

# **Governance and Networks. Tools to Study the Dynamics of Clusters and Global Value Chains**

**Dirk Messner  
Jörg Meyer-Stamer**

**Institute for Development and Peace  
University of Duisburg**

Paper prepared for the IDS/INEF Project "The Impact of Global and Local Governance on  
Industrial Upgrading"

Duisburg, February 2000

## Content

<b>1</b>	<b>From State Theory to Governance Concepts</b>	<b>1</b>
<b>2</b>	<b>What is a network, and how do we recognize it?</b>	<b>3</b>
2.1	Networks as organizational patterns for dealing with reciprocal dependence	4
2.2	Key features of policy networks	6
2.3	Policy and private networks	8
<b>3</b>	<b>Three main areas to study the logic of network governance</b>	<b>11</b>
3.1	Interest constellations and decision styles as determinants of network governance	11
3.1.1	The simple cases: Mastering prisoner's dilemma and chicken game—situations in networks	11
3.1.2	The complex case: Mastering the battle of the sexes - dilemma	12
3.1.3	Three decision styles and their effects on the governance behavior of networks	13
3.2	The social functional logic of networks	15
3.3	Seven main network failures	16
3.3.1	The problem of numbers	17
3.3.2	The time dimension of decisions	17
3.3.3	Institutional consolidation of networks: conditions of and problem facing their operation	18
3.3.4	The coordination problem	20
3.3.5	The bargaining dilemma	21
3.3.6	Power in network relationships	21
3.3.7	The tense relationship between conflict and cooperation	22
<b>4</b>	<b>Network Governance: Operationalization for field research</b>	<b>25</b>
4.1	Network Governance at the Local Level, Impact of Foreign Buyers	26
4.1.1	Hypotheses	26
4.1.2	Questions regarding the social functioning logic	26
4.1.3	Questions regarding decisions styles	27
4.1.4	Questions regarding core-problems of networks	27
4.2	Who should be interviewed?	28
4.3	Governance in Global Value Chains	30
4.3.1	Hypotheses	30
4.3.2	Questions regarding the social functioning logic	30
4.3.3	Questions regarding decisions styles	31
4.3.4	Questions regarding core-problems of networks	31
4.4	Impact of International Standard-Setting on Clusters and Value Chains	32
4.4.1	Questions	32

## **1 From State Theory to Governance Concepts**

Why are we talking about governance? Or rather, why are we not talking about rule, like in “the rule of law” or “the rule of the state”? The answer is straightforward: because this would be a far too narrow view. It is obvious that it is not just governments who are ruling the world. And if we are looking specifically at the economic sphere, i.e. the world of firms and their environment, it is even more obvious that we have to deal with all sorts of “rulers”, not just government.

In the good old days, things were reasonably straightforward. There was government, sometimes democratic, sometimes not, which ruled, and there was the rest of the society which was being ruled. The latter included the private sector. Even though there has been freedom of entrepreneurship in many places for quite some time, the rules of what an entrepreneur could and could not do were defined, often unilaterally, by government. For instance, Germany’s constitution, which was drafted in 1949, determines that the use of private capital has to serve the common good, and it can be disappropriated if it does not.

It is sometimes argued that in the industrialized countries the power of government reached its peak in the 1960s, when it seemed to extend to successful macroeconomic management. From this perspective, the phenomenon of stagflation, which in the 1970s shattered the belief in the latitude of macroeconomic management, shattered the trust in the capacity of government to steer the fate of society.

This aspect is only part of a larger phenomenon. Keynesian macroeconomic management was just one, albeit crucial, element of the way advanced capitalist societies organized themselves in the latter phase of the period of Fordist development. Within the Fordist development pattern, government played a crucial role, much stronger than in earlier phases of capitalist development. It was not only in charge of macroeconomic management but also responsible for all sorts of mesoeconomic activities, such as industrial policy (e.g. the Airbus program). Apart from that, it created massive schemes for social security and redistribution.

Conceptually, the usual distinction at this time was between hierarchy and market. Government rule was one manifestation of hierarchy. There was, of course, consultation going on in democratic societies between government and societal groups, i.e. government did not impose laws and regulations unilaterally but rather after some discussion. Yet the dominant role of government was hardly disputed, especially if it was democratically elected. Between the extremes of hierarchy and market, the pendulum swung towards hierarchy, as the economic crises of 1929/32 seemed to have shown that reliance on the market was highly risky.

The crisis, and the “demystification”, of government rule is causally linked to the crisis of the Fordist pattern of development. Fordism ran into crisis for a number of reasons, such as

decreasing productivity growth, the ballooning cost of social security systems, and its enormous energy intensity. What is important in the context of this paper is to note that many of the manifestations of the Fordist development pattern came under fire since the 1970s – central banks moved from Keynesian to monetarist concepts, the private sector mounted a growing resistance against government intervention, the class compromise between capital and labor was questioned, and so forth. The pendulum started to swing back from hierarchy to market.

There was, however, something else which happened with respect to governance. One way of defining the term governance is to say that it means co-ordination – either by the invisible hand of the market or by the very visible, sometimes quite heavy hand of government. From an analytical perspective, it is obvious that both markets and governments suffer from certain typical failures. Some economists found an easy way of dealing with this: They claim that government failure is more costly than market failure, and that one basically has to live with certain market failures. Actors in the real world, however, found a different solution: They created, more or less spontaneously and without anybody planning this, a third variety of governance, namely networks. Network governance means negotiation between autonomous actors which are to a certain extent interacting on a permanent basis. In the latter part of this paper we will elaborate on the internal functional logic of networks, as well as explain the typical network failures. At this point, it is important to point out that in industrialized countries we can today distinguish three types of governance:

- Hierarchy, i.e. in political terms the sphere of the rule of the state. The main traditional instruments of public governance are power, money and law. Governments are the only actors who may legally exert physical force, and who can unilaterally define rules. Recently, “soft” instruments of governance have gained importance, like information and the capacity to moderate and mediate. Hierarchy is also a common way of addressing structures inside companies, which usually have a clear peak, often in the figure of the CEO who often has a big latitude in determining the fate of the company. The discussion on “corporate governance” deals with the question how external forces, such as shareholders, can limit the degree of freedom of decision of a company leader. Yet this still involves the sphere of hierarchy.
- The market, i.e. a sphere where co-ordination is guided by the “invisible hand”. This is the world of arms-length business transactions. But it is also increasingly the world of what used to be hierarchy, namely public governance, and is now being reorganized to increase efficiency; this is what New Public Management is about.
- Networks, i.e. a sphere where co-ordination is based on negotiation.

Considerations so far focused at industrialized countries. To what extent does the concept of network governance apply to developing countries? Our basic message is that network governance is a crucial element of governance in advanced developing countries, too. Let us repeat one main message: Patterns of governance move between the extremes, or idealtypes, of hierarchy, markets, and networks. In the past, governance in many developing countries was

quite hierarchical, especially with respect to latecomer industrial development; consider the bureaucratic-authoritarian development model of the East Asian NICs or Brazilian state's role in building-up the steel, car, and petrochemical industry. With the crisis of the import-substitution model in Latin America and elsewhere since the 1970s and the recent crisis of the hierarchical governance model (which evolved towards "crony capitalism") in East Asia, the pendulum is swinging towards market-based governance in these countries, too; in places like Chile it even swings wider than anywhere else. But underlying these swings is the same dilemma as in advanced countries. Hierarchical governance becomes increasingly difficult, with one important reason being the fact the level of differentiation of society is constantly increasing so that even an extremely efficient and integer government would find it difficult to rule society, and especially the economy. Market governance offers an alternative, but only to a degree which is limited by market failures, some of which compromise the international competitiveness of the private sector (e.g. underinvestment in training and R&D). Therefore, from a theoretical perspective one would expect network governance to emerge in advanced developing countries as well – due to necessity, since otherwise a given country would fall behind other countries in the context of a globalized economy; but also as the outcome of the struggle between adherents of hierarchical governance and the proponents of free markets. From an empirical perspective, it appears to us that network governance has been emerging even in strongly market-oriented countries like Chile.

## 2 What is a network, and how do we recognize it?

In both everyday language and the academic literature, the term network tends to be used in a loose and descriptive way. Whenever something is not tied firmly and legally by ownership, family, organizational boundaries, or something else, it is addressed as a network. A typical example would be the term "supplier network", trying to describe the complex system of a firm which produces some final product and is receiving inputs from a multitude of other firms, involving partially long-term relationships, partially arms-length-transactions. In this context, the term "network" is meaningless from any analytical point of view –from a governance, a geographical, or a learning perspective it is lumping together elements which have nothing in common except for one customer.

In the context of this paper and our project, we need to define the term network in a clearer way. We have defined above that **network governance** means **negotiation between autonomous actors which are to a certain extent interacting on a permanent basis**. Implicit in this is a definition of the term network, namely as a governance arrangement (or more precisely one out of three arrangements – hierarchies, markets, and networks). In other words, we do not use the term network in a merely functional way. To put it differently: From a governance perspective, a given supply system involves all three patterns of governance – hierarchy (between a dominant customer and a dependent supplier, involving a stable

relationship), market (arms-length relationships), and networks (involving a stable, interdependent relationship between a customer and certain suppliers).

