

The Dynamic Influences of Institutions and Design-Principals on the Outcomes of a Local Agricultural-Environmental Decision-Making process

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Introduction

Since the agreement from Maastricht in 1993 about the ‘subsidiarian’ principle, exists an urgent need for new ideas about decentralized co-ordination mechanism. It is assumed that the legitimization and the efficiency of bottom-up approaches might better fit into local circumstances (environmentally and socially) as top-down procedures, because co-operation and learning processes among participants could lead to locally adapted solutions. The interest of the research presented here is to find those variables, which have a major impact on participatory decision-making in order to achieve mutual understanding and sustainable solutions.

Studies, which use the ‘Habermasian’ perspective (the communicative rationality (Habermas 1987a,b)) in order to analyze participation assume, that it is just a question of the right “tools” to build up mutual understanding among participants: With the right performance of reasonable argumentation and a good information-exchange participants would finally decide on the “best” outcomes. Contradicting to this perspective exist a merely economic view: Participation is seen as a bargaining procedure. Actors with different interests play a special kind of game, in which those with the best position will win – it is argued, that power-asymmetries (which are the results of existing institutions) among participants decide on the outcomes of participatory processes. The core difference between both views is the assumption they use – where as in the first perspective it is indirectly assumed that actors are able to change preferences, is this in the second perspective denied¹.

This work is based on a heuristic, which integrates both perceptions: On the one hand I ask in which way existing power-asymmetries might have an influence on the outcomes of a participatory process. On the other hand I investigate in the design-principals of participation and in which way they manipulated the participatory process and its results. The paper is based on the assumption, that participatory processes could be envisaged as value articulating institutions, in which participants are able to change preferences (see Vatn 2005) but not necessarily will do. This view on interaction postulates, that the design and the setting of the decision process have an important influence on the outcomes, but equally the subject and the institution connected to

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the subject might be influential as well. Social institution (like property right structures) can determine power-asymmetries and choices of participants, which might hinder or favor mutual understanding and co-operation in a participatory process. Therefore the analysis of the decision situation and its context becomes very important to understand the way humans in a participatory process behave and decide. The work is based on a qualitative empirical study on two participatory processes. A scientific project conducted in North-East Germany “round table talks” with local stakeholders in order to agree on local agri-environmental measures.

The paper starts with a description of the theories which were used to explain behavior of participants: First I introduce the “Distributional Theory of Institutional Change” by Jack Knight (1997), second interactive approaches to group sociology (e.g. Neidhardt 1999) are presented. This section ends with the description of the empirical framework and explains briefly the empirical methods. The next section presents the case studies and its context. I abstained from a very detailed description of the cases in this paper (see Arzt (forthcoming) for more details). Finally I connect the observation of the case studies to the theories described. The paper closes with suggestions for the organization of participatory processes.

Theories

The following section includes the description of two theories², which I have used in order to analyze participatory processes: “The Distributional Theory of Institutional Change” and “Interactionist Approaches to Group Sociology”. The theories use very different assumptions of human behavior and follow different logics. A positivist approach (in contrast to a normative one) was chosen, since it is yet not clear how humans behave in participatory processes and for what intentions.

Distributional Theory of Institutional Change

Power-asymmetries of actors represent the main determinants of institutional change in the “Distributional Theory of Institutional Change”. This theory is developed chiefly by Jack Knight (1992, 1997) (see also Theesfeld (2005) for a comprehensive aggregation of his work). Institutions are defined here as socially developed rules, which regulate interactions, in order to simplify life and to produce social value like gains from negotiation or cooperation. The stability of those institutions and the shared knowledge about this stability allows establishing patterns of behavior, which produce social welfare (Knight 1997: 28). Knight (1997: 30) argues that existing

¹ For a more detailed description of the different perspectives see Arzt (forthcoming).

² The dissertation also integrated collective-choice theory based on the „second generation of rational-choice theories” from Elenor Ostrom (see Ostrom).

institutions are the result of interest conflicts among relevant actors - and therefore will not exactly reflect the preference of one interest group alone. Hence, institutions are not best explained in terms of a Pareto-superior response to collective goals of benefits (like other neoclassical- institutional change theories suggest) but rather as a by-product of strategic conflicts over distributional gains (Knight 1992: 126).

Knight (1997) puts forward the importance of power in the bargaining process over institutional alternatives, especially in explaining a society's informal network of rules, norms, and conventions. He believes that asymmetries of power influences the evolution of social institutions and emphasis on strategic actions – this he holds true to be the trigger in the evolution of informal changes. Knight's approach is based on a rational-choice approach as it provides a basis for understanding social conflicts. He also assumes that actors build expectations about the behavior of others.

A simple game-theoretical model is used to describe the structure of the interactions from which social institutions emerge. It starts with a pure-coordination case, in which each player has a dominant strategy³. Different actors are characterized by different payoffs. If breakdown values are unequal, an asymmetric bargaining power is assumed. The strategic and powerful actor can bind the rational choice of the other actor by adhering to a strategy, which means a distributional disadvantage for the latter (Knight 1992: 127). This single interaction is repeated later on with other actors that have similar power distribution. Repetition creates stabilized expectations and common knowledge if actors are clearly identifiable and if features are characteristics for a large part of the society. Under these conditions, a self-enforcing informal institution can be established. The powerful actor in turn estimates the usefulness of formalizing the norm. When either the relative bargaining power (relation between the payoffs of defection) or the distributional consequences (payoffs of cooperation) changes, institutional change will emerge once again and institutions will be adapted to the currently prevailing power distribution.

