

Between self-organization and government: a complexity perspective on the rise and fall of the hierarchical state

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The literature on governance that has emerged in the past 15 years indicates that the position of government in society has changed substantially (Jessop 1998, Van Kersbergen and Van Waarden 2004). This development is most often looked at as the increased complexity of Western societies and its problems, the rise of network forms of policymaking, and the decline of possibilities for hierarchical steering through public agencies.

The first aim of this paper is to take two central concepts from complexity theory, self-organization and co evolution, to develop a typology of relationships between government and society. Governance can then be defined as the way in which the activities of actors are coordinated around collective problems. Our approach of governance fits with the perspective put forward in the five basic propositions put forward by Stoker (1998).

A second aim of the paper is to use this typology to provide a historical account of the evolution of the government-society relationship. Rather than taking the hierarchical state as our starting point, we reflect on the emergence of this governance arrangement in Western Europe. Based on secondary analysis of historical research, it becomes possible to place the current discussion on privatization and liberalization in its historical context, as we look at 'the rise and fall of the hierarchic state'. In our view, this approach has merits as it enables us to look at more general mechanisms that shape governance arrangements in European societies.

The paper is structured in 5 sections. We begin with a reflection of the rise of governance as an idea and as practice. This is necessary in order to take a critical look at the central position of the idea of a hierarchical state in the governance debate. In a second section, we present the concepts of co-evolution and self-organization. We use these central elements of complexity theory as building blocks for an alternative view on the coordination of activities around collective problems. The concepts lead into a typology of such coordinative arrangements, which is presented in section 3. Section 4 then takes up the challenge of framing the historical development of governance arrangements in West-

European societies in terms of this typology. Based on this expose, we draw conclusions in section 5, and make some suggestions for future research..

1 The rise of governance: ideas and practice

The recent proliferation of the governance concept indicates the simultaneous diffusion of new ideas about the state and its role in societies, as well as the way in which practices of government-society interaction are evolving. Ideas and practices are related, but do not overlap completely, which accounts for much of the confusion surrounding the concept.

In terms of ideas, governance stands for a plethora of government-society interactions such as network governance, interactive governance, deliberate governance, process management, joint-up government, new public management, decentralization, contracting out, privatization, etc. In most cases, these interactions are contrasted with the dominant paradigm in Public Administration (PA), that of the hierarchical state. This paradigm is exemplified by the work of Weber on bureaucracy (1978) and Wilson (1941) on political control. The general storyline is that the new arrangements have become more prominent at the expense of classic government, and there exists some consensus on the factors that have contributed to this: complexity of collective problems, the emergence of the network society and globalization, the lack of efficiency of regulation, the rise of liberal ideologies, and increased costs of hierarchical state arrangements (Pollitt et al. 2007).

For sure, the hierarchical state is a more or less accurate description of dominant practice in Western democracies during the 20th century. Strong national states developed which were involved in physical development such as the reconstruction of cities and industries, and in social development through the enlargement of the welfare state, based on a technocratic belief in the power of large-scale interventions. In its most extreme form, it led to the establishment of socialist regimes, but in weaker forms, it describes the way in which collective problems have been dealt with throughout Europe. However, the narrow focus of much of the PA literature is reflected by the fact that in other countries states developed along other logics. Regimes in Asia have for long relied on authoritarian rule that was characterized by a controlling but not necessarily developing state, while in the United States, a small central state left much room for individual development and individual risk acceptance. Another alternative is provided by Singapore's perspective that countries should be run as strictly regulated companies.

The ideational construct of the hierarchical state is thus less universal than the literature might make us believe. In addition, the position of governments in society has shifted over time, as is illustrated by the decline of the socialist welfare states in Central and Eastern Europe. It is difficult to defend the fact that recent shifts in this position in Western democracies have received such abundant attention in scholarly literature. We do not deny that such shifts are taking place, but it seems to reflect a continued narrow perspective if we seek to derive governance typologies purely based on this specific shift.