Let us come back to the definition and look at each of its elements. What do we mean by *actors*? This refers to both individual or collective actors. Individual actors are, for instance, well-respected persons which may play an important role in a local policy network, or a prominent expert who is part of one of the numerous policy networks around the EU Commission. We would also refer to a firm as an individual actor. Collective actors are, for instance, business associations, trade unions, or NGOs. But what about government? It would clearly be inappropriate to address it as a single actor, as in any given policy network it is very likely that more than one government representative or agency are involved. In fact, we have found cases of policy networks which involved mostly different government agencies.

Another aspect is *negotiation*. This implies that inside a network actors are interdependent. In a dependent relationship, the powerful actor can determine what the dependent actor has to do; this is hierarchy. In an interdependent relationship, the involved actors have to negotiate to come to a joint solution.

Another aspect is addressed by the attribute *autonomous*. It also refers to the element of interdependence, albeit from a different angle. Introducing this term reminds us of the fact that sometimes actors, despite a first impression indicating the opposite, are not quite autonomous, such as mandatory associations in a corporatist system.

Finally, what is meant by *to a certain extent interacting on a permanent basis*? This refers to the fact that networks, unlike formalized organizations, are somewhat fluid. The configuration of a given network will often change much faster than the configuration of an organization. But a network must be distinguished from an ad-hoc roundtable.

## 2.1 Networks as organizational patterns for dealing with reciprocal dependence

In spite of the differences between them, the network studies revolve around one central point: political decision-making structures are increasingly characterized by the dominance of informal, decentral, and horizontal interorganizational relationships. In the analytically oriented approaches, a **new view of political governance** is gaining currency; it is characterized as follows by Kenis and Schneider (1991, pp. 26f.):

*"... the network perspective implies a new perception of causal relations in social processes.... The core of this perspective is a decentralized concept of social organization and governance: society is no longer exclusively controlled by a central intelligence (e.g. the State); rather, controlling devices are dispersed and intelligence is distributed among a multiplicity of action (or processing) units. The coordination of these action units is no longer the result of 'central steering' or some kind of 'pre-stabilized harmony' but emerges through the purposeful interactions of individual actors (what is meant here are collective*

actors, organizations, D.M.), *who themselves are enabled for parallel action by exchanging information and other relevant resources.*"

Seen from this perspective, the network phenomena are more than a different way of looking at an essentially unaltered social reality. The empirical studies available demonstrates that the notion of a clear-cut separation of state and society and the idea of the state as the supreme social control center can no longer be sustained. Mayntz notes far-reaching changes in political decision-making structures that point to changes to the basic structures of society: "instead of being created by a central authority, policy today often comes about in a process in which a multiplicity of both public and private actors are involved." (Mayntz 1993, p. 40)

As the analysis of the theories of competitiveness at the company level has already shown, "*tacit knowledge*" is gaining in importance in the policy process as well. The significance of noncodified knowledge has changed the form of learning processes. Noncodified knowledge cannot be purchased and traded in markets; imitative learning is limited in scope inasmuch as noncodified knowledge cannot be grasped by it; state-level efforts, e.g. to build technological know-how with an eye to developing an effective technology policy are relativized in view of the relevance of tacit knowledge. In detecting problem areas, working out viable and adapted solutions, and implementing policies, state institutions are therefore forced to rely on actor knowledge in given policy fields that is difficult to transfer and often not codified. This is true, as is shown by the empirical network studies, of health policy no less than in environmental or industrial policy. Networks are organizational patterns which, by focusing the knowledge of different actors and the learning processes they have gone through together, are more apt to be in a position to convey "tacit knowledge" than are market mechanisms and hierarchical decision-making systems.

Kenis and Schneider are the authors who have worked out this **crucial dimension of networks** most clearly: *Policy networks are mechanisms of political resource mobilization in situations where the capacity for decision making, program formulation and implementation is widely distributed or dispersed among private and public actors ... In situations where policy resources are dispersed and context (or actor) dependent, a network is the only mechanism to mobilize and pool resources.*" (Kenis/Schneider 1991, pp. 41f.)

The cooperation of actors and organizations in networks can thus be explained by the fact that the individual actors do not have all the resources needed to realize the output aimed for, inasmuch as these resources are dispersed among different actors. It is precisely this state of affairs that is defined in resource dependence theory as "*interdependence*" (see Aldrich 1975, Benson 1975, Mandell 1988). The interorganizational structure of a network aims to draw together the array of different resources important for the collective output so as to achieve a joint result that cannot be attained individually. Networks are accordingly forms of organization that, in view of the limitations of hierarchical coordination and central political governance, have emerged to deal with the complexity problem outlined above and the interdependence phenomenon, with its governance logic, that is associated with it.

Network studies show that the **reciprocal dependence** of public and private actors has increased. The tendency analyzed by Luhmann toward simultaneously increasing the independence and interdependence of social subsystems and organizations undermines the action autonomy of all social actors (though not to the same degree); it is the source of the spread of mutual dependencies. This dynamic casts doubt on the classical notion that there are either private matters for which individuals, specific organizations, or firms are responsible or public affairs that are regulated by the state (as a state under the rule of law, legitimated by elections). It appears as though, aside from the spheres in which solely private actors deal with their private affairs and the fields in which the state autonomously handles public problems, there is emerging a growing mixed segment in which there is a need for collective governance that can be dealt with effectively neither by private nor by state-level actors on their own.

## 2.2 Key features of policy networks

We can note the following characteristics of networks:

1. The **structure of networks** is characterized by three basic elements: a) the lines defining the relations between actors are more horizontal than hierarchical; b) these are accordingly "**interorganizational**" webs of relationships, while traditional policy research focused on individual organizations; c) the interactions between actors in networks tend to involve loose relationships.
2. Networks **are phenomena in polycentric societies** in which, in many social sectors, there is and can no longer be any a priori assumption of a crucial, central, hegemonic actor, which is ultimately determinant or only significant or even simply present in all kinds of networks. In contrast, the classical theory of the state was based on the ideal model of the centripetal, monistic society in which the state represented the clear-cut peak of the polity.
3. Actors are ever less able to derive all necessary resources inside their own organization and therefore work together in a network with other actors who possess different resources important to their collective output.
4. Policy networks are characterized by their function of formulating and implementing policy. This functional description is a criterion for **specifying the boundaries of individual networks**. Actors in no way involved in the collective decision-making process aimed at elaborating policies are thus not part of the network.
5. Policy networks consist of autonomous actors with different but reciprocally dependent interests. "**The theme of [their] interaction**" (Héritier 1993, p. 433) is the attainment of a common goal.
6. The network structure can contribute to achieving common goals and solutions in cases in which the governance resources are distributed over several actors, and do so **by means of the following functions**:

- pooling of decision-relevant know-how;
- ongoing exchange of experience, which makes it possible to selectively correct, complement, and broaden knowledge and at the same time encourages learning processes on the part of the actors involved;
- the development of structures of consensus and compromise by creating transparency as regards common and divergent interests;
- the development of a common problem-solving orientation reached through compromise of interests and the emergence of trust in stable network structures.

7. The relationships in networks are as a rule not of equal import; **power structures** are involved. An actor's influence and centrality increases in relation to the importance the other actors ascribe to the resources controlled by him (e.g. information, financial resources, legal resources). Positions of power are not necessarily determined by organization size or financial clout. Even smaller, financially more weak organizations or actors with strategic resources (e.g. scientists with specific know-how of groups with blockade or veto power) can play a significant role in networks.

8. The way in which actors work together in a networks ("**decision styles**") is rarely marked by harmonious or symbiotic cooperation. Since the actors have their own specific interests and may on occasion also pursue both divergent and common interests, competition and cooperation alike have a role to play. Some authors speak of "*cooperative competition*" (see e.g. Eßer et al. 1993), others of "*antagonistic cooperation*" (Marin 1990); empirically, it is possible to distinguish various policy styles.

#### 9. **Different network types** can be distinguished

- in terms of the number of actors involved,
- the internal structure of the organizations involved (capable in terms of strategy, action, and mobilization versus low-powered),
- the degree of network stability,
- the character of the interorganizational relationships (that can be "measured" along a continuum of "weak to strong ties"),
- the specific policy field concerned,
- "policy styles" or dominant action orientations, or indeed rules to which the actors are oriented.

10. A network's "social innovation," its **logic of interaction**, consists in the combination of elements derived from the underlying organizational pattern of "market" and hierarchy:" on the

one hand, the existence, characteristic for markets, of a variety of autonomous actors; on the other hand, the capacity (or at least function), typical of hierarchies, of approaching goals by means of coordinated action. In this sense the network appears to be an organizational form that is capable of disarming the "**Luhmann paradox**" (growing functional differentiation - increasing interdependence of the subsystems; at the same time: increasing closure of the subsystems toward one another - independence - self-referentiality). Independence (existence of independent actors and organizations) and interdependence (interorganizational cooperation) themselves become characteristics of network governance. Properly functioning network structures prove that functionally highly developed subsystems in fact grow more and more difficult to govern by means of traditional hierarchies, though the horizontal self-coordination between the subsystems (e.g. between production, research and development, and marketing in a large-scale corporation) can give rise to governance potentials. In contrast to the assumption of an uncheckable trend toward self-referentiality on the part of the subsystems, communication, coordination, and joint efforts aimed at solving problems across functional sectors prove to be entirely possible. The "Luhmann phenomenon" of simultaneously increasing independence and interdependence is "processed" in networks.

