

Facilitating Collaborative Decision Development in Urban Planning

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Urban planning issues often involve complex functional interdependencies, conflicting values and cultural clashes among stakeholders. The emerging forms of **governance**, with direct and open interaction between planning agencies and diverse stakeholders among individuals, business and different organisations, require new forms of working and communication. Here two applications of an approach for the management of complexity, uncertainty and conflict are described. Attention is paid to power-relations and their influences on collaboration for the development of creative synthesis and decisions.

The approach proved to be efficient for the management of complex decision development processes, but there are some democratic risks when applied in public planning. The way of working is time consuming and the outcome is to a great extent dependent on the ability of the process-leaders and the commitment of the participants.

A new professionalism is developing for managing collaboration, and for facilitation of complex urban planning issues.

The close points of similarity between design processes and processes for decision development make it appropriate to develop an education for process-leading and facilitation in co-operation with schools of architecture and planning.

1.

Urban issues and planning practices

Urban planning issues today often go beyond the traditional tasks of developing physical artefacts. They may now also include e.g. the development of far-reaching environmental strategies in urban regeneration or the development of measures for counteracting segregation in housing markets. Questions that before could be seen as externalities or as secondary effects of planning are now looked upon as of central concern. The wider the focus of problems dealt with the wider the range of stakeholders among individuals and organisations, private and public, that are concerned. The decision situations are often characterised by lack of reliable knowledge, complex functional interdependencies, cultural clashes, counteracting values, conflict among participants, and lack of resources and legal devices for implementation. Direct access to knowledge and opinions, and understanding the needs of individuals, ethnic groups, organisations and

business are a pre-requisite to the successful handling and implementation of such complex tasks. There is now a widespread opinion that collaboration among stakeholders during the planning process, before decisions are taken, is the best way to take into account opinions and ideas from the public that can give quality to the implementation, and for handling possible future conflicts.

The traditional approach to public planning, with its formal hierarchical and sectoral organisations and procedures demonstrates weaknesses when they have to deal with non-standard issues that go beyond the normal agendas of established public planning. There are no single departments that have either the knowledge or the competence to act in such situations. In some European cities there is an emerging new professional role of facilitator and manager to handle complex urban developments (Evans, Strömberg 2001).

Collaboration and struggle for power

The public sector's traditional role in urban development and design has diminished in Sweden, as in most European countries, during the last twenty years. Planning departments are often relegated to the development control function, and have to rely on outside expertise and consultants for the creative input to project development. The new situation can be described as a transition from government i.e. formal and bureaucratic ways of planning and design to more open and collaborative forms of governance (Healey 1997). This takes many forms of co-operation between public and non-public organisations, and by different forms of public-private partnerships. Such a transition is by no means simple to effect, and is criticised for failing to promote democratic control over and influence on planning and design processes, and for inadequately providing satisfactory mechanisms for managing them.

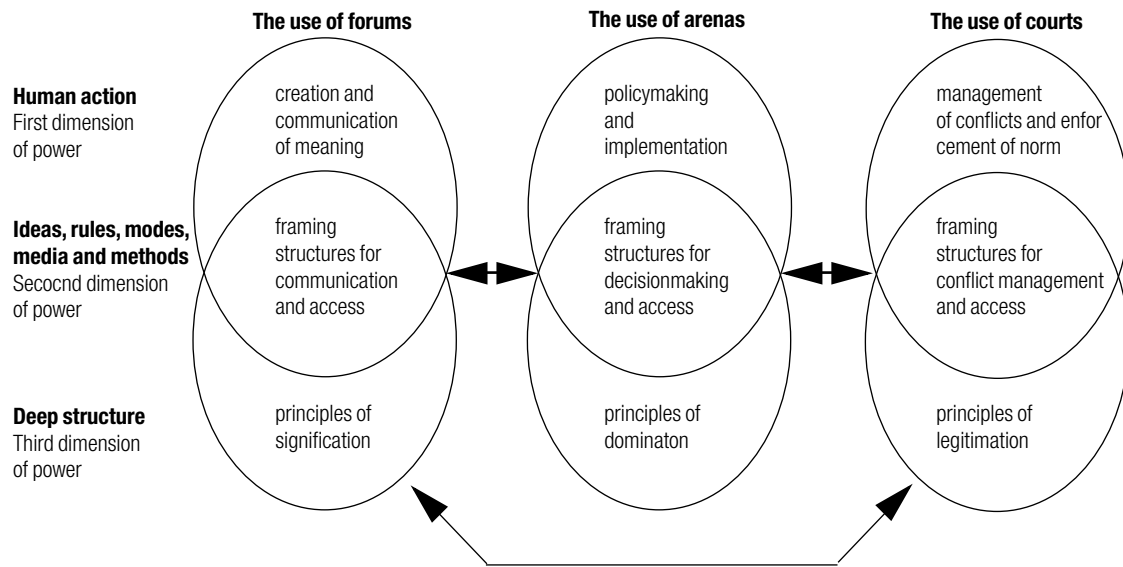
The struggle for participation and influence in planning has long been on the political agenda in Europe. It is also in focus in different theoretical planning discourses (e.g. Forester 1999, Healey 1997, Sager 1994) then often inspired by Habermas's ideas on communicative action and ideal dialogue (Habermas 1987).