One of the reasons for taking the hierarchical state as the basis for perspectives on governance may be that it within the PA literature there is no definition of government which does not reflect this specific manifestation. We have to go to public choice theories and historical sociology in order to find definitions that are free of this bias. In this paper we build on this work, but use central insights from complexity theory to frame our perspective. As complexity theory is about systems in general, it does not suffer from any bias towards the hierarchical state. Also, we believe that complexity theory holds clues as to the ways in which governance types evolve over time.

2 Co-evolution and self-organization

Complexity theory is based in the natural sciences and biology, and purports to provide a framework for understanding the functioning of complex adaptive systems (CAS). Such systems have the following characteristics (Levin (1999, 12):

- Diversity and individuality of components: components of the system are diverse and there are mechanisms for maintaining that diversity. In addition, components can act autonomously. A CAS consists of heterogeneous components;
- Localized interactions among components, such as competition, collaboration, and information exchange;
- An autonomous process of selection: a mechanism which accounts for the continuation of certain local outcomes and the elimination of other outcomes.

These features give rise to nonlinear interactions, where effect and cause are disproportionate. As a result, components become organized hierarchically into structural arrangements (the ‘stable assemblies’ from Simon 1981) that are determined and reinforced by flows and interactions among the parts (Levin 1999, 13).

The success of studying physical processes and natural ecologies in terms of CAS has led social scientists to introduce a complexity perspective into the realm of economic and social sciences (cf. Arthur 1990; Byrne 1998; Stacey 1999; McKelvey 1999; Richardson, 2005). There have also been some attempts to apply it specifically to the subject matter of public administration (Kaufman 1991; Allen 1997; Haynes 1999; Mörçul, 2003; Teisman 2005).

Rather than discussing the merits of the approach of others, we concentrate here on our own agenda. One of the central features of a CAS is its ability to self-organize, that is, to develop structure without an external controlling agent. It might seem paradoxical to take this process as a starting point for looking at governance, but in fact there is a clear antecedent in public choice approaches that seek to explain the emergence of government out of the interactions of individual actors (Ostrom et al. 1992). In a statement that could have been taken from a text on public choice, Heylighen (2002, 9) notes that ‘Any explanation for organization that relies on some separate control, plan or blueprint must also explain where that control comes from, otherwise it is not really an explanation. The only way to avoid falling into the trap of an infinite regress is to uncover a mechanism of self-organization at some level.’

A second central concept taken from complexity theory is that of co-evolution. The third characteristic of a CAS refers to a process of selection, which indicates the way in which the system’s environment plays a role in the evolution of a CAS. If we acknowledge that this environment consists of other complex systems, then there is the possibility that a two or more systems evolve in interaction with each other. Such processes of co-evolution are in our view central to understanding the way in which coordination around collective problems evolves over time.

2.1 *Self-organization*

The added value of self-organization as a concept applied to governance processes is that it focuses on ‘a dynamical and adaptive process where systems acquire and maintain structure themselves, without external control.’ (De Wolf & Holvoet, 2004). Self-organization emerges from interactions between elements of systems. Here we deal with the ability of a system to achieve governance without external guidance and control. This possibility has received

some attention as self-governance (Kooiman and Van Vliet 2000) and the focus on market based instruments in New Public Management. Although self-organization has been addressed in public administration theories, we believe that a complexity perspective can provide a more nuanced analysis.

In a way, self-organization forms the very core of governance processes. Control over and guidance of these processes is distributed over the full set of actors and over different process systems, a fact which has provided the basis for network approaches to policymaking. While actions of governments may appear as something different than self-organization, they are in fact just an additional dimension of self-organization..

Outside the PA literature self-organization has a long tradition of research and empirical experiments. Game theory, for example, has modeled many instances of interaction that allows players or actors to reach certain outcomes without reverting to external pressures (Marks, 2002). Theories of collective action also deal with self organization in their efforts to explain the way through which social groups are able to produce public goods (Olson, Hechter).

