

*I*ntegrative *S*ystems and the *B*oundary *P*roblem

**Elaboration of convergence, convergence of boundary judgments and convergence mechanisms**

*Discussion paper, version April 12, 2007*

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April 2007

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## 1. Introduction

ISBP addresses questions like:

- How to make people cooperate when knowledge perception differs?
- How to stimulate convergence of stakeholders towards cohesion and compliance?
- How to set boundaries of social systems and problems without negatively affecting social cohesion?

Such questions are especially relevant in the empirical domain of conflicting demands on life support systems, both cultural and natural, where sustainable development issues are at stake. In my contribution to the research framework of January 2007 I presented a model of the ISBP project. This model is adapted here with some changes, specifications and additions (e.g. of convergence mechanisms and wider contexts). In this text I will elaborate on this model and the concepts of convergence and convergence mechanisms.

The main relationship between policy innovation and convergence of governance is specified by two intervening factors. The first, the *boundary judgments* on the relevant system and problem, is central to the project and is seen as the basis for the conceptual models with which actors interpret observations as belonging or not to the system or problem and thus relevant in that respect. Boundary judgments are normative of cognitive perceptions of actors on the *relevancy* of specific actors, factors, issues etceteras for a domain (what is 'fit', what is acceptable, what is needed?). Divergent boundary judgments hamper the inclusion of the (policy) innovation in all elements of governance, beginning with the cognitive (knowledge) aspects of them. Next, but in interaction with boundary judgments, the receptivity of actors – people, groups or organisations – influences the way in and the degree to which the innovation is reflected in governance becoming more integrative (Jeffrey & Seaton 2003/4). The receptivity is not only dependent on the degree of exposure to new knowledge, but also on the way the actor can associate and exploit new knowledge around existing knowledge, activities and objectives. This requires that the actor "lets the outside coming in", opening and regrouping understandings to include reckoning with the new knowledge. This can be seen as an unbounding and rebounding *process*, for which a further cultural context matters. The items mentioned in section 6 of my first ISBP report, under the title "Strategies for managing boundary judgments", can be seen as an elaboration of the ways an organisation can try to increase its receptivity.

In the figure below the thicker arrows indicate what relationships are most central to the study and will be elaborated upon in this paper. The paper will concentrate ultimately on the ways in which boundary judgments might be influenced by convergence mechanisms.

In the next section I will first elaborate on the concept of convergence in governance.

