



The governance of physical and social connections

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Lasse Gerrits and Frank Boons

It is by no means a new idea that the world we live in is an interconnected one. Centuries before Castells' seminal trilogy 'The Information Age', various European philosophers adopted a systemic view in order to explain certain physical and social phenomena. The 1950s were the heyday of total systems thinking: the idea that everything is connected to everything. This led to the assumption that planning and policy making should cover every relevant variable, and planners and policy makers alike aspired to develop all-inclusive models of society. This was then combined with a comprehensive rational approach in an attempt to weigh all alternatives to arrive at a certain decision. Planning bureaus were established in order to facilitate such efforts at social engineering (Klijn & Snellen 2009).

This approach to planning and policy making failed to deliver (Gerrits 2008). Societies are too complex to be managed comprehensively. And while many people searched for control parameters in order to stabilize societies, reality showed that such stability does not exist. This in turn gave rise to a host of new ideas about steering in society, from free-market thinking to incrementalism to nihilistic postmodernism. Skepticism regarding attempts at holistic steering is justified but it does not diminish the wicked problems that are a result of the multiple connections that exist in society. Witness today's governance of the Randstad Holland: while many acknowledge that it is impossible to govern the Randstad as a whole it also proves

counterproductive to govern it in a fragmentary way. This leaves planners and policy makers with a seemingly unsolvable issue: how can one govern an interconnected society while being unable to mimic such interconnectedness in planning and policy activities?

The 'interconnectedness of things'

Dirk Gently, a fictional character and detective conjured up by the late British author Douglas Adams, strongly believes in the total interconnectedness of all things, by which he means that seemingly unrelated events may in fact be connected and may help to solve the riddles he deals with. Gently shamelessly uses

Images**1** Hamburg**2** Rotterdam

his axiom in order to justify expensive trips to the Bahamas in search for a lost cat in Britain. It is by sheer good luck and coincidence that he actually manages to do his work properly but the results reinforce his belief that this approach works. A fictional character he may be, but Gently points at an important issue, namely that the interconnectedness of things is a matter of both mind and reality.

Looking back at total systems thinking, one notices how systemic thinking turned into the belief that systems exist a priori. In some case, such as a logistics chain or a public transport network, systems have a tangible nature. But even in such cases the actual boundary between the system and its environment is not set incontestably. The public transport network surely includes the physical infrastructure, but also the travelling habits of its users. These are influenced (among other things) by their alternative options, connecting the public transport network to infrastructure for motoring and air travel. Taking interconnectedness seriously thus runs the risk of a comprehensiveness that can only lead to paralysis: we are never able to understand all the linkages that exist. In the Netherlands, for instance, there is a widely shared feeling that physically upgraded neighborhoods can accommodate a population of mixed ethnicities, which may improve the overall wellbeing of such neighborhoods and increase the chances that its inhabitants can improve their social-economic status. While there might be many relationships between the physical space, its population and the overall status of the place, scientists, planners and policy makers alike find it very hard to tease out the exact relationships.

The problem at hand is that those planners and policy makers can not escape this issue since they are entrusted with the task of redevelopment of, say, a run-down neighborhood in Utrecht, solving congestion in motorways, or the development of container terminals in the port of Rotterdam. They need to

assess the systemic nature of societies and to act accordingly. But, if they are not struck by paralysis, they need to deal with the ambiguity of not knowing completely the system they seek to intervene in. How to respond to such ambiguity?

Attempts to master connections in spatial development

A dominant approach in the attempts to govern the multiple connections that exist in societies is to structure or order them. Debates in spatial development and urban management often revolve around the issue of centralization and demarcation of tasks. In the case of the Randstad, for example, there have been many calls for the establishment of a so-called Randstad Province or a new authority that should govern the Randstad as a whole (see for example the report by the Commission Geelhoed). Advocates of such an approach often point at examples such as Hong Kong and Singapore to prove that centralization of authorities helps to cope with the multiplicity of physical and social connections. After all, the reasoning goes, a single authority is better able to understand and link those connections than many authorities that focus on subsystems and display little mutual coordination. Another example is the advice of the Dutch Elverding Commission, who proposed specific measures to simplify public decisionmaking: their position seems to be that if (legal) procedures are restructured, society will follow.

Calls for centralization can be regarded as attempts to master the complexity of connections. Reality, however, is harsher than that. The reason that the establishment of a centralized government will not help to improve coping with all connections is because humans always have an information deficit, regardless of their attempts to overcome that deficit. In other words: the types and numbers of authorities do not matter much as long as humans have not found the definite answer to their inability grasp the full complexity of social and physical connections in urban development. For example Buijs et al. show that attempts to find a fit between connections and government in the Randstad lead to an amalgam of Ministries, Provinces, Municipalities, formal inter-municipal cooperation, semi-autonomous bodies and a host of advisory boards (2009). Paradoxically, the search for coherence leads to further fragmentation of authority across different organizations. Each organization attempts to define a problem at a certain scale and with certain connections but these definitions are, by definition, incomplete.

This is not to say that planners and policy makers have not found ways to cope with this complexity. Underneath the desire to structure the apparent chaos of multiple connections lays a deep-rooted craving for simplicity. The most common approach to simplification, according to Sharkansky (2002) and Morcul (2003), is by creating simplified representations of the complex world. Policy makers and planners can do so through, for



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example, slogans, logos, rhetorical statements and designs or plans and visions in spatial development. This simplification helps in two ways: it creates an understandable reality for them to work in and it offers an understandable reality for others to adhere to.