11. The functioning of networks presupposes a **capacity on the part of the actors involved for self-organization, efficiency, and action**. In other words, networks do not substitute for the action of individual organizations. It is only seldom that efficient networks will emerge from cooperation between weak individual organizations.

### **2.3 Policy and private networks**

So far we have mostly focused at policy networks. To what extent does the concept of network governance apply to the private sector, and are there critical distinctions between policy networks and private networks?

We have argued above that the network governance concept is applicable to the private sector, and that it is useful to conceptualize different governance patterns. In fact, we are by far not the first to argue along such lines, as the following table illustrates.

<b>Stylised comparison of forms of economic organisation</b>			
<b>Parameters</b>	<b>Forms</b>		
	<i>Markets</i>	<i>Hierarchies</i>	<i>Networks</i>
<i>Normative basis</i>	Contract, property rights	Employment relationship	Complementary strengths
<i>Means of communications</i>	Prices	Routines	Relations
<i>Methods of conflict resolution</i>	Haggling; resort to courts for enforcement	Administrative fiat, supervision	Norm of reciprocity, reputational concerns
<i>Degree of flexibility</i>	High	Low	Medium to high
<i>Amount of commitment among the parties</i>	Low	Medium to high	Medium to high
<i>Tone of climate</i>	Precision and/or suspicion	Formal, bureaucratic	Open-end, mutual benefits
<i>Relations between economic agents</i>	Independence	Hierarchical	Interdependence
<i>Source: OECD (1992), p. 78, adapted from Powell (1990).</i>			

But are the categories and concepts which are used in analyzing policy networks easily transferrable to the investigation of private networks, i.e. inter-firm relationships based on mutual dependence and negotiation? At first sight, this may appear implausible. Policy networks are, in the end, about government and the state and the rule of the law, whereas private networks are just about making money. But it seems to us that things are not that simple. Policy networks are the modern-day functional equivalent of what grand leaders were in the past: they are a means of getting problems solved. And private networks involve a logic that is not identical with simple utility maximization in the sense of making more money, but also includes power games, personal and collective aspirations, and the like. This is the reason why we propose that policy and private networks are not all that different, and that the same set of concepts can be used to investigate either of the two.

But, one might proceed to question, are there not crucial differences between policy and private networks? This is a difficult question, and we are nowhere close to giving a conclusive answer. However, some possible differences which come to mind immediately are, coming to think of it, not necessarily differences. Some of them are the following:

- **Complexity:** One might assume that policy networks are normally more complex than inter-firm networks. On average this may be true. But there are just too many exceptions to make this a meaningful difference. There are many policy networks, especially at the local and regional level, which involve a very limited set of actors (like, maybe, six). And there are highly complex private networks, especially when it comes to R&D consortia or export consortia.

- **Competition:** One would expect that there is no competition in the world of policy networks, i.e. in a given policy field and territory there is just one policy network, whereas it is the rule that there are numerous, competing private networks in any given field. However, reality is quite different. Since government is highly divisionalized, there are often policy networks which have huge overlaps, for instance a policy network around a Ministry of Economy, another around a Ministry of Labor, and yet another around the Prime Minister's Office, all of them trying to formulate economic and employment promotion activities. On the other hand, in certain fields, such as information technology, it appears that in any given contest (i.e. before an "industry standard" had become defined) the number of competing networks has tended to decrease in recent years.
- **Outcome:** One might assume that private networks have a clear outcome, such as a sale, whereas the outcome of a policy network is much more fuzzy. But this is not necessarily the case. Policy networks often generate straightforward outcomes, such as a regulation, a decision to create an organization (e.g. a technology center), or a policy program (in the sense of a fund and a set of rules which define how to spend it).
- **Power of the outcome:** One might assume that a crucial difference is that policy networks may generate what then become, by administrative decree or act of parliament, legally binding rules, whereas private networks cannot decree laws. But even here the difference is blurred. Policy networks often generate regulations which are respected because those who are regulated were involved in the process; this is what the whole discussion on "implementation problems" is about. Private networks, on the other hand, often define rules which technically are not laws, but which are much more binding than many laws, such as the UNIX standard.

It appears to us that there are two important differences between policy and private networks. First, there are different overall goals and interests involved. A private network involves actors which have a straightforward goal, namely producing certain products and earning a profit. A policy network usually involves actors which stand for a broader set of goals and interests, such as distributional or social goals.

Second, an important element in understanding the functioning of policy networks is what Scharpf has coined the "shadow of hierarchy", i.e. the possibility that, in case the policy network does not come up with a result, government can impose, unilaterally, a solution which would be suboptimal for all those involved in the policy network. This threat creates a crucial incentive for the actors in a given policy network to work out an agreement rather than getting stuck in endless disagreement. As far as we can make out, there is no real equivalent to the "shadow of hierarchy" in private networks. If a private network gets stuck, the main incentive for the actors to get moving again is probably the exit option, i.e. the implicit or explicit threat that key participants in the network start to run their own show or switch to another network. But this is probably a weaker incentive than the "shadow of hierarchy".

Still, keeping these differences in mind, we suggest that it is useful to apply the concepts which have been developed based on the analysis of policy networks also to the analysis of private networks.

### **3 Three main areas to study the logic of network governance**

#### **3.1 Interest constellations and decision styles as determinants of network governance**

Both interest constellations and decision styles in networks can be boiled down to three variants. Regarding interest constellations, these are prisoners' dilemma, chicken game, and battle of the sexes. The three decision styles are the bargaining orientation, the confrontation orientation, and the problem-solving orientation.

##### **3.1.1 The simple cases: Mastering prisoner's dilemma and chicken game—situations in networks**

Two of the three interest constellations (the prisoner's dilemma and the chicken game) can be transformed into trivial coordination events with positive effects for the actors involved (see Scharpf 1991a, p. 64). In networks it is not unrealistic to assume the existence of **communication** between the actors and a chance to reach **binding agreements**. Under these conditions the prisoner's dilemma can turn into a positive-sum game for the actors involved. This is also true of a chicken-game constellation in which escalations and possible collisions result precisely from the fact that communication and binding agreements are impossible. If, in contrast, we proceed on the assumption that communication and binding agreements are possible, the standard outcome provided for in conventional game theory ("joint disaster, equal cowardice, a victory of one" - Shubik 1987, p. 395) can be averted.

The conditions guaranteeing that binding agreements are honored can, however, not be assumed as given in all societies or subsystems of societies (like networks). The simplest solution (provided such relationships are enforceable under the law) is to be found in societies that guarantee (as a rule, from which there are exceptions) **legal and contractual security**. If this is the case prisoner's-dilemma and chicken-game constellations can be regulated by legally binding contracts. In other words, in these cases "cooperative solutions" presuppose no more than communication between actors oriented exclusively to their own interests and a fulfillment of binding contracts guaranteed by a state under the rule of law.

Preventing defection by means of laws or contracts is anything but trivial in a number of societies. In many countries social relations are marred by corruption. Where this is the case, "*generalized distrust*" develops (Scharpf 1993a, p. 74), with the consequence that the dilemma situations outlined above will as a rule end up in confrontation, obstruction, and/or suboptimal

solutions. In such societies political governance (geared to the Kaldor optimum) will prove to be a very difficult undertaking both in hierarchical decision-making systems and - above all - in network-like organizational structures.

Apart from the aspect of legal security, a second (sometimes substitutive, sometimes supportive) factor contributes to making binding agreements possible: the **existence of trust** between actors. Trust between actors involves a great number of presuppositions - particularly in situations in which the prisoner's dilemma or the chicken-game situation, both marked in their points of departure by mutual distrust, must be solved. While in societies in which there is a relatively high degree of legal security trust can serve to support the development of binding agreements, countries without sufficient legal security are faced with a situation in which the existence of a minimum of trust between actors forced to rely on interaction is of crucial significance for any successful joint decision-making. Here interpersonal relationships based on trust are often the substitute for regulative state functions and thus constitute an essential foundation for the efficiency and proper functioning of such societies.

### **3.1.2 The complex case: Mastering the battle of the sexes - dilemma**

The core problem in this constellation is that actors are forced to choose between outcomes (in the standard model: football game versus concert) that differ so significantly from one another that no simple compromise solution along the lines of the distributional principle of "a little of both" is possible, i.e. the actors are confronted by an "either-or" decision situation. Hierarchical decision-making systems are not troubled by the battle-of-the-sexes problem. When different outcomes are possible, the central unit responsible makes the decision. The battle-of-the-sexes constellation is very frequent in network structures inasmuch as they are less homogeneous than, for instance, hierarchically structured organizations, and this makes it more likely that different actors will envisage different solutions. The battle constellation confronts networks with difficult problems in that they are forced to reach *joint* decisions: firms engaged in a joint venture and forced to decide between alternative investment strategies, firms within a cluster that prefer specifically different solutions to problems and innovation strategies, or policy networks forced to set priorities and decide between alternative solutions.

Actor constellations faced with the battle-of-the-sexes constellation are invariably faced with the same problem: "While important benefits are dependent upon the ability to cooperate, cooperation is seriously threatened by conflict over the choice of one of the cooperative solutions (or over the distribution of costs and benefits of cooperation)." (Scharpf 1991a, pp. 65f.) Unfortunately, this constellation-of-interest conflict, which often occurs in reality, has found little attention in the literature, e.g. compared with the wealth of material on the prisoner's dilemma.

