

Abstract

Within public administration and policy sciences the concept of policy networks nowadays is well accepted. Not much attention has been paid so far to strategies aimed at institutional design. Therefore, in this article, we develop a conceptual framework to study institutional design more thoroughly. We do this by specifying the nature and variety of institutional rules that guide the behaviour of actors within networks. Given this categorization of rules, we identify possible strategies to change network rules. Next, we focus on the strategic context of attempts to influence the nature of institutional rules: the process of institutional design. We conclude with suggestions to apply the conceptual framework to empirical research into the forms, impacts and implications of attempts to change the institutional features of policy networks.

Key words

Institutional design, networks, network management, rules, institutions, complex decision-making

INSTITUTIONAL DESIGN

Changing institutional features of networks

Erik-Hans Klijn and
Joop F. M. Koppenjan

E. H. Klijn

Associate professor
Centre for Public Management
Department of Public Administration
Erasmus University Rotterdam
PO Box 1738, 3000 DR Rotterdam
The Netherlands
E-mail: klijn@fsw.eur.nl

J. F. M. Koppenjan

Associate professor
Faculty of Technology, Policy and Management
Technical University Delft
Jaffalaan 5, 2628 BX Delft
The Netherlands
E-mail: j.f.m.koppenjan@tbm.tudelft.nl



INTRODUCTION: REDISCOVERING INSTITUTIONAL DESIGN IN NETWORK THEORY

In our present, complex societies, policies are developed within complex networks of interdependent actors. These networks have important impacts on the way policies develop and on the kind of policies that come about (Hanf and Scharpf 1978; O'Toole 1988; Rhodes 1988).

Two managerial responses to the existence of networks

In general two responses to the existence of policy networks can be distinguished (Kickert *et al.* 1997). The first is aimed at the improvement of the strategic behaviour of actors within networks and the quality of interaction between these actors. Within policy network theory until recently, the main attention was given to this first response. The implication of this first strategy is that policy networks are accepted as a fact of life. Networks are there, and they are there to stay. The best you can do is to deal adequately with them.

The second reaction does not treat policy networks as given. Due to profound dissatisfaction with the implications of existing policy networks, this type of response is aimed at changing policy networks, perhaps even abolishing them, or to create new ones (compare, for instance, Marin and Mayntz 1991; Marsh and Rhodes 1992).

Governments all over the world and especially in western democracies search for new forms of governance or try to induce these by changing their relations with other public and private partners. Examples are the ideas of joined-up government in the UK, the introduction of the Private Finance Initiative and the attempts at modernizing local government in this country. But also the initiatives for creating more autonomous governmental organizations in many western countries (Pollitt *et al.* 2001) can be seen as attempts to break through predominating, historically grown network relations. Obviously governments in western democracies see interventions of institutional design in which institutional characteristics in networks are changed as legitimate and effective means of governance.

Attention for institutional design

We think these wide-spread strategies at changing the institutional features of policy networks call for more scientific attention. Of course there are theoretical reasons for this. In public administration and social science it is common knowledge that institutions are durable and hard to change (compare Goodin 1996; March and Olsen 1989). Yet in practice many efforts to change institutions are undertaken. This raises

questions such as: how is this possible, are these attempts as futile as theory suggests and what are their theoretical implications? But there are also practical and normative reasons for studying institutional design. Institutions are often considered to be the result of enduring interaction processes by which actors have developed ways to reconcile their conflicting interests. This institutional capital is not easily replaced by newly designed arrangements.

Outline of this article

In this article we present a theoretical framework for the analysis of attempts at institutional (re-)design in network-settings. This framework builds on concepts and insights from policy network theory (Klijn and Koppenjan 2000; Koppenjan and Klijn 2004) but also on neo-institutional economics and the new institutionalism in social sciences (Williamson 1985; Ostrom 1986; March and Olsen 1989; North 1990; Powel and DiMaggio 1991; Nooteboom *et al.* 1997). The framework provides a way of looking at networks as institutions and provides a way to identify and analyse institutional design interventions. By this we can enhance our understanding of institutional design and undertake research to assess the impact of institutional design interventions.

In the next section we deal with the idea of networks as institutions and the role of rules. We then discuss various strategies of institutional design (section 3). In section 4 we elaborate on the complex character of the process of institutional design, since these interventions have to be achieved in bargaining games. We end with a sketch of a research agenda for which the theoretical framework may be applied (section 5).

NETWORKS AS INSTITUTIONS: RULES AND THEIR STRUCTURING

Institutions actually form the social infrastructure of our behaviour. Without institutions virtually every form of collective behaviour and collective action would be impossible. If we were not able to fall back on fixed rules, norms and agreements, which give our behaviour meaning, collective behaviour would be virtually impossible due to the considerable transaction costs and collective action problems could hardly be solved. Institutions thus often provide a source of stability and comprise a social infrastructure, formed by the interaction of actors in the past. This means not only that they are useful for determining behaviour and provide a handle for co-operation but also that they are difficult to change because they carry the bias of previous interactions, views and power relations.