2.2 *Co-evolution*

The notion of co-evolution was originally coined by Ehrlich and Raven (1964, in Odum, 1971) who observed that selection pressures causing an adaptive change of a species had a reciprocal character, i.e. that the adaptive change lead to a consequent change in the environment. Co-evolution is therefore a type of evolution because of the reciprocal nature of selection pressures. Over time, a pattern of interactions emerges in which species change because of mutual change and consequent selection pressures.

While originally this idea was restricted to the domain of biology, it has also appeared in the social sciences (Sanderson 1990). Sanderson argues that many theories in social sciences have an evolutionist character, i.e. theories that look at long-term social change within societies such as change of culture or change of demography. Fewer theories, however, have an explicit evolutionary character. Such theories focus on the occurrence of selection pressures and the consequent adaptive change, or lack thereof.

Norgaard (1984; 1994; 1995) used a co-evolutionary perspective in order to understand decision making and changes in decision making as a result of interaction between the decision maker and the environment. In his analysis, Norgaard argues that people are engaged in co-evolutionary processes because they are dependent on resources within the environment. Their actions affect the environment but the consequent changes affect people as well. Through the act of decision making people engage in a pattern of feedback loops. In order to deal with the ensuing feedback from the environment and aim for optimisation of the use of that environment, they are pushed to create increasingly individualized task specifications and more complex institutional and cultural contingencies. This gives rise to coordination mechanisms and therefore the birth of states and governments.

The mutual adaptations cast selection pressures on the entities involved. However, humans are not passive entities. They learn, adopt or adapt, plan, attempt to forecast and are capable to reflecting on the process they are in. In short, human actors are reflexive actors and this introduces the ability to select and manage the selection pressures that exert on systems deliberately and to decide on the pool of resources. This is made more explicit in evolutionary economics in which the focus shifts from the representational agent that is central to neoclassical analysis to an erratic population and how the decisions of this particular population influence the state of the systems (cf. Bergh & Gowdy, 2000). This

incorporates the complexity of the systems from which choices regarding selections and selection pressures are made into the analysis (Foster & Hölz, 2004).

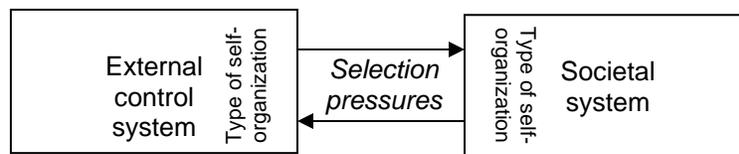
In order to look at co-evolution we need to define more precisely the systems that co-evolve. Governance involves the coordination of activities within a society concerning its collective problems. Such governance can be the result of self-organization, or be the result of external control. External control involves some form of rule setting, monitoring, and sanctioning which is exercised by a system outside the system that is being controlled. This leads to the distinction of two systems: the societal system, and the external control system.

The external control system can emerge in two ways. First, actors in society can self-organize into structures which include monitoring and sanctioning. These activities can develop into distinct systems, resulting in an external control system. The other possibility is that actors have coercive means which enable them to establish control over a society. Thus, an existing system of external control can extend its sphere of influence.

2.3 *A model of co-evolutionary change*

We have defined governance as the coordination of activities of actors around societal problems. Based on the above, such coordination is established through self-organization within the societal system, through external control from a separate system, or some combination of the two. Changes in the relationship between the societal and the external control system result from the interaction between two elements: ideas preferences about the ideal relationship, i.e. archetypes of the state and society; and the actual selection pressures that both exert on one another. Ideas about how mutual influence should take place and the actual casting of selection pressures are closely related as ideas and preferences drive the nature of selection pressures but at the same time the real consequences of acting and receiving those selection pressures can reinforce or question existing ideas.

Consequently, there is a relationship between the co-evolution of state and society through selection pressures and ideas about selection pressures and the type of self-organization displayed by state and society. Whether state and society adapt to changes to regimes or hold on to the existing regimes depends on the disposition of self-organization. This self-organization is driven by the actors involved and their belief systems at the one hand and external incentives (i.e. from state or society) on the other. These elements can invoke changes from conservative to dissipative self-organization and back, depending on the pressure cast. Figure x displays this conceptual framework.



