FLEXIBLE SENSE-MAKING

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Abstract

Decision support is sometimes structured a priori. That puts limits to further thinking and possible commitments, but we have transparency. Other times the converse, a superficial consensus procedure without a structure, is used. Then we have an increased risk for parochial or even corrupt decisions. So in management science we have a debate and my stand in this dilemma is that no reasonable synthesis may be produced without a simultaneous consideration of explicit structures and a mood of *making sense* of those. A balance has to be struck. For the rest I do not take side in the debate. I recognize that a structure may be produced early or late in a project. What I find important is that a structure appears at all, so that the *make sense* will refer to something visible. So that democracy and audit can have a chance.

This way of thinking creates freedom and varieties for control. The more you know about how to make sense, to yourself and to others, as analyst or as client, the more variety you can permit your procedures for thinking and choice.

To be explicit both about the perspective and about how the parties make sense of it, that is the methodological idea. It is tested and it provides:
- A relatively complete overview,
- A framework for creative thinking,
- A language of functionalities,
- A framework for the organization of concrete facts,
- An instrument for search,
- An instrument for setting priorities so that both choice and rejection becomes visible,
- A framework for teaching and understanding between levels,
- A framework for critics and for an expression of improvements,
- Transparency and accountability,
- A simplified documentation and memory,
- A framework for assessments and for setting standards for vital functionalities.

Management today

The story begins in the 1970:s when I worked on design and risk issues for the National Defence Research Establishment of Sweden, in close contact with other European and US planning milieus. In the best cases I worked on and learned about there was some theoretical backing with concerns for criteria, cost, impacts, risks, stakeholders, law and commitments, also for present and future commitmentst, often also with an explicit concern for political actualities like gender issues, regional policy, industrial policy, egalitarian aspects etc. We had, and have, proponents for quantification and modelling on the one hand and those in favour of a communications oriented facilitating methodology on the other. We have a dichotomy of managers for or against models, methods and quantitative knowledge with the latter in majority, much depending on the domain. Feed-back is common and not always supplemented by more theory based predictions. Business areas have different cultures. In marketing, aviation and defence I have met good abilities to talk method. Lobbyism can sometimes be put to use, but more often it is nuisance and jeopardy.

Mainly we have pragmatic approaches in our administrations, both in the private and in the public sector not much in contact with a methods debate. Abdul Khakee (2003) describes the situation very precisely for evaluations and assessments. West Churchman (1978) also testifies a certain disillusion

and offers some still valid explanations by paradigms of politics, morality, religion and aesthetics. Francis Wheen's cruel revelations (2004) are offered with accusations of secterism, romantism, commercialism and hypocrisy. Even expressions like mumbo-jumbo and counter-productive folly are used. I do not share all his views on religion and politics, but I am grateful for his informed piece of modern history with seventeen pages of references. Inga-Britt Ahlenius, head of UN audit, testifies how a parochial consensus praxis also involves the Swedish government. She writes about how a corrupt personnel policy leads to ignorance and corrupt decision-making in all areas (2005).

This is not the complete scanning of management today which I would have wished to make before lancing a diagnose. It is Norbert Wieners outrage in the last chapter of his book (Wiener 1948) which finally gave me the courage to write. I quote: *The state is stupider than most of its components.* He does not write about the war, I must add. This is general about man and society.

This still limited set of observations means to me that a defence against superficial consensus, parochial compromises and lobbyism is lacking. A wide enough spectrum of methodological and scientific knowledge, ready to use, is clearly rare and there is even a widespread resistance to methodology. In this paper I shall try to explain what I find to be the key issue of knowledge management today.

Management science today

My quick scanning now of management science and its decision support methodology has got the purpose of showing the kinds of human dialogue there are. There are many management sciences and all of them more or less deal with information, knowledge and decisions. Let me start with Operational Research (OR). Despite having developed a flourishing formalism with optimization, multicriteria methods, simulation and many other methods by the 1970:s it was not accepted by its prospective clients as expected. Figures and models became less popular, and then the subject's academic domains also suffered. A resurrection might come by the comprehensive book by a leading IFORS team (Boyssou et al 2005) since it offers models, not methods, e g building blocks to go flexibly into management analyses of different kinds.

A so called soft methodology, soon enough accepted in the OR-culture, regained some of the methodological domains lost in the 70: s, aided by new approaches and a strategic IT-support (Rosenhead, 1989). Total Systems intervention (TSI) appeared in the 1980:s in northern UK with new idéas of democracy and scientific backing. (Flood & Jackson 1991) Then came critical theory of different kinds (Flood & Romm 1996, Midgley 2000), taking care of Wenre Urlich's Critical Heuristics (1983) which elaborates how to make reference to whole systems concepts and how to choose systems delimitations, sets of stakeholders included, purposefully and critically.

Multiple perspectives has been a popular theme for many years as a rebuttal to the mathematical, business oriented and one-dimensional operational research. Important taxonomy designers for perspectives in management science are West Churchman (1971), Harold Linstone and Ian Mitroff (1993), Donald de Raadt (1997) and John van Gigch (2003). Churchman offers a course in philosophy for managers and introduces the concepts of *guarantor* and *backing* for management science. Linstone and Mitroff argues for a balance between technical, social and individual perspectives. De Raadt argues for ethical explicitness, not only the freedoms I open for. John van Gigch offers a generic meta-modelling theory about facts, models and metamodels on to which I can map my methodology of sense-making. Sense-making will then be how to understand facts by models and how to understand models by meta-models.