Institutions are thus a two-edged sword: they enable interactions, provide stability and certainty and form the basis on which actors' trust may be founded. At the same time they serve to 'codify' previous (unequal) power relations, of common opinions

and permitted discussions and may thus obstruct or hamper reforms (March and Olson 1989; Ostrom 1990).

Rules as the heart of institutions: Ambiguity, formation and change

Rules form the heart of institutions. Many authors even consider rules as *the* characteristic of institutions. For instance, Scharpf (1997: 38) describes institutions as 'systems of rules that structure the course of actions that a set of actors may choose'. Institutions are therefore in short sets of rules, which influence, guide and limit the behaviour of actors. In this sense networks may be regarded as institutions. They are patterns of social relationships between mutually dependent actors (Aldrich and Whetten 1981; Marin and Mayntz 1991) but are at the same time systems of rules.

After all, networks are characterized by specific and unique sets of formal and informal rules. Each network has its own history, in the course of which rules have been formed and these in turn have undergone a development (March and Olsen 1989; Klijn 1996, 2001; Burns and Flam 1987; Scharpf 1997).

The rules of the network are 'activated' by the actors in separate games. This does not mean, however, that rules are always clear or even fully known to the interacting actors. Rules are often ambiguous and require translation in the interactions (March and Olsen 1989). Just as a judge tries to interpret a specific case (offence) in the light of an existing rule, an actor in the network tries to interpret the meaning of events in the game based on the network rules that he is familiar with. So network rules influence the interactions of the game by means of actors who apply rules in their actions.

The fact that network rules are activated in the game also explains why difficulties frequently arise in games that cover more than one network. In games of this sort, after all, different rules from different networks are activated which leads at the very least to ambiguity (which rules apply and how should they be interpreted?) but may also result in conflicts between different sets of rules (van Bueren *et al.* 2003). The behaviour of actors in such situations often consists at least in part of determining and reaching consensus on the rules that will apply.

Changes of rules

Although there are occasions when rules are consciously designed and decided upon, rules are usually formed as a by-product during interactions. Rules may be the product of conscious design behaviour by an actor – usually a public actor – but even then they are only rules if the other actors in the network recognize them as such and keep to them. This immediately provides a definition of the essential difference between social and physical rules. Social rules, and thus also rules in networks, only remain in existence if they are followed by actors and are actually complied with in concrete game

behaviours. Rules that are broken by the actors, either consciously or unconsciously, or are not (or no longer) complied with, lose their validity (Duintjer 1987; Burns and Flam 1987).

Rules may change due to various conditions

- As a result of a conscious action (design/intervention) by an actor provided that this intervention is perceived to be legitimate by other actors in the network and is at least complied with. (Note that this is not necessarily in a literal sense. We will return to this later.)
- As a result of reinterpretation by actors; if a number of actors start to interpret existing rules in a different way (in terms of our example of the judge we could say: create a different jurisprudence) rules will change.
- As a result of non-compliance or even conscious breaking of rules; if actors no longer comply with rules or even consciously break them and this stance is adopted by other actors and not followed up by effective negative sanctions, rules will lose their meaning. This process will usually be accompanied by the simultaneous formation of new rules (see van Buuren and Klijn 2004).

Types of rules in networks

Rules are thus gradually formed and changed. The next question we want to address, however, is what it is exactly that regulate in networks and how can be analysed. To put it another way: what types of rules are found in networks? In the literature we find various classifications of rules (see, for example, Ostrom 1986; Burns and Flam 1987).¹

In this article we assume a distinction between interaction rules and arena rules. *Interaction rules* have a procedural character and tell actors what is and is not permitted within a network. They modify behaviours within the context of the arena rules.² An overview of the two types of rules and examples can be found in Table 1.

Interaction rules may focus on the access to the network or the arena or on the interactions within the game. Access rules determine how exclusive games are, how actors are selected for particular games and which exit options they have. Other interaction rules are (non) intervention rules, rules that regulate the availability and use of information, and rules for dealing with conflict.

Arena rules are rules that provide the actors with a handle for determining the nature of the network and arena in which they find themselves. They specify positions, realities and pay-offs. They are thus rules that define the nature of a social practice. As such they are at times barely recognizable as rules and are of an almost tautological character. *Arena* rules have the character of what Searle, the English analytical philosopher, calls structuring rules (Searle 1971; van Eemeren and Koning 1981). A structuring rule defines when someone in a chess game has been placed in checkmate. *Arena* rules define the nature of the game.

Table 1: Types of rules in networks

	<i>Description</i>	<i>Aspects</i>	<i>Examples</i>
Interaction rules	Rules which regulate interactions in the game; i.e. rules which specify what is and is not permitted in games between actors	Access to policy game Interaction in policy game	– exclusivity – selection – exit options – (non-)intervention – provision of information – conflict
Arena rules	Rules which regulate the game setting; i.e. rules which specify what type of game and network is under discussion in any given case	Reality Pay-off Positions	– identity of actors – product rules – status – evaluation criteria – status – powers

Source: Adapted from Klijn (1996, 2001).