Current normative planning theories put collaboration; participation and dialogues centre stage in knowledge development, and for building social and political capital among participants. It focuses on how political communities communicate in public arenas, how participants exchange ideas, sort out what is valid, work out what is important and assess proposed courses of action. Patsy Healey makes several recommendations as to the form and style of planning processes that acknowledges diverse stakeholders of local communities, what she calls the soft infrastructure of relation building. She also recognises the influence of the hard infrastructure of institutional design, and the need to adapt the public planning system to promote and support community-based planning activities (Healey 1997).

These communicative approaches have great relevance to the reality of planning practice to manage new forms of co-operation across sectors within the public planning organisations, and to facilitate negotiations and partnerships embracing the private sector, and the demands of broader citizen participation in planning and decision-making processes. Simultaneously, this theoretical communicative approach is criticised for being idealistic, naive and misleading, neglecting the reality of power relations in society and giving too much attention to ideal, but unachievable, conditions for dialogue.

Many theorists instead refer to Foucault's concepts on power in society, as a fundamental aspect for understanding planning practice. Policies and strategies are being developed in contexts where complex power struggles form the background to incremental decision-making based on fragmented analysis and valuations, bargaining and negotiations. For example Flyvbjerg (1998) visualises the intricate power relations that influence the processes and outcome of planning in the city of Aalborg in Denmark demonstrating that 'rationality yields to power'.

Voogd and Woltjer, (1999) present a critical review of relevant literature in the field of communicative planning. They raise the question whether communicative planning is a better framework for protecting values and reaching objectives, than the framework



that has justified planning interventions up to now. Referring to a huge amount of Dutch examples, the authors show how the principle of including all relevant stakeholders is violated simply because of lack of time and resources. This leads to selective participation. While some environmentalists deliberately choose not to participate in official sessions, economic interest groups are strikingly eager to become involved and to co-operate. Only when plans or projects become tangible or conceivable do parties become active. In brief, discussions about 'here and now' are easier than debates about change for 'there and later'. In general, it is people with higher education and social-economic status that participate (op cit. p 846–847).

The authors conclude that nowadays 'the project' goes hand in hand with 'the process' and that conventional planning and communicative planning are complementary, and not substitutes.

Dimensions of power in planning situations

Many actual urban issues, like infrastructure developments, have environmental, social and economic effects that influence the whole urban region at the same time as the area is divided in a lot of political and

administrative autonomous territories (Bjur, Malmström, Strömberg 2000). In such situations, no single decision-making body can solve the problem alone. The situation can be described as shared-power, no-one-in-charge situations. Bryson and Crosby (1996) introduce the idea of intentional design and use of forums, arenas and courts to establish and communicate meaning, to make decisions, and to manage conflicts. Their idea of the design and use of social settings is founded on a triply three-dimensional conception of power. The situations they describe have the background in USA where courts are more frequently used for solving urban problems than in Europe. Anyhow, their principal discussion of relating different forms of power to different social settings for human interaction is of high relevance.

The first dimension of power is related to human action. The power of actors varies with the issue, and there are several sources of power, such as wealth, status, knowledge, and skill.

The second dimension of power has to do with agenda setting, the privilege of problem formulation and other manipulations of what comes up for decision and action. Various ideas, rules, modes, me-

dia, and methods are the principal barriers that bias attention toward some matters and away from others. Framing structure is used here as a comprehensive term not only in a negative sense as a hindrance but also in a positive sense for focussing the matter.

The third dimension of power is the deep social, political, and economic structures of a society that provide

...the basis for a potential set of issues, conflicts, policy preferences, and decisions that public actors might address. (op.cit. p. 178.)

The three dimensions of power are closely inter-related. Public actions are guided by human action power as well as by the framing structures and the deep structure power. However, framing structures are man-made cultural constructs that can be strengthened, weakened or changed by human actions.

While established formal social settings, i.e. arenas and courts, are difficult to change, the possibility to develop collaboration among stakeholders and interested people is to establish informal forums for knowledge development and dialogue. There are several ethical and practical questions and problems for implementing such forums. Some ethical questions include: Who can and wants to participate? Who represents whom? Who formulates the agenda? What issues can be addressed? From a practical point of view there are great problems of how such collaborations and dialogues can be managed and how they link to formal arenas of for planning, decision-making and implementation. Who decides what are good or bad solutions? Who has the power to take decisions? What kind of legitimacy do decisions have? Do we need new roles or professions for dealing with urban questions?

2.

Methodological developments

Can findings and insights of planning theorists be incorporated and developed into practical processes for planning and design for establishing of social settings, procedures, methodologies and techniques for collaborative planning?

Planning and design problems are seldom simple and well defined. Consequently it is not appropriate to use what is commonly understood as the scientific step-by-step-method with its linear and well-structured approach with an initially formulated goal, followed by analysis, formulation of alternative solutions, evaluation and recommendation. Instead there is a great need to introduce and use methods that can handle messy, ill-defined and complex questions with high degrees of uncertainty in situations where many actors have competing interests. Besides, frequently there are limited resources, both in time, money and manpower, to investigate, analyse and evaluate possible alternatives.