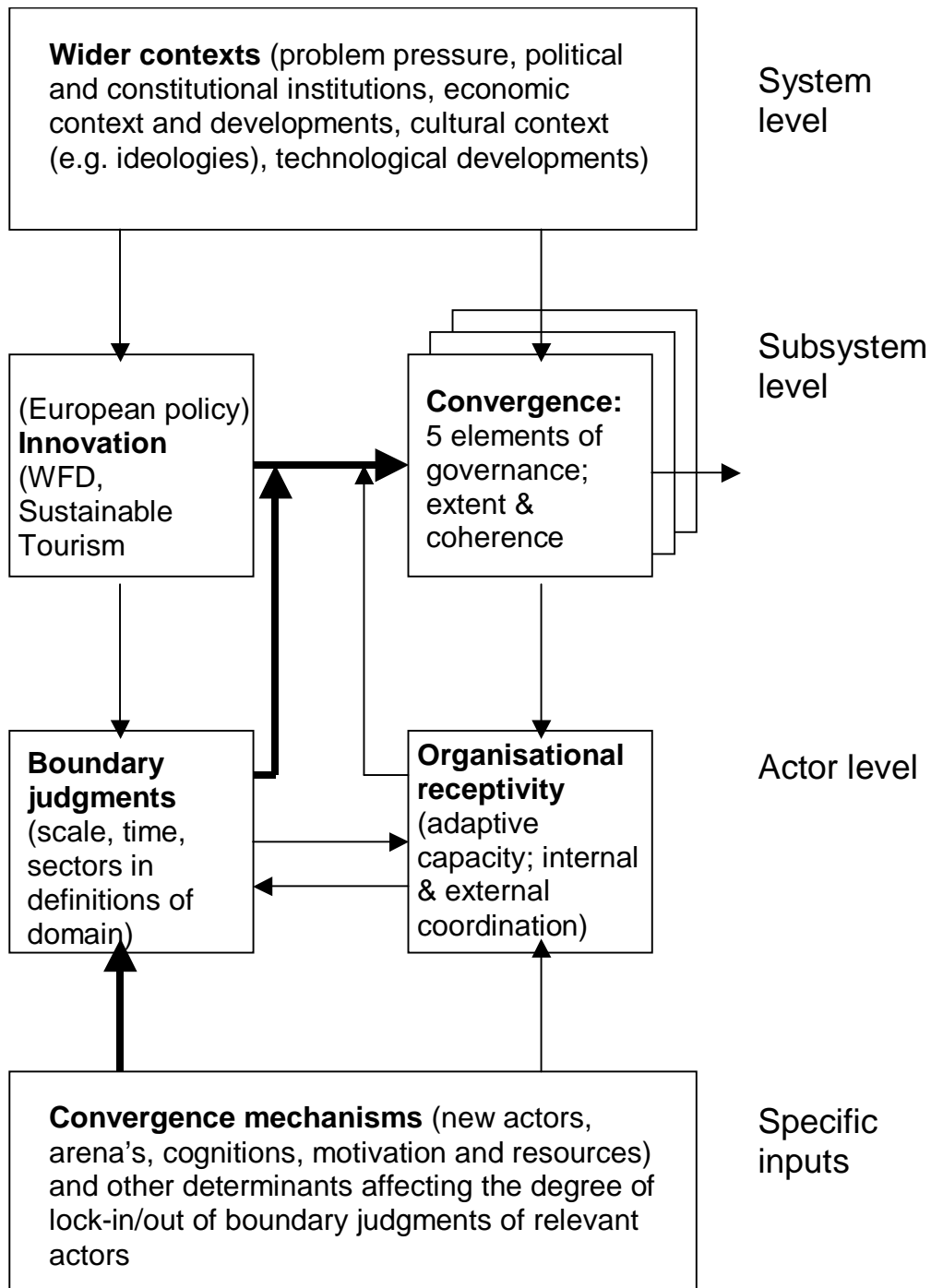


Figure 1, Basic model ISBP

## 2. Convergence in governance

Governance is a term that is used in many ways. Based on an assessment of literature Kuks and I formulated a governance model in five elements (Bressers and Kuks 2003, 2004 – see also section 3 of my first ISBP report). Essentially governance is viewed as an extension of the concept of policy and adds the multi-level and multi-actor aspects, the attention for the responsibilities and resources for implementation, and in general the standard multiplicity of all elements.

- (1) *Levels and scales of governance* - Where? – Multi-level
- (2) *Actors in the policy network*- Who? – Multi-actor
- (3) *Problem perception and policy objectives* - What and why? – Multi-faceted
- (4) *Strategy and instruments* - How? – Multi-instrument
- (5) *Responsibilities and resources for implementation* - With what? – Multi-resource-based

So public governance consists of five elements. These five elements provide answers to the five central questions of governance: Where? Who? What? How? and With what? Furthermore, a characteristic feature of modern 'governance' systems is that they have many aspects. They are multi-level, multi-actor, multi-faceted, multi-instrument and multi-resource-based. The assumed relationships between these five elements are based on the basic principle that the elements of public governance each form the context of the other elements and that they will tend to adjust to each other. So, in general, I expect the elements of public governance to exert a stabilising influence on each other. This stabilising influence occurs through processes of mutual adaptation of values, cognitions and resources. Thus, while changes in the elements of the governance pattern can be caused by changes in other elements, ultimately these changes often have external sources affecting one or more elements from the outside. Mutual adaptation mechanisms that, without external 'disturbances', have a stabilising influence then become the mechanisms by which substantial changes in one of the elements are followed by responding changes in other elements, resulting in complete regime changes. 'Changes from within' are not impossible though, since the variety within the elements of governance can be so great that new 'coincidental' linkages can cause new patterns to arise (cf. the debate in evolution theory).

### *Extent*

Governance becomes more complex when more layers and scales are involved, more actors are involved, more perceptions of the problem and accompanying goals are involved, more instruments are part of the policy mix and more organisations share responsibilities for implementation. This increasing domain, I will refer to as the *extent* of governance. Governance with an insufficient extent is by definition weak as guardians of sustainable use of natural resources, while some relevant parts of the domain go unregulated. Complexity as such is thus not wrong. Most of the time, growing complexity is an answer to real needs and developments. As a matter of fact, societies generally grew into more complexity during most of modern times. Many external change agents, such as technological developments, add new scales, new actors, new problem perceptions, new instruments, and new

responsibilities to the existing ones. Nevertheless, such extra complexity can easily lead to fragmentation.

