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Power in intercommunal knowledge networks: on the endogenous dynamics of network governance and knowledge creation

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Abstract
This paper presents empirical and theoretical findings about the endogenous dynamics of interorganisational knowledge networks. Based on a qualitative study of intercommunal knowledge networks in local employment policy a model of knowledge network life cycles is outlined, empirically illustrated, and theoretically explained. It is argued, that the interdependence of knowledge, power and trust plays a central role for the internal dynamics of networks. The paper also aims to show why network innovation and creativity is often closely linked to internal conflicts. The results have consequences for a dynamical concept of network governance.

Zusammenfassung
Im Mittelpunkt des Papiers stehen empirische und theoretische Befunde zu den endogenen Dynamiken interorganisatorischer Wissensnetzwerke. Die Analyse basiert auf einer qualitativen Studie interkommunaler Wissensnetzwerke der lokalen Beschäftigungspolitik. Dabei wird ein Lebenszyklusmodell interorganisatorischer Wissensnetzwerke skizziert, empirisch illustriert und theoretisch erklärt. In dieser dynamischen Perspektive zeigt sich, dass die Interaktion von Wissen, Macht und Vertrauen für die Entwicklung und Koordination von Wissensnetzwerken eine zentrale Rolle spielt. Zudem wird deutlich, warum Netzwerkinnovationen häufig in Verbindung mit Konfliktereignissen stehen. Die Ergebnisse leisten einen Beitrag zu einem dynamischen Konzept von Netzwerkgovernance.

1. Introduction

Network euphoria is cooling down. The literature describes a wide range of pathologies, side effects and defective developments (Hämäläinen/Schienstock 2001; Hirsch-Kreinsen 2002). Some authors even claim that networks are hardly more than a myth and a ceremony in the age of innovation (Meyer/Rowan 1977; Krücken/Meyer 2003). For a better understanding of these ups and downs of horizontal collaboration, network research is increasingly concentrating on interaction processes and evolutionary dynamics (Kickert 1994; Doreian/Stokman 1997; Jansen 2002; see Kooiman 2003 with a governance perspective). There has been a whole range of studies on exogenous conditions for network change stressing political, cultural, economic and ideological factors, external shocks, international problem pressures or institutional embeddedness (Marsh/Rhodes 1992; Sydow/Staber 2002; Hirsch-Kreinsen 2002). Based upon the observation that networks like most social systems are both open and close (Luhmann 1995; Marsh/Smith 2000), some of the attention has now shifted to endogenous sources of dynamics. There are two lines of argumentation: On the one hand, interorganizational learning and knowledge generation seem to foster the self-referential evolution of networks (Nishiguchi 2001). On the other hand, trust and power - the classical forms of network boundary maintenance - are emphasized as factors of network fluidity (Bachmann 2001). This paper presents empirical and theoretical findings about the evolution of interorganisational knowledge networks. Based on a qualitative study of intercommunal knowledge networks in local employment policy (Straßheim 2002; Oppen/Straßheim 2003)[1], a model of knowledge network life cycles is outlined, empirically illustrated, and theoretically explained. It is argued, that the interdependence of knowledge, power and trust plays a central role for the internal dynamics of networks. The paper also aims to show why network innovation and creativity is often closely linked to internal conflicts. The argumentation follows four steps: Firstly, the development of knowledge intensive collaboration between cities in local employment policy is briefly sketched and basic presuppositions for the understanding of knowledge networks are formulated. Secondly, an integrated model of network life cycles is elaborated and third, empirically exemplified by a case study based on a qualitative and quantitative analysis of network meeting minutes. Fourthly, network life cycles are theoretically explained by the mutual generation of knowledge, power, and trust and their underlying by-products: non-knowledge, countervailing powers, and distrust. The results have consequences for the further analysis of power as a part of public network governance.

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[1] The Hans Böckler Foundation financially supports the project "Learning in networks and communal problem solving capacity" at the Social Science Research Centre Berlin.

2. Knowledge networks defined

The recent restructuring of both the public labour administration and the social security system in Germany is a paradigmatic case for the establishment of knowledge networks. It has left the local actors with uncertainty and scepticism. Most cities can hardly cope with the resulting cluster of goal conflicts, legal rigidities and financial bottlenecks (Blien/Walwei/Werner 2002; Schmid 2003; Schönig 2003; Trube/Wohlfahrt 2003). Experts emphasize the risk-absorbing function of knowledge networks under such conditions.[2] Intercommunal comparison and benchmarking, the awareness of new ideas and concepts, the deepening of contacts, information about resources and funding by EC-initiatives like URBAN or URBACT – such are the reasons frequently given for a participation of cities in intercommunal networks. Since the mid-nineties a wave of intercommunal networking is observable. Cross-policy networks are coupling multiple areas like city development, vocational training, and environmental policy.[3] On the contrary, policy-specific networks exclusively concentrate on different aspects ranging from case management to controlling systems.[4] Most of these intercommunal networks are launched by single or multiple actors like cities, foundations, federal institutions and, increasingly, the EU, sometimes in collaboration with political, economic and industrial promoters.[5] As laboratories of "lesson drawing" (Rose 1991), intercommunal networks promise to accelerate the troublesome and risky process of individual trial and error by synchronising multiple experiences. By facilitating intercommunal comparison and knowledge creation, they correlate with the frequently observed tendency towards policy learning, open coordination and soft governance on the subnational, national and transnational level (Kern 2001; Port/Pochet 2002; Stone 1999; Straßheim 2003).

Despite such great expectations the form and definition of knowledge networks remains controversial (Kowol/Krohn 2000; Kämper/Schmidt 2001). For the purpose of this paper, some helpful hints can be found in theories of knowledge generation. Following a research group around Nonaka (Nonaka/Takeuchi 1995; Nonaka/Toyama/Byosière 2001), all processes of knowledge generation are driven by the interplay of two types of knowledge. While tacit or implicit knowledge is based on experiences, practices, core beliefs and frames and thus is hardly communicable, explicit knowledge consists of data, indicators, standards, instruments and rule systems. Tacit knowledge is context bound, while explicit knowledge is

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[2] During our research 25 semi-standardized interviews with experts on the network level and the local level were conducted.

[3] For example, Bertelsmann Foundation/Hans Böckler Foundation/KGSt: "Cities of Tomorrow"; Bund Lander Initiatives: 'Social City', 'Learning Region'.

[4] For example, Bertelsmann Foundation: 'BiK – Employment policy in cities'.

[5] For example, Bertelsmann Foundation: Initiative for Employment.