The specific element of the battle-of-the-sexes constellation is the coexistence of cooperative interests (in the standard situation: spend the evening together; or: common investment interest; common interest in formulating policy in an interdependent policy field, etc.) and competitive

actor motives and interests that are difficult to compare and reduce to a common denominator (in the standard situation: football game versus concert; or: choice between the alternatives of building roads or rail networks; construction of a technology center versus investment allowance). Even given the condition that it is possible to reach a binding agreement and all those concerned are seriously interested in doing so, this constellation of interests will often end up in conflicts over distribution and evaluation as regards the preferable solution (and the costs and benefits) and agreement on which of the solutions is the one acceptable and in the end just for both sides concerned. If these processes aimed at reaching agreement fail, there are no ways out of the dilemma, despite common interests.

The battle-style conflicts of interest, which occur frequently in the real world, are more difficult and can be solved only under presuppositions more complex than those of the prisoner's dilemma and the chicken game. Battle conflicts frequently occur in networks (interdependent structures, dependence on cooperation with others, thus common interests, but potentially different and incompatible proposed solutions). Hierarchical or majoritarian decision-making systems would have little trouble coping with battle constellations inasmuch as here the dominant agency of decision would be able to push through the solution it preferred. But in network structures in which the actors are forced to rely on joint decision-making processes, the battle constellation turns out to be a serious problem.

### **3.1.3 Three decision styles and their effects on the governance behavior of networks**

In other words, what we are looking for is a solution beyond the precincts of conventional public-choice theory. Proceeding from thoughts developed by authors such as March and Simon, Scharpf, or Etzioni, it is possible to contrast three fundamental action orientations that are based on distinguishable cognitive and normative actor dispositions (see March/Simon 1958, Scharpf 1988a and 1991a, Etzioni 1961 and 1994). The actors assume individually definable styles of decision-making. Etzioni distinguishes "utilitarian, coercive and normative" action orientations. March and Simon and Scharpf, whose terminology is used for the following discussion, distinguish between "bargaining, confrontational and problem solving" orientations:

- The **bargaining orientation** describes the typical, egoistical perspective of the "public-choice individual", who is guided by the rationale of his individual interests.
- The **confrontational orientation** implies that one's individual utility is measured in terms of benefits gained over others. The issue here is thus not utility maximization, as in the case of the bargaining orientation, but the desire to "vanquish" other parties, to exert one's advantage over others.
- A **problem-solving orientation** on the part of actors implies that they are geared to seeking an anticipated **common utility**.

What happens in the battle constellation when the three distinguishable normative and cognitive action orientations are fully conjugated? An individualist bargaining orientation on the part of actors leads into bargaining blockades and endless disagreement. This finding is important in that both public-choice theory and, often, network theory wrongly assume that the individualist-egoistic action orientation is the only conceivable one and at the same time the one that is most promising for the actors involved.<sup>1</sup>

A confrontational actor orientation is geared to either winning or losing. While the individualist action orientation is apt to lead to "endless" disagreement inasmuch as both sides are interested in a common solution, but are unable to agree for fear of giving up their egoistic interests and thus "get in each other's way," the confrontationally oriented actors will prefer in the standard situation to spend the evening alone and to reject on principle any alternative solutions proposed by others. Networks in which confrontational action orientations prevail have no prospects of successfully solving problems.

A problem-solving orientation on the part of the actors can, in contrast, contribute toward breaking up the battle constellation and increasing collective welfare (in the sense of the Kaldor optimum). Only when actors able and willing to cooperate are geared to achieving a solution not necessarily their own but as optimal as possible for the network will there be a way open out of confrontation and endless disagreement. But a joint problem-solving orientation on the part of the actors, i.e. the existence of a phenomenon that might be termed *cooperative individualism*, is only a necessary, not a sufficient condition for successful decision-making in battle constellations. This would mean that actors oriented to solving problems would first agree on procedural rules and time hierarchies that are in line with the interests of all the actors concerned. This would imply, for instance: the football game this week, the concert the week after. If, however, stable solutions of this sort are to be possible, it is important to reduce (and preferably eliminate) the risk that the cooperative behavior of one actor might be exploited by others. Here two presuppositions play a role that were referred to in the discussion on the prisoner's dilemma and the chicken game:

- legal and contractual security (in cases in which legally binding contracts are involved);
- a minimum of trust between the actors, which would serve to diminish the "fear of exploitation."

---

<sup>1</sup> See e.g. Kenis/Schneider (1991), Marin (1990). As a rule network theorists do not distinguish between different constellations of interests and relationship patterns on the part of actors.

### **3.2 The social functional logic of networks**

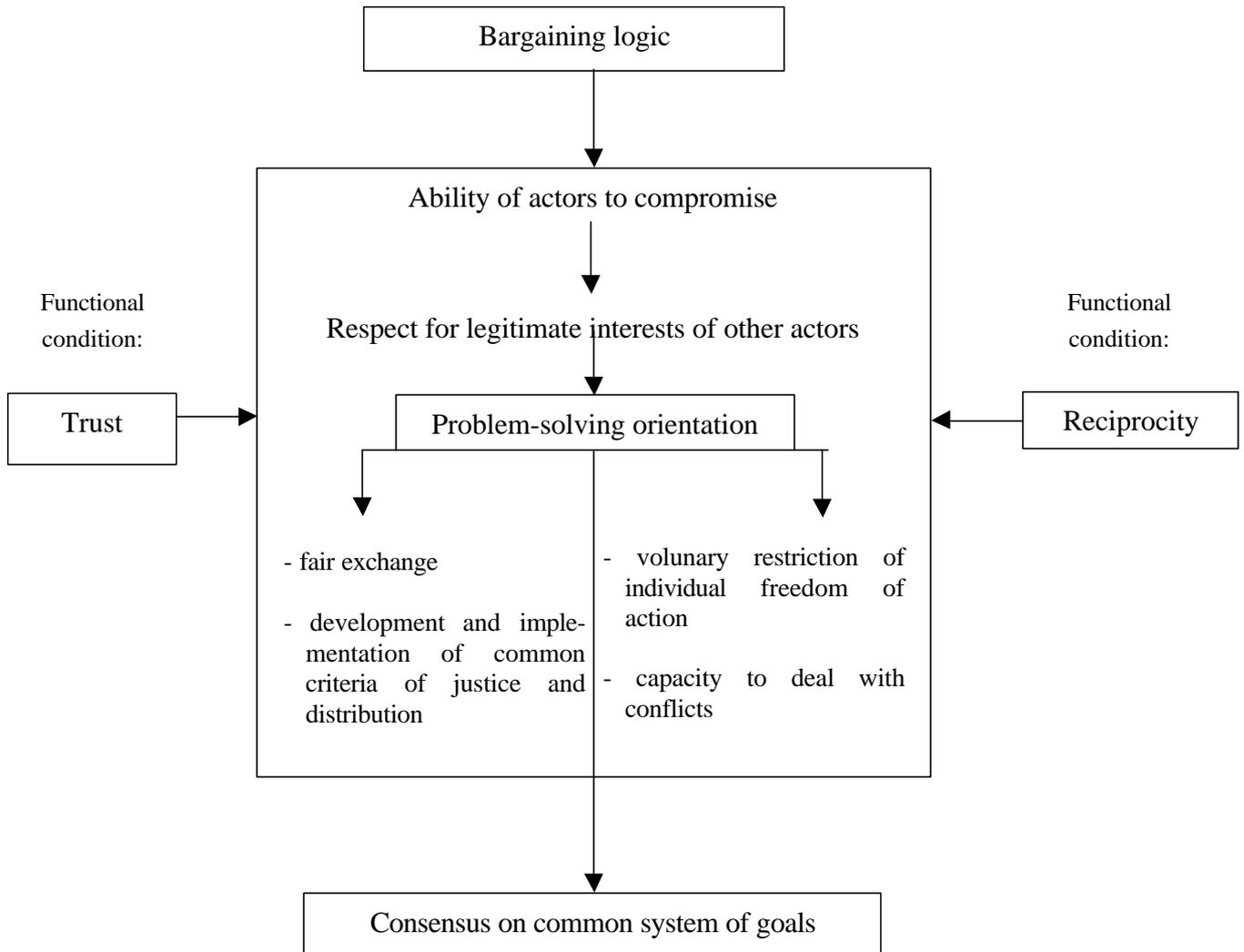
It has become clear that, in networks marked by interaction between actors with common and divergent interests, it is in many cases impossible to achieve a collective output solely on the basis of exchange orientations and individual rationales. The interaction typical for networks is bargaining. The decisive social mechanism that ensures the functioning of bargaining systems is the willingness of the actors to compromise.

Mayntz (1991) points to the significance of specific rules for the functioning of bargaining in networks. The observance of rules as a stabilizing element is not a factor specific to network organization, since the market as well as hierarchical organizations are also in need of rule systems. What is essential is the substantive content of the rules needed to govern the logic of compromise and bargaining in networks. Mayntz specifies four central network rules:

- (1) fair exchange/just distribution of costs and benefits,
- (2) reciprocity,
- (3) restraint of one's own freedom of action,
- (4) respect for the legitimate interests of other actors.