An example of a misfit in the elements of public governance is when a new problem perspective is accepted, but no new targets are formulated for that newly recognised problem or it is not recognised that the new targets are contradictory to the existing ones. It would thereby create the risk that 'the left hand is undoing what the right hand is doing'. These are examples of a mismatch within an element. When the new objective is not followed by instruments to attain it, that is a mismatch between elements. In the ISBP project it is often precisely the challenge to meet sustainability that causes this kind of growth of the extent of the domain. For the 'policy innovation' to be fully used / complied with it is essential that the resulting tendency to fragmentation is met with convergence to new forms of coherent governance.

### *Convergence*

A central focus in the research is on convergence, what I would label as the *changes* of the governance regime towards more integration (extent and coherence<sup>1</sup>). Taken literally the word would mean a change towards coherence only. But it is not the idea of the project that the coherence is reached by falling back into the 'old' situation, before the policy innovation entered the scene. When the call for 'sustainable tourism' or 'integrated water management' is met with old actors and ideas closing ranks and excluding such new heresies from the debate, this might restore coherence, but is not the convergence we're after.

### *Coherence*

By *coherence of public governance* I mean the following. When more than one layer of government is dealing with the same natural resource (as is often the case), then coherence means inter alia that the activities of these layers of government are recognised as mutually dependent and influencing each others' effects. Likewise if more than one scale is relevant the interaction effects between those scales should be considered. When more than one actor (stakeholder) is involved in the policy, coherence means that there is a substantial degree of interaction in the policy network, and preferably productive interaction providing coordination capacity. When more than one use or user is causing the unsustainable problem, coherence means that the various resulting objectives are analysed in one framework so that deliberate choices can be made if and when goals are conflicting. And when the actors involved have problem perceptions that start from different angles, coherence means that they are capable of integrating these to such an extent that a common ground for productive deliberation on ambitions is created. The same holds for instrumental strategies that are used to attain the different objectives, as well as for the different instruments in a mix to attain one of these objectives. Coherence of the organisation of implementation means that responsibilities and resources of various persons or organisations that are to contribute to the application of the policy are co-ordinated, or these actors themselves are co-ordinated. Last but not least there is the

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<sup>1</sup> While the term 'integration' is common in most policy papers (e.g. 'integrated water management'), I prefer to use the term coherence instead, for the reason that, in most policy papers the term integration is used in a sense that implicitly or explicitly includes an increase in the domain of the regime. Therefore, we believe that integration as it is used in the policy sphere is a combination of what we call *extent and coherence*. For the sake of conceptual clarity I will use these terms further when appropriate, and reserve 'integration' for the combination of the two.

(mis)match between these elements of governance and the growth in coherence when such misfits are resolved.

So, by (full) *coherence of public governance* I mean:

- that levels are more mutually interacting and are aware of their mutual dependencies,
- that actors belong more to 'policy communities' rather than 'issue networks', implying more interaction and consensus orientation,
- that interrelatedness of different aspects of the problem and their dependencies are recognised and intensely debated and goals are set accordingly,
- that the policy mix contains instruments that are mutually reinforcing each others incentives,
- that the implementing organisations share their resources and co-operate intensively to complement each other.

#### *Paths of change*

Non-trivial changes (even if they involve changes towards 'consensual management' or the like) will often involve some kind of conflict, struggle or manipulation, with also losers involved. Though it is not impossible that changes in problem perceptions invoke a real consensus that everybody is better off with more integration, this certainly need not be the case. It is even likely in such a case that there has been some previous struggle about the problem perception itself. Even though these changes are heading towards integration, the change process itself will often involve overt or hidden conflicts. Such opposition can also lead to 'failed' or partial regime shifts towards more coherence, when changes in one element of the regime are encapsulated, rather than followed by matching changes in the other elements of the regime.