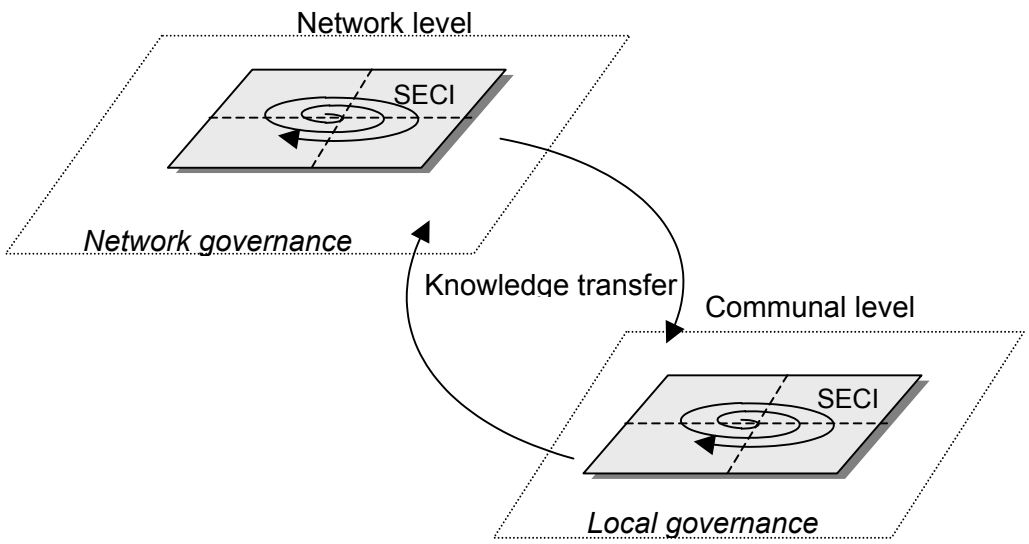
decontextualized, often quantified and easily transferable. According to Nonaka, the transition and translation between these two types forms the actual motor of knowledge creation. Thereby he distinguishes four different phases of knowledge creation: "socialization", "externalization", "combination" and "internalization" (Nonaka/Takeuchi 1995; Pawlowsky 2001):

- By sharing experiences particularly in organisational work, processes, routines, mental models, deep structures and cultures emerge that are very context specific and inaccessible for external actors (Nonaka: "socialization");
- The articulation of such experiences starts a creative process which has once been described by Richard Rorty as "imaginative redescription" (Rorty 2001). Such externalised knowledge is made explicit and thus transferable between different groups or organisations. It often leads to a reformulation and redescription of goals, problems and strategies (Nonaka: "externalization");
- The abstraction and combination of explicit knowledge is a prerequisite for the design of data sets, rules, norms, standards and complex controlling and evaluation systems. Benchmarking – currently very common in employment policy (Mosley/Schütz/Breyer 2001) – is an example of this explicit knowledge creating activity (Nonaka: "combination");
- The transformation of explicit knowledge into tacit organisational routines, its adaption, implementation and daily application completes the circle of knowledge creation (Nonaka: "internalization").

In fact these phases can occur separately, as parallel, overlapping and boundary spanning processes (Nonaka/Toyama/Byosière 2001; for a similar argument concerning the policy cycle see Sabatier 1993). An important consequence for knowledge networks is expressed in the following figure (Figure 1). It should make clear that the circulations between socialization, externalization, combination and internalization (SECI) do not terminate at one level. Processes of conversion and communication are crossing boundaries between groups or organisational units and sometimes boundaries between organisations, thus forming an interorganisational level of knowledge creation (Lane 2001; Nishiguchi 2001). Knowledge networks provide in this perspective an additional platform of common knowledge creation, a complement to the single knowledge creation processes on the communal level. They can therefore be defined as two-level arrangement of coupled SECI-processes, self-organising

but always mutually connected by knowledge-transfers[6]. At the network level, boundary spanners create new knowledge which can be used by the member organisations for knowledge creating processes of their own. Reversely, the 'grassroots knowledge' transferred from the local level secures the continuation of the network discourse.

Figure 1: The two levels of intercommunal knowledge networks



The symbiotic two-level arrangement which characterizes knowledge networks has been designated before as "coevolution of interorganizational relations" (Nishiguchi 2001).[7] This has certain consequences for further analysis: Methodologically, it means that the analysis of knowledge networks is always confronted with multiple relationships and has to take into consideration processes and general conditions on the network level as well as on the level of member organisations (Staber 2000). Empirically, it means that intercommunal knowledge networks (for other forms of regional cooperation see Oppen/Straßheim 2003) show a

[6] It should be noted that the term 'knowledge transfer' differs from concepts of 'diffusion' in so far as it refers to a communicative process by which each participating organization creates its own knowledge. Knowledge is actually not transmitted but - as Latour has put it - "translated" (Czarniawska/Joerges 1995).

[7] Very similar notions refer to "structural coupling" or "cooperative core competences" in networks (Duschek 2001; Kämper/Schmidt 2000; Kowol/Krohn 2001).

permanent if sometimes suppressed restlessness. The divergence induced by participating organizations ensures that knowledge networks seldom reach any kind of equilibrium – rather a phasewise stabilised, phasewise punctuated disequilibrium (Staber 2000: 76). A possibility to describe such non-linear dynamics is, as the next section aims to show, the concept of life cycles.

3. Life cycles – a dynamic perspective

Basically there are two approaches to life cycles (see Quinn/Cameron 1983 for an overview). In a functional dynamics perspective every phase of the network development is seen as a part (a function) of problem solving, learning, implementation or growth. This has been criticized by arguing that the perception of problems and solutions depends on continuing processes of knowledge and power generation (Foucault 1980). Alternatively, current research on group development (Chang/Borgia/Duck 2003), on network life cycles (Ring/van den Ven 1994; Child/Faulkner 1998; Lowndes/Skelcher 1998) and on rule dynamics (March/Schulz/Zhou 2000) has adopted an institutional dynamics perspective which can be summarized as follows: from initialisation to termination, networks show a typical evolutionary development which passes – depending on the actual pattern of horizontal and vertical interactions (Kickert/Klijn/Koppenjan 1997) - through different states, thereby inevitably being interrupted by turning-points and conflicts. Networks oscillate between structural and institutional integration on the one hand and variability and divergence on the other (Diller 2002). In most life cycle models, at least five phases can be distinguished, each of them being threatened by a specific crisis:

