

# Managing the dynamic agenda in process modelling seminars - enhancing communication quality in process modelling

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## Abstract

Process modelling can be done successfully in the form of a seminar. In order to reach the overall goal of such process modelling seminars, quality in communication is important. Since process modelling is multi-driven, it is necessary to re-focus and re-plan predefined activities during the seminar. In this paper we elaborate on the notion of the dynamic agenda as means for handling such managing tasks in order to reach communication quality. We found out that the agenda can and should be sustained, expanded, and restricted during a seminar and that collective agreements in managing the so-called “agenda setting” need to be considered.

**Keywords:** Process modelling, Business process, Communication Quality, Seminar, Agenda

## 1 Introduction

Numerous authors have identified that business (process) modelling is important during information systems development (e.g. Nilsson et al 1999; Kruchten 2000; Lind & Goldkuhl 2003; Lind 2003b). Performed in the right way seminar-based process modelling can, besides deriving information systems requirements, contribute to an efficient learning process among the participants (Lind & Seigerroth 2003). In such a case it is, however, important to understand how interaction should occur and be managed during such activities. Below follows an excerpt from a process modelling seminar.

Thursday the 23<sup>rd</sup> of January 2003, the seminar room

*Jan, who is the seminar leader, describes the action model which explains the action patterns of the customer placing an order via the internet shop of the distance selling company. This model had been sketched in a previous seminar, but was refined since then. Benjamin, who is one of the participants in the modelling seminar breaks in and says that the graphical representation projected on the wall is not correct. This prompts Jan to ask the question “How does it work then?”. Benjamin starts explaining the action logic of a customer placing an internet order in a completely unstructured way. This verbal description encourages Anna, who is another participant in the seminar representing the distance selling firm, to start a discussion about how internet orders are handled by the IT-system. The discussion turns out to be much unfocused. Jan then breaks in and compares internet orders with telephone orders. But Benjamin and Anna reject this comparison. Jan continues talking in order to derive important aspects of what Benjamin and Anna are trying to reveal by writing down important key words. Upon that Mikael, who is another process modeller, breaks in and says “your keywords are the basis for further refinement. Let us continue with the issue of forwarding orders to the warehouse. Is this okay?”*

From the description of what happened in the seminar room it can be seen that process modelling is a complex task – how shall such a task be performed to ensure quality? Fitzgerald et al (2002) argue that it is essential to study methods in action during information systems development. Based on this we propose that an understanding of information systems development is not only created through focusing on the methods for (e.g.) process modelling themselves but also through deeper reflections on the practice of information systems development from different stances (c.f. Bansler & Havn 2003; Hjalmarsson et al 2001; Lind 2003a).

In the area of process modelling the use of theories explaining communicative action has resulted in the design of new perspectives and languages for modelling practice (c.f. Winograd & Flores 1986; Dietz 1999; Goldkuhl & Ågerfalk 2000; Ågerfalk et al 2002). A communicative perspective in process modelling advocates that communication is not only the distribution of information; communication is action (Austin 1962; Searle 1965; Habermas 1984). Viewing communication as action has resulted in concepts and perspectives from communicative theory being incorporated into process models (Goldkuhl & Lyytinen 1982). We argue that the focus up till now has often been on creating process models from this theoretical stance. However, the task of process modelling has not in the same extent been studied as a core unit of analysis from a communicative theory perspective. In this paper we present the results of research with the purpose to study process modelling from a communicative quality perspective in order to contribute to the understanding of the practice of information systems development. We believe that in order to achieve the overall goal of process modelling, the seminar organisation must have the ability to continuously redesign the seminar agenda based on what happens during the seminar. By agenda we mean issues to focus on as well as actions to perform during the seminar in order to arrive at a certain goal (see section 3.3).

The purpose of this paper is to investigate the agenda concept and its use during process modelling seminars. We will put a special focus on the issue of managing as well as continuously changing the agenda. With communication theory as a perspective we will analyse this approach and conceptualise the notion of agenda setting.

In section 2 we present the research approach used in this study. Section 3 consists of the theoretical framework applied in the research. This framework includes a view on seminar-based process modelling founded on a communicative approach. Section 4 presents the business reconstruction case in this study as well as the three scenarios that is used to describe different aspects of managing the agenda during the seminar. This section also includes a comparison of the scenarios and a base for the analysis of the concept of dynamic agenda setting that is presented in section 5. In section 6 the conclusion of the study is presented as well as a discussion of the value with the study. In this section suggestion for further research is also discussed.

## **2 Research approach**

The empirical basis for this paper has been derived from an action research project. Action research was introduced in the 1940s by social psychologist Kurt Lewin (1890-1947), and the concept has a variety of definitions (c.f. Argyris et al 1985; Checkland 1991; Cronholm & Goldkuhl 2003). It can be viewed as a collaborative process between researcher and actors “in the field” which includes a dialog-based and deliberate process of reflective learning (Argyris et al 1985). Action research could be viewed as a kind of qualitative social research

(Checkland 1991) and this type of research often has the purpose of identifying and conceptualising categories and theories (Strauss & Corbin 1998; Bryman 2001).

The research reported in this paper has been performed following an ‘abductive’ (Hanson 1958) and iterative strategy (Walsham 1995). Through this approach we have been able to see patterns and reveal deep structures as a result of shifting between categories of empirical findings and external theories about communication (Alvesson & Sköldbberg 2000). Altering amongst different grounding principles has been proven valid in research with ambition to generate concepts and theories for the information systems development field (see Lind & Goldkuhl 2002; Goldkuhl & Cronholm 2003).