Hence, a community's asymmetries of power influences the capacity of strategic actors to determine the content of institutional rules. The institutional development is determined by the parties' relative abilities to force others to reduce their amount of alternatives to react in a certain situation. The definition of power in Knight's understanding postulates that a powerful actor does not force a person to react against his own will, because cooperation is for both parties the preferred strategy, but power asymmetries among actors limit the maximal output for the less powerful actor (see Knight 1997: 46). This explains why institutional development becomes an

³ It becomes more complicated if the outcome is equally attractive. Each actor must find some way to form an expectation of what others will do. Knight further develops this model into a multi equilibrate model, which differs in the payoffs for various players (Knight 1992).

ongoing bargaining game among actors (Knight 1992: 42). The actors bargaining power is a function of their resource provision and their diverse endowments of bargaining relevant resources (Knight 1992: 42). Knight analyzes the resource asymmetries as a measure of asymmetries in power. He suggests that sources of power asymmetries can be limited to “differences in substantive resources of the actors” (Knight 1992: 143).

The term “power” in game theory stands for the fact that one actor is able to survive several rounds of the game without a cooperative solution. This could be due to his stock of assets or that he would bear relatively lower opportunity costs (Knight 1992: 132). An actor with realistic *exit options* and *time preferences* can survive several rounds in the bargaining game by having low costs of non-coordination. Risk behavior is also closely linked to resource availability – a higher provision with resources leads to a higher level of risk acceptance (Knight 1995: 109). Another key power resource is *credible commitment*. Because the crucial point is to convince a social actor to accept the commitment of another actor – with a binding commitment, an actor determines the choice of others (Knight 1992: 129).

Distributional consequence of the bargaining outcomes are enabled as well by *sanctioning powers* of actors, because they can push their preferred choice forward – the principal effect of sanctions is to reduce the value of noncompliant behavior. Knight mentions further the *organizability* of a group as a power resource – because with collectively organized actions it is easier to push forward. The same holds true with joint *mental models* and *cognitive schemata* that prevails in different groups of society. The norms and values of an actors as well as their mental models constrain their pool of possible alternatives and affect the valuing of costs and benefits for a rule change (Schlüter 2001: 95). For instance, the implementation of a rule that is not in line with the prevailing and recognized mental models of the concerned actors implies high transaction costs and reduces the distributional gains on the bargaining outcome for the actor trying to imply this rule (see Hagedorn 2000).

Information plays another key role as it is asymmetrical distributed among the actors: Information influences actors’ evaluations of individual alternatives, hiding institutional alternatives, or adding new alternatives is only possible in a situation of information asymmetries. The relative transaction costs of an alternative are interpreted as a power resource, because they change the distributional consequences of the bargaining outcome for an actor, as it affects the payoffs of cooperation. Transactions cost are linked to the other determinants mentioned above. Existents of networks in which actors collaborate and their positional power (which could arise from strategic position that, for example, offers an actor access to important information or controlling

power over assets) are further power resource mentioned by Knight (1997; 1992). The following table shows the power resource Knight puts forward, and the effects on the bargaining model.

Table 1: Power Resources of the “Distributional Theory of Institutional Change”

Power resources	Effects on the bargaining model
Exit costs	Relative bargaining power
Risk behavior	Relative bargaining power
Time preference	Relative bargaining power
Credible commitment	Relative bargaining power
Sanction power	Distributional consequences of the bargaining outcome
Organizability of a group	Distributional consequences of the bargaining outcome
Joint mental models	Distributional consequences of the bargaining outcome
Information/ knowledge	Distributional consequences of the bargaining outcome
Transaction costs	Distributional consequences of the bargaining outcome
Positional Power	Distributional consequences of the bargaining outcome
Networks	Distributional consequences of the bargaining outcome

Source: Theesfeld (2005: 78; adapted from Schlüter 2001: 114).

Following the perspective of this theory for the analysis of the participatory process means to assume, that actors have (1) fixed preferences and can build expectations about preference of others – (2) that bargaining is an expected “norm” among the actors⁴. The empirical work has to refine the power resources of actors and find out in which way they might influence others actors possible behavior. Decision-outcomes become more or less predictable, because Knight does not mention that design of decision processes has an influence on the outcomes. The problem to use his theory, however, lies within the measurement of those determinants - and to decide about their relative importance in the process. Information advantages of one group may be less important, because of good organizability of another group and its power to define mental models (see Schlüter 2000).

The following section presents a different view on interaction of actors– which does not puts the bargaining procedures in focus, but suggest that satisfaction with the group process, mutual understanding and trust building influences outcomes. This lies in contrast to the theory of Knight, in which satisfaction has no direct influence, or only if it would be strategically used to help one party to restrict the alternative choices over institutions of the other.

Approaches of Group Sociology in Participatory Processes:

⁴ Müller (2004) argues, that bargaining is dominant, if it is established as a “norm” among all participants – otherwise bargaining behaviours can be in conflict to argumentation behaviour of other parties and decision-procedures might have results, which are not in accordance to “rational choice” theories. Vatn (2005) argues that actors can be “I” or “We” motivated, according to different subjects and decision-procedures, and that this decides if people are in the bargaining or argumentation modus.

If people come together in a participatory process, group processes always emerge – scientists in the disciplines of “group sociology” are trying to find the typical mechanisms of groups - and which factors influence them. According to interactionist’s approaches (Schäfers 1999, Stangor 2004) *is a group more than the sum of its individuals*. What does that mean? Individuals in groups will bring their personal interest and motivation - but, and this is the most interesting point, the members also react according to the behavior of others – (independent of their own interests). In some constellations an individual may react more egoistic where as the same individual may in other group-constellations behave altruistic (Schäfers 1999; Trafimow 2000; Elias 1987; Terry et al. 2000). There is the tendency in most groups that individual members of the group develop similar attitudes, values or opinions. The process through which individual or group change thoughts, feelings, and behaviors of others is called *social influence* (Stangor 2004: 84). There is a pervasive tendency in groups for group members to adopt the prevailing group norms, which can occur both actively and passively. The resulting change in opinions and beliefs is known as *conformity*. It is through conformity, which it allows both groups and individuals to meet important goals. From the point of view of the individual, conforming to group norms allows one to feel that he or she has obtained valid information and avoids the possibility of rejection or ridicule (Stangor 2004: 108). Conformity can lead to long lasting opinion change or just outlast as long as the individual is in the group. The factors that increase the likelihood of conformity have been extensively studied. They include the number of people who are doing the influence or who are being influenced (minority or majority influence), the unanimity of the positions of the influencers, and the importance of the topic to the individual. However, the mechanisms of the influencing variables can be very diverse and no causal relationship can be exposed obviously (see Schäfers 1999, Stangor 2004). Interactionism in group sociology therefore means the assumption that social behaviors is determined in part by the individual and in part by the relationship between the individual and the group.