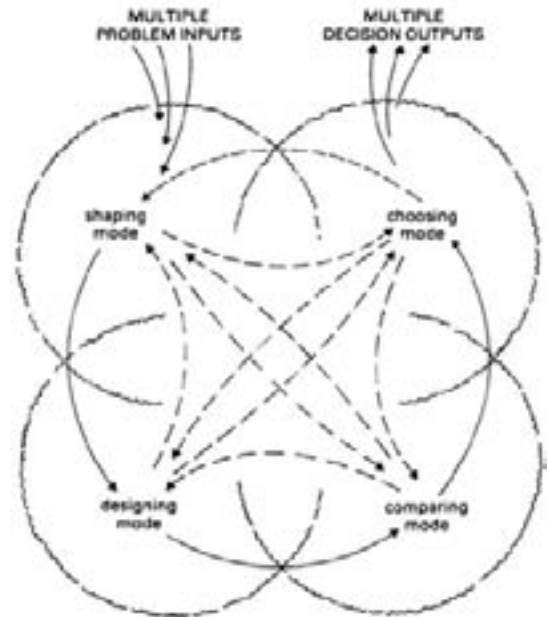
Sketching is the traditional tool for architects and planners in creating images of future urban situations. With this approach it is possible to search the way ahead in an iterative way by going from detail to whole and back again. By formulating and testing assumptions on a preliminary level, changing from analysis to synthesis and going forwards and backwards, it is possible to take decisions in a selective and incremental way that lead the process ahead. The framing of the situation becomes clearer and sharper during the iteration between analysis and synthesis. These kinds of processes are dealt with in design theory when focussing the development of artefacts in architecture or in industrial design, see for example the article "In touch with place" by Lisbeth Birgersson in this issue of the Nordic Journal for Architectural Research. In planning and policy analysis this incremental way of solving problems was coined "The science of muddling through" (Lindblom, 1959) as opposite to blueprint or synoptic planning for the Grand Solutions.

Sketching can also be used as a tool for stimulating communication among stakeholders and interested parties in a planning process. Forrester (1999) describes a complex multiparty planning process for the waterfront of Oslo. The planning director used his staff as mediators to manage special planning sub-committees including planners and common non-professional people. The planners should let the parties argue and try to find solutions. The basic attitude was to never let any sketch be presented as the sketch. It

was the intentions and characteristics of the sketches that were important, not the sketches themselves. The planners worked not only as sources of information and expertise, as neutral facilitators, but also as mediators with a mission to look for ultimate solutions.

The basis for development of methods for problem solving is to understand how professionals and laymen really work when they are tackling complex problems. Donald Schön coined the notion "reflection-in-action" to describe the conscious reflective way of working used by "the reflective practitioner" (Schön 1983). He demonstrates, e.g. in the interplay between an architect and a planner, how uncertainties and controversies are realities that have to be handled and the ways that professional practitioners use to frame their roles when they work. Single-loop learning implies performing a task in a given context with given premises. Double-loop learning and frame-reflection imply learning about the premises and thereby the possibilities of changing the conditions, frames, under which the tasks are performed. Group discussion processes can reset parameters for subsequent action, and be used in setting the frame for action (Schön and Rein, 1994).

Different facilitation methodologies and techniques can assist such group dialogues. There are several approaches to tackle complex problems. Rosenhead (1989) gives an overview of problem structuring approaches for management of complexity, uncertainty and conflict. One of these is the strategic choice approach which is based on results from pioneering research on analysis of problem solving and policy-making in the processes of public urban planning (Friend and Jessop, 1969; 1977). The findings decisively challenged the prevailing view of how problem solving and decision-making is carried out in reality. It uncovered how informal networks can achieve co-ordinated action without invoking legal and procedural rules. The actors' drive to achieve co-ordinated working stemmed from efforts to resolve different kinds of uncertainty about the working environment, about values and about other actors and decisions in related fields. The research work focussed on the processes, leading to consensus building and the formation of policies, but did not especially address the power-relations among



actors.

Drawing on the results of the research, a practical methodology to assist and facilitate complex decision-making processes was developed (Friend and Hickling, 1987; 1997). The approach sets out to articulate the kinds of dilemma that experienced decision-makers repeatedly face in the course of their work, and the often intuitive judgements they make in choosing how to respond. The approach helps users to make incremental progress toward decisions by focusing their attention on alternative ways of managing uncertainty. Planning is viewed as a continuous process of moving forward strategically, rather than the attainment of a strategic aim. The focus is on the connectedness of decisions with one another, rather than on the relative importance attached to each decision. The use of the term "strategic" therefore has a slightly different meaning to that is normally implied now by the term "strategic planning".

The standard model for "rational" decision making puts different stages in a logical sequences one after another, while sometimes allowing for feedback and recycling in between, having an beginning and an end. However, in reality more complex decision processes

involves copying with multiple problem inputs and multiple decisions outputs without any clear sequential order between the different stages. In general there are four main modes of activities in decision-making processes. One of these is concerned with formulating of goals for the process in order to solve a perceived problem. Often it is not one single problem but several, often interconnected, problems. One stage of decision-making processes is therefore to find out possible connections between problems, a shaping mode. Another mode is concerned with designing possible courses of action for solving the problems. There is a need for comparing these alternatives and evaluate their consequences in order to create possibilities for choosing.