Collected data from the seminars are documented in the form of video-recordings, sound recordings, log books as well as evolving business models. They represent a rich amount of data about how to conduct seminar-based process modelling with communication quality and the initial results of this work are reported in this article. During the analysis of empirical data the task of managing as well as continuously setting the agenda has governed the choice of scenarios to use as the basis for conceptualisation. We have during the analysis used analytic techniques from grounded theory (Strauss & Corbin 1998) and action analysis (Goldkuhl 2003). These techniques have been used since the empirical material consists of recordings of conversations and because our purpose has been to generate concepts to understand how the process modelling seminar is managed. The analytic techniques are thus suitable when adopting the research strategy formerly presented.

### **3 Theoretical framework**

#### **3.1 The preparation of process modelling sessions**

Different co-operation procedures can be used during process modelling. A co-operation procedure determines how different participants interact and co-operate. Lind & Seigerroth (2003) have identified the potential in seminar-based co-operation during investigative work. The authors emphasise the importance of achieving an efficient knowledge sharing process during seminar-based process modelling. During seminar-based process modelling people contribute to and learn from each other. Expected effects are thus more knowledgeable and actable producers in the organisation. The selection of participants is therefore a crucial task (ibid).

A process modelling seminar needs to be prepared. The seminar can be used as a *practice* (c.f. e.g. Goldkuhl & Röstlinger 2003; Goldkuhl et al 2001). Practices are governed by certain pre-conditions. Essential pre-conditions for the process modelling are the assignment, the basis and the instruments.

Normally seminar-based process modelling is performed in several sessions. It is, however, important to determine an overall goal for the sessions. When performing *seminar*-based process modelling one part of this overall goal is to reach a common and mutual understanding of the business practice. This overall goal is then broken down into several subgoals that each modelling session needs to be governed by. The subgoals form the topics to focus on and what actions to take during the process modelling seminar. These goals with appurtenant plans form the assignment which needs to be agreed upon. Each seminar thus has an agenda related to the goals of the assignment. An agenda is conceived as a plan of future actions, when these action should be performed, and what topics to focus on during a certain seminar. Agenda stands for a list of items of business to be considered at a meeting, a series

of things to be done; a plan of activities and action<sup>1</sup>. In our view this means that an agenda is bound to a particular process modelling seminar and indicates which actions, topics and discourses should take place during the seminar.

A highly important task is also the choice of which participants to involve in the seminar. According to Lind & Seigerroth (2003) the participants in the seminar should represent a cross section of the organisation, both horizontally and vertically. This is important in order to ensure that the team represents or holds as much knowledge as possible about the organisation. Process modelling is a learning process (ibid), which means that the outcome of a successful process modelling will be more knowledgeable participants. It is therefore crucial for a successful choice to balance between the ones who know and the ones who need to know.

Another basis for a process modelling session consists of business models created earlier (ibid). In order to facilitate a multi-driven modelling approach there is a need to use existing business models for generation and for verification. Results from one process modelling seminar thus form the basis for succeeding process modelling seminars. Other important pre-conditions are instruments such as generative questions as well as facilities for making drawings and sketches.

During the interaction between different participants of the seminar the original plan of activities and topics to focus on might become refined. Examples of foundations for making such refinements are:

- Proposals concerning topics to focus on might turn up / evolve
- Proposals of joint activities might turn up / evolve
- During a discourse we might discover that we need another one

These foundations imply that there will be the need of standpoints being declared during the process modelling sessions. This relates to the concept of situated act according to Suchman (1994). All actions cannot be planned in advance (c.f. Suchman 1987). One reason for why this is not possible is the multi-driven modelling approach. Theories to use and methods to use might be possible to plan in advance but the situation we investigate and the evolving relationships between the participants in the seminar cannot be anticipated. The consequence of this is that the seminar leader(s) primarily needs to have the ability to handle the change of the original plan and the topics to focus on the basis of a mutual agreement. Other participants need to accept the responsibility of participating in such a process modelling seminar. Let us investigate how such aspects have been treated in this business modelling case.

### **3.2 Multi-driven process modelling**

During process modelling different issues are focused on. So what enables the modeller to state particular questions? In a modelling situation the analyst is guided by methods, theories and the business context. Such balancing between these factors (methods, theories and the studied situation) means that the process modelling is multi-driven. The factors guide the modellers concerning the aspects (topics) they should direct their attention to in a modelling situation. These aspects are the propositional content of the question and the answer.

A method consists, among other things, of questions to ask in the modelling situation as well as notational rules for expressing the answers (Goldkuhl et al, 1997). The answers

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<sup>1</sup> The Concise Oxford Dictionary of Current English, Clarendon Press, Oxford.

documented in business models form the basis for reaching mutual agreements. These business models are continuously being refined during process modelling sessions.

The method's character is prescriptive (ibid). A method tells you what to do in different situations in order to arrive at certain goals. All methods build on some implicit or explicit *perspective* (way of thinking). A perspective includes values, principles and categories (with definitions), which are more fully expressed in the method and its components. The perspective can be based (grounded) on theories. Observe that the perspective can be contained in the method implicitly without being articulated explicitly. Parts of the perspective can be present in the method in a rather inherent way. A perspective is the conceptual basis of a method and represents its underlying values.