### **3. Policy innovations as disturbance**

In our project we aim at convergence of governance with inclusion rather than exclusion of the enlarged domain that is required by the policy innovation. This means that there should be room to accommodate new boundary judgments. While – as Nick Winder has pointed out – boundary judgments should not vary too much in time and at any given time to enable collective action, they also should not be so fixed that stability is attained at the price of premature lock-ins. When they are too fragmented the resulting uncertainty on the domain will cause incoherent action, or abstinence of any action, or conflicts over competences. The boundary judgments on space, time and scope of relevant sectors, have implications for the levels and scales, actors, problem perspectives, strategies and resources that are deemed relevant. E.g. the concept of sustainable tourism brings wider spatial scales into the pictures since both local and global aspects and all layers in between are to be considered; likewise not only the short term viability but also the long term impacts and survival of the industry counts; and tourism is not any longer a matter of accommodation and paid attractions, but also about protecting nature, landscape and cultural history as crucial resources and thinking about the sustainability of the travel infrastructure etceteras. These are not only new subjects, but also bring new actors (stakeholders) into the picture and even introduce new instruments, like labelling, into the scene.

In our Twente sub-project proposal we started from the assumption that these boundary judgments are part of a perspective on the domain, rooted in ‘discourses’ and that thus there would be typically an “old” discourse that was challenged by a new one, carried by the advocates of the policy innovation. In the sustainable tourism case study this assumption seems to be falsified, since the pattern of beliefs and wordings is much more complex, than as to belong to two identifiable discourses of two (coalitions of) actors.

Typically a policy innovation, like integrated water management or sustainable tourism implies such an enlarged domain. New scales and levels enter the scene, as do new actors. They may bring problem perceptions from different angles than the ones the “old” actors were used to take for granted, pointing to new ambitions and requiring new strategies and resources. So, from the perspective of coherent governance, the policy innovation is a kind of disturbance. To prevent this from causing fragmentation and the loss of social cohesion convergence mechanisms that smoothen the development of new coherence are important. When the policy innovation is only just starting to take hold, the action observed will be however not so much deal with restoring coherence after the domain is shocked by the intrusion of new boundary specifications and thus new scales, actors, perspectives, strategies and responsibilities, but will rather deal with the enlargement of the extent towards such inclusion. While these are dissimilar processes, we’ll probably need to discuss how to deal with them in our case studies.

#### **4. Convergence mechanisms for domain definitions**

The “boundary problem” that forms a challenge for “integrative systems” calls not only for scientific study but also for practical solutions. In cases of policy innovation often the boundaries of the domain at stake are enlarged or need to become more flexible and thus uncertain. Enabling this – while keeping enough cohesion to be able to create legitimate decisions and actions – might require:

- a good balance between pluralism and consensus-seeking (avoiding extremes);
- optimising the receptivity of the actors involved (enabling synergies).

In our study we will look at ways in which actors have tried to achieve these and thereby “manage” the boundary problem.

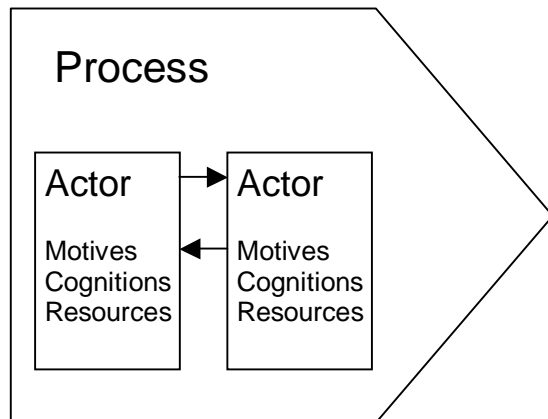
Convergence is a process. And being a process it is dependent on the actors involved, their characteristics and the arena’s where they interact, like shown in the following figures that are repeated from the first ISBP report. It is important to distinguish the following forms of convergence:

- (a) the convergence of boundary judgments among actors involved
- (b) the convergence of elements of governance (in figure 1 and section 2 identified as the form that is central in this project)
- (c) the convergence of actor’s behaviour towards the intention of the policy innovation (in the first report labelled ‘compliance’ – here not dealt with).

In order to achieve (b), convergence of (a) seems to be a precondition.