For each mode of a planning process there are different traditional tools in action like sketching, calculation of costs etc. as integrated parts of specific practices, used by diverse actors in the planning process. As long as these tools enrich the progress, and don't work as black boxes for the participants, it is also possible to use them as support for learning and decision development processes as tools for interaction, to support the exchange of knowledge and arguments across disciplinary and professional borders (Birgersson, Malbert, Strömberg 2001).

In the strategic choice approach a toolbox with simple graphic techniques for the structuring and management of complexity, the handling of evaluations and management of different categories of uncertainty is provided. The approach views the conducting of any non-routine decision process as governed by perceptions of the relative importance attached to three broad categories of uncertainty.

- Uncertainties about factual conditions such as the distribution of population, the costs for public transport etc. can be handled by research, surveys, investigations, estimations, forecasting etc. and can often be dealt with provided that sufficient resources are allocated. This is called uncertainty related to the working environment in the SCA.
- Uncertainties about value issues such as the distribution of public spending between investments in pu-

blic or private means of transport etc. can be dealt with e. a. by request for the setting of priorities or by direct involvement of decision takers in the decision development process. This is called uncertainty related to guiding values in the SCA.

- Uncertainties about related issues concern decisions in other contexts that are not on the current agenda. It may e. a. be future decisions within the own organisation not yet dealt with or possible reactions on decisions from decision-takers outside the domain of the own organisation. These uncertainties may be dealt with by extending the current decision agenda or by collaboration or negotiation with other actors. This is called uncertainty related to related decisions in the SCA.

The management of uncertainty does not imply that all uncertainties have to be dissolved, but that they will be deliberately handled in a way that is dependent on their impact on the situation, available resources and urgency. Many uncertainties will sustain unreduced.

The process of working with the SCA has striking similarities with architects' and other designers' sketching in that it gives freedom to move forwards and backwards between detail and whole, between analysis and synthesis in search for feasible solutions. While the designer often creates as an individual, the basic idea of the SCA is to facilitate the sharing of ideas, mutual learning and the exploring of complex issues by groups of people where no one alone can claim full understanding. It is an orientation towards interactive collaboration among participants working in an exploratory way by moving backwards and forwards among the different modes in a gradual framing of the issues while incrementally taking decisions. The focus is on process management, and the progress is highly dependent on the ability of the process leader to co-operate with the group and, above all, the group's commitment to the way of working.

While the outcome of the designers' efforts are often physical artefacts and technical solutions, the products of the SCA are chains of interrelated decisions on what shall, or shall not, be done if or when something

occurs. A Commitment Package is conceived as a balanced assemblage of proposed steps forward, which may embrace a set of proposed immediate actions, a set of explorations to deal with important uncertainties, and a set of deferred choices that should be addressed later. The decisions may concern any artefact e.g. a physical construction as well as a political policy.

In spite of that there are many situations, in which the approach has been applied, few of them have been reported and evaluated. Anyhow, the approach has attracted theoretical attention. Some authors point out that the approach provides possibilities to combine rational analysis with creative synthesis (Yewlett, 1985, Sager 1994). But it has also been criticised for not providing attention to the power relations of the intercorporate networking processes, nor to the ethical issues of network building and informal construction of policy networks bypassing the hierarchical accountability arrangements of individual public agencies. (Healey, 1997).

Two cases of application of the strategic choice approach in public planning will here be described. Both cases were initiated from top down within the public organisations in situations when the standard procedures had failed to solve the current issues and the situations were deadlocked. In both situations there was an ambition for the researcher to test and develop the approach for decision development. The findings and experiences from the first case, concerning unbalances in a local housing market, were later used in the second case, a preparative regional agenda 21, for a development of the methodology in terms of also, explicitly, addressing the significance of power relations between the actors within and among the decision-making organisations.

3.

Case 1: Unbalances in a local housing market¹

Köping, a Swedish municipality of about 20 000 inhabitants, had since several years, severe problems with a growing stock of unlet residential apartments. A reduction in the number of jobs, a decrease in the population and an increased construction of single-family hou-

ses were put forward as the main explanations. The situation became problematic with a growing social segregation in the housing area. Many efforts to solve the problems had all failed. An analysis showed that housing procedures had a narrow sectoral approach, and were based on rigid routines. The situation deteriorated successively, and different agencies and persons in the administration blamed each other for the deadlocked situation.

The situation in this municipality is an illustration of a traditional planning organisation, which at some stage can no longer develop effective strategies when uncertainty becomes considerable and an emergency situation develops. Most of the municipal departments were influenced by the problem, but no single department could solve it within its own domains or on the formal arenas of the municipality. Due to the sectoral division of the planning system, a previously unrecognised issue became a shared power, no-one-in-charge situation (Bryson & Crosby 1996).

Local government officers found themselves incapable of developing an integrated strategy to tackle the problems within the standard operation procedures. The politicians attempted to inject optimism by revising the basis for demographic prognosis – from retardation to expansion. On these revised and manipulated figures the officers prepared a new housing provision programme. The way of tackling the problems appeared to be an act of invocation, rather than strategic decision-making. An analysis of the past ten years of housing provision programmes in the municipality revealed a considerable amount of uncertainties not taken care of and faulty planning achievements.