Groups are not static; they change over time in their constellation and in their communication structures. Group dynamics are studied in diverse ways: (1) group development over time and in different phases, (2) role development in groups and (3) the communication structures within groups. Most recognized in the context of participation is the development over time. Group development can be divided in diverse phases (Stangor 2003). Idealized four phases are differentiated: Forming, confronting, norming and finishing. During the formation- phase people are mostly friendly and try to find out about others interests, motivation etc. During conflict-phases members argue about their different views and values - this phase is very relevant, because information are exchanged and people have the chance to learn about the “true” nature of

members. If participants can overcome their conflicts without braking apart, then exists a good possibility that they find rules and norms in order to finish their targets.

Claessen (1999) found out that the communication structures and contents in groups with members representing different stakeholders (e.g. Farmers, ecologists, scientists) differ from groups with more homogenous members (e.g. club of environmentalists) because they avoid talking about basic principals and values, instead their language is more analytical and technical (Claessen 1999). Nevertheless, Claessen describes as well the social influence in representation-groups.

For my research of participatory processes I found the work of Neidhardt (1999) relevant. He studied groups in real life contexts and tried to bring different influential variables in a causal relationship – instead of identifying each variable separately. Following Neidhardt (1999), groups in which durable outcomes could be produced over long periods of time, show that members could balance well between *conformity pressure* and *individual bargaining of their interests*. That means that individuals in groups are not always able to bring their individual interests into discussion, instead they will sometimes agree on facts they do not conform with totally, because otherwise the group might end up in endless discussions over millions of details, which would be negative for all. Hence, conformity pressure is a necessary mechanism to generate group decisions. However, if conformity pressure leads to results that only follow the interests of few individuals - others may abandon the group, if they are able to do, or otherwise disturb co-operation. This mechanism could be interpreted as a result of power-asymmetries (like exit-possibilities or sanctioning power of one group) but the difference here is, that Neidhardt stresses that group-members not (only) calculate their strategic movements – instead they are also lead by *feelings* and try to achieve *satisfaction* from group membership.

In voluntary groups (like most participatory processes are) *trust* is therefore an important lubricant between members and it is important if the decisions outcome should be more than “lip services”. I mean with trust within groups (not to be confused with personal trust) the “feeling” of people that they somewhat can build expectations of the reactions of others (see Ostrom 1998, 2005). With trust I therefore do not mean, that they agree on same facts or have the same opinion or stop argumentation - but that participants find the members of the group loyal and respectful. The level of trust and conformity pressure can be influenced by design-principals to a certain degree. However, trust itself cannot be subscribed to a group by just following “blue print” design procedures. It is not clear to which degree trust building can be enforced from

outside or are influenced by design-principals⁵ - yet, that group-processes and its dynamics have an important influence cannot be denied (see Ostrom 2005, Stangor 2004). To describe group-processes I found it useful to look at the following variables: Conformity pressure, identification and satisfaction of participants with the group, norms and rules, phase of group development and the level of trust.

Design-Principals

If design-principals have an influence on group processes, it makes sense to investigate in which way they do it. What are design-principals⁶? I divided five levels, where principals can have an influence: Target setting and planning, information exchange, decision procedures, public relations, incentives and sanction setting. Each level can be designed, featured or influences in different ways: *Targets* for instance can be simple or complex, can be in accordance to the interests of members or that of political actors or organization committees. They can be full field within short or long-time horizons, within the scope of members or dependent on external funds or decisions. The attributes of *information exchange* are that of form (e.g. dialogs, lectures, small group discussions) of quality, quantity and comprehensibility. *Decision procedures* can be divided in those, which build on consensus or majority, they may integrate different values, they may have complex procedures or simply ask the members to lift their hands, if they agree or voice, if they do not.

The influences from design-principals on group processes are not simple, and empirical studies reveal that causal relations (if a is x, b is reacting y) are seldom (see e.g. Stangor 2005) – Group processes instead reminded me of ecological systems - here a little change of one variable can have enormous unpredictable reactions of other variables. However, some models exist for group productivity, which I found useful to bear in mind. The following figure (1) was adapted from Stangor (2004: 240) who build it on the works of Hackman and Morris (1975) and Fuller and Alldag (2001).

⁵ For example: On the one hand very formal group-processes can hinder trust building, because people are not able to formulate own wishes or express feelings. But on the other hand very lax decision procedures and very informal actions can also disturb trust building, because it may produce insecurity.

⁶ Many different definition of design-principal for participation exist. Here I sorted design-principals according to the level of influence. Design-principals can be methods, which a moderator for instance use (e.g. small group discussions, meta-plan technique) – or they can be a result of the discussion (e.g. sanctioning rules).

