volume 21, number 1 (2005) 1-20.
- North, D.C. (2005). Understanding the Process of Economic Change. Princeton University Press.
- Pinkse, J., and A. Kolk (2009). *International business and global climate change*. London: Routledge.
- Pollack, Mark A. (2005), The governance approach: the EU as a polity, p. 36-48 in Helen Wallace, William Wallace and Mark A. Pollack (eds.), *Policy-Making in the European Union*. Oxford: Oxford UP.
- Rip, Arie & René Kemp (1998). 'Technological change', p. 327-399 in : Steve Rayner & Elizabeth L. Malone (red.), *Human choice and climate change*. Columbus, Ohio: Batelle Press.
- Schot, Johan (1998). 'The usefulness of evolutionary models for explaining innovation. The case of the Netherlands in the nineteenth century', *History and Technology*, vol. 14, p. 173-200.
- Schot, Johan and Vincent Lagendijk (2008). 'Technocratic Internationalism in the Interwar Years: Building Europe on Motorways and Electricty Networks', *Journal of Modern European History* (2008), 6 (2), 196-216.
- Rotmans, Jan, R. Kemp, and M. van Asselt (2001) 'More evolution than revolution: transition management in public policy', *Foresight*, 3 (1): 15–31.
- Rotmans, J. & D. Loorbach (2010) "Towards a Better Understanding of Transitions and Their Governance: A Systemic and Reflexive Approach", Part II (p. 105-221) in Grin et al., 2010.
- Smith, Adrian Jan-PeterVoß, John Grin & (eds., 2010), Special Issue of *Research Policy* (vol. 39, no. 4; p. 435-510) on 'Innovation and Sustainability Transitions'
- Stirling, Andrew. Precaution, foresight and sustainability, p. 225–272 in: J.-P. Voß, D. Bauknecht & R. Kemp (Eds) *Reflexive governance for sustainable development*. (Cheltenham: Edward Elgar, 2006).
- Stone, Diane (2000). 'Non-Governmental Policy Transfer: The Strategies of Independent Policy Instuitutes,' *Governance*, vol. 13, no. 1, p. 45-70.

- Stone, Diane (2004). 'Transfer Agents and Global Networks in the 'Transnationalisation' of Policy', *Journal of European Public Policy*, 11(3) 2004: 545-566.
- Stones, Rob (2005). Structuration Theory. Houndmills-New York: Palgrave.
- van den Bergh J.C.J.M. & F. Bruinsma (eds. in association with R. Vreeker & A. Idenburg),
 Managing the transition to renewable energy: theory and macro-regional practice.
 Cheltenham, UK: Edward Elgar Publishing.
- Voß, Jan-Peter & Kemp, René. 'Sustainability and reflexive governance: Introduction', p. 3–28 in: Jan-Peter Voß, Dierk Bauknecht & René Kemp (Eds) *Reflexive governance for sustainable development*. (Cheltenham: Edward Elgar, 2006).
- Voß, Jan-Peter, John Grin & Adrian Smith (eds., 2009), Special Issue on Long Term Policy Design of *Policy Sciences* (vol. 43, no. 4, p. 275-427)