In an attempt to tackle the problems the decision development approach, Strategic Choice Approach, was applied as a tool to manage the communicative processes between politicians, administrators, planners and different stakeholders outside the administration. The process was introduced with a three-day workshop with focus on physical planning and housing. Participants were local government officers, politicians and representatives of the municipal housing company.

A large number of issues and questions were raised

during the workshop. Discussions gradually came to dwell on the problems related to unlet apartments, and their relationship to the overall planning in the municipality. Some actors meant that there were too many dwellings in the municipality in relation to the population. The political leaders wanted to produce more single-family dwellings. The taxation rules imply that one pays local tax where one is living and not where one is working. By attracting economically well off families from outside to move in to the municipality the municipal economy gained. However, people already living in the municipality also moved to single-family houses, and thus there was a surplus of apartments.

Others described the problem as a question of rent level. Getting deeper into the situation, it was revealed how a complex national housing subsidising system compensated housing companies for rent losses. Tenant rents were subsidised depending on income, making them indifferent of rent level. At the same time the national rent control system made it impossible for the company to raise the rents in order to finance improvements in the area. Thus, there were no economic incentives either for the politicians or for the housing company to change the situation. The politicians' drive to act was social degradation, and bad reputation.

Instead of following the politically produced demographic prognosis, which was accepted as being expert judgements, the participants could by simple calculation now understand and discuss the foundations of population trends. Instead of a hierarchical command situation with routine procedures, the organisation now shifted to an informal forum with lateral dialogue and with interactive participation. The problem widened and became more complex than at the start of the process. The unlet apartments appeared to have implications for the municipality as a whole.

Most of the discussions took place with the help of graphic representations on large sheets of paper displayed on the walls of the meeting room. A majority of the participants became aware of the fact that most of the views and uncertainties they had expressed were interrelated. With the help of various graphic techniques the participants could work into the problem structure, and

subsequently they were able to recognise the interrelationships between different decision areas. Simple techniques were used to evaluate alternative solutions. Participants could also manage different types of uncertainties related to different decisions as the work proceeded. Each decision cycle ended up with a commitment package outlining what had been decided and what should and could be done later on if certain conditions occurred.

The new way of informal interactive working constituted a new spirit of collaboration among the participants from different departments and organisations. Working groups were formed and dissolved during the process. They varied in size and composition depending of what issues they were investigating. A reference group was established, including representatives from the political parties, from the governing party as well as from the opposition, and other stakeholders and a steering group of politicians and leading officers responsible for housing and planning. In Bryson & Crosby's terms a new temporal forum was established which moved the deadlocked processes into a new situation with new framing structures.

The dialogues, facilitated by a process-leader, manifested a mutual need of understanding both the languages and local cultures in different parts of the municipal organisation. As a result of the interaction a clearer understanding of causal relationships in the municipal development was established among the officers and politicians. During the initiating decision cycles, a large number of investigations were initiated, and at the same time proposals were successively formulated and put forward to the reference and steering groups. Politicians took incremental decisions, which could take the process further, continuously in the steering group. A meeting place and an office for a facilities manager were established in the most problematic housing area for direct and daily contacts with the inhabitants.

The work of the groups changed, the attitudes among participants towards the issues were dramatically revised, and decisions, which would change the housing market, were developed in collaboration and implemented during the following years. The ap-

proaches to tackle the problems were manifold. The area was developed from housing only to a mixed use with working places in small offices, which rent levels were free for negotiating. A day-centre for care of elderly was built. The quality of outdoor environment was raised and so was the standard of the apartments. This shift of problem focus, from economy and rent level only to also include diversity, quality and amenity, influenced all departments in the municipality. In terms of Schön and Rein, the situation was reframed as a result of double-loop learning.

The methodology was later also applied to other planning sectors within the municipality, such as care for elderly and housing renovation. Five years later, however, the key-persons in the experiment had moved away from the municipality, and with them most of the methodological knowledge. The application of the SCA had not changed the standard routines for planning and collaboration.

The evaluation process showed that the application of the SCA as a facilitating vehicle had stimulated collaboration among politicians and officers from different departments within the municipal administration, and stakeholders outside the municipal organisation. The new spirit resulted in policies and actions that eventually changed the situation in the area. The housing company developed its way of co-operation with people living in the area. The downward spiral was broken, and the demand for rented flats in the area grew.

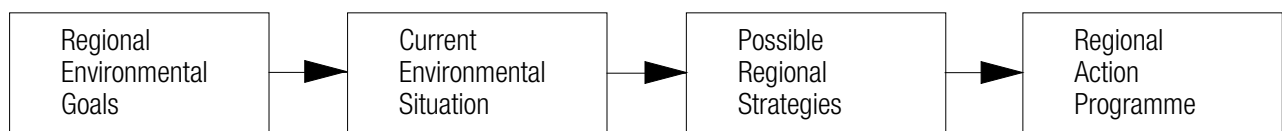
The opinion among participants in the process towards the application of the SCA as a way to tackle the deadlocked situation was in general positive. Some meant that it was not the methodology itself, but the allocation of time, and that the same results could have been achieved with other approaches. The politicians representing the opposition party were not happy with the continuous, collaborative, incremental decision taking in the steering group. In that way they lost their public arena for criticising the governing party.