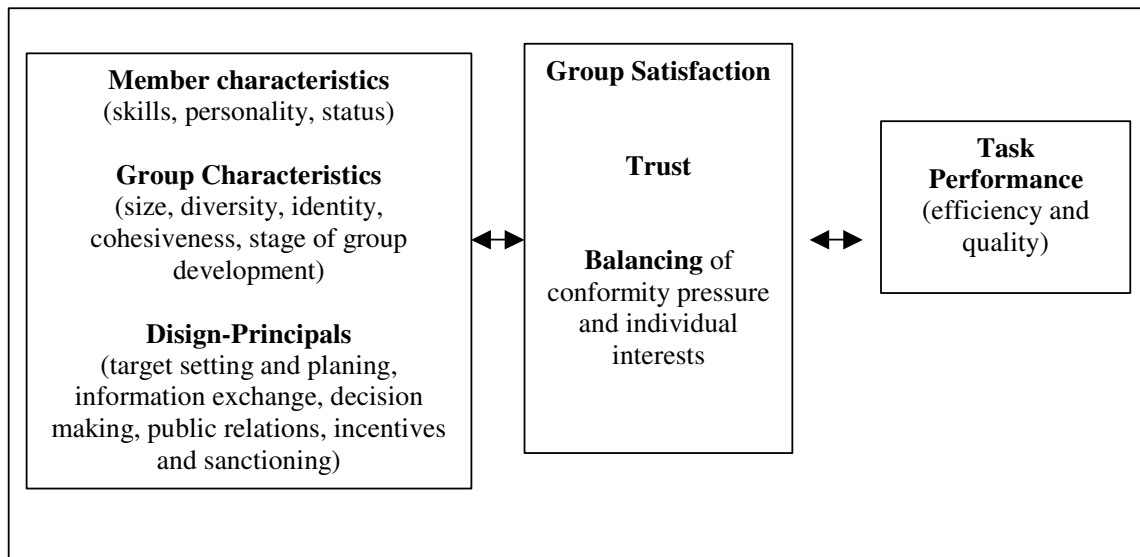


Figure 1: A model of group productivity
 Source: adapted from Stangor (2004: 240)

Framework and Empirical Methods

An analytical framework was elaborated, in order to structure the various variables mentioned in the theories. It was developed in order to organize the empirical data, but it is not an explanatory model. The frame is adapted from the Institutional Analysis and Development (IAD) Framework by Elenor Ostrom (2005). My framework (figure 2) divides the influencing variables on a participatory process in context and interior variables: The participatory decision-process is interpreted as an action arena; here participants and design-principals play an important part on the building of decision rules. The “round table talks” were newly established in the regions and rules of decision-making were evolving and not established or fixed. Therefore special attention was given towards the group-processes and its dynamics (e.g. trust building, group formation, group pressure etc., reputation, reciprocity). In order to study the dynamic within the action arena, I used interactionist’s approaches of group-sociology.

The context variables have been divided in *social cultural and historical* influences, the consequences of *property rights* structures (e.g. tenant and owner relationship, aspects of agri-environmental schemes, environmental law) and the influences of the properties of the *natural resource* at stake. To explain mechanisms of context variables, distributional theory of institutional change was used.

I chose qualitative empirical research methods in order to understand mechanisms of the participatory process. The research is based on in-depth interviews of all participants, who attended the participatory process with more than 80 %. In total I conducted 14 interviews,

which have been recorded and transcribed. 15 additional interviews (which have not been recorded) were used. The protocols of each meeting of the participatory group were analysed and observation protocols of 50 % of the meetings have been involved in the empirical study. Further I used secondary literature on various subjects (e.g. historical development). In order to sort the data, I used a software-tool: Atlas.ti. It allowed me to code quotes, write memos, and create network-links between various codes and variables.