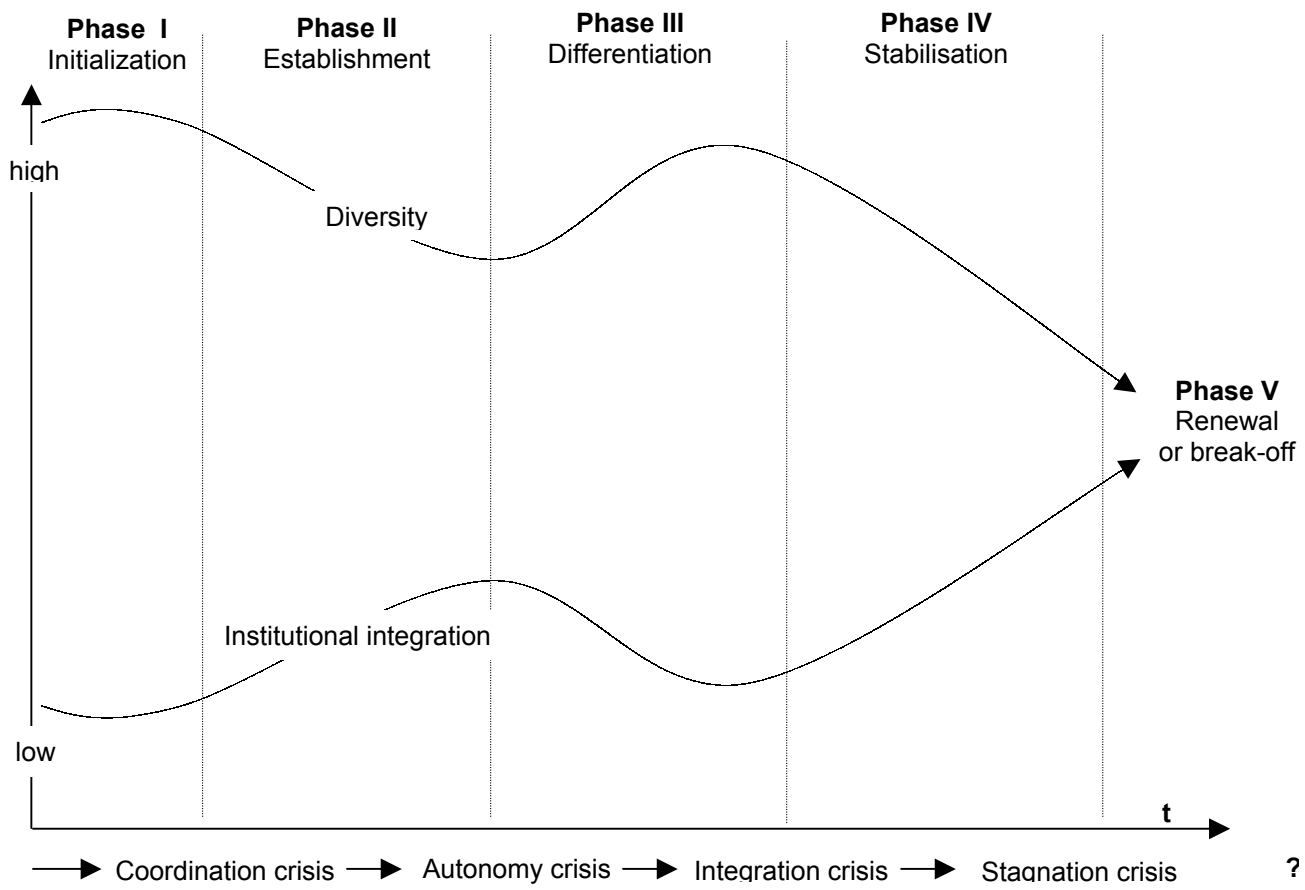
1. The **phase of initialisation (phase I)** – after participants have been identified - is characterized by a reciprocal exchange of information and discussion about common strategies and problem definitions. A central **coordination crisis** often develops when coordination structures and principles are discussed. Being informed differently, the actors have dissonant aims and interests. The kinds and urgency of problems are perceived diversely. Fluctuations and 'shot gun partnerships' are frequent.
2. In the **phase of establishment (phase II)** this problem may deepen. The more complex interactions and rule structures become, the more decisions are delegated to the network management. An **autonomy crisis** may emerge. With the specification of financial and legal forms and the establishment of management and service units, the fear of losing autonomy arises. Disengagement or competence rivalries weaken the basis of trust.
3. Consequently, competences are returned to the actors. Divisions of labour and decentralisation of responsibilities are elements of a **phase of differentiation (phase III)**. Plans need to be operationalised and implemented. Sometimes (Eisen 2001), this phase is referred to as the **phase of growth**: further actors are contacted and integrated, the spectrum of cooperation, topics and tasks is widened. In this phase innovation and variation of contents dominates. A result of this new complexity may be an **integration crisis**. Dispersed activities have to be harmonized and collaboration needs to be strengthened. With the number and divergence of actors, the coordination of knowledge, competences, and interests requires a great deal of energy. As symptoms of this crisis,

internal competition and bilateral agreements as well as a general free rider problem can be observed.

4. A **stabilisation (phase IV)** of cooperation at this point can only be achieved by common report, feedback and evaluation systems. Parallel to this, actors formulate their network experiences and produce mission statements, policy standards, handbooks, project reports etc. Such mechanisms of formalisation and bureaucratisation may lead to a **stagnation crisis**. Innovation deficits, loss of trust and disengagement are typical problems in this phase. Discussions take the shape of rituals, communication procedures are of a merely symbolic character.
5. In order to overcome these relatively frequent network problems, to regenerate the motivation base and to reach a **phase of renewal (phase V),** a qualitative change is often necessary, accompanied by an alteration of the actors' constellation, the reformulation of goals, or experiments with new forms of cooperation. If this process does not succeed, a massive rise of distrust, the sharpening of conflicts, a heavy struggle for resources and finally the exodus of participants all have to be expected. In such a case a terminal stagnation crisis mostly leads to the break-off.

Figure 2 summarizes this relationship between network development phases and dynamics of crisis. The two curves refer to the negative correlation between institutionalisation and divergence. Principally network governance varies between these two poles, transforming the restlessness of a two-level-arrangement into a quasi evolutionary process of variation, selection and retention (Weick 2001; Straßheim 2002).

Figure 2: A live cycle model of knowledge networks



New research on interaction processes and group development emphasises a complementary aspect (Chang/Bordia/Duck 2003). While the model presented above is based on an integrative and phase oriented view, a second and compatible variant focuses on turning points and sudden changes. Following the 'punctuated equilibrium approach' (Gersick 1991; Baumgartner/Jones 2002), interaction-processes often show a break or at least a decisive change of orientation. The establishment and differentiation of cooperation, topics and tasks is often followed by a second phase of operationalisation and implementation. This is especially true for project networks (Sydow/Staber 2002), which, in contrast to open-end projects, are strictly time-limited. Current research on regional cooperation in Germany (Diller 2002) confirms the life cycle model and also observes a qualitative "jump" after a period of innovation, which is followed by institutionalisation procedures, i.e. activities that aim to secure the common knowledge at this point and to implement it in a manner which is efficient by minimizing transaction costs:

"The analysed regional collaborations do not emerge because of their efficiency. They emerge because certain innovations cannot be created in other forms of governance. […] Only after a longer and trustful cooperation do transaction costs decrease and do synergies slowly lead to an efficient work. This transformation from a cooperative network to an institutionalized collaboration represents a decisive qualitative jump, including stronger commitments and new resources to increase the efficiency of cooperation." (Diller 2002, 233)[8]

[8] Author's translation, H.S.

4. Empirical findings

The following example of the German network "Cities of Tomorrow: Cities and local employment policy" may exemplify this combination of life cycles and punctuations.[9] "Cities of tomorrow" ("Kommunen der Zukunft"), founded in 1998 by the Bertelsmann Foundation, the Hans Böckler Foundation and the KGSt[10], ended in 2002. As one of the largest cross-policy knowledge networks in Germany, it covered a broad range of topics, reaching from communal competitive tendering to organisational learning. Our analysis focuses on a sub-network on local employment policy, which ran from 2000 to 2002 and consisted of 14 cities.

