

Commentary paper: Methods and projects as action patterns for enhancing improvisation

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1 Introduction

Bansler & Havn (2003) report upon the need for a perspective to regard the “messy reality of systems development practice seriously and makes it possible to grasp its non-methodological, un-planned and fortuitous aspects”. They (ibid) base this conclusion upon observations from the development and use of a web-based tool (ProjectWeb) for enhancing collaboration and communication during project-based work. Bansler & Havn (ibid) criticise that prior and existing IS-research focus on methods as the dominating discourse about information systems development (ISD). They claim that “ISD is commonly viewed as a series of distinct projects each having a clear purpose and a well-defined beginning and end” (ibid). Thereby attention is not put enough on the improvisational characteristics of development.

One criticism that can be put upon the step taken by Bansler & Havn (ibid) is their conception of methods and projects. They put criticism upon the traditional way of regarding ISD without focusing on how to understand methods and projects. In this commentary paper I will put forward a notion of methods and projects, based on the notion of social action, to be used as a basis for discussing the highlights put forward by Bansler & Havn. This commentary paper will start out by putting forward the notion of social action. Then a discussion of how to understand methods and projects will follow. Bringing some issues forward by using these notions as well as issues brought up by Bansler & Havn will conclude the paper.

2 The notion of action

The core of systems development is human action. Human action can be material and/or communicative and be performed by the support of instruments. Human action is purposeful and meaningful behavioural. A human intervenes in the world in order to create some differences. An important distinction is made between the action result and the effects of the action (von Wright, 1971). The action result lies within the range of the actor and the action effects may arise as consequences outside the control of the actor. An action is performed in the present based on a history and aims for the future (Goldkuhl & Röstlinger, 2002). A social action is an action oriented towards other persons (Weber, 1978). The action can be a communicative act, e.g. someone saying something to another person, or material. Material actions counts as social actions if they are directed to other persons (Goldkuhl, 2001; Goldkuhl & Röstlinger, 2002). Actor relationships between the intervening actor and the recipient are established through social actions (Habermas, 1984). Human action is about making a difference, where such difference can have impact in the social world as well as in the material world.

A generic model of social action (see figure below) including both communicative and material acts is presented by Goldkuhl (2001) and Goldkuhl & Röstlinger (2002).

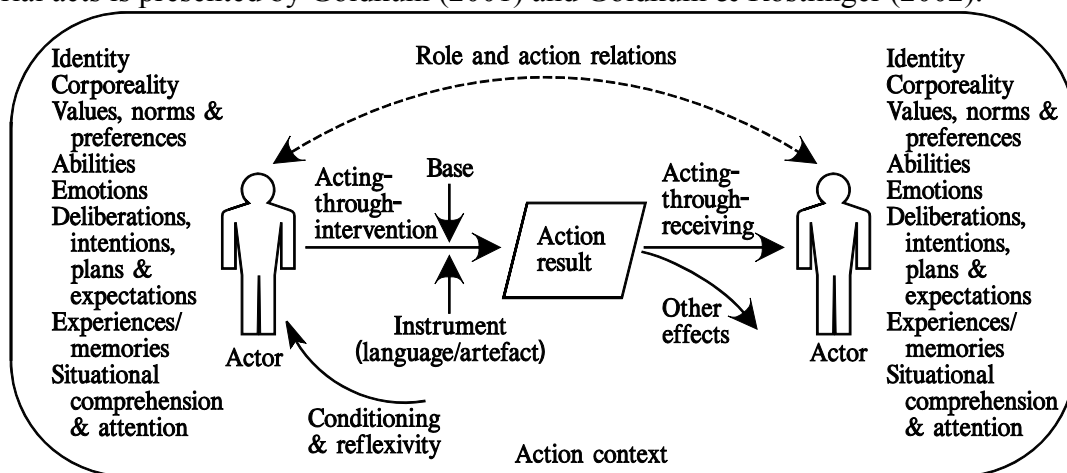


Figure 1: A generic model of social action (Goldkuhl & Röstlinger, 2002)

For the performance of most actions people need instruments of different kinds. The language is used as one instrument when performing business communicative acts. For performing material acts there is often a need for an external instrument, which then extends the ability of an actor (Goldkuhl & Röstlinger, 2002). One example of external instruments are methods.