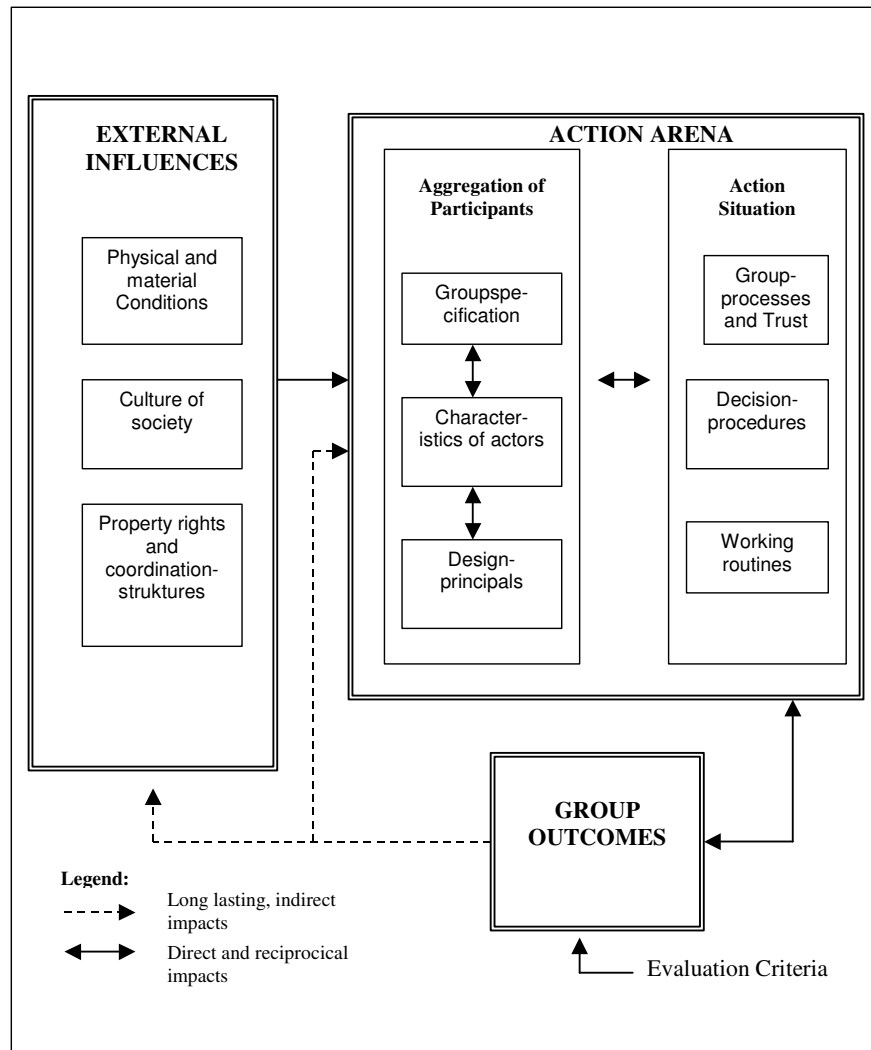


Figure 2: Framework to analyze participatory processes

The Case-Study

In two regions in North-East Germany (Brandenburg, see figure 3) “Round Table Talks” were initialised by an interdisciplinary team of scientists. The scientists came from diverse research institutions and were part of the GRANO-project, which was an interdisciplinary project, financed by the German Ministry of Education and Research (see Müller et al. 2003 for details). The general goal of the project “Round Tables” was to decide about voluntary programs, which would support sustainable agriculture in the regions best. The round table group met 14 times over a period of two years in the Region of Uckermark, and 7 times over a period of one year in the region of Schraden. The participants were representatives from clubs (e.g. the farmers’ union), officers from different institutions (agricultural and environmental ministries), private farmers and people interested in the subject (e.g. tourist industry), and scientists. On average 20 people attended each meeting.

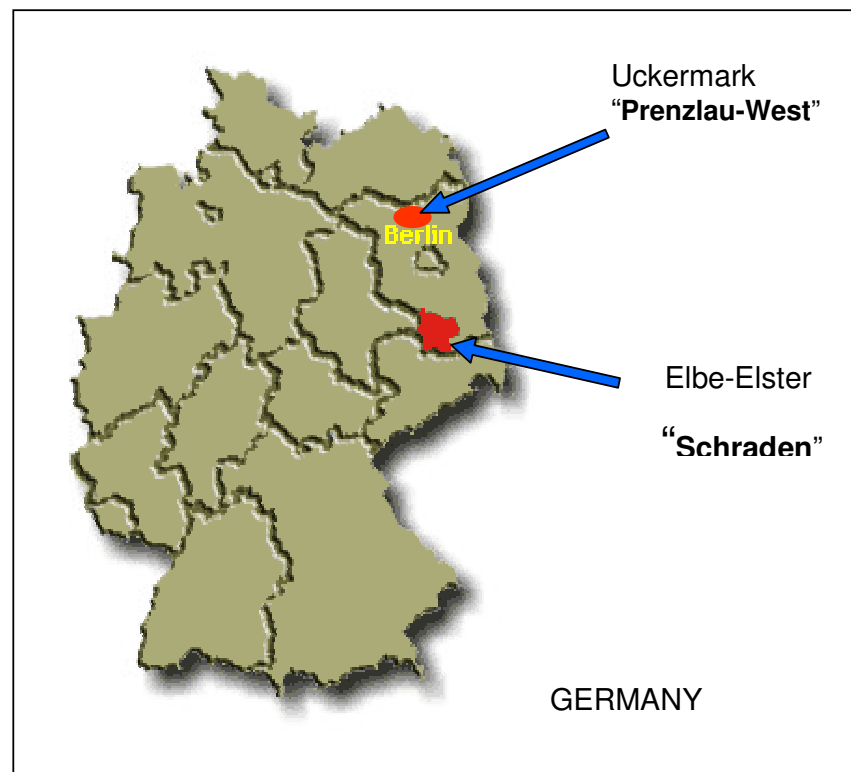


Figure 3: Location of the participatory process

A general working routine was established in the Uckermark, where they discussed three environmental subjects: (1) Sölle, which are typical little water bodies of the regions, (2) soil erosion and (3) structural elements of the landscape, especially the problem of missing hedges. In the second region Elbe-Elster the actors decided to deal with the water-household of the region.

In both regions the participatory process started with a brief presentation of its members - this was followed by scientific introductions, which dealt with the political advantages of regional developed sustainable agricultural measures and the environmental situation of the region. Afterwards the participants had to decide⁷ about the topics they wanted to deal with. Even though they decided about a certain sequence, it was observed during the next meetings that this sequence was not followed⁸. Each subject was introduced with one or several scientific lectures. In some meetings local farmers presented their experience with environmental measures. In depths discussion followed on various levels of the problems. The following table (2) shows – that a lot of comments from the participants dealt with political subject (e.g. the target of future political development, general problems with agri-environmental schemes). Comments on the natural environment (e.g. natural reasons to do a certain measure or natural reaction to a certain behaviour) were relatively small in number compared to political and economical comments.

Table 2: Comments (in %) sorted according to the topics discussed

Comments on:	Politics	Agricultural business administration	Natural Environment	General Society	Property Rights	Proceedings
Topics						
Sölle	38	17	13	9	3	19
Soil-Erosion	31	38	17	7	2	3
Hedges	36	10	10	20	22	0
Water-household	23	19	12	5	5	34

The protocols of the meetings show, that the organisation team, especially in the region of Uckermark, always tried to bring discussions back towards an operational level – they worked out a guideline about different measures- and wanted participants to discuss those intensively, in order to consolidate on a regional program. The protocols revealed that during the discussion about agri-environmental measures participants used very different arguments and criteria for each suggested measure. Accordingly, the decisions about the question if a suggested environmental measure should be part of a regional environmental program, were difficult to understand and relative spontaneous or irreproducible. Finally the scientists (in Schraden it was a local environmental expert) worked out a decision paper based on the discussions. They invited the participants to alter this suggested agri-environmental program if they disagree (which they

⁷ Point decision techniques were used: First all relevant subjects were written on a board. Each participant could then use five points, which he or she divides between the several subjects. The subjects with the most points were than chosen.