We analysed the meeting minutes of the network meetings by identifying and categorising those topics that structure the network interaction for more than one statement (for definition and relevance of topics in interaction systems see Luhmann 1984, 267; see Baumgartner/Jones for a similar approach on issue cycles). The content analysis is based on typologies used by Chang/Bordia/Duck 2003, complemented by expert interviews and participant observation.

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[9] See www.kommunen-der-zukunft.de. I should like to thank Matthias Schulze-Böing for providing me with the meeting minutes and Björn Böhning for a primary analysis of the material.

[10] The KGSt (Kommunale Gemeinschaftsstelle für Verwaltungsvereinfachung) is a German local government association.

Figure 3: Issue cycles in the German knowledge network "Cities and local employment policy"

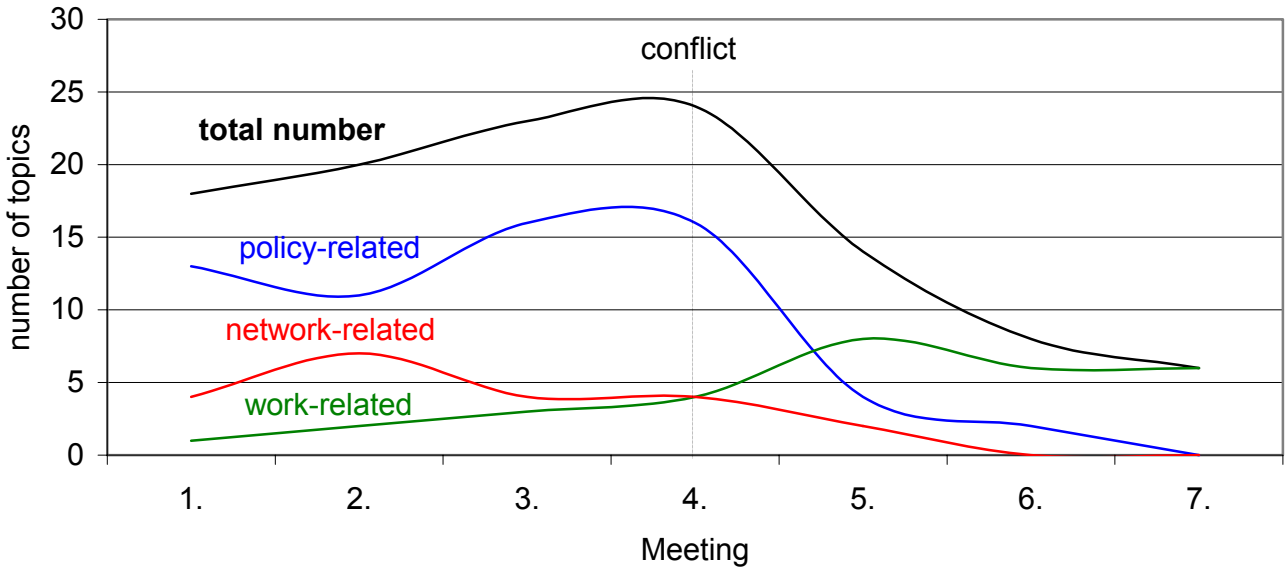

Figure 3 shows in the upper curve the total frequency of topics and then distinguishes between

- policy-related topics, in which a focus on contents (for example strategies of case management, controlling systems in local employment policy etc.) prevails,
- network-related topics, in which competences, resources, questions of membership, external relations etc. dominate and
- work-related topics, in which the division of labour, the project tasks, deadlines etc. are of a central relevance.

The frequency of topics rises until the fourth meeting and then rapidly declines. In particular, the frequency of policy-related topics as well as that of network-related topics decreases. Hence the work-related topics dominate the discussion until the seventh and last meeting. This change is introduced by a heavy conflict in the third and fourth meetings concerning the competences and duties of nearly all actors and the relevance of a number of issues not yet being discussed in the network. In so far, the development harmonizes with the 'punctuated-equilibrium-model'. It may lead to the assumption that such an "interruptive event" (Zellmer-Bruhn 2003) is in some way expectable, even productive. The complexity and differentiation of the network activities at this point threatens the continuation of the work and is therefore reduced and transformed into a processible task.

> "When people reach temporal milestones that are important to them, they change their views of their own situation, seeing a meaningful portion of their time as closed, and the next portion as imminent. Equilibrium periods are thus interrupted by strong, self-imposed signals." (Gersick 1991, 24)

Such "performance pressures" (Gersick 1991, 23) result of a growing divergence of issues and opinions, forcing the participants to concentrate on certain aims, products and work-related details when time is limited. Furthermore, the findings correspond with the propositions of the life cycle model: after a *phase of initialisation* at the first meeting characterized by a broad discussion of policy-related topics, the number and intensity of organisational questions related to competences and resources increases in the second meeting (*phase of establishment*). The third and fourth meetings with their growing stress on contents and their rising conflict (*phase of differentiation*) finally introduce the productive *stabilisation phase*, which mainly focuses on the completion of the agenda. A dynamic approach thus emphasizes the productivity of conflicts and helps identify the turning points between innovation and efficiency in project networks. These results also support an integrative approach to both models (Diller 2002), thereby confirming earlier observations in group development research:

> "…both the integrative model and the punctuated equilibrium model describe valid developmental patterns of project teams. Furthermore, the two models complement each other to better inform researchers and practitioners on the development of different aspects of group's functioning." (Chang/Bordia/Duck 2003, 116)

However, a conceptual deficit of both life cycle models and punctuated equilibrium models lies in the weak theoretical substantiation of the observed changes (see Blyth 2002). The question remains why and by which factors the network development changes and possibly turns into a conflict or crisis - and by which factors these turbulences are retranslated into relative stability again. The following section will show that the interdependence of some usual suspects of network theory plays a central role: power, knowledge and trust (Bachmann 1999).

5. Parasites of network communication

Although especially knowledge networks are defined by non-hierarchic, cooperative and horizontal relationships (Kickert/Klijn/Koppenjan 1997), power has to be seen as an integral part of network dynamics. Power and knowledge are matched in a certain manner. In contrast to Weber's classical definition[11], modern theorists regard power merely as a result of communication processes (Mumby 2001). A relational power definition emerges in outline, when Bachrach/Baratz (1962) respond the question "Who has power?" with their concept of a 'mobilization of bias' and by doing so draw the attention to the reciprocal (and not unilateral) character of power. In the most prominent view expressed by Foucault, power renews itself with every discursive act, emerging as 'agon' in a creative process of mutual interpretations and anticipations (Foucault 1980; Pottage 1998). In this respect, power even becomes a guarantee of creativity, directs communication, enforces certain claims and thus generates the capability to act. Similarly, in theories of micropolitics this duality between power and creativity is seen as a cyclical relationship (see Küpper/Felsch 2000, pp. 311; Mintzberg 1984).