This conceptual model does not imply a fixed sequence of change or continuity. It attempts to depict the process of mutual influence between states and societies. Central to this is the occurrence of selection pressures that come in the shape of policy instruments such as law and punishment (pressure from the state to society) or in the shape of means of influence such as voting and lobbying (pressure from society to the state). Those selection mechanisms can provoke change of regime or stabilizing current regimes. However, such a

change does not purely depend on the selection pressures only. The disposition of the organization of the state and society, alternating between conservative and dissipative self-organization, determines receptiveness to selection pressures. A fit between pressures and types of self-organization increases the likelihood that a certain pressure is well-received and therefore legitimate. A misfit between the two renders the selection pressure obsolete and causes the sender to search for alternatives. This is the co-evolutionary revision of the government – governance continuum in a nutshell.

3. A typology of governance situations

Based on the concepts of self-organization and co-evolution we can now delineate specific governance types (see Boons 2008 for an earlier version). Of course these reflect the lists that have been developed in the literature based on empirical investigation (refs.). The list is also similar to the institutional settings distinguished by Scharpf (1997). The main difference is that whereas he looks at contexts as influencing the way specific games develop, we are looking at the ways in which such contexts emerge and evolve. Our typology makes use of the concepts of self-organization and co-evolution and thus provides insight into the mechanisms that provide the dynamics in each of them. This enables us in subsequent parts to look at the evolution of governance.

a) Self-organization

This is the process of ‘spontaneous’ coordination that is exemplified by the pure market such as shown in Adam Smith’s metaphor of the invisible hand. Here, actors can self-organize through mutual interaction without external coordination. In the end, such actors are individuals, but they may also be corporate actors that are the result of earlier processes of self-organization. Self-organization occurs under certain boundary conditions, and these may be influenced in one way or another by a system of external control, such as the establishment of property rights. Mechanisms that lead to self-organization include mimicry and professionalization (DiMaggio and Powell 1983; Hedström and Swedberg 1998).

b) Self-governance

One result of a process of self-organization may be that actors can develop and enforce monitoring and sanctioning rules. In terms of rational choice theory, this provides a solution to the problem of collective action, and requires specific strategies and conditions (Olson, Ostrom, Hechter). This literature suggests the relative instability of such arrangements due to the ever present danger of free-riding. Again, a system of external control may be relevant in setting the boundary conditions which enables actors to devise their self-governance, but the regime of monitoring and sanctioning does not make use in any way of governmental structures.

Elinor Ostrom has developed a distinct research program uncovering this process of emergent government. Her work focuses on the management of common pool resources, classic situations of the Tragedy of the Commons (Hardin, 1968). She finds that, contrary to game theoretical predictions, actors in real life situations are sometimes able to coordinate their activities in such a way as to prevent the resource from overexploitation. This can involve communication, but in certain cases extends to monitoring and sanctioning schemes. Effectively, actors using the resource develop self-governance (Ostrom et al., 1992).

c) Private interest government

The threat of governmental regulation may induce actors in society to self-organize, or to modify their structures of self-organization in the direction of aims provided by government. Here government plays an active role through what Mayntz has called 'the shadow of hierarchy'. In our terms, selection pressure is exerted on society through the threat of regulation. Cawson's collection of 'private interest government' provides illustrations of the ways this mechanism has been adopted. During the 1980ies, a distinct approach developed in several European countries in which government abstained from legislation in exchange for the commitment of organized sectors to develop their own regulation. These cases of private interest government (Cawson, 1985, Boons et al., 2000) build on self-organizing initiatives of societal actors, who are induced by a government which provides specific incentives, and thus creates a selection environment in which self organization can thrive. Thus, an external control system provides selection pressure that induces self-organization. This is different from external control, as the control system does not specify the order and goal of the system, as it does in regulation. In short, this is self-organization with goals specified by an external control system. A subtle variety of this mechanism is that where a governmental body adopts a certain concept, which then serves as a focal point (Schelling) for societal actors [mimicry?].