The rules constitute the social functional logic of networks; they are schematized in the following diagram. The diagram weights and categorizes the rules specified by Mayntz in terms of their functions.

## The Social Functional Logic of Networks



### 3.3 Seven main network failures

The notion that the governance problems of societies can be solved a priori and in principle by building network structures proves premature on closer analysis. The literature on "**market failure**" broadly documents the fact that without the governance instrument of the "market" complex societies and economies, in particular on the world scale, are not viable, though market allocation is nonetheless not a panacea, either. The same is true for the state, though it no doubt has important governance tasks to meet; there are nevertheless cases of "**government failure**". Network-like patterns of organization are in this sense no exception. Beside the strengths and functions of networks worked out above, it is also possible to describe forms of "**network failure**". The literature on this complex is, however, quite limited in scope. What

follows are the pitfalls of network governance in seven central problem dimensions, having in mind that:

### 3.3.1 The problem of numbers

The first problem area is trivial and is nonetheless often disregarded. The problems bound up with negotiated coordination in networks grow as the number of actors involved and their interdependent options of action increase (veto position). If prohibitive demands on information-processing and conflict-settlement capacities in networks are to be avoided, the goal must be to limit as far as possible the number of actors involved whose task interdependence must be dealt with by means bargaining coordination.

### 3.3.2 The time dimension of decisions

In **majoritarian decision-making systems** we can sometimes observe a tendency, bound up with the pressure of elections and uncertain majorities, to give preference to short-term orientations and to put off to a future date decisions that are necessary but painful in the short term. In **networks** the actors are to some extent unaffected by the party competition dominant in majoritarian systems and thus not subject to the pressure to generate quick decisions that find the approval of external actors or voters. The actors in networks work above all to find solutions to problems that concern them directly. One thing that characterizes networks is of course the fact that in them the roles of decision-maker and person directly concerned largely converge. Against this background there is no immediate incentive to work for a maximization of utility geared to the short term.

Still, we do encounter three problem constellations. **First**, situations are conceivable in which the **individual utility** of the actors or organizations involved in networks is calculated for the short term, whereas the implementation of "**system interests**" affecting the overall network calls for a longer-term orientation. This can, for instance, be the case when, in objective terms, the "system benefits" are to be found at a level different from that of the decision-relevant benefits of the individuals involved.

**Second**, actors in networks may be interested in the temporal **stability** of a specific bargaining structure which has yet to be created, since we are dealing here for the most part with voluntary forms of cooperation and coordination. Interest in stable cooperation results from the interdependence of the action-related resources held by the other actors involved and from the high transaction costs that come about as a result of the complex bargaining process. Continuous cooperation is the condition for safeguarding the expectations of all actors involved. This constellation keyed to safeguarding stability gives rise to a **tendency toward conflict avoidance and incremental change**. Discussions and problem-solving efforts within the network, including more fundamental reorientations that could negatively affect the interests of important network actors will tend to be put off. What is conceivable here are status quo

orientations that are based on agreements and compromises found in the past and are less reflective of present, or indeed future, interests.

**Third**, once a network is successfully stabilized, the high level of **social cohesion** thus attained can favor solutions that correspond more to a "*parametric*" than a "*strategic rationality*." What is meant by "*parametric rationality*" is a pronounced preference for decisions that keeps close to the traditional development path (Grabher 1994, p. 79). The development of a "*consensus culture*" and symbiotic relationships between the network actors set on incremental change can lead to "*collective conservatism*" (Kuran 1988) and slow down and obstruct required structural change.

Networks are thus most efficient when they are concerned with shaping structures within an established and dynamic development corridor. Here we would for the most part find positive-sum games. Networks are, however, faced with major difficulties stemming from the above-noted tendencies toward conservative decisions and incremental change when they are forced to come to terms with structural crises entailing the emergence of upheavals and the need to manage them.

### **3.3.3 Institutional consolidation of networks: conditions of and problem facing their operation**

The mutual dependence of the actors involved in a network on the governance resources of others implies a tendency toward continuity in actor relationships and thus a minimum of institutional consolidation. Relatively stable cooperative relations characterized by a specific pattern of mutually accepted organizational identities, competences, and spheres of interest, i.e. a minimal basic institutional consensus, make it easier to find compromises to settle conflicts of interest between network actors.

The pressure to stabilize a network and find compromises increases in relation to the reliance on the governance resources of other network actors and the duration of the cooperative relationships involved, both of which lead to specific transaction costs that constantly rise over time. The accumulating "*costs of exit*" make it more and more unattractive to abandon network cooperation.

If stabilization fails to materialize, loosely linked networks are threatened with disintegration. The transition from the "weak ties" characteristic of the precarious relationship structures of emerging networks to "stronger ties" can, however, at the same time serve to illuminate potential weaknesses of network structures. Networks act in a field marked on the one hand by disintegration, adjustment risks, and "endless disagreement" between the actors involved and on the other hand by functional and cognitive obstruction stemming from a surplus of social cohesion. We can discern in this field four problem dimensions that are in part also intensified by the "time dimension of decisions," and this gives rise to particularly clear-cut problem trends.

**The potentially retardative function of the compromise logic effective in networks:** Close relationship structures in networks and the need to seek compromise entail the problem that it is difficult to redistribute, against the will of the actors, the power and other resources (e.g. money, market entry or access to information, social status) between the actors who might be instrumental if the overall network is to achieve a given goal. While in hierarchically structured decision systems the central authority is generally able to push through its interests, and majoritarian systems are faced with the possibility (and the danger) of realizing their interests at the expense of minorities, as a rule networks are reliant on consensual decisions. This constellation is faced with a strong inherent conservative tendency.

**Functional obstructions or the "joint decision trap:"** Since the costs entailed by the breakdown of negotiations are often high (high "exit costs;" risk of "endless disagreement"), it is likely that conflict-avoidance solutions that negatively affect the interests of established and strategically important actors will fail to materialize and that strategies will be sought within the framework of the existing development corridor. Scharpf coined for this constellation the term "*joint decision trap:*" networks "*with high internal consensus requirements will find it difficult to exploit new opportunities that are attractive on balance, but not for each member individually, and they will encounter similar difficulties when it would be rational to cut their losses in response to worsening conditions.*" (Scharpf 1991b, p. 285)

**Cognitive blockades:** These functional barriers to innovation can be overlapped by cognitive blockades. Long-term relationships between network actors favor the development of joint orientations, views, bargaining styles, and even prejudices. In the course of this process there emerges a social cohesion that is the sine qua non of any cooperation founded in trust. The reverse side of social cohesion as a resource productive for the functioning of networks can be seen in cognitive blind spots resulting from an exaggerated standardization of views and overly symbiotic relationships between network actors. The result is highly path-dependent behavior.

**The ingroup-outgroup logic of networks, or the "Luhmann trap”:** The inward stabilization of networks is linked with the formation of joint rules, conventions, and routine acts. It is only in an action context of this type that trust and the ability to anticipate the behaviors of other actors can develop. The emergence of such "ingroup" structures is based on the constitution of "*ingroup-outgroup boundaries.*" A number of studies have shown that trust among insiders could arise from common distrust of outsiders. The development of functioning networks on the basis of ingroup-outgroup boundaries can lead to segmentation tendencies between the subsystems with an inclination to insulate themselves and refrain from communication. Any such tendency is extremely dangerous in highly interdependent societies. It favors two divergent types of externalization:

- Active strategies on the part of networks with a one-sidedly ingroup orientation and a tendency to respond with "hostility" to their environment ("*boundaries of distrust*" [Scharpf 1991b, p. 297]) aimed at consciously shifting negative externalities to third parties ("*opportunism with guile*");

- Activities of narrow-minded networks that, as a result of a lack of coordination with other subsystems or networks, lead to effects that are uncontrollable because they are not taken into account (**unintended effects**). This second type of externalization is likely to occur more frequently than the first one, since the relationship between networks stabilized by ingroup mechanisms and their environment are as a rule marked less by antagonisms (in the sense of "opportunism with guile") than by actor indifference to the negative externalities they cause in the pursuit of their interests ("*boundaries of irrelevance*" [Willke 1992]).

### 3.3.4 The coordination problem

It is recommendable to use the Pareto optimum and the Kaldor criterion as indicators for measuring the efficiency of coordination activities. The Pareto optimum consciously disregards aspects of distributive justice and the possibility of a redistribution of existing assets. The Kaldor criterion, a measure of welfare more relevant in political terms, rates as positive all measures whose utility is great enough for those favored to be able to fully compensate all persons disadvantaged by the measure (Kaldor 1939).

The attempt to coordinate by means of bargaining in the context of networks results in three specific problems:

- Solutions that maximize aggregate welfare are systematically ignored if they do not at the same time imply for each of the network actors an improvement over the status quo.
- The case that under these conditions more than a Pareto-superior solution should be possible would also entail the risk that the negotiations might be blocked by a dispute over the choice between the possible solutions.
- What this means is that networks are able to reach the Kaldor optimum only when they are not guided by competitive, or indeed hostile, action orientations vis-à-vis other network participants (in the sense of "getting the best of the others.")