Of course it doesn’t need to be the case that “old” actors stick for a long time to the “old” boundary judgements and only reluctantly accept an enlargement of the extent of the domain. This relates to the “*receptivity*” of the actors involved. In section 6 of

my first ISBP report I listed a number of ways in which an organisation can increase its receptivity. Many of these have to do with the cognitions, motivation and capacity to enable a more open, yet persuasive interaction of the organisation with its environment. But there might be several reasons why not all organisations are willing and able to do so (Costejà 2003: 12-14). There will be a tendency that existing orientations reproduce themselves, that has to be overcome. Actors can for instance have a possessive, rather than a more pragmatic decision orientation. In a separate paper Valentina Dinica goes deeper into the motivation of actors / organisations to “open up”.



*Figure 2, Process model with the actor characteristics used in Contextual Interaction Theory*

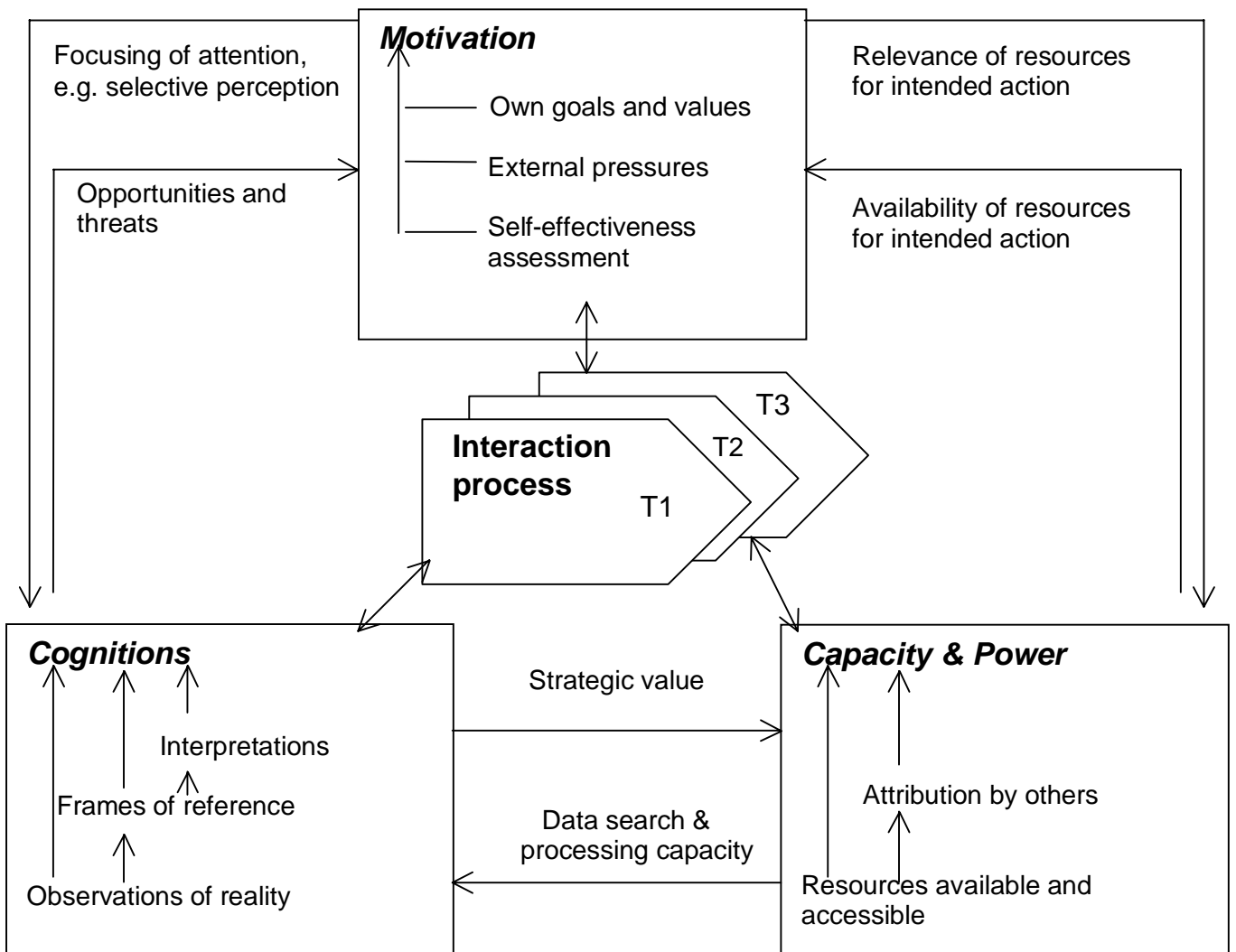


Figure 3, Dynamic interaction between the key actor-characteristics that drive social-interaction processes and in turn are reshaped by the process

Convergence of boundary judgments – labelled above as convergence (a) – is not a “the more the better” kind of criteria. While clarity and stability is often a prerequisite for action, redundancy and flexibility can be helpful under challenging or changing circumstances. This indicates a degree of acceptance of uncertainty and ambiguity (cf. Smith and Stirling 2006). The optimum can change over time. The optimum will likely move more towards convergence as time and maturity of the innovation develops, unless extreme volatile circumstances make redundancy and flexibility as important as ever for the robustness of the system.