Within arena rules three subsets of rules may be identified: reality rules, pay-off rules and position rules. Reality rules specify primarily what constitutes good and bad arguments, information and standards for actors. Professional codes regarding behaviour (e.g. physicians) or products (e.g. good-quality housing) play an important role here. In addition, arena rules relate to which pay-off rules (financial but also non-material) and which position rules in the network are important. Figure 1 gives an example of network rules in this case rules within the Dutch fishery network.

Network rules: Structures of power

Rules are a codification of specific characteristics of networks. They determine such characteristics as the closeness of networks (by means of the interaction rules that determine which actors are admitted in the game), the language that is used in networks and last but not least the power and resource dependencies in networks.

Power is in essence the perception of actors in the network of another actor's influencing potential. This perception is regulated by position rules that determine whether or not an actor is respected. But this perception is also determined by what is permitted in a network. In short, it is also dependent on the access options (which actors are, consciously or unconsciously excluded) and the mode of communicating about (policy) issues (which items, judgements, etc. are taken for granted because they are part of the actors' identity). Thus, they rest on the product and identity rules of the network. This last dimension of power is usually referred to as mobilization of bias

The Dutch fishery policy network at the beginning of the 1990s is a relatively closed network. The network, which consists of the Ministry of Agriculture, the Fishery organizations (and fishery firms) and the Public regulation body, the Fish Board, was relatively closed for other groups (like environmental groups or other ministries). There are a number of domain and interaction rules, which reflect this closure. The evaluation rules, which regulate the behaviour of the actors strongly see the fishery interests as national interests and favour a procedure in which policy is legitimate when fishery sector and politics agree. Support from the fishery organizations is crucial in the eyes of the actors. One respondent remarked: 'In the end the Government has the authority to push issues through but to a large extent, it will consider what support it has.' So the evaluation rules strongly stress the importance of the fishery interests, of support of the fishery organizations and the legitimacy of policy proposals is derived from the way it matches the fishery interests. Although in the 1980s the first tensions in this closed network already were visible because of conflicts between the Ministry and the fish organizations and fishermen about the fish quotas and the regulation and enforcing of these quotas (set by the European Union) the basic rules which existed for a long time are still rather strong.

Figure 1: Rules in Dutch fishery network

Source: van Buuren and Klijn (2004).

(Bachrach and Bararatz 1962). Through an analysis of these dimensions of the network via rules an insight may also be gained into this grimmer side of institutions (Moe 1990; Knight 1992). Figure 2 gives some illustration of the power dimension of network rules. We use again the network rules of the Dutch fishery network as an example.

The last observation about power draws attention to the fact that the structure of the network, the sets of rules, is made up of interactions and choices from the past and thus also of the power relations from the past. A struggle about changing rules, and that

It is very clear that the rules of closure, which have been elaborated in Figure 1, are also a result of power relations of the past. The fact that evaluation rules stress the importance of the fishery interests is a result of the strong position in interactions of the fishery organizations in the past and their close relations with the Ministry of Agriculture. This strong position has resulted in strong formal ties and rules (like the ability of the fishery network partly to regulate their own affairs) and informal rules like the evaluation rules. It is mainly the European Union, as we will see, which as an external actor intervenes in this closed network by imposing all kind of rules and regulations. This disrupts the network and the rules of the network.

Figure 2: Power in the rules of the fishery network

means for each attempt at institutional design, is also a power struggle (see Klijn 2001). In addition to enabling and facilitating interactions by reducing strategic uncertainty and transaction costs, network rules therefore also have a 'dark' side: the institutionalization of distributive advantages and the exclusion of certain actors, interests and issues. Institutions are not neutral. They simultaneously fulfil both a positive and a negative function: they effect a stable interaction environment but also bring about non-decision making and mobilization of bias. Whenever institutions fall short in the first function or become dysfunctional due to the second, there are grounds for institutional design.

A definition of institutional design

After dealing with networks as institutions and placing rules at the heart of institutions it is possible to give a clearer description of the concept institutional design. Institutional design is aimed at deliberate changes in institutional characteristics of networks. So it has to be separated from gradual changes in these characteristics which always occur because actors in networks slowly adapt institutional characteristics over time or because institutional arrangements lose their regulative power. These emergent, sometimes even unconscious processes of (de-)institutionalization are more or less by-products of the strategic games actors play (Giddens 1984; Ostrom 1990). They are tied to (re)interpretations of actors (creating gradually different understandings of the rules) or more or less conscious ignoring or changing the application of rules.

Institutional design, in contrast, refers both to the *activity* of trying to change the institutional features of policy networks, as to the *content* of the institutional change that is aimed for.

Furthermore, we need to clarify what we mean by institutional characteristics. We have defined institutions as ‘systems of rules that structure the course of actions that a set of actors may choose’ (Scharpf 1997: 38). So institutional design is the deliberate attempt to change the set of rules that structures interactions within policy networks. These rules can be formal or informal.