d) Lobbying/voting government

This type of governance can originate from the announcement of external control by an external system. This results in the organization of attempts by societal actors to influence the formulation and implementation of specific regulations. It can also originate from the desire of a societal group to have a favorable regulation, and the consequent pressure put on the external control system to develop such rules. This may take a formal shape through elections, or be more specific, as through lobbying. In contrast with c), this is external control with goals specified/negotiated by society. [agenda-setting?]

e) Pure external control: government

We define government as the coordination mechanism for human activities where actors subject themselves to a separate system that has the power/ability to set and enforce rules that constrain their behavior on any issue it deems relevant. Thus, government covers everything from the arbitrary use of violence by a power holding entity, to the government of classic public administration which rules through unilateral rule setting by government. Although we are not familiar with this in current western democracies, in other places and times this has proved a realistic option. Self-organization is not absent here; it takes place within the framework set by the government (see governmental networks, refs.). This self-organization has to do with a problem which is identical to self-governance: the establishment and maintenance of a structure for monitoring and sanctioning, as well as with appropriating the resources necessary for its own existence. [see Jordan et al 2005 on classic government]

Every society can be characterized at a certain moment in time by a specific set of governance types. Such sets have been described in terms such as corporatist regimes, etc. This mix at a certain point in time is the result of processes of (co-)evolution and self-organization. While these are based in strategic behavior and choices of individual and corporate actors, they are not the result of institutional design.

Self-organization necessarily produces a pattern that is adapted to the system environment; otherwise it would not occur. When boundary conditions change, the system may disorganize. A resilient system has the capacity to adapt to changing circumstances, which requires the ability to produce variety in activities, and a selection procedure for selecting from that variety the action that increases fit to new boundary conditions. 'Whereas self-organization allows a system to develop autonomously, natural selection is responsible for its adaptation to a variable environment.' (Heylighen 2002, 4).

Evolution takes place within systems through goal displacement and clustering of stable assemblies. Goal displacement can result from the internal dynamics in a system, where means become ends, or discretionary freedom of organizational members is used to strive for additional goals (Selznick 1949). The way in which taxes are used to achieve specific policy targets is a good example of this mechanism. While taxes originate as the extraction of resources from society to fuel the external control system, over time they have evolved into a way of providing (dis)incentives for specific behavior by societal actors.

Goal displacement can also be a result of cooptation, where an organization adopts additional goals, or changes its original goal in order to adapt to a changing environment (Blau 1963).

Clustering of stable assemblies refers to the process in which units that are the result of self-organization become part of a larger structure. Multilevel systems are the result of an evolutionary process resulting in hierarchies of stable assemblies. A collection of many elements has a small probability of self-organizing directly to form a viable entity. If elements first self-organize into smaller viable sub-systems, or stable assemblies, then these can self-organize to form a more complex system (Simon, 1962). This evolutionary perspective on complex systems is useful because it states the processes through which system elements can self-organize to form stable assemblies, which can then connect in response to their selection environment to form nested systems. Thus, a self-organizing system persists partly because of its inner dynamics which produce order, and partly as adaptation to the selection environment in which they emerge.

At the same time, systems exert selection pressure on each other, and this results in co-evolution. As a way of illustrating the potential of this framework, we now turn to a process which has been analyzed by several authors, and which in our view displays the characteristics of changing governance as self-organization and co-evolution: the rise and fall of the welfare state. At the same time, it serves as a way of questioning the national state as the focal point in public administration. As we will show, this national state is a relatively short-lived combination of governance arrangements which falsely serves as the dominant paradigm on which typologies of governance are built.