Anyhow, when boundary judgments of the active actors are very divergent, attaining convergence in governance will be often difficult. The domain becomes unstable and diffuse and in that sense there is a “boundary problem”. Policy innovations tend to require such new boundary judgments and so introduce some “promising instability” (Deutsch 1966: 147) to the system. To build bridges between the divergent domain

perceptions that are the consequence of new and unevenly spread boundary judgments, direct inputs into the cognitions of the actors involved could serve, but are by no means the only possible mechanism. The “intervention points” (placed between “”, because there need not be a conscious intervention by one of the actors), could be the actors at the scene, the arena’s where actors meet and the cognitions, motivation and resources & power of the actors involved (cf. figure 2). Each “intervention” that enters at one of these five points could in principle cause others to follow suit (cf. figure 3). The best way to influence one of them could even be an indirect one through one of the others.

The items below are ideas on how convergence (a) – the convergence of boundary judgments – could be stimulated. They are presented as ‘new’ because they express possible additions to the status quo that could help developments towards convergence. Again, their labelling as interventions is not necessarily because someone intervenes, but because they are new developments – be it deliberate or spontaneous - that create dynamics in the system.

### *1. New actors*

First of all there can be new actors introduced that have no contents, but rather process oriented – in this case convergence oriented – goals. A strong pressure of “policy brokers” (Sabatier and Jenkins-Smith 1999) could increase the likelihood that actors in the process absorb new knowledge and that they are able to adapt boundary judgments to new circumstances. Policy brokers are actors (individuals or organisations, like intermediaries) that have process oriented goals rather than contents oriented goals, and for that reason are more concerned with for instance the speed and consensus of decision making than with the precise contents of the decision. Also some other actors can enter the scene leaving a considerable impact, for instance when a newspaper or radio or TV channel exposes the issue to a wider public or NGO’s take up the issue.

### *2. New arena’s*

While part of the challenge is to bridge between networks that were previously not seen as connected, some authors discern alternative “adaptive networks” to the usual “power networks”. Here – freed from short term gain oriented debate – innovative ideas could develop that can be brought back into the power networks once they proved sufficiently attractive for creating win-win opportunities or breaking stalemates (Nooteboom 2006). More generally there can be a variety of new meeting points that serve the purpose of convergence of boundary judgments, like occasional meetings, regular meetings, a platform, association, or communication means, like a professional journal and websites. These can be realized as individual or joint stakeholder initiatives. Also installing committees can serve to explore new venues, though sometimes they serve more as a “refrigerator” (“parking place”), window dressing for legitimacy or even to encapsulate potential opponents. The use of committees to explore a subject among representatives of various organisations and agencies and/or among so-called ‘experts’ is already ubiquitous for a long time. It is said that Churchill once remarked on committees “We’re overrun by them, like the Australians were by rabbits!”

### *3. New cognitions*

In a sense, this is what it is all about. No doubt “boundary judgements” belong to the category of cognitions themselves. This doesn’t preclude that they can also be modified by other cognitions. On the contrary. Exposure to other cognitions might even be the first and foremost option to get boundary judgments becoming more flexible and possibly change.

A first possibility is to introduce new information into the system. This often takes the form of reports, that contain new information from recent studies or even existing information brought together and applied to show its relevance. Such information could reveal joint problems or joint chances to the actors. The diffusion of the information is dependent not only on its reporting to the actors, but also on the form in which this is done, by whom it is done and by the receptivity of the actors themselves (see Valentina’s paper). Media attention can amplify the exposure to such new information manifold. Apart from ‘direct’ information also ‘representations of reality’ that could impact the frames of reference of the actors involved could be important here (see figure 3). Schematic overviews, one-liners, wordings, stories, analogies, etceteras could even in this indirect way have a bigger impact on the boundary judgments of actors because they can help opening up their minds to enable new ideas coming in (of course the opposite is also possible). Next to external new information, own learning processes (interpretations of own experiences) can contribute to the new information that forms the judgments of the actors. Challenging or conflict situations, with ‘stalemates’ will sometimes stimulate attempts to find a way out. To enhance the likelihood of such own learning, exposure to new experiences counts. New actors entering the scene and new arenas can be important here, but also job rotation schemes, job qualification accreditation schemes, joint training programmes and policy planning processes.