INSTITUTIONAL DESIGN STRATEGIES

Institutional design is first of all aimed at changing rules. To achieve this, however, highly diverse institutional design strategies are possible. In this section we will first look at the possible options for intervention available to institutional design: what type of rules (and thus network characteristics) are the interventions aimed at? Subsequently we look at the way in which the rules could be changed.

Directions of institutional design: Which rules change?

Various management strategies aimed at changing rules may be distinguished. These strategies may be classified into three categories:

- (1) Strategies aimed at the *network composition*; these are strategies, which focus on changing or influencing the composition of the network. This intervention is based on the premise that the composition of the network (and changes made in the composition) has an influence on the interactions (and thus outcomes) occurring within it. There are various ways in which the composition of the network may be changed. For example, strategies aimed at consolidating or changing actors’ positions or adding new actors. However, strategies may also be aimed at changing the access rules for actors or at influencing the network as a whole by promoting network formation, and self-regulation, or modifications to the system. The various strategies range from relatively light interventions, like laying down actors’ positions which only confirms achieved and existing relation patterns, to more encompassing interventions like system modifications (see Table 2). An intervention like system modification not only involves a larger variety of rules affected, but also influences more deeply the position and identities of actors and mostly creates more resistance (see also section 5). Table 2 shows which sort of rules function as intervention points for each strategy.

- (2) Strategies aimed at the *network outcomes*; these are strategies that try to influence the standards or the logic of costs and benefits in a sustainable way so that games within networks evolve in a different way because other strategic choices are made. The point of intervention here is not the actors as in the previous set of strategies but their choices. This means the sustainable influencing of actors' strategic choices and the outcomes resulting from them. The most important institutional design strategies in this category are strategies to change the pay-off structure (financial or other rewards that are connected to strategies and decisions), to change professional codes (standards by which actors see their professional activities and identities) and strategies that are aimed at changing evaluation criteria (standards by which actors judge the achieved outcomes). The two last types of strategies are closely connected.
- (3) Strategies aimed at *network interactions*; these are strategies that try to influence the interactions between actors in a sustainable way. These strategies are aimed at influencing rules, which regulate the process in networks and in this way try to facilitate interactions, to put them in a framework or to make linkages. Strategies in this category include developing conflict settlement mechanisms (which regulate conflicts between actors) or introducing certain procedures into interactions (and fix certain interaction or decision sequences in the interaction). But strategies such as certification (standards of quality attached to the characteristics of an actor or his relation to other actors) or influencing supervisory relationships also fall into this category.

Table 2 shows the strategies, which have been discussed earlier and shows also to which type of rules a certain strategy is aimed.³ For this we use the same typology of rules that have been presented in section 2.

The table shows a wide variety of institutional interventions and provides a conceptual framework to analyse the type of strategies we can observe in reality. An example of institutional interventions is given in Figure 4 where we discuss some interventions of the European Union in Dutch Fishery networks. This example shows that different strategies can be used at the same time.

Institutional design for changing of institutions: Implementing strategies

We have shown earlier where institutional design strategies may be aimed at. This leaves us with the interesting question of how to implement these strategies. In line with what was said in section 2 about the changing of rules we may distinguish two important ways in which institutional design strategies may be implemented:

- Direct intervention in rules; interventions may be aimed directly at changing rules. This is the case with, for example, legislation (or changes in legislation),

Since the 1980s the EU has been very active on fishery policies trying to influence and change national fishery policies and the fishery policy networks (van Buuren and Klijn 2004). One of the measures of the EU has been the establishing of fish quotas and downsizing the catch of fish. This is clearly a measure of institutional design aimed at the outcomes of the network (second type of strategy mentioned earlier). With this measure the EU changes the evaluation rules and the pay-off structure (what is profitable and good, see also Table 2). The quota regulations were first used in the 1980s but strengthened substantially in the 1990s partially as a result of the alarming data about deteriorating numbers of fish. These were unilateral top--down decisions by the EU, which caused very strong tensions within the Dutch fishery networks. They increased the pressure on the Dutch fishery network, bypassing the consensual way of interacting and putting pressure on the evaluation rule that the interest of the fishery sector is the general interest. In general the fishery organizations are very negative ('The Commission is just muddling along') about this development but do not have much potential to change anything.

Figure 3: Institutional design strategies of the European Union in fishery politics

with attempts to change informal established rules. The earlier example of the European Union intervening in the national fishery networks is a clear example of this. But direct intervention in rules can also be achieved by private regulation or by regulation, which is achieved in joint decision making between public and private actors. An example of a private agreement is that of the Tabaksblat commission in the Netherlands which has established rules on pay-offs for top managers in response to the discussion on the 'self-enrichment' of managers via the provision of shares. In the USA, too, there is a discussion underway about sharper controls on companies in response to a series of fraud scandals, the most well known of which is the fraud involving ENRON. Drawing up rules of this sort directly affects actors' options for behaviour and regulates, for example, the method of information provision.