⁸ This had several reasons, for instance were the local stakeholders chiefly interested to discuss the hedge problem- however natural scientist, who conducted the meetings, needed more time to select data and other information- therefore they pushed the problem of soil erosion forward, which they identified to be the most important environmental problem of the region.

only did negligibly). At last the organisation team asked, if the participants would agree in consensus about the programs, (which they did, with only some abstention from voting). A great fluctuation in numbers and in backgrounds of participants could be observed during the processes in both regions. The following tables (3 and 4) show in which way the statements of the participants were distributed among the participants. In the region of Schraden it was more or less equally shared, but in Prenzlau-West farmers, officers and members of the organisation team dominated it.

Table 3: Number of statements sorted by actors-groups in the region Schraden (in %)

Stakeholder	Statements in %
Organization (scientists)	16
Farmers	14
Agricultural Office	10
Environmental Office	15
Local expert for environment	13
Forestry Office	2
Municipal Office	10
Association for Water household	13
Others	7

Table 4: Number of statements sorted by actors-groups and Discussion subject in the region Prenzlau-West (in %)

Stakeholder	Sölle	Soil Erosion	Hedges	total
Organisation	30	18	13	22
Farmers	25	33	24	30
Agricultural Office	6	20	12	14
Association for Landscape Maintenance	1	0	9	2
Tourism and Commerce	3	1	n.p.*	1,5
Environmental Office	13	18	15	16
Building authority Office	0,5	7	9	5
Office for reorder of land	2	0	n.p.*	0,7
External Expert	19	3	3	9

* not present

Results: Influences on the Participatory Processes

The participants in Uckermark could reach consensus about a program for “Sölle” (special landscape structure elements) and about soil erosion. In Schraden they agreed on a project draft that included different project to consolidate the water-household of the region. Yet, there was a majority of participants who said that they were frustrated about the process (“it was nothing more than sitting nicely together”, “it was just a scientific project”). The farmers in Uckermark argued that they agreed to the programs only because it would do no harm, but they have not been convinced to have done something useful, nor would they change their farming behavior on

behave of the discussions. Trust has not been enhanced during the process in both regions⁹. However, and this is the main difference between both case studies: In the region of Schraden different conflicts between environmentalists and farmers have been discussed more intensively. Compared to the region of Uckermark participants felt more satisfied about the meetings in general and were disappointed that they could not continue discussions¹⁰.

The influence of *external factors*: Both regions had more or less similar social context conditions. Existing mental models and ideologies of actors could be well explained by looking closely at the historical development of the regions. I found out that mental model, supporting a more conventional agricultural production, still dominates the local societies. This is because (1) most people did not have long experiences with the “green” idea - environmental protection became a subject only after the breakdown of the German Democratic Republic (GDR) in 1989 and was introduced mainly by actors coming from the “west”. This is one reason why there are only very few environmental clubs (NGOs) in the eastern parts of Germany. (2) Local people and farmers argued that agricultural production is much more sustainable now, compared to the production in former GDR- times and that technical innovation is very suitable to improve the environment. (3) They made bad experience with people from environmental clubs. (4) And above all, the regions are distressed about a very high unemployment rate. The huge agricultural farms (which farm on 200-300 ha) are the main employer in the regions and it is feared that extensive production could lead to a reduction of employment.

Farmers in the region were the opinion, that society would not support an environmental production financially, and that the political administration (federal and EU level) would tighten laws, but would not spend more money to finance agricultural environmental programs – therefore they did not believe that the agri-environmental programs they discussed would come into practice or would make any difference. Farmers were concerned about their own business future and looked for ways to sustain, without external financial support. Farmers and municipal officers followed this opinion. Environmentalists in the region on the other side were the opinion that only through tighter laws, farmers would change their production techniques, which they found not to be very sustainable.

The mentioning of laws (e.g. “farmers are obliged to do “y” because it is in the law x”) from the side of environmentalists always blocked in depth discussions with farmers during the meetings. Finally environmentalists did not use the forum to express their attitudes. During the interviews

⁹ Trust was measured on various levels: among members of the same group, between different stakeholders, towards the political administrators and towards the organization team.

¹⁰ It was planned that after the scientific project GRANO had finished, that a local project would take over- but due to personal and financial problems of the local project team this did not happen.

they explained, that the participatory process was not the right location to express their opinions, because farmers would not like to listen and only existing conflicts would freeze. Some environmentalist believed, that lobbying on a higher level (to influence law making) would have a better effect instead of arguing with farmers, who are only interested in their farms (and not in the landscape development). Both (farmers together with municipal officers and environmentalist) hold strong stereotypes towards each other. However farmers and environmentalist hold a positive opinion towards scientists – and both argued that they would be predestinated to decide on environmental targets for the region.

In the empirical work I looked closely at the properties of the environmental goods¹¹ at stake and connected those properties to the discussions of the participatory process. The main results of this analysis are: (1) If farmers coordination is desperately need (like in the case of water-household consolidation) to solve the environmental problem, the discussion has been more intensively and the motivation of all actors was higher. (2) If the environmental problem was very complex – information exchanges was difficult and participants decided on rules of thumb. (3) Some environmental problems needed intensive case studies on its specific location in order to formulate environmental and economic useful solutions. This was however very often neglected – instead very open solutions were discussed- with the consequence that environmentalists and farmers have not been convinced or felt to be to very superficial. (4) Some suggested solutions for environmental problems were very cost-intensive and would bind capital for a long time (e.g. hedges) – if this was the case - discussions on property rights became very important.