Two explicit experiences from this study are of significance to the further development of the methodology. Most processes and decisions were negatively influenced by hidden power plays among groups and participants with explanations in personal antagonism, competition concerning positions in the internal hierarchy or other forms of complex human relations with little relevance or relationship with the actual issues of the housing market. These hidden agendas and power-relations were not discussed openly. Still they were always present influencing the work in a harmful way.

For the purpose of research on the collaborative processes, a fourth category of uncertainty for the description of power play within the group of co-operating partners was introduced. It was labelled intra – organisational uncertainty as a complement to uncertainty in related decision fields, which also included stakeholders outside the co-operating group. The category intra-organisational uncertainty was in this case used only for description and analysis in the evaluation research process. In the following case it was also developed and used as a tool too support the decision-development process.

The facilitator for the decision-process has a very exposed position. During the introduction of the methodology external experts guided the process, as consultants, without being consciousness of the actual power-relations. After a while the consultants were regarded as actors in the hidden power play among different parts in the administration. In a later stage of the process, the consultants left the day-to-day work in the process, and a leading internal municipal officer was appointed process-leader. This shift of process-leader re-balanced the power play and confirmed which group had become 'owner' of the process. The conclusion was that the process leader needs to have a neutral position in the internal power play.

4.



Case 2: A Preparative Regional Agenda 21 in Gothenburg²

In an attempt to establish co-operation and a common ground for future Local Agenda 21 processes, a regional Agenda 21 project was initiated and financed by four major public authorities. The Gothenburg City Council, the Association of Local Authorities, the County Council and the Regional Government were the founding bodies, the total area including almost 700 000 inhabitants. The original project organisation and the project plan followed standard operating procedures. A project leadership team comprising of staff members from the authorities involved and guided by a similarly composed political steering group made up a linear project plan, where each phase should be finished, reported and approved before the next was initiated. The project was financed for three years.

The project work got stuck already at the introductory goal description phase. The description of the current environmental situation for different sectors consumed most of the total time and money available. When an innovative turn-around was brought about in the strategy phase, the politicians had already, at least mentally, abandoned their ownership of the project. The active participants had difficulties in conveying their growing insights and knowledge as briefings at meetings for formal reviews and decisions.

Participants, whose ambitions had not been realised, expressed disappointment and criticism. One of the critics, representing a local municipal authority in the region, was appointed head of the subsequent strategy stage. His task was to make the best possible use of the remaining year of the project to regain the enthusiasm and confidence of the participants. Five strategy task groups were set up; these also included people from outside the initiating organisations. Three of the strategy groups were formed to deal with sector issues: traffic, energy and chemicals. The two other strategy groups were established to work with broader and more complex themes: Life in the City and Life in the Countryside.

The Life in the City strategy group comprised an interdisciplinary group of planners and other officials from the four public authorities and two researchers

from Chalmers University of Technology. To use the Bryson and Crosby terminology, a new forum was set up. A new application of a somewhat developed strategic choice approach was decided. The researchers had, as consultants, leadership tasks, one as process-leader and one as project leader.

The practical work of the group lasted for almost a year. After introduction and orientation, when the main task was to understand the context, contents and expectations of the continuing Agenda 21 process, the group worked for two intensive periods. The first was directed to the complex relationships between different problem areas such as emissions from cars, segregation in the housing-market and lack of co-ordinated regional leadership, and related decision domains such as transportation and housing policies. The second period addressed knowledge development, and a new problem conceptualisation leading to the identification of related decision domains and actors for continuing problem-solving activities.

The group had access to a special room, where the dialogues took place, and where the continuous knowledge building process was represented in the form of schemes, symbols and key words on sheets of paper covering the walls. This external graphic memory constituted a structured base for an effective common language, and for notation of ideas, concepts and other references like different categories of uncertainties and their characters.

Most local environmental problems in cities and in their surroundings are related to the use of natural resources. Accordingly, the group chose to tackle a problem area, created by the leakage of nutrients to groundwater, a problem they called unbalanced flows. To understand the kind of decisions and actions that must be co-ordinated to make sustainable solutions for unbalanced flows possible, the group analysed the decision domains for the different problem areas. The purpose was to identify actors to be mobilised for problem solving. Some new members with special competence were brought into the group.

Reframing and double-loop learning about nutrients
The excess production of crops in fields and meadows

causes an excess use of nutrients, which lead to risks for leakage of nutrients, or 'eutrophication', of watercourses, lakes and the sea. Another source is the effluent from sewage treatment plants. Today, this is a major pollution problem in Sweden. Technical experts from the water and sewage sector dominate the standard problem-solving activity with regard to this problem. Large public investments are planned to improve purification technology.

During the process, the group identified another problem in the under-nourishment of cultivated land, which is temporally solved by the unsustainable use of artificial fertilisers. By reframing the problem (Schön and Rein, 1994), the group questioned the standard approach, and instead identified other strategies and actors for closing the cycles of nutrients. In this way, both the problem of 'under-nourishment' and that of 'excess-fertilisation' were possible to tackle at the same time. This collective cognitive accomplishment of the group shows how dialogues can generate a new situation, with double-loop learning (Schön, 1983), which produces new insights, and makes it possible to take advantage of a new viewpoint.