3 Constituents of a method

How shall then a method be perceived? My perspective on methods is that they should help people in action, i.e. to extend the quality of results from action. Methods are *not* there to stop people thinking.

A method is guidelines for work. Its character is prescriptive. A method tells you what to do in different situations in order to reach certain goals. In information systems development there is usually a need to document different aspects. Many ISD methods therefore include representational guidelines; what often is called modelling techniques or notations, as well as procedural guidelines, i.e. how to work and what questions to ask (Goldkuhl et al, 1998). Many times the *procedure* and *notation* are tightly coupled together. General *concepts* are used when asking questions and are also parts of the semantics of the notation. The concepts can therefore be regarded as the glue between procedure and notation.

When there is a close link between *procedure*, *notation* and *concepts* we call this a *method component*. A method is often a composition of several method components to what is many times called a methodology (Avison & Fitzgerald, 1995). These different method components form together a structure, a *framework*. This includes the phase structure of the method.

All methods build on some implicit or explicit *perspective* (philosophy). A perspective includes values, principles and categories (with definitions), which are more fully expressed in the method and its method components. Observe that the perspective can be expressed in the method without being explicitly articulated. Parts of the perspective can be inherent in the method in a rather tacit way. A perspective is the conceptual and value basis of the method.

In this method theory a procedure includes questions. But who asks the question and who is answering? This aspect is labelled *co-operation procedures*; i.e. how different persons interact and co-operate when performing the method guided work. Co-operation procedures have to do with roles and division of work in the development process. It is conceptually important to distinguish between a procedure ("what question to ask") and the co-operation form ("who is asking the question"). A method component (with procedures) can be used within several different co-operation forms, as e.g. brainstorm sessions vs. interviews. The important parts of this method theory (Goldkuhl et al, 1998) are illustrated in figure 2.

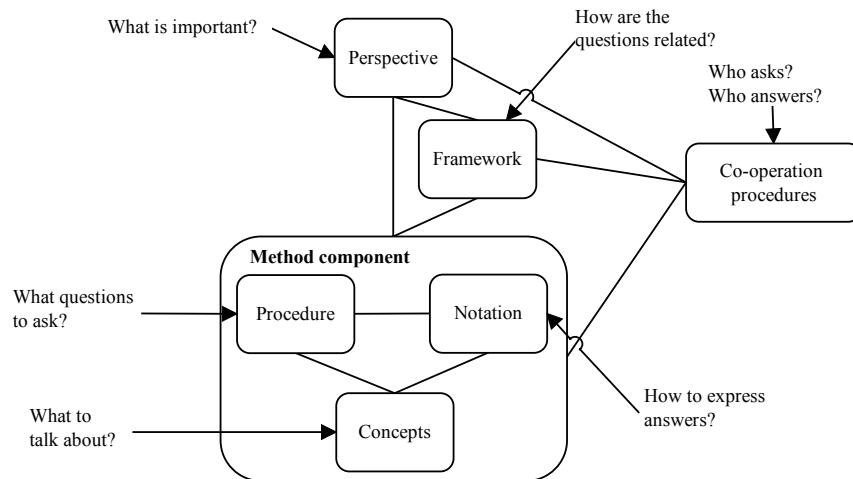


Figure 2: The method notion: Relationships between perspective - framework - method component - co-operation forms (Goldkuhl et al, 1998)

4 The notion of projects

A lot of work concerning system development is project-based since the task, i.e. the information system that is going to be developed, is often unique. There are also a lot of different competencies involved in order to manage the production of the resulting information system (Murch, 2001; Yeates & Caddle, 1996).