The influence of *interior factors*: The design-principals in both case studies were more or less similar (in their moderation techniques, decision- methods, information-exchanges procedures), but the participatory procedure in the Schraden region differed from that in the Uckermark, in the following facts: (1) Only one subject was discussed for what all participants were highly motivated to find solutions. (2) The organization-team avoided to build up expectations that financial support would come. (3) Officers from local ministries had been invited to the last meetings. (4) In the Schraden region a local expert for water management was hired to prepare the environmental project suggestions. (5) Technical details about water management have been discussed by locals but less environmental lectures were given. (6) Conflicts were allowed to emerge.

¹¹ The properties of the environmental resource are: Size, borders, rivalry, specificity of the location, insecurity, complexity, legitimate, and Information availability. The properties of the solutions suggested to solve the environmental problem are: Co-ordination necessity, influence on the production, knowledge, capital necessity, frequency, and predictability.

Influence of Power-asymmetries

Power-asymmetries between farmers and environmentalist existed. The following table (5) shows the main differences between the conflicting parties in the participatory processes. How did those power-asymmetries influenced the outcomes?

Well, the answer is not straight forward: Without going to much into details, it can be stated that the environmentalists had a lot of influence on the formulation of the formal outcomes (the agri-environmental programs) - but the formal results had little impact on the actual behavior of the farmers. Farmers did not take the programs serious. Therefore the distributional theory of Institutional Change could explain that farmers have been resistant to change institutions during the process. The agreement farmers made has no consequences and could be interpreted as a “good will” – which might have influence on a better bargaining position for coming negotiations with environmentalists.

Table 5: Power-asymmetries of conflicting parties in the case studies

Determinants	Farmers and actors supporting them	Environmentalists	Organizators (scientists)
Power of defining ideologies	++	-	+/-
Networks	++	-	n.k.*
Organizability	+	-	n.k.*
Credible commitment	-	-	++
Exit-Possibilities	++	++	-
Time preferences	++	++	-

* n.k. = not known

Another effect can be partly explained with the “Distributional Theory of Institutional Change”:
Before the project was initialized the organization team in the region of Uckermark interviewed some farmers. During the interviews farmers argued, that they had little expectation that a regional agri-environmental program (if they could develop one together) would be financed - they therefore wanted to talk about general landscape development, problems with wind parks etc. During the first meetings farmers repeated this opinion - but still the group continued to work on agri-environmental measures. Interviews, held after the project was finished, revealed that farmers were dissatisfied, because the measures they decided on, have not been financed - and that this was the main reason they came to the participatory process. What has happened? If we look with the perspective of distribution and assume stable preferences, one reason could be that the repeated promise of the organization team: the program would be financed by the local agricultural administration, was trusted. In this case the power of the organization-team to make credible commitments was very stronger (together with the opinion of farmers that a agricultural environmental program would do no harm). That interpretation would mean that the

organization team themselves were acting strategically with the intention to change farmers perceptions. Could that be? It is of course true that the organization team had a very strong interest that participants would come to a result, because otherwise the financial support for the project was insecure. The analysis of the organization team prevailed however, that the organization team was very heterogeneous, and very intensive debates among the scientists about the right procedures and the right target setting accompanied the process all time long. Some members of the organization team hold close contact to the local agricultural administration, and they have been convinced that the local agricultural administer would finance the programs – the organization team was very disappointed since they did not it. The strategic behavior of the organization team should therefore not be over interpreted. It makes therefore sense to look closer to the design-principals and their influence on group-dynamics – because the preferences and the perception of the farmers were also socially influenced. That the credibility of scientists could have had a major influence is nevertheless not to be denied.

Existing power-asymmetries can in addition only partly explain, why farmers wanted to continue discussions in the region of Schraden and why they found especially the confrontation with the environmentalist important and liked the forum for that.

Influence of Design-Principles and Group Dynamics

The investigation in the group process proved, that the view and the statements of farmers (and other stakeholders) had little impact on the design and target setting of the participatory process, that was especial relevant at the region of Uckermark: The environmental and economic data presented to the participants by scientists very often did not fit with the ability of the group to process data (to much, not well explained, to scientific etc.). The Uckermark group persisted in a formation phase, established a low profile of group norms (e.g. do nothing only when you are ask), the attractiveness of the group was lowered down during the project and the conformity pressure was high (“I only agreed, because I thought it is important for the scientists”, “ I agreed, to be left alone”).

In the Schraden group the satisfaction with the group process was higher, here the design of the process did take the interest of farmers more serious. This was especially true for the target setting. *All* participants had a great interest to solve the problems. Another difference between the case studies was, that in Schraden the conflicts between farmers and environmentalist were allowed to evoke to a certain degree. The group therefore could enter partly into a conflict phase, which would have allowed them to enter the next phase (norming), in which accepted rules could

have been established. Additionally, the social attractiveness¹² was raised in Schraden because officers of the local ministries supported the work during face-to-face contacts. I believe that especially conflicts, which were allowed to emerge during the process and the high motivation to the subject was responsible for better identification with the group performance. It would be interesting to find participatory process in the same social context but where members are *very* satisfied with the group-processes and to compare those with the case studies presented here.

However, the balance between conformity pressure and individual interests which Neidhardt (1999) found out to be most important for long lasting groups, was not very well performed in both regions.

Conclusion and Suggestions for Participatory Decision- Processes

Both theories explain the observed behavior in the participatory processes to a certain degree. Investigating in power-asymmetries are especially helpful to understand a general direction of institutional change in a specific social context – here I found it extremely important to understand and to find out who the conflicting parties are and the reasons for their conflicts together with the historical background they share. This knowledge helps to understand prejudices and ideologies of people. Additionally important it is to understand their networks and their organizability. Further I suggest to look closely which party is able to make credible commitments for most of the participants. In this paper I neglected to mention that not all stakeholders of the region were integrated in the process and that this had historical reasons. So power-asymmetries are very relevant for the relative bargaining power even before the participatory process starts.