In the search for natural fertilisers that can replace artificial ones, farmers, the food industry, distributors, traders, households, property owners, housing companies, tenants and building constructors become key actors. The group decided to involve representatives of these categories in the process. The knowledge-building process now shifted to another phase with more problem-solving activities. Adding new participants also implied the introduction of new perspectives, which led to the identification of many new uncertainties.

Management of Uncertainties

Uncertainties of different types were continuously identified during the knowledge-building process of the strategy group. For the management of uncertainties pertaining to the working environment, a draft report was produced to state briefly the technical, economic, juridical, sanitary and behavioural prerequisites for a system change that would close the cycles of nutrients.

This report was to be used as a point of departure for the continuing dialogue process involving the actors and stakeholders affected.

The most successful part of the work of the strategy group was the management of uncertainties in related decision fields. The establishment of a new problem focus led to the identification of a broader group of actors and affected parties. After the formal closure of the project, these actors were invited to a meeting, to discuss the problem and possible actions. At the meeting, all key actors associated with the flow of nutrients, from farmers to households and housing companies, were represented. The participants declared their willingness to take over and build upon the work of the strategy group. Some of the uncertainties could then be transformed to uncertainties in the working environment.

There were many uncertainties related to values identified though not resolved. Consumers' attitudes toward the use of human urine on land for food production, for example, is a complex composed of cultural values, and uncertainties related to facts about possible sanitary and medical impacts. What, for example, are the medical effects of hormones contained in human urine? This kind of uncertainty was analysed in depth by a special working group that contacted research groups working in the field.

The project organisation was comprised of several different organisations with various purposes and goals. Competition, misunderstandings and distrust within and between organisations, between groups and individuals, especially between the active participants of the strategy groups and the political steering group, constituted lots of uncertainties. There were no politicians working in the strategy-groups, and the possibilities to reduce these kinds of uncertainties by direct consulting or co-operation were in that way limited.

Outcome

By the time the project was formally concluded it had developed gradually into a dialogical process comprising of numerous organisations and individuals within the region. In other words, several innovative forums were set up and used. The lack of committed political

leadership, and the need for skilled process leaders for the different forums became obvious.

The work at the early stages of the process closely resembled business-as-usual. After the innovative turnaround, at the later stages of the process, other actors and stakeholders became more actively involved in the work. The forums of the strategy groups, however, had no direct linkage to the formal arenas. The political steering group acted according to Swedish mainstream planning tradition: decisions are taken only after prepared proposals are submitted for consultation.

The outcomes of the project, on the one hand, are traditional visible products such as reports and other written material, and on the other hand, invisible products such as new levels of knowledge and shared problem perceptions among the participants. The invisible products of the maturation process among the participants can provide the basis for the longer-term co-ordinated actions, those Agenda 21 supports. A substantial result of the process is a voluntary association that includes individuals from the organisations and task groups of the original project, and other interested persons of the region. A group of diverse stakeholders has voluntarily been involved in a consensus-building and problem-solving process, and they have reached some agreements with regard to practical implementation of the results.

5.

Discussion

Did the application of the new approach to collaboration improve the planning process? Of course it is difficult to draw general conclusions, but the two cases provide experiences that give ground for some reflections concerning efficiency and democracy.

5.1 Efficiency

The two cases describe processes that took place in situations where the organisations had no prior experiences and the standard operation procedures of the planning organisations were insufficient to solve the current problems. It is not possible to compare the ef-

iciency of this approach to the standard procedures.

Did the new way of working influence the perception of problems?

Both cases can be described in terms of double-loop learning and frame reflection (Schön, D., Rein, M. 1994) that gave participants possibility to question rules normally taken for granted, to test new ideas and to develop new solutions to perceived problems.

In the Köping case, there was a thorough shift in the perception of the problem. Initially some actors formulated rather narrow and technical questions as to how to recruit tenants to the unlet flats. Other actors defined the problem as a mis-match between price and quality. Others meant that there were too many dwellings in the municipality in relation to the population. The open way of working made a shift of problem focus possible. This resulted in a much more complex set of interconnected problems questioning the application of rules for subsidising housing and taxation. These new perspectives engaged political leaders, most departments in the municipality and several stakeholders outside the municipal domain.

In the Agenda 21 case a transformation in the perception of the problem took place in the strategy group when problem-focus shifted from a focus on over-fertilisation to the interplay between over-fertilisation and under-nourishment. The problems put forward by the consortium of public organisations, concerning the development of environmental strategies were not solved; instead several basic questions and their interdependencies were developed and communicated by the stakeholders themselves.

Did the new way of working influence the quality of outcome?

In the Köping case, the demand for flats in the housing area increased, and the acute problems were solved by the implementation of the developed strategies. The process took several years and the causal relationships between the interventions and the demands for flats are not possible to establish. During the period the economic situation and the demand for housing changed in whole Sweden. Anyway, most of the partici-

pants in the process were convinced that it was their efforts that had broken the bad record and caused the successful development in the area.