Based on the model of social action the aspects that are emphasised during projects are *actions* related to each other in order to produce *result*. Actions need to be related to each other in order to regard patterns used to produce results. Actions are related to each other by regarding the result of one action as the basis for the following action etc. A series of related actions constitute an action pattern.

A project can be characterised as having a clear start and end, where the starting point is some needs from the client that needs to be fulfilled. The end point of the project, which is the ultimate result, is when satisfaction has been reached for the producer and for the client. In order for a project to have a well defined start and end there is a need for clearly defined goal as well as clearly defined expected result. When formulating goals for a project as well as evaluating the project it is important that one reaches a balance between the quality of the result, the amount of resources that needs to be put in to reach the expected result and the calendar time.

The goals mentioned above needs to be agreed upon before the actual execution of the project. To fulfil a goal means making a difference. Actions are performed in order to make differences, i.e. fulfil goals. Within the scope of a project actions are performed in order to

arrive at fulfilled goals. Since goals need to be agreed upon and also evaluated, there is a need to arrange actions in patterns that facilitates such needs. Actions can therefore be grouped into phases as well as projects often are divided into a number of phases. A project is divided into the following phases:

- Agreement phase, which is oriented towards coming to an agreement concerning the goals to reach in the project.
- Execution phase, which is oriented towards co-ordination and performance of actions for refinement.
- Conclusion phase, which is oriented towards evaluation of the result in relation to the formulated agreement.

Within the language/action community (Goldkuhl et al, 1998; Goldkuhl et al, 1999) there are a number of theories and methods that regard the essentials of the organisation to be speech-acts issued by different actors. Studies have been made where work in organisations can be reduced to patterns consisting of inter-related speech-acts. Conversation-for-action (CFA) (Winograd & Flores, 1986) relates such speech-acts as request, promise, report on execution, and declaration. Such patterns of speech-act are very closely related to the action patterns used in project-based work. The first two speech-acts are about coming to an agreement (agreement phase), the latter two speech acts are about reporting and evaluating the execution (conclusion phase). In between the agreement and conclusion phase the result needs to be realised, i.e. the execution phase, based on the agreement.

There are a number of decision points in a project. Some of these are called milestones, which are states where decisions about the altered direction about the project can be made. Milestones and decision points are used to ensure that expected results are reached in the projects. By formulating milestones one will break down different types of goals for the project in different part results. Such part results both determine the action patterns as well as constitute the link between the framework of a method and action pattern constituting the project.

5 Discussion

By regarding the initiative put forward by Bansler & Havn (2003) one could interpret that there exists a *dualism* between improvisation and ISD as a formal process supported by methods and projects. I claim that there exists a *duality* between these two aspects. This means that improvisation is facilitated within the frame of a pre-determined structure of action.

Information systems development is often performed by a number of people. These people need to be co-ordinated, which is done through communication. Such co-ordination can be horizontal and vertical (Goldkuhl & Lind, 2002) and is based upon predicted action patterns. My belief is that improvisation can take place within the boundaries of pre-defined action patterns constituted within different projects and methods. Special requirements should however be put upon methods and projects in order to facilitate such possibility. There is a need for

1. regarding methods as constituted by method components in order to make situation adaptability possible
2. regarding the project definition constituted in the beginning of the project as possible to redefine

3. regarding action patterns advocated for, in project models and system development methods, as generic. These patterns are to be adapted to the special characteristics of the particular situation.

ISD of today advocates a need to improvise, but it needs to be done within the frame of a predefined action pattern, possible to redefine. Action patterns and methods are needed for helping a number of people working together thinking better and thereby arranging their work.

The perspective behind methods for ISD has historically been very implicit. This means that there have been few arguments for why certain procedures should be performed in many ISD methods. In order for the competent method user to become reflective about the use of methods such arguments need to be put forward. This is order to enhance deviation from pre-defined action patterns.