I could show in my work that the properties of the environmental good at stake had an influence on communication and decision abilities. The influence is very often mistreated in a lot of analyses about participatory processes - with the consequence, that the level of discussion about the subject is very often not adequate (e.g. too complex, too side specific) or that information exchange is not in accordance to the possibility of groups to process data.

Nevertheless, I revealed that it is not enough to just understand power-asymmetries, as it misses the dynamics, which evolve through social influence. Several design-principals for group performance may enable conflicting parties to overcome power-asymmetries - but their influencing capacity is not straightforward. The main reason to use the term “dynamic

¹² This is the attractiveness of group-members to be part of the group. For a lot of individuals a group can be more attractive, if people with status are members or recognize the work of the group.

influences” in my title was to point out that variables would not have in all groups the same influence. For example: Groups which already exist over long periods of time and have build a good communication structure and which have a high reputation in the society can handle more complex targets as group which are just beginning to interact. Since long lasting groups already could build trust into the decision procedures and may also handle more information. Hence, design-principals are to be chosen into accordance to the group-dynamics and group characteristics and the context.

The last figure (4) in this paper presents an aggregation of all those variables, which I found to be important in my case study, but may vary in others. Yet, I like to emphasize with that figure – that it makes sense to divide the variables in accordance to their stability. Design-principals are the only ones, which can be changed (to a certain degree) directly from the group or its organization team. The change of performance can have an influence on group dynamics (e.g. norms, trust building, conformity) indirectly. Context variables, along with the characteristics of members, and the group-characteristics (e.g. participatory groups will always be diverse and big in number) should be seen as given – or only to be changed over a long time horizon. Design-principals have to take them into account in order to enable the group to develop rules for sustainability – to have the knowledge of power-asymmetries may be helpful to trigger sustainability.

I believe that running a participatory process is a demanding job – which needs skilled and competent personnel.

A lot of bad experiences which were made in past times with participation should not discourage to try new ways to look at participation - because if mutual understand and co-operation in the sense of sustainability can succeed, all may profit.

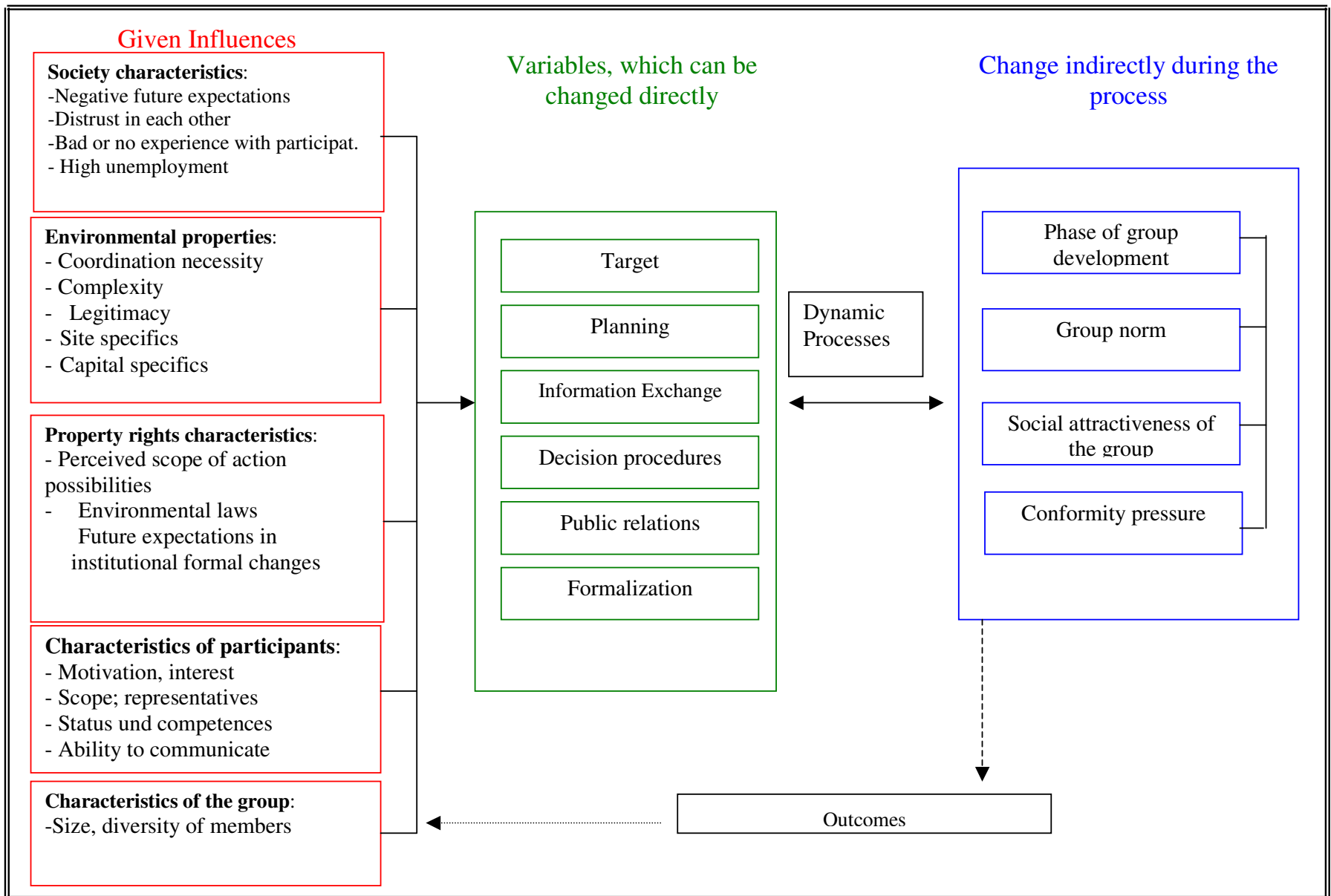


Figure 4: Influences on the Outcomes of Participatory Decision-Process

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