4 A historical sketch

In this section, we sketch in highly generalized form the rise and fall of the national (welfare) state in West-European societies. Especially in its current 'work in progress' shape, it can easily be dismissed as a caricature. The historical development of each society has unique features and differs considerably. A more or less ideal-typical description may nevertheless serve as underpinning the main purpose of this paper, which is to show how governance arrangements are the result of processes of co-evolution and self organization.

In *Coercion, capital, and European states*, Charles Tilly (1992) provides an answer to the question how the national state came to dominate European societies. His approach is interesting in

explaining this from the interaction between the economic and the state system, or in Tilly's conceptual language, processes of capital accumulation and concentration, and the way in which these co-evolve with processes of accumulation and concentration of coercion.

The accumulation and concentration of capital is related to the development of cities; they are the places where capital concentrates. Such concentration takes place in a European (and eventually worldwide) network of trade, in which some cities act as nodes. Around 990, cities were scattered across Europe, mostly north of the Alps. Over time, an area from Bologna and Pisa to Ghent, Bruges, and London emerged which contained larger cities. Over time, this area broadened, but it can be clearly distinguished from the areas outside it, which remained rural. The accumulation and concentration of capital in cities has its own dynamic, a process of self organization. Cities attract migrants from nearby rural areas, but also are connected to these areas in for the production of food. During the 16th to 18th century, a process of proto-industrialization developed in which manufacturing units spread across the country were dominant. The capitalists that were brokers in this network accumulated capital, but it did not concentrate. During the nineteenth century, industrial production led to centralization in factories, providing further impetus to the concentration of capital in cities.

Tilly explains the emergence of the national state as the dominant mechanism for organizing coercion based on two factors. The first is the aggressive competition among rulers for territory and trade, which 'made war a driving force in European history' (Tilly 1992, 54). Related to this is the importance of finding the means (people as well as resources) to carry out warfare. The means for coercion were relatively equally dispersed around 990. Kings had a small group of soldiers, just as their chief followers; cities had militia to guard walls and settle internal disputes. In the course of centuries, coercive means became increasingly concentrated in the hands of what we now call nation states. The trajectories that were followed by various societies depended to a great extent on the structure of capital accumulation in respective territories. The reason is that this structure confronted them with specific possibilities for acquiring financial means and persons with which wars could be fought. In rural areas, rulers were forced to build organizational structures to extract the means for war from a dispersed, rural population. Rural areas were often dominated by landlords who held people in serfdom, and as a consequence needed to be co-opted. When central rulers did not succeed in doing so, the structure of coercion remained dispersed. In areas where cities dominated, extraction was relatively easy as economic flows could be taxed, or capitalists could be called upon for loans to provide the means for war. In both cases, capitalists were vital allies, and as a consequence were able to influence the ruler's ambitions. In some areas, the power balance between capitalists and rulers was more or less equal. The trajectory based on that balance, followed by England and France, produced national states earlier than in other areas.

Thus, in co-evolution with the structure of capital accumulation, distinct ways of organizing coercion were practiced in different parts of Europe. In sequential wars, some of these coercive structures were more successful than others, which eventually resulted in the elimination of forms other than the national state.

Systems of coercion have their own dynamic as well. Although created and for a considerable time focused on war-making and the extraction of resources necessary to do so, over time they engaged in other activities, such as production and distribution of certain goods. Such interventions led to collective action among subjects, which, depending on the states coercive force, led to bargaining about specific state policies. This bargaining was accompanied by a shift from indirect to direct rule by the central ruler. Before the 17th

century, central rulers were able to control large geographical areas only by dividing it and handing over control to allies. These were given charge over the extraction of resources from subjects, of which they could keep a part. They exchanged this for their loyalty in wartimes. Direct rule consists of the taking over by the central ruler of these decentralized structures of coercion, and it requires a substantial central organization. The first instance of direct rule occurred after the French revolution, and this model spread through Europe either by mimicry or by the conquering of territory by French armies.