### *4. New motivation*

Next to cognitions, also motivation and resources (see below) can be intervention points to influence boundary judgments. Motivation to accept changes in domain perceptions is not only a matter of position, but also of saliency. When motivation is positive and there is enough saliency it will create ‘selective attention’ towards new boundary specifications. In contrast when motivation is negative and there is enough saliency it can create barriers to accept new specifications (e.g. the ‘island mentality’ of upstream water managers towards downstream problems). Low saliency will tend to make an actor passive in this respect and implicit shifts in domain specifications by others even can go unnoticed. While the importance of motivation is not difficult to see, ways to influence it are harder to elaborate (see also Valentina’s paper, note however that she deals with motivation to adapt the convergence of elements of governance, the (b) issue listed at page 7).

In figure 3 three sources of (de)motivation are specified: own goals and values, external pressures and self effectiveness assessment, influenced by cognitions, resources and by experiences during the interaction process. Especially deeper values are hard to change, even by friendly and informal contacts during the interaction processes. Internal reflection leading to changed values or goals can of course occur, but is in any case no “mechanism” to be used by anyone else. Motivation to open up towards extended or changed boundary judgments can be changed via cognitions when new chances to attain existing goals are presented that rely on the acceptance of such extended domain specification. For instance when

restoration of wetlands in nature policy could contribute to the target of creating more water buffering capacity. Via resources and power such motivation can be evoked when there is a resource dependency or an alternative threat that makes continuation of the present conceptualisation of the domain uncertain anyhow. For instance when obligatory tasks in the European Water Framework Directive are far beyond the capacity of the water management, but combining recreational developments with water projects make these water projects affordable by giving access to large additional subsidy schemes. In a sense such opportunities and restrictions also impact motivation through their impact on self effectiveness expectations.

### *5. New resources and power*

Boundary judgments are a small, but important part of cognitions. Resources and power can influence them both direct and indirectly, via motivation. It is important to keep in mind that that changing resources is here a way to get these specific cognitions (boundary judgments) change; and that this will also occur even more indirectly via motivations change. At this spot it is not dealt with as a way to get directly changes in the governance structure (or even in the acceptance by actors of such changes). Only in as far as boundary judgments are what stands in the way, the latter is the case. Now how could resources & power change boundary judgments of actors, change what they perceive as the extent of the 'right' domain ?

First of all: when resources and power are used to influence boundary judgments, this presupposes a 'user', an actor that is motivated to do so. One could say that such actor uses and exerts 'coordination power'. A source of such power could be his 'centrality' in relevant networks (cf. "social network theory"). A deliberate attempt to do it this way was when the then minister for the environment Nijpels created 'bridgeheads' in several departments when producing the first national environmental policy plan in 1989. By giving his ministry links with all other relevant ministries, while keeping the coordination role, he could manage to get a far more ambitious document accepted than when it would have been the product of 'normal' inter-ministerial battle. What is relevant here is that this way acceptance was raised that a lot of sub-sectors were included in the "environmental policy domain" that were previously guarded against such inclusion. An important asset (or resource) is here the degree of respect and trust by others of such actor. This also helps for the acceptance of information messages. For the rest power is not only an objective, resource based, strength, but firstly a matter of attribution by others. As long as this attribution is not falsified, assumed power is real power. As cognitions can also sometimes follow new realities forcing acceptance (incentives to motivation) of enlarged extent of the domain can indirectly also alter the boundary judgments. This can in principle be done by direct hierarchy forcing openness to new boundaries. More often a softer approach will be taken, e.g. via the conditional provision of money (golden cords, budgeting); standardisation requirements (procedures, instructions, forms) or plans – all creating forms of resource dependency. Resources can also be employed to enhance the learning capacity of other actors to increase the chance of more openness towards an extension of what is regarded as the relevant domain.

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