If the conditions are now changed in such a way as to make it possible to compensate both the winners and the losers, and if this possibility is used as an instrument, one could - disregarding the transaction costs - well imagine solutions to the problematic outlined above. If voluntary negotiations are to come about in networks, the actor who stands to lose from a given project would have to compensate those who are interested in it if they are to relinquish their position. In a compulsory bargaining system (e.g. when property rights are legally protected against negative externalities), the compensation payments would have to flow in the opposite direction.

### 3.3.5 The bargaining dilemma

The discussion of the coordination problem will have made it plain that the "*motivational requirements*"<sup>2</sup> - i.e. the action orientation of the actors involved - are of key significance for the efficiency of networks. Coordination in networks and the maximization of aggregate utility succeed as a rule only when the actors are able to reach agreement on the distribution of the costs and gains that accrue. The condition for this is open communication, trust-based cooperation, fairness, viz. a bargaining style keyed to finding joint solutions to problems. The following dilemma emerges: on the one hand, successful coordination is likely only on the basis of trust-based and cooperative orientations on the part of the actors involved. On the other hand, the course of the negotiations and the determination of the solution will entail conflict over the distribution of the costs and gains as well as over fairness criteria. While it is impossible to reach a result without a cooperative bargaining style on the part of the actors involved, it is likely that the process of negotiation will entail strategic action, manipulation of information, and bluffing or threats. The constructive action orientation appropriate to the overall outcome can, since it is bound up with joint solutions, easily be exploited during the bargaining process. Conversely, effective bargaining strategies such as successful tactical maneuvers and manipulation of information - imperfect information under the usual conditions - can mean bargaining edges, and at the same time finally prevent the parties involved from solving common problems and maximizing the cooperation-based gains that would, on the whole, otherwise be attainable. It is thus not unlikely that above all actors open to supporting reaching the "Kaldor optimum" by means of cooperative strategies will run the risk of being cheated in the matter of distribution. It is in this constellation that the *bargaining dilemma* is at home.

### 3.3.6 Power in network relationships

As a rule networks come about because the governance resources that need to be mobilized to solve a given problem are distributed over a variety of actors. In networks there exist, in other words, **reciprocal interdependencies** between the actors involved, so that the classical definitions of power and rule provided by Max Weber, which are in essence based on the notion of clearly identifiable "power centers," and which still serve the social sciences as terms of reference, are, all in all, hardly applicable to networks. The enforcement of power is difficult in a network system characterized by structures of mutual dependence; whereas the exercise of sovereignty via command and automatic obedience is conceivable in hierarchical decision-making structures, it is a hopeless undertaking in networks. However, there are imbalances in networks. The action options of the actors may be more or less large. Some actors have more (albeit far from absolute) power than others.

---

2 Honneth (1994, p. 12) uses this term to thematize the action orientations and moral orientations of actors that constitute the foundation of the reproduction of complex, modern societies.

One way out of this unclear situation, or at least some points of orientation, are to be found in Crozier and Friedberg. They point out that "power [is] a reciprocal, though imbalanced, relationship (Crozier/Friedberg 1979, p. 40). They describe power as a exchange relationship based on reciprocity, but one in which the conditions of exchange favor one (or more) of the actors involved: "It is an interrelation of forces from which the one can derive more than the other, but in which, at the same time, the one is never fully at the mercy of the other."<sup>3</sup> The basis of power is the **disposal over resources**. It is possible to distinguish (aside from repression and violence) four significant sources of power, i.e. power

- that is based on the mastery of specific expert knowledge,
- that stems from control over information and communication resources,
- that can be derived from the presence of universal organizational rules or value patterns, and
- that rests on the disposal over financial resources that can be used to influence the first- and the second-named factors.

If power resources in networks are distributed within a field of forces of this kind, and there is, then, also a "*power of the weak*" (Crozier/Friedberg 1979, p. 42), how are these interrelations of forces and asymmetries determined in a specific field of forces? Crozier and Friedberg speak of the "*degree of relevance of resources*" (Crozier/Friedberg 1979, p. 46), without defining more precisely the term relevance. It is, instead, reasonable to distinguish between **strategically significant** and **strategically less insignificant resources**. Strategically significant are resources that cannot simply be substituted; strategically less significant are resources that can be substituted.

### **3.3.7 The tense relationship between conflict and cooperation**

If networks are to be stabilized, they must develop a "culture of cooperation," consensus, and coherence. "Cooperation is a key concept of network theories. It serves to integrate networks, and it counteracts the virulent forces of disintegration, fragmentation, and the "*culture of separation*" (Dubiel 1992, p. 134) active in modern societies and contributes to strengthening common interests in networks.

This view is derived from the correct assessment that functioning network structures are unable to build on purely competitive, or indeed hostile, relationships between the actors involved.

---

3 Crozier/Friedberg (1979), p. 41. Giddens (1992), in his "Constitution of Society," pp. 313ff., argues along similar lines: See also Kiebling (1988), pp. 156ff.

But this discourse often turns into a one-sidedly harmonistic and thus naive interpretation of the way modern societies function. In fact, the social sciences are conducting, in parallel to the cooperation-focused discussions, a debate aiming in just about the opposite direction. In his search for institutions and action orientations that might contribute toward the integration of modern societies, Dubiel comes up with a "*culture of conflict*." While conflicts are generally regarded as destructive, and attempts are made to contain them with the aid of a sense of solidarity, Dubiel argues that ties and cohesion in modern societies are practically generated by social conflicts.<sup>4</sup>

The debate centers on the thesis that, in modern, democratic societies, conflict is an essential socialization factor and an eminently significant mechanism for creating coherence and integration. Conflicts produce the "social capital" needed to master conflicts and hold societies together. In contrast to the Marxist discussion up to the 1970s, which interpreted conflicts as antagonistic crises that in the end break up capitalist societies, conflicts are now being discovered as the real pillars of society. The train of thought is supported by the argument that the vitality and innovativeness of pluralist free-enterprise societies consists in their ability to renew themselves with their own resources. Society generates a continuous current of conflicts that its members have to learn to confront and deal with. The result is that permanent social learning and search processes are stimulated. These arguments should be taken very seriously by network theorists leaning toward exaggeratedly cooperation- and harmony-related orientations. In both overall societies and in networks, the elimination of any and all conflict potential undermines social, political, or economic innovativeness and responsiveness.

Hirschman rightly emphasizes that, as a result of the generally conflictual and charged structures of modern societies, the mode of problem-solving that might be termed "muddling through" can prove extraordinarily successful.<sup>5</sup> This is true as well of network structures, which may even be particularly suitable to this end. Hirschman, however, also points out that the conflicts in societies should be seen less as "*cement*" than as solvents, or indeed as "*dynamite*," that dissolve or break up social relationships (Hirschman 1994, p. 294). That is to say, and this is the crucial point in the context of the issue under discussion, all the arguments against the one-sidedly cooperation- and harmony-oriented view of decision-making and problem-solving mechanisms also apply for an exaggerated glorification of the productive potential of conflicts. In highly differentiated societies in general and in networks in particular, there exists a tense relationship between conflict and cooperation and between individual liberty and creativity and group responsibility and security.

---

4 Dubiel (1991) and (1993). For an overview, see Rödel's collective publication (1990), especially the article by Gauchet, to which Dubiel refers.

5 Hirschman (1994), p. 301. Hirschman refers to Lindblom's classical essay "The Science of Muddling Through" (1959).

## Overview: The seven problem dimensions and pitfalls in networks

	Problem dimension	Potential pitfalls of networks
(1)	<b><i>Problem of numbers</i></b>	
	Number of actors involved in a network may be large	The greater the number of actors, the higher the risk of veto positions that may block a network.
(2)	<b><i>The time dimension of decisions</i></b>	
	<p>Networks are faced with the challenge of establishing long-term interests against short-term interests.</p> <p>Mechanisms:</p> <ul style="list-style-type: none"> <li>• conflict avoidance</li> <li>• cooperation</li> <li>• development of social cohesion</li> </ul>	<p>These mechanisms can contribute to conservative and structurally conservative tendencies, agreement on the "smallest common denominator," and collective conservatism</p>
(3)	<b><i>Institutional consolidation</i></b>	
	<p>The institutional consolidation of networks is a condition for their functioning.</p> <ul style="list-style-type: none"> <li>• stabilization of cooperative relationships by developing common identities</li> <li>• development of "weak ties" into "strong ties"</li> </ul>	<p>These mechanisms can trigger the following :</p> <ul style="list-style-type: none"> <li>• the retardative function of the logic of compromise in networks</li> <li>• cognitive, social, and political blockades</li> <li>• path-dependent action</li> <li>• "internal" consolidation, "hostile" or "indifferent" attitude vis-à-vis network environment: tendency to consciously externalize costs and produce unintended effects</li> </ul>
(4)	<b><i>Coordination problems</i></b>	
	<p>Networks have the possibility, important to many policy fields, of working out horizontal coordination between a large number of reciprocally dependent actors</p>	<p>The coordination problem is that the Kaldor optimum is difficult to achieve and a common actor understanding on the criteria for the distribution of "profit and loss" as concerns product-solution options is needed as a condition for preventing bargaining blockades ("endless disagreement")</p>
(5)	<b><i>Bargaining dilemmas</i></b>	
	<p>Development of trust-based relationships between network actors is the condition for the functioning of networks.</p>	<p>Dilemma: trust-based relationships between actors are the condition for successful coordination , but at the same time especially trustworthy actors may easily be cheated in the bargaining process, strategically oriented bargaining patterns (e.g. including manipulation of information) may prove successful over the short term, but they undermine trust-based relationships and prevent any approximation to the Kaldor optimum</p>
(6)	<b><i>Power</i></b>	
	<p>In networks the governance resources are distributed across a great number of actors. There are no clearly identifiable power centers.</p>	<p>In networks, too, there exist asymmetric relationships between actors who possess resources of varying strategic significance; networks are not a priori "democratic" and "hierarchy-free;" "power" in networks and between networks and their environment can lead actors "not to have to "learn." Then the "systemic intelligence" of networks is threatened with erosion</p>
(7)	<b><i>Tensions between conflict and cooperation</i></b>	
	<p>Cooperation in networks permits cumulative, goal-directed search and learning processes on the part of the actors involved.</p>	<p>The following applies for the relationship between conflict and cooperation:</p> <ul style="list-style-type: none"> <li>• in networks there are as a rule both cooperation and conflict;</li> <li>• exaggerated harmony orientation can hamper efforts aimed at innovation;</li> <li>• conflicts are a potential productive force;</li> <li>• cooperation and conflict can operate in networks as a bond and a solvent.</li> </ul>