The process of simplification

In order to understand the process of simplification, the authors investigated how planners and policy makers in major European transport hubs deal with the complexity of the connections they are required to govern (Gerrits 2008). Such connections arise from the activities of the authorities that have both physical and social consequences. Conceptually, there is a continuous string of loops between the policy activities and the physical and social system. Port authorities, for example, busy themselves with the development of the port, such as the construction of new terminals (Rotterdam), the deepening of the navigation channel (Antwerpen and Hamburg) or the construction of new infrastructure (Rotterdam and Hamburg). Each activity is connected to the other. A deeper Elbe in Hamburg, for example, means that bigger ships can enter the port. This in turn creates the need for better infrastructure in order to distribute the goods from the port to the hinterland. Since this infrastructure runs through neighborhoods, citizens become involved, too. As such, every action by planners and policy makers leads to consequences elsewhere because of, well, the interconnectedness of things.

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However, those policy makers and planners often find out that neither the physical system nor the social system comply with what they wished for. Unforeseen societal resistance and physical problems show that attempts to master all connections did not lead to the avoidance of such issues. The main problem, at least from the perspective of the policy makers and planners, is that the partially unknown multiple connections mean that any decision could lead to changes somewhere else in time and space. For instance, the port authorities in Rotterdam struggled with the fact that the construction of the Maasvlakte 2 port extension could lead to an unwanted decrease of the shrimp population in the Waddenzee some 300 kilometers to the north, because these ecological systems are connected. And the port authorities in Hamburg discovered that the deepening of the Unterelbe lead to both discontent among citizens elsewhere along the river and the occurrence of increased sedimentation, the opposite of what they were aiming for. These are clear examples of physical and social connections leading to new situations that are both unexpected and unwanted.

Upon facing this uncertainty, policy makers and planners respond to the pressures stemming from these new situations by altering their planning routines. By and large, there are two



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types of responses. Often, they respond by building coalitions with those who support their own goals and by shielding the planning process from those who oppose it. This results in a narrowly defined scope of the project and consequently, in research and planning aimed exclusively at finding the means to that end. The main reason for this approach is an attempt to keep the project under control as it is considered complex enough as it is without distracting factors. Any perceived threat to the original goal is actively diverted away. Here, complexity is denied, or seen as an unwanted deviation from a desired state. An example of such an approach can be seen in one of the most contested infrastructural issues in the Netherlands, the ongoing growth of Schiphol airport. For over twenty years, this growth has been contested mainly because of the resulting noise pollution for the people living near the airport. Over the years, the national government, the airport, and local citizen platforms have held each other hostage through negotiating complex schemes for monitoring noise pollution. A control oriented approach is considered vital, especially because the organizations and people involved have great distrust towards each other (Teisman et al. 2008).

However, such an approach can be rendered intolerable if the opposing pressures that were diverted backfire on the planners and policy makers themselves. It is then forced to alter its regime. The second type of response is characterized by a more complexity embracing approach (cf. Teisman 2005, Gerrits 2008). They connect with other actors in order to expand the diversity of ideas and goals in the process. This results in a debate that questions the scope, subsequently taking into account more than one aspect of the physical and social system. Consequently, research is also aimed at exploring options rather than simply finding the means to a given end. In other words: the existence of connections is acknowledged and used rather than trying to cut them away. This amounts to an explicit acknowledgment that the boundary around a system is a choice of policymakers. The sketched approach leads to the input of knowledge from various angles, as well as support

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5 Location Maasvlakte

for the choices eventually made. Even though a boundary must necessarily be drawn, this explicit process helps to draw it in such a way that important interconnections are taken into account.

In the Schiphol case, a complexity embracing approach would allow the consideration of a wider range of issues concerning the airport, such as its economic relevance for the area in which it is located, as well as other negative external effects that are now almost completely left aside. This would also bring in new actors, and new possibilities for innovative developments.

The coevolutionary nature of connections

More and more researchers (cf. Norgaard 1994, Gerrits 2008) suggest that decision making over physical and social systems has a coevolutionary nature because of the reciprocal quality of connections. This is a fancy way of saying that connections are real in the every day practice of governing systems such as cities, ports or transport networks. But above all it means that any planner or policy maker should not ignore those connections, nor treat them as if they are fixed in time and space. Blue-print planning is likely to fail, regardless of how many connections are taken into account.

There are many ways to deal with this, most notably through adaptive management, public process management or interactive decision making. Each of those approaches is an attempt to deal with the capriciousness and multiplicity of social and physical connections in governance. But regardless of all recommendations, the complexity of connections remains real. It is therefore not a matter of developing yet another amalgam of recommendations. Rather, one should question the simplifying or order-seeking behavior of planners and policy makers and introduce diversity in governance rather than singularity. The paradox here is that simplicity is both destructive regarding the outcomes and inevitable in order to make sense out of the complexity they deal with. But this does not imply that all hope is lost. If the world of planning and policy making is imperfect because of the many connections that build continuous

complexity, which in turn hinders improvement, the starting point for understanding the implications of connections should be that imperfect world. Instead of trying to 'fix' the consequences of complexity, one should aim to use this complexity. Obviously, Dirk Gently pushed the envelope too far, but there are some things to learn from his approach. It will not take away the surprises, but policymakers would benefit from looking at them as presents rather than as unwanted turbulence. ☯

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Dr. Lasse Gerrits M.Sc. BA is assistant-professor in Public Administration at Erasmus University Rotterdam. He specializes in the analysis of complex decision making processes in spatial development and water management. He has published in, among others, *Public Administration Review*, *Emergence* and the *Journal of Soils and Sediments*.



Dr. Frank A. Boons lectures Public Administration and Industrial Ecology at Erasmus University Rotterdam. His recent research seeks to apply a complexity perspective on ecological strategies of firms as well as governance of sustainability. He has published widely in journals such as the *Journal of Industrial Ecology*, *Technovation*, and *Business Strategy and the Environment*.