> "The constitutive relationship of power and creativity is that of a duality: creativity presupposes power and in creative acts power relations are questioned."[12] (Küpper/Felsch 2000, pp. 282)

Micropolitical games, group and coalition building as well as particularistic power strategies of single actors destabilize institutionally crystallised power-structures. By externalising micropolitical aims and establishing them, a new power structure may emerge which may in turn be challenged by new countervailing procedures. Especially in the process of knowledge creation, power has the central function of providing orientation and reducing complexity. Tacit knowledge is often framed by dominating interpretations and leading images, for example the currently very strong "supply and demand" paradigm in local employment policy (Bertelsmann/BA 2002). In accordance with such hegemonic interpretations, knowledge may be converted into easily transferable standards like 'best practices' and 'benchmarks' and may be diffused among cities in a sometimes coercive manner (Stone 1999; Straßheim 2003).

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[11] "'Power' (Macht) is the probability that one actor in a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests" (Weber 1921, pp. 28). Author's translation, H.S.

[12] Author's translation, H.S.

A functional equivalent to power is trust (Luhmann 1968). Especially under circumstances of a high degree of uncertainty and contingency (in the sense of the possibility that others may always act differently), trust emerges not as a single act but as a product of interdependent relationships (Lewicki/McAllister/Bies 1998; Ellrich et al. 2001). Similarly to the creation of knowledge and power, reciprocal trust-building in networks has both an interpersonal dimension and an institutional dimension. The interpersonal dimension consists of particularised and affective relationships, strengthened by face-to-face interaction and based on mutual loyalty. The institutional dimension refers to calculated system trust in institutionalised performance and functionality, in approved and organised problem solving capacity - generalised trust also includes the trust in power (Oppen 2003; Rousseau et al. 1998). Over the lifetime of network relationships, these forms of trust mutually reinforce or change each other, depending on the network phase: [13]

> "Conceptualizing trust in only one form in a given relationship risks missing the rich diversity of trust in organizational settings. Recognizing that, in a given relationship, trust has a bandwidth […] introduces the idea that experiences over the life of a relationship may lead to pendulum swings." (Rousseau et al. 1998, 401)

These interdependencies between formal and informal, generalized and particularized, explicit and tacit dimensions seem to be, as Figure 4 shows, a common feature of knowledge, power and trust (for a very similar observation see Ring/Van de Ven 1994). This explains, especially under circumstances of coevolution in intercommunal knowledge networks, the above-mentioned oscillation between divergence and institutionalisation.

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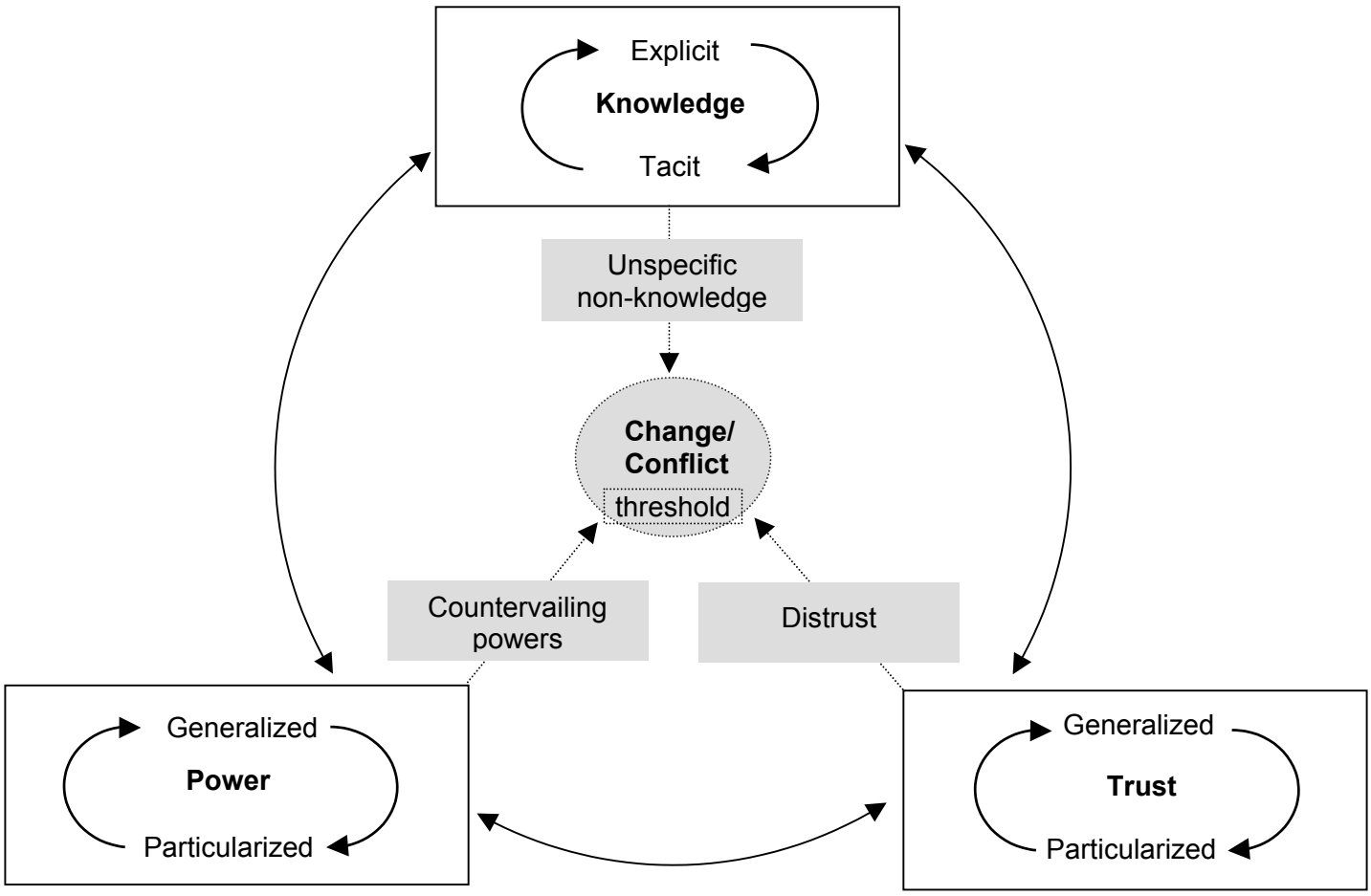
[13] Rousseau et. al. 1998 emphasise the role of a third form, calculative trust, which seems to be especially important in the initialisation phase of networks.

Figure 4: Knowledge, power and trust – dimensions of endogenous network dynamics



But still it remains unclear exactly why the conflict or crisis emerges when knowledge production is flourishing. The answer can be found in parasites of communication which inevitably emerge when order is established (Serres 1984). Every selection of specific topics, tasks and structures implies an exclusion of other possible topics, tasks and structures. Sense-making in itself always draws a distinction (Spencer-Brown 1979), thereby opening sources of noise, irritation and deviation. In terms of social evolution theory, such sources of mutation guarantee a "preadaptive advance" (Luhmann 1997, 661) by inducing capabilities of variance and creativity into an existing order.