Sometimes the theory might be the main driving force (Dietz et al, 1998). In such a situation, the analyst is utilizing the generative power of the theory to put questions and the modelling method is perhaps only used in a rather free fashion. In another situation, the modelling method might be the main driving force for the analyst. In such a case the analyst is using the modelling capabilities of the method as the main question generator. The notational and procedural rules of the method are followed rather strictly and the influence of theory (outside the method) might be low (ibid).

In business modelling, an analyst should not be guided by his preliminary knowledge of theories and methods alone. The business situation being studied must be an important stimulus for generating questions. We can talk about the business context as one driving force for the modelling. If this is the main driving force in modelling, we call it situation-driven modelling. This means that theory and method have little impact on the modelling result.

The goal of seminar-based process modelling is to reach a thorough understanding and a mutual agreement concerning the business-interaction patterns studied. In order to reach such a goal Lind & Seigerroth (2003) argue that process modelling needs to be divided into interactional collection (generation of data) and interactional validation (verification of data).

### **3.3 A communicative perspective on seminar-based process modelling**

Current IS research advocates a need to reconstruct business processes when conducting design and evaluation of information systems (e.g. Nilsson et al 1999). The reconstruction of a business process aims at arriving at a shared understanding of how such an existing process is being performed. This includes making explicit different conceptions, action patterns, rules and business language (Goldkuhl & Lyytinen, 1984). It is required that tacit knowledge (Polanyi, 1966) is articulated. The participants of the reconstruction process, e.g. representatives of the studied organisation and analysts, try to convert know-how to know-that. Know-how means the representatives' ability to talk, understand and act in social situations (Goldkuhl & Lyytinen, 1984). Know-that means the explicit knowledge of how users can talk, understand and act (Lind & Goldkuhl, 1998). Process modelling is about stating questions and documenting answers about business process-related issues. The concept of business processes has been conceptualised from different stances (Keen & Knapp, 1996). Two main conflicting perspectives on business processes can be identified; the transformative (Hammer, 1990) vs. the communicative view (Winograd & Flores, 1986). However, in order to conceive a comprehensive view of an organisation, one needs to take communicative as well as material actions into consideration when conducting process modelling (Lind & Goldkuhl 2001).

Such a view can be derived from socio-instrumental pragmatism (Goldkuhl 2002). Its foundation is social action (ibid). Social actions are communicative and/or material and come in pairs (Lind & Goldkuhl 2001). The basis for grouping social actions into an action pair is that one social action functions as an initiative for another social action, which will have the function of a response. Action pairs are patterns of initiatives and responses. Action pairs can also be labelled as adjacency pairs in communication theory and conversational analysis<sup>2</sup> (e.g. Sacks, 1992). An adjacency pair forms an ordered pair of utterances (a first and a second) produced by different speakers in a conversation<sup>3</sup>. Action pairs constitute action patterns (Goldkuhl 2003).

Goldkuhl (2003) describes action patterns as business interaction patterns and highlights a set of important principles when performing process modelling from a communicative perspective. To conduct conversation is to perform linguistic actions and these actions are performed in a social interaction which implies that they are related to each other as initiatives and responses (Linell 1998). This idea of relating action pairs is founded in the concept of turn-taking an essential notion in conversational analysis (Sacks 1992). Turn-taking is about different actors taking turns in acting towards each other. Turn-taking in business processes is a notion that is needed for explaining the logic of action patterns in an organisational setting. Turn-taking is an important part in the concept of next-speaker selection (Sacks, 1992; Levinson, 1983). This concept is about selecting to whom to direct the conversation. Social interaction should be conceived as entailing both giving and taking. The issues discussed in the conversation, i.e. the propositional content, lead to a joint construction, a co-construction, of reality (Linell 1998). According to this concept, no part of reality is ever the product of one person alone; see for example the reconstruction of know-how leading to know-that in a process-modelling dialogue. In this dialogue the issues we talk about can also be referred to as topics. Many times the actors shift between different topics during a conversation (Linell 1998)<sup>4</sup>. The topic is made up of the issues talked about which according to speech-act theory are referred to as the propositional content (Austin 1962; Searle 1965; Habermas 1984).

The object studied during process modelling should thus be business interaction patterns constituted by inter-related social actions (Goldkuhl 2003). The same notion of social action can be applied to explain related seminar-based process modelling actions. Goldkuhl (ibid) proposes the use of action analysis as means for revealing constituents of several actions (precondition, performer, action, result and addressees) related to each other in adjacency pairs.

Adopting a social action perspective on seminar-based process modelling means that one can study the roles acting towards each other, the action patterns including the turn-taking and the next-speaker selection, joint construction as well as the topicalisation. Process modelling is thus meta-communication<sup>5</sup>.

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<sup>2</sup> According to Bryman (2001) conversation analysis (CA) has its roots in ethnomethodology and is the fine-grained analysis of talk as it occurs in interaction in naturally occurring situations. The talk is recorded so that a detailed analyses can be carried out. These analyses are concerned with uncovering the underlying structures of talk in interaction and as such with the achievement of order through interaction.

<sup>3</sup> According to Levinson (1982) conversation is not a structural product in the same way that a sentence is, it is according to him rather the outcome of interaction between two or more independent, goal-directed individuals, with often divergent interests.

<sup>4</sup> This has been referred to as topicalisation according to SAMPO (Auramäki et al, 1988) and conversational analysis according to COMMODIOUS (Holm & Ljungberg, 1996).