Table 2: Strategies to influence and change rules in networks

<i>Strategy</i>	<i>Arena rules</i>			<i>Interaction rules</i>	
	<i>Identity/ product rules</i>	<i>Pay-off rules</i>	<i>Position rules</i>	<i>Access rules</i>	<i>Interaction rules</i>
<i>Network composition</i>					
1. Change actor positions			X		
2. Lay down actor positions	(X)			X	
3. Add actors			(X)	X	
4. Change access rules for games				X	
5. Influence network formation			(X)		X
6. Promote self-regulation	X	(X)	(X)		X
7. System modifications (e.g. market forces, reorganizations)	X	X	(X)	X	X
<i>Network outcomes</i>					
1. Change evaluation criteria	X	(X)			
2. Influence pay-off structure	(X)	X			
3. Influence professional codes	X	(X)			
<i>Network interactions</i>					
1. Conflict regulation			(X)		X
2. Change interaction procedures				(X)	X
3. Certification	X				X
4. Change supervisory relationships	(X)			X	X

- Indirect interventions via the influencing of perceptions and the creation of long-term changes in interaction patterns. If we assume that rules may also be changed as a result of actors changing their strategies, interpreting rules differently or no longer following rules, institutional design strategies may also be aimed at bringing about sustainable changes to actors' perceptions and strategies and by that achieving changes in rules in the longer run. We refer to this as 'reframing'. Reframing involves the bringing about of major changes in actors' perceptions so that they interpret situations in a different way and (drastically) adjust their behaviour. Established habits and things that are taken for granted are thus broken down enabling new lines of behaviour (and new common practices regulated by rules).

Reframing strategies can have different forms like using administrative stories (the 'Third way', stimulating free competition, etc.), setting up prestigious policy documents or providing sensitizing concepts (agencies, autonomizing). Administrative

One of the objectives of the Private Finance Initiative in the UK in the field of road contracting was the creation of a new industry of private actors who were going to deal with the construction, the operating and the financing of road construction projects. If we look at the first eight major road construction projects which were contracted out in the latter part of the 1990s (projects which were completed in 1996), then it may be stated that new consortia were certainly created which also repeatedly bid for one of the projects. In total eleven consortia were involved in the eight design finance, built maintenance (DFBO) projects. Six of these consortia won at least one contract bid. The bidding procedure that is used works towards a situation in which two bidders remain. If we look at an overview of the remaining two consortia and the winners and losers then we see that various consortia are mentioned a number of times, as winner or loser. Two consortia won twice. Moreover, in some cases organizations were involved in different consortia. In subsequent contract negotiations these consortia also played an important role. Thus we see that although this intervention to change the game rules on the implementation of road facilities led to a mighty shake-up in the network, after a while stabilization once more occurs and a fairly settled group of players forms around the policy issue. In short, a (new) process of network formation once more begins to develop, surely because when entering into long-term contracts (thirty years!) long-term relations are also entered into between public and private actors (Haynes and Roden 1999; Immers 2002). In this situation it is central government (department of transport) that is the initiator of strategies of institutional design and they tried this by changing the network composition (by influencing the pay-off rules, changing access and interaction rules and position rules).

Figure 4: Changing actors and access rules

stories may be set up which pave the way for change. The concept of ‘the Third Way’ as the Labour Government in the UK tells it is, besides many other things, a story, which functions as a vehicle to change policy and minds of actors.

Administrative stories like ‘sensitizing’ concepts highlight particular problems and propagate particular solutions. A concept such as autonomizing, for example, focuses attention on a specific formulation of the problem (there is too little distance between policy and implementation and this is why implementation ends up being inefficient) and proposes solutions (greater efficiency can be achieved through self-reliance and performance indicators). In short, reframing strategies such as administrative stories and sensitizing concepts, but also others such as discussing major policy documents or utilizing crisis situations, aim to bring about sustainable changes in actors’ thinking and strategic behaviour and via this route try to achieve a reinterpretation of rules or the forming of new rules.

Reframing strategies are often used in combination with direct interventions. Administrative stories thus accompany concrete measures such as the self-reliance of sections of departments, the introduction of performance contracts, etc. In short, institutional design in networks is often a combination of direct interventions in rules and attempts to reframe.

It will be clear that reframing in combination with direct intervention in rules does not always result in clear-cut outcomes. Institutional design as we will elaborate in the next section is often complex and also realized in complex interaction processes with unexpected and unforeseen consequences. The choice of the (mix of) institutional design strategies will probably depend on three main factors:

- (1) The institutional characteristics of networks; rules of the networks will probably make certain strategies more likely than others (because of used and proven ways of doing, of power differences or other characteristics that are connected to the set of rules in a certain network).
- (2) Imitation behaviour and dominant discourses in or outside the network; this idea of institutional behaviour as imitation or as shaped by dominant discourses is already elaborated by other writers (see Powell and DiMaggio 1991 on the idea of imitation).
- (3) Strategic choices and options; just as all interactions in networks institutional design strategies are subject to strategic choice and considerations. This strategic aspect is elaborated in the next section.

THE COMPLEX CHARACTER OF THE INSTITUTIONAL DESIGN PROCESS

Even though institutional rules are not static and are subject to constant change, they are not easy to influence via conscious design activities even though the discussion of various strategies in the former section may suggest this.