The way in which national governments co-opted to incorporate activities that emerged as self-organizing arrangements is described by De Swaan (1989). One example is taking care of the poor. Poor people are those that are not able to provide their own basic needs, and reflect an asymmetric distribution of wealth in a society. The problem is not only for those belonging to this category; they also constitute a threat to the rich, as poor people may engage in stealing, or trying to challenge the existing distribution of wealth through violence. Also, when poverty led to disease, they provided a health threat to communities, rich and poor alike. Throughout the Middle Ages, charity based on a religious ideology formed the basis for arrangements through which the richer provided food and shelter for the poor. Religious institutions provided coordination, but a strong ideology which focused on the importance of the free choice to provide charity supported local self-organization. These arrangements persisted because of the following reasons (De Swaan 1989, 39-40): a stable, closed economic community, the arrangements involved an exchange where the provision of basic needs was traded for absence of opposing the division of wealth, and also some form of labor by those poor who could do so, and the provision of needs was such that they kept the poor from starvation, while not exceeding a level such that others would leave their work and try to make use of charity.

These balances were precarious, and external events such as bad harvests, epidemics, or war could lead to disruptions because the poor from one community started to move and make demands on the charitable arrangements of other communities. Around 1500, cities started to take over the charitable arrangements as a way of stabilizing the exchange at a regional level. But this only brought the problem to the next geographical level. In the end, the national state became involved in small steps as the actor with sufficient resources and the bureaucratic structure necessary to regulate the ways in which poor people were dealt with (De Swaan 1989, 59).

The increased control of states over its subjects increased as extraction was exchanged for taking on additional tasks, such as the regulation of disputes among subjects, and regulation of economic activities. Before the 19th century, activities around alleviating poverty and education emerged mainly as a result of self organization within societies. Such arrangements solved collective action problems at the local or regional level, but were instable due to the possibility that they resulted in migration of people seeking the most beneficial arrangements. The national state was increasingly involved in establishing central arrangements that provided more stability. Thus, the stable assemblies that emerged as a result of self organization became part of the government system.

Eventually, the national state in Western Europe developed into a welfare state. According to Jessop (1999), this governmental system operated as a counterpart to a specific system of capital accumulation and concentration which was characterized by the Fordist model of mass production, and principally evolved within national boundaries. The welfare state ensured, within the same boundary, employment and thus consumption, and corrected market failures at the national level. Based on its routines of direct control, economic and social policies were administered through mainly through regulation and bargaining with

organized economic interests. In this view, the welfare state as it existed until the end of the 1970s was a unique constellation in which the boundaries of the coercive and economic systems coincided. As a result, national states had the organizational means to influence the economic system on which they were dependent.

The developments after 1980 which are now subject to intensive study from specialists in governance, primarily need to be seen in terms of the rapid internationalization of the economic system (including financial streams) (Jessop 1999, Castells 1996). As a result, the boundary of the national state no longer coincides with that of the economic system on which it depends. This has made players in the economic system more powerful, and has decreased the power of national governments, thus disrupting the balance of power that characterizes the welfare state. International economic competition forces national governments to adopt economic and social policies that aim to strengthen the economic structure: stimulating the knowledge economy, building competitive industrial clusters, and reshaping social policy in such ways that it contributes to its competitive position. In this respect, Castells has described the 'downward competitive spiral' among national states to minimize welfare arrangements.

5. Conclusions

The above makes clear that the arrangements which exist in societies to coordinate activities around collective problems evolve over time. Rather than being satisfied with typologies that enable us to classify shifts into alternative arrangements, we need to study the way in which this evolution is shaped. Looking at governance as the result of self-organization and co-evolution provides a first step in such an analysis.

Based on our historical sketch, we can draw the following conclusions. First, governance, as the coordination of activities of actors around collective problems, has taken different forms at various points in time. Classic government, here defined as the European welfare state, was a unique set of governance arrangements that dominated during a short period in European history. Outside this period, other sets of arrangements can be found, and they are the result of self organization in economic and systems of external control, and the co-evolution of these systems.