<sup>5</sup> Meta and object is two concepts that are used in language philosophy to differentiate diverse forms of communication and language levels. On the meta level a meta language is used to understand, develop and govern the object level (Martinich 2001).

## **4 A business reconstruction case: a description of the process modelling scene**

The mail-order (distance selling) tradition in Sweden has been well established for about half a decade. Last year a project was initiated with a joint working group consisting of members from different distance selling companies, researchers and participants from the Swedish distance selling association. This working group studies IT and business development in a distance selling cluster (c.f. Edström et al, 2004; Lind et al 2003). This project was organised as an action oriented case study of three distance-selling companies. For the purpose in this paper only one case study has been analysed.

### **4.1 Managing seminar-based process modelling in practice: towards a concept of dynamic agenda setting**

The case study in question was divided into three process reconstruction seminars with eight actors from the distance selling firm and a process modelling team with three process modellers. Departments such as IT, procurement, customer service, warehouse and marketing were present at the seminars. The first seminar was aimed at describing the work practice setting with the purpose of creating a common understanding of the specific company. The ambition was also to describe the collaboration that exists in the business between different roles. During the second and third seminar the action logic that constitutes the business was reconstructed and modelled. Through this reconstruction a hypothesis concerning the logic of the business was unfolded. From this new understanding the different business processes were identified. The “raw” material that was produced during the seminars was revised and adapted between the different seminars. The ambition was to create conditions for improvement in the reconstruction process. In order to be able to do this work efficiently and to ensure that this elaboration was grounded the seminars were documented on video (three cameras), audio, and in written notes. The “in-between” work was presented to the participants at the following seminars. It was used as a base to create a meaningful discussion about the business, problems and question marks that had been identified during the reflective analysis. Through this procedure a verified reconstruction of the particular distance selling firm evolved.

In order to investigate essential managing abilities during seminar-based process modelling we have identified three central categories in relation to managing the seminar agenda: *sustaining*, *expanding* and *limiting* the agenda. These three central categories have been identified through the use of action analysis of the communication between actors in the process modelling seminars. The following sections present three scenarios in which each of the three categories is presented. The presentation of the scenarios is the basis for further elaboration of the concept of dynamic agenda setting (see section 5).

### **4.2 Scenario 1: Sustaining the seminar agenda**

*The verification of the action model describing the action logic  
when customers place orders via the internet shop*

As described above the first seminar was aimed at investigating the work practice with the ambition to describe the collaboration that exists in the business between different roles. During the second and third seminar the activities that constituted the business in the distance selling firm were reconstructed in the form of different models. These were then verified and validated with the purpose to reach a common agreement about the business logic in the firm between the business representatives.

In this scenario of the seminar the seminar leader validates the action models that were generated in the previous seminar by explaining the action logic of the business to the seminar participants with the help of the models. The purpose of this procedure is to receive reactions from the business representatives indicating that the models either have faults or are a valid description of the action logic in the business.

During description of the action model which explains the action of the customer placing an order through the internet shop, one of the participants (customer representative 1) objects to the action logic described in the model. She argues that the model does not explain the actions carried out when customers place orders via the internet shop correctly. The objection of customer representative 1 is however opposed by another participant (IT department representative) and a discussion evolves concerning the action logic when a customer places an order using the internet shop. In order to resolve this situation the seminar leader formulates a hypothesis about the action logic based on that of another variant of placing orders, and he tests it on the participants. The hypothesis is, however, turned down by the customer representative 1 but it initiates a thorough description from her concerning the actions through which the customer places orders via the internet shop. New information arises of how the action logic in this business interaction pattern is composed. This new information prompts another actor in the process modelling team, process modeller 1, to state that the action model must be redesigned based on this new information. Process modeller 1 then asks the company representatives if the process modelling team could test the logic in reality in the time between this seminar and the following by posing as a customer who places an order via the internet shop. The proposals for improving the model and the suggested test of the system by the modelling team are agreed upon by the participants and the work to verify the other action models prolonged.

We have identified and described seven main actions in this scenario. For each of these we have specified eight units of analysis: precondition, performer, action, addressees, results, topic, type of discourse and changes to the agenda. The three last units of analysis have been identified as important complementary aspects, in relation to action analysis according to Goldkuhl (2003), of actions when analysing agenda setting in process modelling. Note that the result from one action forms the basis for the following action. The actions are thus related to each other as conversations. The analysis of the different actions in this scenario is documented in table 1.

#	Topic	Precondition	Performer: Action	Addressees	Results	Type of discourse	Changes in the agenda
1	<i>the action logic when customers places orders via the internet shop</i>	Action models; Process modelling method; Process modelling theory; Agenda for the session	Seminar leader: describes the action logic through the action models	Seminar participants	Knowledge about the current status in the action models	Verification	None: the agenda is sustained.
2		Observation of the description of the action logic; Accurate knowledge about the action logic	Customer representative 1: oppose the description of the action logic	Seminar leader The participants	Knowledge which indicates faults in the action model	Verification	None: the agenda is sustained.
3		Observation of the opposition; Understanding of the action logic in another process variant	Seminar leader: presents a hypothesis on the action logic	Customer representative 1 The participants	An testable idea about the action logic	Verification	None: the agenda is sustained.
4		Observation of the hypothesis; Accurate knowledge about the action logic	Customer representative 1 and IT representative: reject the hypothesis	Seminar leader The participants	Initiation of a thorough description of the action logic	Verification	None: the agenda is sustained.
5		Accurate knowledge about the action logic	Customer representative 1: thorough description of the action logic	Seminar leader The participants	New information about the action logic	Verification	None: the agenda is sustained.
6		New information about the action logic	Process modeller 1: suggestion on future elaboration and test.	Seminar leader The participants	Prerequisites for an agreement on elaboration of the action model and verification through test	Verification	None: the agenda is sustained.
7		Prerequisites for an agreement on elaboration of the action model and verification through test	Process modeller 1: Suggestion on agreement	Process modeller 1 Seminar leader The participants	An agreement is reached	Agreement	None: the agenda is sustained and the verification continues.