> "The new order emerges by the parasite, who disturbs the message. He confuses the old row, sequence, message and he composes a new one." (Serres 1984, 283)

There are three parasitic elements of knowledge networks: unspecific non-knowledge, distrust and countervailing power. Processes of knowledge creation block out certain interpretations, thus limiting and reducing the scope of potentially relevant knowledge. In the

case of explicit knowledge, the problem of information overload is transformed into a problem of missing data, specifying non-knowledge through benchmarks, indicators and standards. This form of "bounded rationality" is confronted and increasingly questioned by a rising amount of "unspecific non-knowledge" (Japp 2000), i.e. means, motives, and side-effects in the context of member organisations. A second parasite is distrust. In most interpersonal relationships trust is accompanied by distrust (Luhmann 1968; Lewicki/McAllister/Bies 1998). The more complex and ambivalent the circumstances, the more probable is the disappointing behaviour on the side of others. Therefore, distrust is not the opposite of trust, but a functional equivalent of risk absorption – a cooperation ready for defection. However, distrust demands much more attention and thus much more effort than trust. For this reason, networks at a non-critical development stage are based on "cultivated distrust" (Ellrich et. al. 2001). Only in an advanced phase of controversial and unsatisfactory discussion, network relations exceed the 'critical mass' and pass the threshold[14] of pure distrust. If this happens, "undercover divergences" (Filion/Rudolph 1999) and latent "countervailing powers" (Luhmann 1975) on the level of member organizations become active on the network level. Hitherto latent contradictions between different interests and goals on the local level, between member organisations or between boundary spanners dominate the discussion. Consequently, the probability of a conflict rises. New research on group conflicts (Messmer 2003) shows that at this turning-point the dynamics are non-stoppable, forcing the actors to take a stand, to prove the "stability, flexibility and the boundaries of social relationships" and thus the remaining possibilities of conjoint action. Of course, such a conflict can mean the end of the network – or it can release the "domesticated creativity" (Küpper/Felsch 2000), thereby introducing a phase of renewal. However, this milestone-effect cannot be explained simply by problem-solving endeavours. In the empirical example outlined above the network conflict is followed by a "serial shift" (Baumgartner/Jones 2002, 15), focusing the attention of the network participants on standardization, benchmarking and controlling systems as central means of local employment policy. As the conflict develops this hitherto not uncontroversial concept is being massively promoted by some participants and an enforced external expertise. Therefore, the "punctuation" (Baumgartner/Jones 2002) of the network development should not be seen as neutral in terms of power. Rather, a "void" (Deacon 2000) emerges which can and mostly will be filled by a dominant discourse.

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[14] This 'threshold' or 'punctuation' is a very important element in most theories of social change (Luhmann 1969, Gersick 1991, Ring/Van de Ven 1994, Ellrich et. al. 2001).

6. Conclusion

Network governance has been defined as "the deliberate use of imbalance for the sake of the renewal" (Kickert 1993, 201-202). In accordance with such a dynamic notion of networks, this paper empirically and theoretically specifies the conditions for imbalance and renewal in knowledge networks. From the analysis of intercommunal knowledge networks in local employment policy the following conclusions can be drawn:

First, knowledge networks can be defined as two-level-arrangements of knowledge creation. They interconnect knowledge creation cycles on the level of member organizations and on the network level, thus establishing a relationship which is co-evolutionary in character (Nishiguchi 2001). While member organisations extend their knowledge creation capacity by participating in networks, the latter recursively use local knowledge to secure the continuation of their communicative processes. However, multiplicity and diversity of member organisations mostly cause a 'restlessness' on the network level, which can only be stabilized phasewise. This dynamic non-equilibrium may lead equally to observations of high stability, e.g. from an institutional perspective, and to opposed observations of high instability, e.g. in a population ecology approach (Staber 2000).

Second, such contradictions can be empirically explained by a life-cycle-model of networks. Generally, networks oscillate between structural and institutional integration on the one hand and variability and divergence on the other (Diller 2002). Networks thereby show a typical evolutionary development pattern, which is inevitably interrupted by certain turning-points and conflicts. A qualitative analysis of the German network "Cities of Tomorrow: Cities and local employment policy", focused on topic-careers in meeting minutes, confirms the life-cycle-model. It also shows that especially terminated networks and project-networks (Sydow/Staber 2002) are transformed by a growing "performance pressure" (Gersick 1991), which at the midpoint of the network period may rapidly focus the participants' orientation on work-related topics - thus leading to conflicts, but also to an increased efficiency of cooperation.

Third, in order to explain these dynamics of knowledge networks theoretically, an integrated model of interactions between knowledge, trust an power is presented. Both trust and power serve to reduce uncertainty and are in this respect functionally equivalent. In accordance with the creation mode of knowledge (Nonaka/Toyama/Byosière 2001), trust and power enable the transformation of micropolitical alliances and face-to-face relations into generalised network structures which in turn reshape these micro-movements. Generally speaking, the creation of knowledge, power and trust mediates the local and the network level, thus maintaining a dynamic and precarious stability. This stability is precarious in character because of communication "parasites" (Serres 1984) – distrust, countervailing powers, (unspecific) non-knowledge - that latently destabilize the relationship and may even reach a

'critical mass'. In this case the probability of a conflict rises, forcing the actors to search for new ways of collaboration, creating a "void" for the rearrangement of power relations. It can therefore be assumed, that these interruptions open up an "opportunity window" (Tyre/Orlikowski 1994) for external influences and external knowledge. This temporary openness may also be a critical point for the failure or the success of intercommunal knowledge networks.

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7. References

Bachmann, R. (1999). Die Koordination und Steuerung interorganisationaler Netzwerkbeziehungen über Vertrauen und Macht. in Sydow, J. & Windeler, A. (eds.), *Steuerung von Netzwerken - Konzepte und Praktiken*. Opladen: Westdeutscher Verlag, pp. 107-125.

Bachmann, R. (2001). Trust, Power and Control in Trans-Organizational Relations. *Organization Studies* 22 (2): 337-365.

Bachrach, P. & Baratz, M.S. (1962). Two faces of power. *American Political Science Review* 56: 947-952.

Baumgartner, F.R. & Jones, B.D. (2002). Positive and Negative Feedback in Politics in Baumgartner, F.R. & Jones, B.D. (eds.), *Policy Dynamics*. Chicago/London: University of Chicago Press, pp. 3-28.

Bertelsmann-Stiftung & Bundesanstalt für Arbeit (2002). *Handbuch Beratung und Integration. Fördern und Fordern - Eingliederungsstrategien in der Beschäftigungsförderung*. Gütersloh: Bertelsmann-Stiftung.

Castells, M. (1996). The Information Age: Economy, Society and Culture. The Rise of the Network Society. Malden (MA): Blackwell Publishers.

Chang, A., Borgia, P., et al. (2003). Punctuated Equilibrium and Linear Progression: Toward a New Unterstanding of Group Development. *Academy of Management Journal* 46 (1): 106-117.

Child, J. & Faulkner, D. (1998). *Strategies of Cooperation. Managing Alliances, Networks, and Joint Ventures*. Oxford: Oxford University Press.

Czarniawska, B. & Joerges, B. (1995). *Travels of Ideas - Organizational Change as Translation*. Berlin: Wissenschaftszentrum Berlin.