The seven problem dimensions culminate in five core problems of network governance:

	<i>Core problems</i>	<i>Problem dimensions in which core problems emerge</i>
(1)	Decision-making blockade due to buildup of veto positions	<ul style="list-style-type: none"> <li>• Problem of numbers</li> <li>• Power in network relationships</li> </ul>
(2)	Structurally conservative action orientation; trend toward agreement on the "smallest common denominator;" functional and cognitive blockade; collective conservatism	<ul style="list-style-type: none"> <li>• Time dimension of decisions</li> <li>• Institutional consolidation of networks</li> <li>• Power in network relationships</li> <li>• Tense relationship between conflict and cooperation</li> </ul>
(3)	Networks always active in field of tension of disintegration (into "weak ties") and too dense relationships that reduce innovative power (see Point (2))	<ul style="list-style-type: none"> <li>• Time dimension of decisions</li> <li>• Institutional consolidation of Networks</li> <li>• Power in network relationships</li> <li>• Tense relationships between conflict and cooperation</li> </ul>
(4)	Risk of obstructed bargaining in deciding on alternative solutions; problem in defining distributive criteria	<ul style="list-style-type: none"> <li>• Coordination problem</li> </ul>
(5)	Twofold externalization problematic: <ul style="list-style-type: none"> <li>• intended externalization of costs at the expense of the network environment,</li> <li>• unintended effects due to exaggerated inward orientation of network actors</li> </ul>	<ul style="list-style-type: none"> <li>• Time dimension of decisions</li> <li>• Institutional consolidation of Networks</li> <li>• Power in network relationships</li> </ul>

#### 4 Network Governance: Operationalization for field research

The following part is divided into three sections: a set of hypotheses and questions regarding local governance, a set of hypotheses and questions regarding governance in the global value chain, and questions regarding international standards. In our view, each set of questions forms part of an open questionnaire which should guide qualitative research, i.e. open interviews with a limited number of key informants in each cluster.

In the first two sections, we are addressing three main issues:

- the social functional logic (fair exchange / just distribution of costs and benefits; reciprocity over time; restraint of one's own freedom of action; respect for the legitimate interests of other actors),
- the three decision styles (bargaining orientation, confrontational orientation, problem-solving orientation),
- the five core problems of network governance.

## **4.1 Network Governance at the Local Level, Impact of Foreign Buyers**

Network governance at the local level evolves over time. The social functional logic can erode or be strengthened, decision-styles change, and the capacity to deal with core problems changes accordingly.

### **4.1.1 Hypotheses**

- I. Upgrading in the past was based on collective efforts, based on a working social functioning logic. Successful clusters involve both functioning private and public-private network governance.
- II. Political culture (i.e. the predominant decision-making and conflict-resolution styles in the society as a whole) has a strong influence on the social functioning logic of local networks.
- III. The social functioning logic changes profoundly as the cluster becomes integrated into global value chains. In clusters which are hierarchically integrated into global value chains, the social functional logic of networks does not work / erodes.
- IV. Successful clusters have a problem-solving oriented decision-making style.
- V. In a situation of crisis, a confrontational style pursued by key actor(s) is crucial to overcome collective conservatism, but it is useful only in this specific situation. As soon as a certain number of actors shares a new orientation, as well as under “normal” circumstances (no crisis), it is counterproductive.
- VI. Collective conservatism is unlikely in clusters which are hierarchically integrated into global value chains as external pressure is high.

### **4.1.2 Questions regarding the social functioning logic**

1. If a problem arises and the cluster has to respond collectively, will it do so? Is it clear which actors will be involved? Would government actors be involved? Do external buyers play any role? Has the constellation of actors changed over time?
2. If the cluster responds to a challenge, are there implicit or explicit rules regarding the sharing of costs? Do you remember conflicts regarding cost-sharing? How were they resolved? In your view, were there clear winners and losers? Was there any kind of compensation for losers? If there were, over time, repeated responses to challenges, were the winners and losers always the same? Were there failed efforts of collective responses, which left firms with the necessity to act individually?
3. There is local competition among firms. But there is also competition between your cluster and other clusters elsewhere. Which kind of competition do you feel to be more important?

Would you rather collaborate with local firms to compete head-on against firms from another cluster, or with firms from another cluster to compete head-on against your local competitors? How would you compare your obligations to your foreign customers with your obligations to local companies and institutions? Is there a commonly shared vision regarding your cluster's future development, and the collective effort necessary to achieve constant increases of competitiveness?

#### **4.1.3 Questions regarding decisions styles**

4. If a collective response is necessary and various actors are involved in negotiations, are the rules of the game clear? Are certain actors dominating the decision-making / negotiation process? Are there different styles of negotiation in different fora, e.g. different business associations or comparing business associations and public-private negotiations? Could you compare the style of negotiation at the cluster level with the style of negotiation with foreign customers?

5. Looking back and comparing "normal", routine situations and crises, do you see differences regarding the style of negotiations, decision-making, and the behavior of the different actors involved?

#### **4.1.4 Questions regarding core-problems of networks**

##### **4.1.4.1 Decision-making blockade due to buildup of veto positions**

6. Looking back at collective decision-making / negotiations, were there actors who blocked decisions, leading to a failure of the negotiations or a clearly suboptimal agreement? Why were these actors so powerful? Also, was the number of actors involved a factor which caused blockades?

##### **4.1.4.2 Structurally conservative action orientation; trend toward agreement on the "smallest common denominator;" functional and cognitive blockade; collective conservatism**

7. In those situations where collective decision-making led to a decision / an agreement, would you rather describe it as a minimum consensus / smallest common denominator or a creative / innovative solution?

8. In your view, what is more important in a collective decision-making process in your cluster: A consensus, even if it entails a suboptimal solution, or a creative / innovative solution, even if some actors do not support it?

9. In collective decision-making processes, what were the most important sources of creative / innovative proposals – which local actors, and was there any role of external actors (e.g. consultants, higher-level government, external customers or other companies)? Would you describe any local actors as particularly innovative, provocative, and particularly open to change? Do you remember a situation where the tension arising from desire for consensus on the one hand and a confrontational style pursued by certain lead actors was particularly strong?

#### **4.1.4.3 Networks always active in field of tension of disintegration (into "weak ties") and too dense relationships that reduce innovative power**

10. Looking at the group which is involved in collective decision-making on cluster issues, would you rather describe it as a group based on trust and/or close personal relationship or as a loose network which often changes its participants and configuration? How would you compare the ties at the local level with the ties between local firms and foreign customers?

#### **4.1.4.4 Risk of obstructed bargaining in deciding on alternative solutions; problem in defining distributive criteria**

(see above, No. 2)

#### **4.1.4.5 Twofold externalization problematic**

11. If you look back at decisions which came out of collective decision-making on cluster issues, do you recall “solutions” which had a detrimental effect on other groups inside the cluster, or on neighboring cities / clusters?

12. Do you recall any situations where the outcome of the implementation of a “solution” was quite different from what everybody had expected, e.g. that new problems were created?

13. Given the fact that there is a tradition of successful collective decision-making in your cluster, how do you evaluate this in terms of integration into international markets (both for firms individually and for the cluster as a whole) – is it helpful or is there rather a tendency towards an exaggerated orientation towards local issues instead of a global perspective?

## **4.2 Who should be interviewed?**

- Main business leaders (representatives of main firms, some “average” business-people)
- Representatives of business associations (branch associations, chambers etc.)
- Representatives of meso-level institutions (vocational training, higher education, technology support, financial institutions, etc.)

- Local-level government representatives (mayor, secretary for planning / economic development, important politicians), possibly also higher-level government (e.g. state / provincial government)
- Other key informants, e.g. retired persons who played an important role in earlier collective efforts, journalists, researchers

– that is, altogether some 10 – 12 persons at the local level.