Another issue that should be brought forward in this context is the driving force (Dietz et al, 1998) behind investigative work. In a modelling situation, the analyst, can be guided by both method and theory. Sometimes the theory might be the main driving force. 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. On the other hand the business situation being studied must be one important stimulus for generating questions. The studied situation (the business context) is one driving force for the modelling. If this is the main driving force in modelling, it is called situation driven modelling. This is thus the case where theory and method have a low impact on the modelling result. The challenge of the future is however how the balance between the theory, the method and the situation as driving forces should be handled.

Methods used for ISD of today facilitate an iterative approach to development. Within such iterative development (such as Kruchten, 1998) two observations can be made. It is a way to successively decide what result to achieve. It is also a way to successively determine the cost of what to develop. Demands are thereby put upon project control models for facilitating such an iterative approach to development.

Even if there are a lot of things to be said about methods and projects as non-rigid structures for ISD it is important to also address the question of what demands to put upon the future methods and projects control models. Some aspects have been brought forward in this commentary paper, but a lot of work still exists in finding characteristics for provoking improvisation in action when being supported by methods and projects. I would like to strongly encourage Bansler & Havn (2003) to take the view of methods and projects brought forward in this paper for developing a duality for enhancing improvisation in (pre-defined) action patterns.

References

- Avison D E & Fitzgerald G (1995) *Information Systems Development. Methodologies, Techniques and Tools*, Mc Graw Hill, Berkshire, England
- Bansler J. P., Havn E. C. (2003) *Improvisation in Action: Making Sense of IS Development in Organizations, Action in Language, Organisations and Information Systems (ALOIS 2003)*, March 12-13, 2003, Linköping, Sweden

- Dietz J.L.G, Goldkuhl G., Lind M., Reijswoud V.E. van (1998): "The Communicative Paradigm for Business Modelling – A Research Agenda" i Goldkuhl G., Lind M., Seigerroth U. (Eds): Proceedings of the Third International Workshop – The Language Action Perspective on Communication Modelling. Jönköping International Business School
- Goldkuhl G. (2001) Communicative vs material actions: Instrumentality, sociality and comprehensibility, in Schoop M, Taylor J (Eds, 2001) Proceedings of the 6th Int Workshop on the Language Action Perspective (LAP2001), RWTH, Aachen
- Goldkuhl G., Lind M., Seigerroth U. (1998): "Method Integration: The Need for a Learning Perspective" i Magee J. N., Sommerville I. (Eds): *Special Issue of the IEE Proceedings - Software and Distributed Systems Engineering Journal, vol 145, no 4.* s 113-118
- Goldkuhl G., Lind M., Seigerroth, U. (Eds., 1998) *The Language Action Perspective on Communication Modelling*: Proceedings of the Third International Workshop (LAP'98), Jönköping International Business School
- Goldkuhl G., Lind M., Seigerroth, U., Ågerfalk P. (Eds., 1999) *The Language Action Perspective on Communication Modelling*: Proceedings of the Fourth International Workshop (LAP'99), Jönköping International Business School
- Goldkuhl G., Röstlinger A. (2002) Towards an integral understanding of organisations and information systems: Convergence of three theories, in *Proc of the 5th International Workshop on Organisational Semiotics*, Delft
- Habermas J. (1984) *The theory of communicative action 1, Reason and the rationalization of society*, Beacon Press
- Kruchten P. (1998): *The Rational Unified Process – An Introduction*, Addison-Wesley, Reading, Massachusetts
- Lind M., Goldkuhl G. (2002): Questioning two-role models or who bakes the pizza?, Accepted to The Seventh International Workshop on the Language-Action Perspective on Communication Modeling (LAP 2002), June 12-13 2002, Delft
- Murch R. (2001) *Project management – best practices for IT professionals*, Prentice Hall, Upper Saddle River
- Weber M. (1978) *Economy and society*. University of California Press, Berkeley
- Winograd T., Flores F. (1986): *Understanding Computers and Cognition: A New Foundation for Design*. Ablex, Norwood
- von Wright G. H. (1971) *Explanation and Understanding*, Roulledge&Kegan Paul, London
- Yeates D., Caddle J. (1996) *Project Management for Information Systems*, 2nd edition, Pearson Professional Limited