Deacon, A. (2000). Learning from the US? The influence of American ideas upon 'new labour' thinking on welfare reform. *Policy & Politics* 28 (1): 5-18.

Diller, C. (2002). *Zwischen Netzwerk und Institution. Eine Bilanz regionaler Kooperationen in Deutschland*. Opladen: Leske+Budrich.

Doreian, P. & Stockman, F.N., eds. (1997). *Evolution of Social Networks*. Amsterdam: Gordon and Breach.

Duschek, S. (2001). Kooperative Kernkompetenzen - Zum Management einzigartiger Netzwerkressourcen. in Ortmann, G. & Sydow, J. (eds.), *Strategie und Strukturation. Strategisches Management von Unternehmen, Netzwerken und Konzernen*. Wiesbaden: Gabler, pp. 173-190.

Eisen, S. (2001). *Der Netpreneur: Handlungs- und Gestaltungsempfehlungen für den Aufbau von Netzwerken*. St Gallen: Difo.

Ellrich, L., Funken, C., et al. (2001). Kultiviertes Mißtrauen - Bausteine zu einer Soziologie strategischer Netzwerke. *Soziologica Internationalis* 2001: 191-234.

Filion, N. & Rudolph, H. (1999). *Power, Control and Organizational Learning*. Berlin: Wissenschaftszentrum Berlin.

Foucault, M. (1980). *Power/Knowledge. Selected Interviews and Other Writings 1972-1977*. Brighton (Sussex): The Harvester Press.

Genosko, J. (1999). *Netzwerke in der Regionalpolitik*. Marburg: Schüren.

Gersick, C.J.G. (1991). Revolutionary Change Theories: A Multilevel Exploration of the Punctuated Equilibrium Paradigm. *Academy of Management Review* 16 (1): 10-36.

Greiner, L.E. (1972). Evolution and revolution as organizations grow. *Harvard Business Review* July/August (1972): 37-46.

Hämäläinen, T.J. & Schienstock, G. (2001). The Comparative Advantage of Networks in Economic Organisation: Efficiency and Innovation in Highly Specialised and Uncertain Environments. in OECD (ed.), *Innovative Networks. Co-operation in National Innovation Systems*. Paris: OECD, pp. 17-48.

Hellmer, F., Friese, C., et al. (1999). *Mythos Netzwerke. Regionale Innovationsprozesse zwischen Kontinuität und Wandel*. Berlin: Sigma.

Henckel, D., Eberling, M., et al. (1999). *Zukunft der Arbeit in der Stadt*. Stuttgart et al.: Kohlhammer.

Héritier, A. (2001). *The Provision of Common Goods across Multiple Arenas - Introduction to the Research Programme*.

Hirsch, J. (1995). *Der nationale Wettbewerbsstaat. Staat, Demokratie und Politik im globalen Kapitalismus*. Berlin: ID-Verlag.

Hirsch-Kreinsen, H. (2002). Unternehmensnetzwerke - revisited. *Zeitschrift für Soziologie* 31 (2): 106-124.

Jansen, D. (2002). Netzwerkansätze in der Organisationsforschung. in Allmendinger, J. & Hinz, T. (eds.), *Organisationssoziologie (Kölner Zeitschrift für Soziologie und Sozialpsychologie Sonderheft 42)*. Opladen: Westdeutscher Verlag, pp. 88-118.

Japp, K.P. (2000). Distuingishing Non-Knowledge. The Canadian Journal of Sociology 25 (2): 225-238.

Kämper, E. & Schmidt, J.F.K. (2000). Netzwerke als strukturelle Kopplung. Systemtheoretische Überlegungen zum Netzwerkbegriff. in Johannes Weyer et al. (ed.), *Soziale Netzwerke. Konzepte und Methoden der sozialwissenschaftlichen Netzwerkforschung*. München/Wien: Oldenbourg, pp. 211-235.

Kappelhoff, P. (2000). Der Netzwerkansatz als konzeptueller Rahmen für eine Theorie interorganisationaler Netzwerke. in Sydow, J. & Windeler, A. (eds.), *Steuerung von Netzwerken*. Opladen: Westdeutscher Verlag, pp. 25-57.

Kern, K. (2001). Transnationale Städtenetzwerke in Europa. in Schröter, E. (ed.), *Empirische Policy- und Verwaltungsforschung. Lokale, nationale und internationale Perspektiven*. Opladen: Leske + Budrich, pp. 95-116.

Kickert, W. (1994). Complexity, Governance and Dynamics: Conceptual Explorations of Public Network Management. in Kooiman, J. (ed.), *Modern Governance. New Government-Society Interactions*. London/Thousand Oaks/New Delhi: Sage, pp. 191-204.

Kickert, W.J.M., Klijn, E.-H., et al. (1997). Managing Networks in the Public Sector: Findings and Reflections. in Kickert, W.J.M., Klijn, E.-H. & Koppenjahn, J.F.M. (eds.), *Managing Complex Networks - Strategies for the Public Sector*. London/Thousand Oaks/New Delhi: Sage, pp. 166-191.

Kodré, P. & Roth, C., eds. (2003). *Lokale Beschäftigungsbündnisse - neue Problemlösungspotentaile auf regionaler und europäischer Ebene*. Berlin: Edition Sigma.

Kooiman, J. (2003). *Governing as Governance*. London/Thousand Oaks/New Delhi: Sage.

Kowol, U. & Krohn, W. (2000). Innovation und Vernetzung. Die Konzeption der Innovationsnetzwerke. in Johannes Weyer et al. (ed.), *Soziale Netzwerke. Konzepte und Methoden der sozialwissenschaftlichen Netzwerkforschung*. München/Wien: Oldenbourg, pp. 135-160.

Krücken, G. & Meier, F. (2003). 'Wir sind alle überzeugte Netzwerktäter'. Netzwerke als Formalstruktur und Mythos der Innovationsgesellschaft. *Soziale Welt* 54: 71-92.

Küpper, W. & Felsch, A. (2000). *Organisation, Macht, Mikropolitik. Mikropolitik und die Konstitution organisationaler Handlungssysteme*. Opladen: Westdeutscher Verlag.

Lane, C. (2001). Organizational Learning in Supplier Networks. in Dierkes, M., Antal, A.B., Child, J. & Nonaka, I. (eds.), *Handbook of Organizational Learning and Knowledge*. Oxford: Oxford University Press, pp. 700-715.

Lewicki, R.J., McAllister, D., et al. (1998). Trust and Distrust: New Relationships and Realities. *Academy of Management Review* 23 (3): 438-458.

Lowndes, V. & Skelcher, C. (1998). The Dynamics of Multi-Organizational Partnerships: An Analysis of Changing Modes of Governance. *Public Administration* 76 (Summer 1998): 313-333.

Luhmann, N. (1968). *Vertrauen*. Stuttgart: Kohlhammer.

Luhmann, N. (1975). *Macht*. Stuttgart: Ferdinand Enke.

Luhmann, N. (1984). *Soziale Systeme*. Frankfurt a.M.: Suhrkamp.

Luhmann, N. (1995). *Social Systems*. Stanford (CA): Stanford University Press.