In the following we will argue that, just as policy making is not so much an intellectual design activity but a bargaining game, the same is true for institutional design. The game of institutional design is even more complicated, because decisions upon institutional (re-)design have to be implemented within the interaction games of networks (Blom-Hansen 1997). It is there that new rules are adopted and aligned with existing practices.

Institutional design as a bargaining game at the institutional level

Institutional design games differ from 'ordinary' policy games within networks in that they are aimed at changing institutional rules. A further difference is that these games often are played at the institutional level of the network, sometimes even in separate 'arenas' in which decisions on formal institutional rules are taken (Kiser and Ostrom 1982; O'Toole 1988). Formal changes in law for instance can only be made by legislative bodies of governments. This institutional design game itself is guided by a specific set of rules that may differ from the rules that are used within networks. In case of formal laws certain legislative procedures and decision rules have to be followed. Actors who are dominant within a network may not automatically participate in this game. The complicated and lengthy procedures and uncertain institutional environment reduce the manageability of this institutional design game: it is a negotiation game in a garbage can-type context (Allison 1971; Cohen *et al.* 1972; March and Olsen 1983, 1989).

Although the institutional design game often is played in separate institutional arenas, it is not unrelated to the games that take place in policy networks. Some network actors will have easier access to institutional arenas than others. And some will be in a better position to organize a lobby to influence the decision making in this arena or to form a coalition with influential parties who operate in these arenas.

However, not all institutional design attempts take place in separate arenas. Also within the day-to-day arenas of the network actors can try to change the rules that guide the players' behaviour. Institutional design is not only about changing formal rules, but may also be aimed at the informal 'rules in use' within policy networks. In practice it may be hard to distinguish 'ordinary' strategies at the interaction level from strategies aimed at changing institutional rules. But as far as institutional design is undertaken in a separate arena, it is important to remember that this game is not equally accessible to all players in the network.

Another important conclusion is that proposed institutional designs are not rational designs. They are the result of the process of pushing and pulling between the parties involved. Policy assumptions about the effectiveness of institutional designs play a role, but so do the power relations between conflicting coalitions. And also coincidence plays an important role, since the arenas at the institutional level in which decisions on formal rules are taken, are far more politicized and open to environmental influences than the depoliticized and embedded arenas of the policy network.

The implementation of institutional designs within network arenas

How formal decisions in institutional arenas aimed at changing network rules will work out in the games played within networks is highly uncertain. After all, formal rules are not identical to the institutional rules-in-use within networks. Formal decisions may, in the short term, break down institutional practices, liquidate organizations, establish new ones, adjust resources, change common outlooks and so forth. But that does not mean that a new institutional practice will immediately be established. Even if a fairly comprehensive institutional blueprint is introduced, in practice these new institutional rules will have to be interpreted, accepted, applied and internalized. Attempts to implement new rules are often obstructed by the resistance of actors who have a vested interest in the existing rules. As a result institutional innovations are not or only partly implemented or implemented in a deviant way. But even when new rules are accepted, their effective implementation requires a gradual process of learning by doing. Given the complexity of interaction processes, a lot of unforeseen circumstances will arise which parties must learn to deal with.

Laying down new institutional rules in as much detail as possible is not the solution to these implementation problems. The more detailed they are formulated the more room they provide for actors to interpret these in their own way and the greater the distance between formal rules and rules-in-use. This sketch of the process of institutional design shows that we are dealing with a complex undertaking of which the outcomes are hard to predict (Goodin 1996; North 1990; Knight 1992). The example in Figure 5 shows how institutional design interventions may have their own unforeseen effects.

Institutional design as trajectory instead of blue-print

The complex, multi-level character of the institutional design game implies that both the way design processes evolve and their impacts are highly uncertain. The consequence is that designs are by definition imperfect and should be seen rather as the start of a trajectory of institutional change than as a definitive design. The strategic answers of parties to institutional design strategies of one party are only partially predictable. The consequence is that unexpected and possibly undesired effects will occur. These will call for further adaptation and thus for new decisions on strategies for institutional design. As a result the proposed institutional changes will be adapted. But also these new proposals will have shortcomings, which have to be addressed.

An example of this mechanism of repetitive institutional (re-)design is offered by attempts to liberalize public service provision. Unexpected strategic reactions from the players involved restrict competition and endanger public interests. After the first round of institutional innovations, new forms of regulation have to be introduced to

One of the European Union interventions concerns the promotion of free markets. This is also done in the fishery policy. Mainly it is aimed at diminishing protection of various countries of their own industry and sometimes strengthening private market organizations. The more or less unintended consequences of this general EU policy is that it ignores and bypasses the Product Corporation of fish (PC) a semi-public body in the Netherlands which has some regulatory power (see van Buuren and Klijn 2004). The PC is a characteristically Dutch institution where consultation between public actors (ministry of Agriculture) and private organizations take place. But the PC also has regulative power and supports the sector with advice, research and administration. The management of the PC consists of representatives of the sector organizations and observers from the ministries

The EU policy weakens the position of the PC against the private organizations of the fishermen and changes the positions and power of these organizations. The EU policy to ignore this semi-public organization also fuels the discussion in the Dutch fishery network itself on the role of the PC. So here we see unintended consequences of institutional design strategies, which receive their own dynamics as sector organizations themselves begin to question the role and power of the PC and raise the question as to why they cannot regulate their own affairs. They also start to consult the Ministry of Agriculture directly in stead of by means of the PC which used to be standard procedure.