**Table 1: Action analysis of scenario 1**

### 4.3 Scenario 2: Expanding the seminar agenda

*The verification of the action model describing the action logic when orders are transferred to the warehouse*

This second scenario takes place at the same seminar as above, but later in time. The structure of the verification is the same. The seminar leader describes the action logic of the business based on the action models. His purpose is to validate the action model. By this he wanted the participants to either indicate faults in the model or approve it. The specific action model in this scenario explains the action logic when orders are transferred from the call-center to the warehouse via the IT-system. During this presentation two of the participants, the warehouse representative and the IT representative, objected to the explanation. They pointed out that the demonstrated action logic does not correspond to reality. The IT representative starts instead to talk about how the accurate action logic for this procedure is structured. Based on her description, process modeller 1 identifies and indicates two imperfections in the action model. As a consequence the focus of the seminar changes from pure validation (verification) to concern additional action modelling (generation). From this moment the process modeller 1 leads the seminar by asking questions based on the description. The purpose seems to be to create a deeper understanding of the procedure. The answers that he received resulted in additional action logic that could be visualised and documented by the “actual” seminar

leader. During this additional action modelling work customer representative 1 suddenly interrupts the dialog by stating a direct proposal for business improvement, which the representatives could bring back to the firm for immediately changes in the information system. The other business representatives comply with her suggestion and process modeller 1 documents the proposal on the whiteboard. At the same time he, process modeller 1, asks the participants if the additional action modelling provides a good explanation on the logic in which customer orders are transferred from call-center to warehouse. They approve to the logic and the leadership of the seminar is returned to the “actual” seminar leader who continues with by initiating the verification of another action diagram.

In this second scenario we have identified and described eight main actions. Following the same structure as in section 4.2 we have specified eight units of analysis for each of them. The analysis is documented in table 2.

#	Topic	Precondition	Performer: Action	Addressees	Results	Type of discourse	Changes in the agenda
1	<i>the action logic when orders are transferred to the warehouse</i>	Action models; Process modelling method; Process modelling theory; Agenda for the session.	Seminar leader: describes the action logic through the action models	Seminar participants	Knowledge about the current status in the action models	Verification	None: the agenda is sustained.
2		Observation of the description of the action logic; Accurate knowledge about the action logic	Warehouse representative and the IT representative: oppose the description of the action logic	Seminar leader Seminar participants	Knowledge which indicates that the action model is inaccurate	Verification	None: the agenda is sustained.
3		Accurate knowledge about the action logic	IT representative: describes the procedure	Seminar leader The participants	Further understanding as well as new question	Verification	None: the agenda is sustained.
4		New questions about the procedure	Process modeller 1: identifies faults in the current action model and ask new question	The participants	Initiation of a thorough analysis of the action logic in this procedure	Generation	The agenda is expanded
5			The warehouse representative answers: thorough description of the action logic The seminar leader: models the action logic	Process modeller 1 The participants	Additional understanding about the action logic is documented	Generation	The agenda is further expanded
6		The new information about the action logic;	Customer representative: Identifies a need for improvement.	The participants		Capture improvements	The agenda is further expanded
7		The captured improvement	Process modeller 1: writes the proposal for the improvement on the whiteboard.	The participants	Prerequisites for agreement	Capture improvements	None: the agenda is sustained.
8		Prerequisites for an agreement on the additional action modelling and the proposal for change	Process modeller 1: Suggestion on agreement	Seminar leader The participants	An agreement is reached.	Agreement	The agenda is no longer expanded. The verification continues.

**Table 2: Action analysis of scenario 2**

#### 4.4 Scenario 3: Restricting the seminar agenda

*The generation of action models describing 1. the last actions of the procurement of garments and 2. the design of the initial layout of the mail-order catalogue*

This scenario focuses on the generation discourse; e.g. the reconstruction of the business interaction patterns in the distance selling company. It took place during the second of the three process modelling seminars. The goal was to elicit a picture of the business interaction patterns in the firm by reconstructing the action logic. This reconstruction was based on the results from the first modelling seminar: a work practice definition and a co-operative analysis. During this specific scenario the representatives were asked questions about how garments are procured and the mail-order catalogue is designed.

In the beginning of *this scenario* asks the seminar leader questions concerning how garments are procured and delivered from suppliers to the distance selling company. The answers results in the modelling of the last actions in the topic “procurement and delivering of garments”. The result of the modelling (generation) prompts the seminar leader to explicitly conclude that “now you have products in your warehouse but how do you market it to the customer?” This question created a need in the group to model the design of the primary market channel for the company: the mail order catalogue. An important aspect in this modelling that the group identifies is to recognize how the design of the catalogue is linked to the procurement process modelled previously.