March, J.G., Schulz, M., et al. (2000). *The Dynamics of Rules: Change in Written Organizational Codes*. Stanford (CA): Stanford University Press.

Marsh, D. & Rhodes, R.A.W. (1992). *Policy Networks in British Government*. Oxford: Clarendon Press.

Messmer, H. (2003). Konflikt und Konfliktepisode. Prozesse, Strukturen und Funktionen einer sozialen Form. *Zeitschrift für Soziologie* 32 (2): 98-122.

Meyer, J.W. & Rowan, B. (1983). Institutional Organizations: Formal Structure as Myth and Ceremony. in Powell, W.W. & DiMaggio, P.J. (eds.), *The New Institutionalism in Organizational Analysis*. Chicago: University Press of Chicago, pp. 41-62.

Mintzberg, H. (1984). Power and Organization Life Cycles. *Academy of Management Review* 9 (2): 207-224.

Mosley, H., Schütz, H., et al. (2001). Management by Objectives in European Public Employment Services. Berlin: Social Science Research Centre Berlin.

Mumby, D.K. (2001). Power and Politics. in Jablin, F.M. & Putnam, L.L. (eds.), *The New Handbook of Organizational Communication*. Thousand Oaks/London/New Delhi: Sage, pp. 585-623.

Nishiguchi, T. (2001). Coevolution of Interorganizational Relations. in Nonaka, I. & Nishiguchi, T. (eds.), *Knowledge Emergence. Social, Technical, and Evolutionary Dimensions of Knowledge Creation*. Oxford: Oxford University Press, pp. 197-222.

Nonaka, I. & Takeuchi, H. (1995). *The Knowledge-Creating Company*. Oxford/New York: Oxford University Press.

Nonaka, I., Toyama, R., et al. (2001). A Theory of Organizational Knowledge Creation: Understanding the Dynamic Process of Creating Knowledge. in Dierkes, M., Antal, A.B., Child, J. & Nonaka, I. (eds.), *Handbook of Organizational Learning and Knowledge*. Oxford: Oxford University Press, pp. 491-517.

Oppen, M. (2003). Vertrauenskultur in der Wissensproduktion und ihre Folgen für die Chancen(un)gleichheit. in Matthies, H., Kuhlmann, E., Oppen, M. & Simon, D. (eds.), *Gleichstellung in der Forschung. Organisationspraktiken und politische Strategien*. Berlin: edition sigma, pp. 51-70.

Oppen, M. & Straßheim, H. (2003). Netzwerke der lokalen Beschäftigungspolitik. Strukturen, Lebenszyklen und Steuerungsprobleme. in Kissler, L. & Wiechman, E. (eds.), *Zukunft der Arbeit in den Städten. Kommunale Bündnisse für Arbeit*. Berlin: Nomos, pp. 131-153.

Porte, C.d.l. & Pochet, P. (2002). Building social Europe through the open method of co-ordination. Bruxelles: Lang.

Pottage, A. (1998). Power as an art of contingency. *Economie and Society* 27 (1): 1-27.

Powell, W.W. (1990). Neither Market nor Hierarchy: Network Forms of Organization. *Research in Organizational Behavior* 12: 295-263.

Quinn, R.E. & Cameron, K.S. (1983). Organizational Life Cycles and Shifting Criteria of Effectiveness: Some Preliminary Evidence. *Management Science* 29 (1): 33-51.

Ring, P.S. & van den Ven, A. (1994). Developmental processes of cooperative interorganizational relationships. Academy of Management Journal 19 (1): 33-51.

Rorty, R. (2001). *The Decline of Redemptive Truth and the Rise of a Literary Culture*. Berlin (Ms.)

Rose, R. (1991). What is Lesson-Drawing. *Journal of Public Policy* 11 (1): 3-30.

Rousseau, D.M., Sitkin, S.B., et al. (1998). Not So Different After All: A Cross Discipline View of Trust. *Academy of Management Review* 23 (3): 343-404.

Sabatier, P.A. (1993). Advocacy-Koalitionen, Policy-Wandel und Policy Lernen: Eine Alternative zur Phasenheuristik. in Héritier, A. (ed.), *Policy-Analyse. Kritik und Neubewertung*. Opladen: Westdeutscher Verlag, pp. 116-148.

Schmid, G. (2003). Moderne Dienstleistungen am Arbeitsmarkt: Strategie und Vorschläge der Hartz-Kommission. *Aus Politik und Zeitgeschichte* (6-7): 3-6.

Schönig, W. (2003). Zur Rolle der Kommunen in der Arbeitsmarktpolitik. Palliative Fürsorge, integrierte Aktivierung und die Zäsur des Hartz-Konzepts. *Zeitschrift für Sozialreform* 49 (2): 197-215.

Schulz, M. & Beck, N. (2003). Die Entwicklung organisatorischer Regeln im Zeitverlauf. *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 42 (Sonderheft): 119-149.

Serres, M. (1984). *Der Parasit*. Frankfurt a.M.: Suhrkamp.

Spencer-Brown, G. (1979). *Laws of Form*. New York: E. P. Dutton.

Staber, U. (2000). Steuerung von Unternehmensnetzwerken: Organisationstheoretische Perspektiven und soziale Mechanismen. in Sydow, J. & Windeler, A. (eds.), *Steuerung von Netzwerken*. Opladen: Westdeutscher Verlag, pp. 58-87.

Stone, D. (1999). Learning Lessons and Transferring Policy across Time, Space and Disciplines. *Politics* 19 (1): 51-59.

Straßheim, H. (2002). *Wissensgenerierung und Wissenstransfer in Netzwerken der lokalen Beschäftigungspolitik*. Berlin: Wissenschaftszentrum (Discussion Paper SP II 02-204).

Straßheim, H. (2003). Der Ruf der Sirenen - Zur Dynamik politischen Benchmarkings. Eine Analyse anhand der US-Sozialreformen. in Maier, M.L., Hurrelmann, A., Nullmeier, F., Pritzlaff, T. & Wiesner, A. (eds.), *Politik als Lernprozeß? Wissenszentrierte Ansätze in der Politikanalyse*. Opladen: Leske + Budrich, pp. 227-245.

Sydow, J. & Staber, U. (2002). The Institutional Embeddedness of Project Networks: The Case of Content Production in German Television. *Regional Studies* 36 (3): 215-227.

Trube, A. & Wohlfahrt, J. (2003). Prämissen und Folgen des Hartz-Konzepts. *WSI-Mitteilungen* 56 (2): 118-123.

Tyre, M.J. & Orlikowsky, W.J. (1994). Windows of opportunity: Temporal patterns of technological adaptation in organizations. *Organization Science* 5 (1): 98-118.

Zellmer-Bruhn, M.E. (2003). Interruptive Events and Team Knowledge Acquisition. *Management Science* 49 (4): 514-528.

Weber, M. (1921). *Wirtschaft und Gesellschaft. Grundriß der verstehenden Soziologie*. Tübingen: Mohr.

Weick, K.E. (2001). *Making sense of the organization*. Malden (MA): Blackwell Publishers Ltd.

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