Figure 5: Example: Unforeseen impacts: free market policy and the fishery network

cope with these effects. But seldom forms of regulation introduced in a second round of institutional design, are effective at the first shot. So a third round of adapting the institutional (re-)design is necessary.

Again, institutional design implies rather the starting of a protracted and relatively undetermined process than the intellectual design of an institutional blueprint. Figure 6 offers a visualization of the complex and multi-level character of institutional design in which actors, involved in network games, try to influence decisions made at the institutional arena, while formal rules decided upon in these institutional arenas are transposed in network games into new 'rules-in-use' which eventually will guide the behaviour of parties within this game. At each step the process can be disturbed.

CONCLUSION: INSTITUTIONAL DESIGN AS SUBJECT OF RESEARCH

Institutional design is not a simple activity. The nature of institution design, its process and its impact are not very well understood. Institutional design is a process of pushing and pulling with uncertain results. Often, long-established certainties, which have proved their value in the past are changed or removed, while no one knows for sure how this will affect their functioning or what will replace them. These uncertainties, however, in no way restrain politicians and policy makers from taking initiatives for institutional design.

So there is every reason to devote more attention, both theoretical and empirical, to institutional design. Although various attempts have already been made on this front (e.g. Pollitt and Bouckaert 2000) the research into institutional design is still in its infancy. In this article we have presented a theoretical framework, which could be used to conduct research into institutional design interventions. By applying the types of rules and interventions, institutional design strategies can be

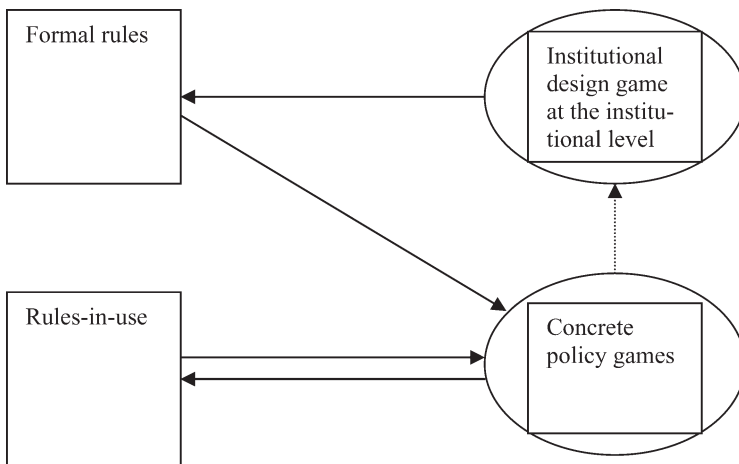


Figure 6: The complex multi-level character of the institutional design game

compared and analysed. Using the theoretical insights on the way in which institutional design is deployed the effects of institutional design could be mapped. This could be done by mapping the specific path of changes initiated by institutional design strategies, but also by specifying the conditions under which the reform process proceeds. At the same time, the effects of the institutional design strategies, which have been set in motion, should be looked into. Research of this sort would give us more insight into the possibilities, limitations and pitfalls of institutional design in networks.

ACKNOWLEDGEMENTS

We would like to thank Sandra van Thiel and the anonymous referees for their comments on an earlier draft of this article.

NOTES

- 1 A well-known essay is by Ostrom (1986) on position rules, entry and exit rules, scope rules, authority rules, aggregation rules, information rules and pay-off rules. The disadvantage is that some important rules, like rules that determine professional standards or identity of actors, are missing.
- 2 They resemble the idea of regulating rules (see Searle 1971; Duintjer 1977).
- 3 For a more extensive discussion of the strategies see Koppenjan and Klijn (2004: ch. 10).