The design of the catalogue is divided into several phases (topics) and in this scenario the first phase, “the design of the initial layout of the mail-order catalogue”, is focused. The seminar leader begins the reconstruction of this phase by preparing the modelling instrument and he then starts asking questions about the action logic. The procurement representative 1 (with support from procurement representative 2 and the market representative) answers these questions through a conversation, providing a large amount of information about the business logic when a catalogue is designed.

The conversation results in that a new action model is sketched and that previous models, projected on the wall of the seminar room, are enhanced. In order to structure the dialog the procurement representative 1 used an explicit model that describes the process. This process model is an outline of how the mail-order catalogue is designed from the procurement perspective. The seminar leader now stops the questioning and instead turns toward the process modeller 1 and asks him if he could use this process outline when modelling this topic *after* the seminar. The process modeller 1 accepts this proposal and the seminar group as a whole agrees to discard this topic on the seminar agenda and instead turn to the next topic. After this agreement is reached, the action modelling session continues on the new topic.

In this third scenario we have identified and described seven main actions that cross three different topics when the action logic in the business is reconstructed. Following the same structure of analysis as in the two previous scenarios we have for each of these main actions specified eight units of analysis. The analysis of the different actions in this scenario is documented in table 3.

#	Topic	Precondition	Performer: Action	Addressees	Results	Type of discourse	Changes in the agenda
1	<i>The action logic when garments is procured</i>	Previous results from the process modelling	Seminar leader: asks questions about how garments are being procured	Procurement representative 1 and 2	Questions	Generation	None: the agenda is sustained.
2		Questions and knowledge about the business	Procurement representative 1, 2 and market representative: answers the questions	Seminar leader The participants	Knowledge about how garments are procured. New and/or refined action models. A need to model another topic.	Generation	None: the agenda is sustained.
3		Action models that covers the topic	Seminar leader: Suggest an agreement to model another topic	All participants	An agreement is reached	Agreement	None: the agenda is sustained.
4	<i>The action logic when the initial catalogue layout is produced</i>	Previous results from the process modelling; Process modelling method; Process modelling theory	Seminar leader: prepares the modelling and start asking questions	The participants	Questions	Generation	None: the agenda is sustained.
5		Questions, knowledge about the business, the action model <i>and</i> a process model over the practice	Procurement 1: answers the questions by explicitly using the process model	Seminar leader The participants	Knowledge about how the first layout of the catalogue is procured. New and/or refined action models. Prerequisites for restricting the seminar agenda.	Generation	None: the agenda is sustained.
6		The process model; Seminar agenda; Process modelling method; Process modelling theory	Seminar leader: Suggests an agreement to limit the seminar agenda and continue with the next topic.	Process modeller 1 The participants	Based on the process model the action logic an agreement is reached top skip the modelling during the seminar and instead continue to the next topic	Agreement	The agenda is restricted
7	<i>The action logic when the catalogue is finalized</i>	Previous results from the process modelling; Process modelling method; Process modelling theory	Seminar leader: prepares the modelling and start asking questions	The participants	Questions	Generation	None: the agenda is sustained.

**Table 3: Action analysis of the third scenario**

#### 4.5 A comparison of the scenarios

In this section we compare the action analysis presented above in regard to if and how the seminar agenda is changed or not changed during the process modelling seminar. This section results in a base for elaborating on the concept of dynamic agenda setting. The result of the elaboration is presented in chapter 5.

The *first scenario* illustrates that the seminar agenda could be sustained in spite of the fact that the verification initiated elaborate discussions. In this scenario the seminar group concludes that the action model that is being verified does not comply with the action logic in reality. However the seminar group chose not to alter the agenda to include further action modelling (generation). The agenda that states that the seminar should focus on verification is

sustained (maintained<sup>6</sup>). In this case the agreement to sustain the agenda was on the other hand based on consequences for the future. In order to sustain the agenda keywords were noted which formed the basis for redesign of the action model after the seminar. It also was agreed upon that the procedure of placing an order via the internet shop should be tested by the modelling team in order for the process modeller to understand the action logic properly.

The *second scenario* resulted in the conclusion that the agenda should be changed, i.e. not sustained as described in the first scenario. In this second scenario the agenda was expanded (increased in size, volume, quantity, or scope of<sup>7</sup>). During the conversation in this scenario the dialog moved from the verification discourse to the modelling discourse and then to the 'capture improvements' discourse. The agenda was expanded to include not only planned actions from the verification discourse but also unplanned actions from two mentioned discourses. However the scenario also illustrates that the expansion of the agenda could be characterised as temporary. The expansion is halted when the accuracy in the action model being verified has reached an acceptable level and when a suggestion for improvement is captured. The temporary expansion is concluded with an agreement to continue the work with verification (sustain the original agenda).

The *third scenario* differs on two aspects from the previous two scenarios. Firstly, the scenario shows that the conversation during the process modelling can alter between different topics in a dynamic way with the consequence that a process modelling session where action logic is being reconstructed could be characterised as an endeavour that can rapidly become complex. Secondly, the scenario also illustrates that the agenda for the session can be restricted (limited and reduced in size)<sup>8</sup>. As described in the scenario the procurement representative answered the questions from the process modeller based on an explicit description of the process to design an initial layout for the mail-order catalogue. The possibility for the process modellers to retain this explicit description made it possible to reduce the planned agenda and speed up the modelling conversation about this specific business topic. The planned seminar agenda was restricted here, but with the consequence that the action modelling was postponed to the future. The agreement to move on was based on the agreement that the modelling task was to be postponed to a future occasion, and it had therefore an effect on future agendas and the actors responsible for these future acts.