In the Agenda 21 case the consortium did not reach their goal of developing policies and strategies for a regional agenda 21, but the participants in the working groups were satisfied with the progress of the learning-processes. This was also demonstrated by the extensive efforts that on a voluntary basis were put into networking both by individuals, business interests and non-governmental organisations lasting long after that the formal project was finished.

Did the new way of working influence the consumption of time?

In the Köping case, there were no limits formulated for the time that could be spent on finding planning solutions. It was an emergency situation and since no other strategies to approach the problems had been successful, the politicians responsible decided to allocate the resources needed. Lots of time was used for the collaborative work.

In the Agenda 21 case, the project was allocated a frame of three years and a stipulated input of working time provided by each member in the consortium. This, already at an early stage of the process, proved to be unrealistic in relation to the results expected. Learning processes take time to mature, and there are no simple ways to shorten this.



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5.2 Democracy

In both cases the processes were moved from the formal arenas, with their framing structures for decision-making and access, to temporal informal forums with other framing structures for learning, communication and access (Bryson, M. J., Crosby, B. 1996).

Did the new way of working influence the transparency and manageability?

In the Köping case, a new forum was embedded within the administrative structure of the municipality, and politicians responsible from the governing party as well as from the opposition took part in the development processes. Instead of rigidly following prescribed stages of the planning procedures, it was now possible to focus the development of decisions for change in an incremental way. The presence of politicians in the steering group implied that there was a connection between the formal arena and the informal forum. This made it possible to take step-by-step decisions in the steering group making continuously incremental progress.

This raises questions concerning democratic control and influence. When working in the formal arenas, the decision taking is controlled by democratic rules that give public, at least in theory, insight and opportunities for debate. The establishment of the steering group resulted in decision taking in a grey zone in between the formal and the informal structures. The representatives from the political opposition complained that they could not debate and criticise the political majority in public as before.

In the A21 case, with its multi-organisational consortium, with different cultures and established procedures for working, different legal responsibilities and differing geographical demarcations, the situation was much more difficult. The project-organisation was not fitted for the complex task of a regional agenda 21 with its complicated learning processes. However, the experiences became learning processes also for the steering group, which in the end recommended the establishment of meeting-places, forums, and initiating local problem-solving processes. The bridging over between an informal forum for learning and com-

munication and a formal arena for decision taking is a difficult problem that has to be considered every time a re-organisation is established.

Did the new way of working influence the involvement of relevant stakeholders?

In the Köping case, the shift in organisation made it possible to integrate more stakeholders in processes than before, thus gaining direct influence. Most of the departments and the leading politicians were incorporated in the working groups. A new organisation for facilities management was organised in the area for direct contact with tenants and other stakeholders.

In the Agenda 21 case, an active search for relevant stakeholders leads to a broad participation from different municipalities, farmers' organisation, building companies, non-governmental organisations for environmental protection and friends of the earth. The participation was organised in an informal way for mutual learning, and not for formal decision taking.

Did the new way of working influence the provision of necessary information?

One of the main problems in the Köping case was the fragmented information among participants. The perspective was in most cases limited to the professional focus for the individual participant. No one held the full picture. The collaborative processes changed this in a profound way. The participants exchanged knowledge and experiences, and the working groups developed new valuable information for the development processes.

In the Agenda 21 case, politicians in the steering group were not participating in the knowledge development processes. They requested formal presentations and written reports with conclusions as input, for decision taking. However, the knowledge development processes were so rapid in the working groups that there were great difficulties in summarising and disseminating the findings. The steering group regarded this as a failure. The working groups, on the other hand, regarded the knowledge development processes as being very promising.

6.

Concluding remarks

The two cases are examples of that, in planning situations with complex issues involving a variety of stakeholders and high degrees of uncertainties, it can be productive to break out the issue from the formal arenas for decision taking, and to introduce an informal forum for communication and learning in a wider circle of participants. It is of great importance to actively include all stakeholders including formal decision takers in the processes. To avoid violation of democratic rules it is of importance to make clear the distinctions between the different roles for the forum, for learning and debate, and the arena, for formal decision taking, and to provide meeting points and channels for information for connecting them. Anyhow, the development of collaborative planning processes is not just for the development of efficient and democratic decision making but also for including diverse people that have valuable contributions to give in making hidden, maybe conflicting, goals and values become visible and possible to discuss and manage.

There is a new professionalism developing, both in the public and in the private sectors, whose core knowledge and motivation is to structure messy problems, facilitate dialogues and engage with people to bridge disciplines and take care of professional skills for developing concepts and solutions (Malbert 1998, Evans, B., Strömberg, K. 2001). These new professionals are often self-taught, and can come from a variety of backgrounds. However, there is a shortage of such process leaders and facilitators, which calls for the development of an advanced education in the field. The close points of similarity with design processes and the architects way of thinking and working makes it appropriate to develop such an education in co-operation with schools of architecture and planning.

Notes

1. This case was carried out in co-operation with Allen Hickling as consultant. It has been reported in Strömberg, K. (1986) and in Khakee, A. & Strömberg, K. (1993). See also Friend, J. & Hickling, A. (1997).
2. This case was carried out in co-operation with Björn Malbert. It has been discussed and published in Malbert, B., Strömberg, K. (1996) and in Malbert, B. (1998)

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