We strongly ask all field-teams to come up with responses to all questions raised above. Specifically, we ask you to prepare, apart from your analytical paper which summarizes your research findings, a separate file in which you respond to all of the questions, summarizing the responses you have got. To give an example, this might look like this:

*4. If a collective response is necessary and various actors are involved in negotiations, are the rules of the game clear? Are certain actors dominating the decision-making / negotiation process? Are there different styles of negotiation in different fora, e.g. different business associations or comparing business associations and public-private negotiations? Could you compare the style of negotiation at the cluster level with the style of negotiation with foreign customers?*

*Respondents from the private sector pointed out that large firms play a dominating role, both inside business associations and the local community, including local politics. Relations inside business associations tend to be somewhat antagonistic between large firms and SME. However, as the relationship between the large firms is market by strong rivalry, it happens sometimes that one of them forms an informal alliance with SME. In any case, negotiations tend to be complicated and time-consuming, and even more so if local politicians come into the play. There are, however, two persons (the former director of the local university and a retired owner of a medium-sized firm) who have repeatedly played an moderating and mediating role, thus bringing negotiations to an agreement. Public-sector respondents pointed at the historically strong rivalry between the two leading parties at the local level, which is impeding a problem-solving orientation when public politics become important. Several business-people remarked that negotiations at the local level often are more complicated than negotiations with foreign customers.*

Receiving specific responses to all the questions from all teams will allow us, in the last phase of the project, when it comes to elaborating the overall results, to compare the different clusters in terms of governance structures. We hope that in this way we receive information which comes out of the interviews but which might not make it into the analytical paper on each cluster.

A further instrument which will help us in comparing the clusters is the following table. We ask each field team to fill out one table per cluster:

Features of networks								
Feature	Form						Pertinent questions	
		1	2	3	4	5		
<i>Governance type</i>	Public						Private	1
<i>Territory</i>	Global						Local	1
<i>Size</i>	Large						Small	1, 6
<i>Configuration</i>	Horizontal						Vertical	1
<i>Power distribution</i>	Even						Uneven	2, 4, 6, 9
<i>Stability</i>	Stable						Unstable	1, 5, 10
<i>Exit option</i>	Strong						Weak	1, 3, 10
<i>Ties</i>	Strong						Weak	1, 3, 10
<i>Responsiveness</i>	High						Low	7, 8, 9
<i>Boundaries</i>	Open						Exclusive	1
<i>Orientation</i>	Problem-solving						Minimum consensus	3, 6, 7, 8

### 4.3 Governance in Global Value Chains

#### 4.3.1 Hypotheses

VII. Global value chains emerge as hierarchies, but evolve in the process of upgrading over time towards network governance. Successful global value chains are based on a working social functional logic.

VIII. Successful value chains have a problem-solving oriented decision-making style.

IX. The social functioning logic of the chain changes profoundly as it integrates different types of cluster.

The following set of questions is largely identical to those in the section before.

#### 4.3.2 Questions regarding the social functioning logic

14. How would you define this value chain: Is it a market-based arrangement, or is it a clear hierarchy with a lead firm defining the rules of the game, or is it rather a network where other firms, apart from the lead-firm, also actively participate in decision-making processes?

15. If a problem arises and the chain has to respond collectively, will it do so? Is it clear which actors will be involved? Has the constellation of actors changed over time?

16. If the chain responds to a challenge, are there implicit or explicit rules regarding the sharing of costs? Do you remember conflicts regarding cost-sharing? How were they resolved? In your view, were there clear winners and losers? Was there any kind of compensation for losers? If there were, over time, repeated responses to challenges, were the winners and losers always the same? Were there failed efforts of collective responses, which left firms with the necessity to act individually?

17. There is a certain element of competition within the chain. But there is also competition between your chain and other chains. Which kind of competition do you feel to be more important? Is there a commonly shared vision regarding your chain's future development, and the collective effort necessary to achieve constant increases of competitiveness?

#### **4.3.3 Questions regarding decisions styles**

18. If a collective response of the chain is necessary and various actors are involved in negotiations, are the rules of the game clear? Are there different styles of negotiation in different parts of the chain?

19. Looking back and comparing "normal", routine situations and crises, do you see differences regarding the style of negotiations, decision-making, and the behavior of the different actors involved?

#### **4.3.4 Questions regarding core-problems of networks**

##### **4.3.4.1 Decision-making blockade due to buildup of veto positions**

20. Looking back at collective decision-making / negotiations, were there actors who blocked decisions, leading to a failure of the negotiations or a clearly suboptimal agreement? Why were these actors so powerful? Also, was the number of actors involved a factor which caused blockades?

##### **4.3.4.2 Structurally conservative action orientation; trend toward agreement on the "smallest common denominator;" functional and cognitive blockade; collective conservatism**

21. In those situations where collective decision-making led to a decision / an agreement, would you rather describe it as a minimum consensus / and particularly open to change? Do you remember a situation where the tension arising from desire for consensus on the one hand and a confrontational style pursued by certain actors was particularly strong?

#### **4.3.4.3 Networks always active in field of tension of disintegration (into "weak ties") and too dense relationships that reduce innovative power**

22. Looking at the group which is involved in collective decision-making on chain issues, would you rather describe it as a group based on trust and/or close personal relationship or as a loose network which often changes its participants and configuration?

#### **4.3.4.4 Risk of obstructed bargaining in deciding on alternative solutions; problem in defining distributive criteria**

(see above, No. 16)

#### **4.3.4.5 Twofold externalization problematic**

23. Do you recall any situations where the outcome of the implementation of a "solution" was quite different from what everybody had expected, e.g. that new problems were created?

24. Given the fact that there is a tradition of successful collective decision-making in your chain, how do you evaluate this in terms of integration into international markets (both for firms individually and for the chain as a whole)?

### **4.4 Impact of International Standard-Setting on Clusters and Value Chains**

#### **4.4.1 Questions**

25. Do local firms / institutions observe / participate in international standard setting, and if so, who and how? Do other firms in the value chain participate in international standard setting, and if so, who and how?

26. Which international standards are relevant for firms in the cluster / the chain? Has the introduction of international standards ever caused a shock / a major impact / crisis in the cluster / chain? Who, at the local / chain level, did what to respond to the necessity to comply with a given standard?

27. Do environmental and social standards have any relevance for your cluster / chain? Will they have one in the foreseeable future? How do you evaluate international standardization efforts in these areas?

### **Bibliography**

Aldrich, H.: Resource Dependence und Interorganizational Relations, Berlin 1975

Benson, J.K.: The Interorganizational Network or a Political Economy, in: Administrative Science Quarterly, 1975, H. 20

- Crozier, M. / E. Friedberg: Macht und Organisation, Königstein 1979
- Dubiel, H.: Konsens oder Konflikt, Frankfurt 1991
- Eßer, K. / W. Hillebrand / D. Messner / J. Meyer-Stamer: International Competitiveness in Latin America and East Asia, London 1993
- Etzioni, A.: A Comparative Analysis of Complex Organizations, New York 1961
- : Jenseits des Egoismus-Prinzips, Stuttgart 1994
- Giddens, A.: Die Konstitution der Gesellschaft, Frankfurt 1992
- Grabher, G.: Lob der Verschwendung, Berlin 1994
- Héritier, A. (Hrsg.): Policy-Analyse, Opladen 1993
- Hirschman, A.O.: Wieviel Gemeinsinn braucht die liberale Gesellschaft?, in: Leviathan, 1994, H. 2
- Kaldor, N.: Welfare Propositions of Economics and Inter-Personal Comparison of Utility, The Economic Journal, H. 49, 1939
- Kenis, P., V. Schneider: Policy Networks and Policy Analysis, in: B. Marin / R. Mayntz (Hrsg.), Policy Networks, Frankfurt 1991
- Kiessling, B.: Kritik der Giddenschen Sozialtheorie, Frankfurt 1988
- Kuran, T.: The Tenacious Past: Theories of Personal and Collective Conservatism, in: Journal of Economic Behaviour and Organization, 1988, H. 10
- Mandell, M.P.: Intergovernmental Management in Interorganizational Networks, in: International Journal of Public Administration, 1988, H. 11
- March, J.G. / H.A. Simon: Organizations, New York 1958
- Marin, B. (Hrsg.): Generalized Political Exchange, Frankfurt 1990
- Mayntz, R.: Modernization and the Logic of Interorganizational Networks, Discussion Paper 91/8, Max-Planck-Institut für Gesellschaftsforschung, Köln 1991
- : Policy-Netzwerke und die Logik von Verhandlungssystemen, in: A. Héritier (Hrsg.), Policy-Analyse, Opladen 1993
- OECD: Technology and the Economy - The Key Relationship, Paris 1992
- Powell, W.W.: Neither Market nor Hierarchy: Network Forms of Organization, in: Research in Organizational Behavior, 1990 H. 12
- Scharpf, F.W.: Von Fug und Unfug institutioneller Erklärungen, in: Politische Vierteljahresschriften, H. 29, 1988, H. 2
- : Koordination durch Verhandlungssysteme: Analytische Konzepte und institutionelle Lösungen am Beispiel der Zusammenarbeit zwischen zwei Bundesländern, Max-Planck-Institut für Gesellschaftsforschung, Discussion Paper, Köln 1991
- : Wege aus der Sackgasse - Europa: Zentralisierung und Dezentralisierung, in: WZB-Mitteilungen, 1992, H. 56
- : Positive und negative Koordination in Verhandlungssystemen, in: A. Héritier (Hrsg.), Policy-Analyse, Opladen 1993
- Shubik, M.: Game Theory in the Social Science, Cambridge 1987