## **5 The concept of dynamic agenda setting in process modelling seminars**

### **5.1 The constituents of the agenda**

Based on the analysis above it can be identified that the agenda for process modelling should be conceived as consisting of several parts. First of all an agenda is about the future. An agenda consists of *future actions* to perform. This is the illocutionary force (Searle 1965) of the agenda. The concept of action in process modelling situations should however be considered thoroughly. Actions in this sense are two-dimensional. In the tables above we have depicted four discourses. These are generation, verification, agreement and capturing of improvements. These four discourses are essential for process modelling in order to arrive at agreed and verified business models. During the process modelling seminars different procedures are used, however, such as action modelling, process modelling, co-operation analysis and business definition. These procedures are also different actions. The two dimensions concerning actions are thus discourses and procedures.

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<sup>6</sup> The American Heritage® Dictionary of the English Language

<sup>7</sup> The American Heritage® Dictionary of the English Language

<sup>8</sup> Cambridge International Dictionary of English

The propositional content (Searle 1965) of the agenda is thus actions. The agenda however consists of more propositional content. It can also be acknowledged that the agenda covers *different topics*. Examples of such topics are procurement of garments, forwarding of customer orders to the warehouse, internet-shop etc. The theory driving the modelling session covers different topics, i.e. covers different aspects of the business processes. It can however be acknowledged that the actual situation might control whether attention is directed towards a particular topic. Since the agenda consists of future actions and topics the agenda also covers the ordering of actions and topics, i.e. *when* to perform the actions and when to focus on the topics.

An agenda is bound to certain roles. The seminar is to be perceived as one role. The participants in the seminar, however, have other agendas. We will therefore always have *multiple overlapping agendas*, both based on the task that the agenda covers and that different people (roles) have their own agendas. One seminar is often a delimited part of a larger task (e.g. a project), which means that one agenda handles parts of the total assignment. It is also correct to say that one seminar has one agenda, since a seminar can be regarded as an organisational constellation consisting of people acting on behalf of the seminar (c.f. Ahrne, 1994). One agenda is distinguished from another agenda based on the role(s) related to the agenda.

## **5.2 Expanding, restricting and sustaining the agenda**

By using some of the terms with which Strauss & Corbin (1998) illustrated what constitutes a theory we elaborate in this section on what constitutes expand, sustain and restrict in relation to agenda setting. The terms that we use are categories, properties and dimensions.

From section 5.1 could be concluded that the main category in question is *agenda* and one subcategory to this main category is agenda setting. The empirical studies of the three seminars illustrates that agenda setting can have different properties; e.g. making the agenda setting dynamic. From the scenarios described above and the comparison of the scenarios it can be seen that agenda setting could be *characterised* as expanding, sustaining or restricting the agenda during a process modelling seminar.

If *the agenda is expanded* then a number of unplanned actions, not intended in advanced, from other discourses and/or a number of topics are added to the seminar agenda. An important *dimension* identified from the empirical case in relation to this property is that the expansion can be *temporary*; e.g. the move from the planned actions and the intended discourse could be limited in time and consequently the work after the temporary enlargement returns to the planned agenda. The empirical studies today does not however valid the anti-these of the temporary expansion of agenda, but rationally elaborated there might be a situation when the expansion of seminar agenda could be *constant*.

If *the agenda is restricted* then a number of planned actions from a certain discourse and/or a number of topics are left out of the agenda. An important *dimension* identified in the empirical case where the seminar agenda is restricted is that the restriction could imply *effects on the future*. It can create or influence forthcoming actions that are already planned and thus it has also effects on responsible actor's agendas; e.g. if actions are deleted from the agenda governing the specific seminar these actions may be postponed to events in the future. As discussed in relation to the expansion of the agenda the opposite of this dimension is not confirmed by the current empirical findings. However, rational elaboration suggests the

possibility of actions or topics on the agenda that, when restricted, do not inflict effects on the future. These restricted actions or topics are consequently totally removed from the process modelling assignment.

If *the agenda is sustained* then no unplanned discourse and/or topic is added to the seminar agenda. Neither are any planned discourses and/or topics removed from the agenda. An important *dimension* found in relation to the empirical case is that the sustaining of the agenda could, in a similar way as if the agenda were reduced (see above), impose *effects on the future* or have *no effects on the future*.

### **5.3 Coming to an agreement of the agenda**

We have observed that when the agenda is revised the agenda is agreed to in different ways. There is a need to distinguish between who puts forward the initiative of revising the agenda and who agrees. It is also important to acknowledge that the agenda can develop evolutionarily as well as process-sensitively. The evolutionary development of the agenda is however hard to track. From the application we can however observe some diversity in the process-sensitive agreement upon and revision of the agenda:

- revision of the agenda is made by the seminar leader himself without anchoring the revision in the seminar group
- the seminar leader puts forward an initiative to revise the agenda and anchors that in the seminar group
- some participant in the seminar group puts forward an initiative to revise the agenda and communicates that to the seminar group

Our belief is that major revisions need to be anchored in the group. In relation to Linell (1998) we will argue that the group strives to create a joint construction on what consequences the modelling work has on the agenda. There is a need to arrive at a joint agreement. A revision is often based on the need to know more, i.e. answering particular questions which have not been anticipated (concerning actions and topics) during the preparations. The agreement of the agenda is meta-communication.