REFERENCES

- Allison, G. T. (1971) *The Essence of Decision*, Boston, MA: Harper Collins.
- Bachrach, P. and Bararatz, M. S. (1962) Two Faces of Power, *American Political Science Review*. 56: 4 pp947–52.
- Blom-Hansen, J. (1997) A 'New Institutional' Perspective on Policy Networks, *Public Administration*. 75: Winter pp669–93.
- Burns, T. R. and Flam, H. (1987) *The Shaping of Social Organization: Social Rules System Theory with Application*, London: Sage.
- Cohen, M. D., March, J. G. and Olsen, J. P. (1972) A Garbage Can Model of Organizational Choice, *Administrative Science Quarterly*. 17: 1 pp1–25.
- Duintjer, O. D. (1977) *Rondom Regels: Wijsgerige Gedachten Omtrent Regel-Geleid Gedrag*, Meppel/Amsterdam: Boom.
- Giddens, A. (1984) *The Constitution of Society: Outline of the Theory of Structuration*, London: Macmillan.
- Goodin, R. E. ed. (1996) *The Theory of Institutional Design*, Cambridge: University of Cambridge Press.
- Hanf, K. and Scharpf, F. W. eds (1978) *Interorganizational Policy Making*, London: Sage.
- Haynes, L. and Roden, N. (1999) Commercialising the Management and Maintenance of Trunk Roads in the United Kingdom, *Transportation*. 26: 1 pp55–6.
- Immers, W. (2002) *PFI, een Goede Weg Naar Wegen*, Rotterdam: Doctoraalscriptie.
- Kickert, W. J. M., Klijn, E. H. and Koppenjan, J. F. M. eds (1997) *Managing Complex Networks*, London: Sage.
- Kiser, L. and Ostrom, V. (1982) 'The Three Worlds of Action: A Metatheoretical Synthesis of Institutional Approaches' in E. Ostrom (ed.) *Strategies of Political Inquiry*, Beverly Hills, CA: Sage.

- Klijn, E. H. (1996) *Regels en Sturing in Netwerken: De Invloed van Netwerkgeregels op de Herstructurering van Naoorlogse Wijken*, Delft: Eburon.
- (2001) Rules as Institutional Context for Decision Making in Networks: The Approach to Post-War Housing Districts in Two Cities, *Administration and Society*. 33: 3 pp133–64.
- Klijn, E. H. and Koppenjan, J. F. M. (2000) Public Management and Policy Networks: Foundations of a Network Approach to Governance, *Public Management*. 2: 2 pp135–58.
- Knight, J. (1992) *Institutions and Social Conflict*, Cambridge: Cambridge University Press.
- Koppenjan, J. M. F. and Klijn, E. H. (2004) *Managing Uncertainties in Networks: A Network Approach to Problem Solving and Decision-Making*, London: Routledge.
- March, J. G. and Olsen, J. P. (1983) Organizing Political Life: What Administrative Reorganization Tells Us about Government, *American Political Science Review*. 77 pp281–96.
- (1989) *Rediscovering Institutions: The Organizational Basis of Politics*, London & New York: Sage.
- Marin, B. and Mayntz, R. eds (1991) *Policy Networks: Empirical Evidence and Theoretical Considerations*, Colorado: Westview Press.
- Marsh, D. and Rhodes, R. A. W. eds (1992) *Policy Networks in British Government*, Oxford: Clarendon Press.
- Moe, T. M. (1990) Political Institutions: The Neglected Side of the Story, *Journal of Law, Economics and Organizations*. 6 pp213–54.
- Nooteboom, B., Berger, H. and Noorderhaven, N. (1997) Effects of Trust and Governance on Relational Risk, *Academy of Management Journal*. 40: 2 pp308–38.
- North, D. N. (1990) *Institutions, Institutional Change and Economic Performance*, Cambridge: Cambridge University Press.
- Ostrom, E. (1986) 'A Method for Institutional Analysis' in F. X. Kaufman, G. Majone and V. Ostrom (eds) *Guidance, Control and Evaluation in the Public Sector: The Bielefeld Interdisciplinary Project*, Berlin: Walter de Gruyter.
- (1990) *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge: Cambridge University Press.
- O'Toole, L. J. (1988) Strategies for Intergovernmental Management: Implementing Programs in Interorganizational Networks, *Journal of Public Administration*. 11: 4 pp417–41.
- Pollitt, C., Bathgate, K., Caulfield, J., Smullen, A. and Talbot, C. (2001) Agency Fever: Analysis of an International Policy Fashion, *Journal of Comparative Policy Analysis*. Spring pp271–99.
- Powell, M. and DiMaggio, P. eds (1991) *The New Institutionalism in Organizational Analysis*, Chicago, IL: University of Chicago Press.
- Rhodes, R. A. W. (1988) *Beyond Westminster and Whitehall: The Subsectoral Governments of Britain*, London: Unwin Hyman.
- Scharpf, F. W. (1997) *Games Real Actors Play: Actor-Centered Institutionalism in Policy Research*, Boulder, CO: Westview Press.
- Searle, J. R. (1971) *The Philosophy of Language*, London: Oxford University Press.
- Van Buuren, E., Klijn, E. H. and Koppenjan, J. F. M. (2003) Dealing with Wicked Problems in Networks: Analysing an Environmental Debate from a Network Perspective, *Journal of Public Administration Research and Theory*. 13: 2 pp193–212.
- Van Buuren, M. W. and Klijn, E. H. (2004) Trajectories of Institutional Design in Policy Networks: European Interventions in the Dutch Fishery Network as an Example. Paper presented at the British Academy of Management (BAM) conference, University of St Andrews, St Andrews, September.
- Van Eemeren, F. H. and Koning, W. K. B. eds (1981) *Studies over Taalhandelingen*, Amsterdam: Boom.
- Williamson, O. E. (1985) *The Economic Institutions of Capitalism*, New York: The Free Press.