Secondly, a crucial component of a long term view is that the collectivity on which governance arrangements focus, is shaped in these processes. In the course of European history, this collectivity became to be defined as the national state during the 19th century, and this definition was dominant until the late 20th century. Current developments indicate a redefinition of what is the group of people around which governance arrangements evolve. While we base this conclusion on the sketch of a macro development, De Swaan (1989, 37) raises a similar point in his analysis of the evolution of micro arrangements around education and poverty. Such arrangements are not solutions to a fixed collective action problem providing a predefined public good; instead, in the establishment and evolution of these arrangements, the public good itself is defined in specific ways. The shifting definition of what constitute public problems is what we have witnessed the last decades in most Western societies when activities that, in terms of the hierarchical state, were unalienable public services, were privatized.

Thirdly, classic government as it is captured in the dominant paradigm of PA is a combination of two developments. First, it is the set of stable assemblies that has emerged as rulers were able to accumulate and concentrate coercive means throughout the past 1000 years. As it became more prominent, it took over activities that emerged originally as self-governance within society. National states were, in specific situations, able to provide better

monitoring and sanctioning structures than the ones developed in local circumstances. In this way, the national state grew into the welfare state through goal displacement and cooptation. This growth was further fuelled through the internal dynamics of governmental bureaucracies. In terms of Simon (1962), the welfare state is a collection of stable assemblies, which was viable in a period where economic systems were nationally bounded. With the disappearance of these boundaries, the collection of stable assemblies has decomposed. The result is a variety of governance arrangements (Jordan et al. 2005) that are to some extent similar to the arrangements that existed before the rise of the hierarchical state. One example is the way in which the collective problem of ecological impact of industrial activities is dealt with over time. During the period of the hierarchical state, ecological impact was dealt with through regulation of national industrial facilities. Since the late 1980s, in most Western countries this arrangement has dissolved, and has been displaced by arrangements in which business is assumed to take its 'social responsibility'. Several of these arrangements are built around the concept that the reduction of ecological impact coincides with increased efficiency of resource use. Interestingly, in the latter half of the nineteenth century, similar concepts were central in the way in which private and public actors organized their efforts to deal with ecological impacts (Boons 2009).

We do not want to suggest with this example that the future will look in any way like the period before the rise of the welfare state. In fact, there is no way of predicting the future development of governance in our societies. Let us look at one possibility. Catton (1982) has analyzed the development of western societies in terms of resource use. From the end of the 19th century, a specific development has taken place in which our economic system makes use of large stocks of energy sources (fossil fuels) that have accumulated millions of years ago. This has led to the a level of population growth and level of affluence which cannot be sustained when these stocks are depleted. Increased scarcity of resources is already beginning to show its effects in terms of rising prices of oil and food which already have led to societal conflicts in a number of countries, with governments responding to raise international trade barriers. A positive feedback loop might strengthen such strategies and lead to the de-internationalization of our economic system. This is just one of the dynamics that might shape future societies, and how it will affect the evolution of governance arrangements is impossible to foretell. The only certainty of a complexity-based perspective is that we are not able to predict the future state of the system.

A fourth conclusion deals with the relative importance of the societal and external control system. During most of the period described here, competition among rulers seeking to expand their sphere of influence through warfare can be seen as a major driving force. Although this may reflect a bias in Tilly's work, at least from this perspective the dominance has long been with the system of external control. After 1970, international economic competition seems to replace this dominant drive, and the dynamics of the societal system and economic processes within that system, are driving the co-evolution. The disintegration is thus as much a result of the changing selection pressures from the societal system, as it results from internal dynamics in the external control system.

What does the above mean for future research? First, our empirical material is biased in at least two ways. First, in using a historical sketch covering centuries and the whole of Western Europe, it is necessary to emphasize that our analytical framework can be used in looking at the evolution of micro-arrangements over shorter period of time (see Boons 2008 for an example). Second, in the above we have focused on collective action problems as the social situations in which governance arrangements develop. Other situations need to be addressed

too. This might also shed light on the way in which collective beliefs and norms are shaped and influence the emergence and maintenance of governance arrangements.

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