### **5.4 Dynamic agenda setting in process modelling**

As shown in this paper there is a need to regard the agenda for the seminar as dynamic. It needs to be revised continuously in order to ensure communication quality in the process modelling and arrive at agreed business models. In picture 1 we have indicated the need to shift between communication about the business processes and communication about the agenda ((meta)meta-communication) during the modelling seminars.

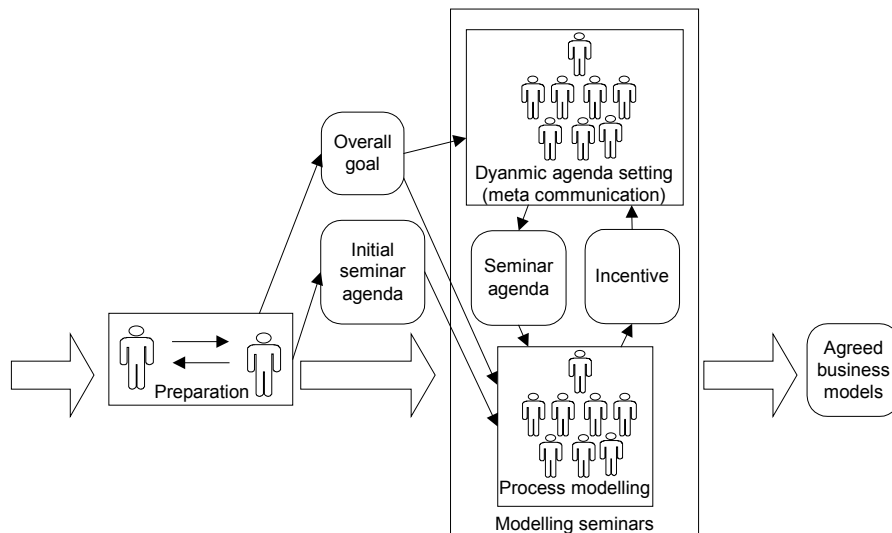


Figure 1: Process modelling and meta communication in modelling seminars

## 6 Conclusions and future research

Our view is that seminar-based process modelling needs to be performed in a way that ensures communication quality in order to be successful. Through the analysis of three scenarios we have shown that communication quality in the seminar is not exclusively based on the use of methods and theories for process modelling. Methods and theories for process modelling are important instruments for performing actions and focusing on relevant aspects. However, in this paper we argue that the process modeller must be sensitive to what is being said in the seminar. Participants have a need to describe and know more about situation-specific details. A process modelling seminar can thus not be planned completely in advance (e.g. Suchman 1987). The seminar agenda must in our view be managed and redesigned during the seminar. If the strategy is applied to completely plan the seminar in advance the seminar organisation in our view may slip into a ‘fictitious truth’ of what the seminar is about, how it should be conducted and what the goal is with the seminar. This could lead to a seminar that does not fulfil the goals with the business reconstruction and lead to an unorganised work practice which amongst other things may result in that the participants lose their trust in the purpose with process modelling during information systems development.

We have in this paper presented 1) the concept of agenda and 2) analysed the management of the agenda during the seminar. An agenda is viewed as a dynamic phenomenon and consists of actions to be accomplished and topics to focus on during the modelling seminar. Managing this dynamic agenda has been concluded as a highly collective task in which participants agree upon the content of the agenda. We claim that increasing the awareness of the dynamic agenda among the different participants will increase communication quality in process modelling. By such awareness people can act with a higher degree of responsibility for reaching the overall goal with the process modelling. The possibility of setting a dynamic agenda has implications on the utilisation of resources. By expanding the agenda by certain actions and topics we have to restrict the agenda concerning other actions and topics if one wants to stay within the same utilisation of resources. It is thus important to be aware of what actions and topics to restrict when expanding the agenda. It is however important to notice that the existence of a dynamic agenda does not exclude the advance planning of the seminar. We want instead to underline a need for both the construction and the upholding of the agenda during seminar-based process modelling.

Actions come with responsibility and are performed to achieve ends. During the research about setting the dynamic agenda we have been involved in another set of process modelling seminars. By acknowledging the existence of the agenda we claim that the quality in these seminars has been raised.

With the goal of exploring effective ways of managing process modelling seminar the dynamic agenda setting will be complemented by studying other important aspects such as group dynamics, facilitation (e.g. managing conflicts, evoking participation and creativity, encouraging mutual learning) and co-ordination. In this respect our empirical findings indicate that the task of the seminar leader seems to be essential. We argue that there is a potential for future research in studying how the notion of agenda setting is related to the notion of co-ordination and how a combined understanding of these two concepts could improve the communication quality in process modelling seminars. Another aspect of further research is how to understand and manage different power relations in the modelling seminar and what consequences these relations have on the quality of the process models and the group's ambition to achieve the overall goal. In this further research our ambition is to study the practice of seminar-based process modelling on a micro level. In other words to conduct fine-grained conversational analysis (c.f. Sacks 1992, Bryman 2001, Goldkuhl 2003) of the communication that occurs in the process modelling seminars. This in order to uncover the underlying logic in this practice and thus understand how micro-situations can result in organisational effects in the business that is being co-designed.

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