Total Quality Management and Business Process Reengineering are relations oriented, but in a way that also invites to considering comprehensive a priori models. (Townsend & Gebbhardt 1990, Hammer & Champy 1993).

The ISO (2006) standardisation in cooperation with professional societies like the INCOSE[1], the IFORS[2], the AFCEA[3], the FERMA[4] and the IRGC[5] should also be mentioned. This work meets

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[1] International Council on Systems Engineering.
[2] International Federation of Operational Research Societies.

difficulties however of being either too rigid or too abstract. The general gain is that methods and models become visible. Those should also be given names so that they can be assessed and spoken about and I shall return to this theme of visibility by the end of my text.

Myself I introduced an explicit theory of combinations of method to the OR-culture (Agrell 1983 and 1988) with further improvements in 1997. It was based on activities and activity levels: *facts, methods, projects* and *cultures* with a need to *make sense* between these. For them it was felt as a worry that the different methods in a composite project would build upon differing theories (Midgley 2000, Jackson 2003). Such combinations were supposed to cause confusion as if the academic advice of Immanuel Kants (1787) had to be followed in business management. But why? Karl Popper (1959) did not feel this worry when he combined conjectures with refutations. I do not share this worry either. It is just that the interfaces between methodological items have to be functional and to satisfy the input/output demands of the different and separated epistemologies concerned. At a conference I heard the metaphor of Lego pieces which have to fit to each other in order to describe this relationship (Seifert & Weinhardt 2006, de Vreede et al, 2006). This is a pretty analogy, but it shows a rigid interface. I prefer the wort *thinklet* which is also used. It opens better for adaptive *sense-making*. Phases of analysis have to *make sense* to each other, I say, and already this is a tough requirement.

Group Decision Support Systems (GDSS) and Group Decision and Negotiation (GDN) appeared and engaged many of the same analysts as the mentioned former methodologies (Seifert & Weinhardt 2006). Co-operation in extended networks and hierarchic administrations oblige a new transparent information and knowledge management. Sense-making is more than ever necessary now that nets and relations comes into focus. Gwendolyn Kolfschoten (2006) is explicit about this, drawing a systems view about more or less accepting attitudes towards a process and its outcomes.

There is also a segregation and tough debate in this group support area between the communications and the logics oriented analysts. The extremes do structure on the one side and social relations on the other. I saw this in my two latest conferences (Andersson 2006, Seifert & Weinhardt 2006) and in years of practice. I saw this with a recent set of applications to the EU-Commissions Research Directorate, where in spite of clear instructions requesting integrated views most applications (in the refuted majority of applications) addressed either social or structural issues. This is not surprising. Researchers belong to their academic niches and we have a very general problem of making sense between those. This deficient communication both between researchers and at the interface science/administration is worrying. This is not a necessary antinomy though. It is just what appears at present in our administrations and think-tanks.

Real antinomies (balances) exist though. We have transparency vs limitless thinking since transparence requires a model described in comprehensive terms not only a set of collected experience. Such a model then also means some of an obstacle for the very free thinking. Here a balance has to be struck so that the model is produced by participation and creative thinking and so that it stimulates to further creativity in the vein of De Bono's list method (1973) and Van Gigch's level 3 meta-modelling (2003). Easier to say than to do! But necessary in order to counter tendencies of corrupt opaqueness!

Another real antinomy is the one of the model vs the sense-making of it. It is often said that in the natural sciences and in technical issues modelling and quantification are useful. Here the sense-making of a model is not discussed so much. A feeling of realism and relevance is enough. A kind of comfortable realism is felt even in meteorology, not so well though in nuclear physics. Efforts to model human and socio-technical systems have not been so well received though, and here I am very inclined to ask whose fault is this. Some say that the models are not fine enough, but that is stupid. No model equals reality. I blame in another direction. It is the *make sense* abilities which fail. It is the inability to see other than true or false. They do not see the truth-values of Foucault (1971), Van Gigch (2003) and Halldén (1999), not the difference between Verstehen and Vernunft (Kant 1781a)

and of course they have not read my article about differing objectives in an administration (Agrell 1985).

There is a tension between *idiographic* and *nomothetic* approaches. The former would mean that the key issues and trade off dimensions are not given in advance (Eden & Ackermann 1997, Bouzdine-Chameeva 2006). The respect for and interest in individual cognitions within their projects are high and they refer to G. A. Kelly (1955) when they make cognitions visible with a client. A priori ontologies are avoided, even used as options in plural. Some of their methodologies have names, the SODA for example (Eden & Ackermann 1997) and the GroupSystems (2006). The *nomothetic* approach would mean a greater willingness to discuss and even to accept known structures in the beginning of a project. My synthesis is that a structure may develop gradually but that it should be settled early enough to offer a frame for cooperation and for setting priorities.

Mike Jackson (2003) offers much of what I want to say, including the flexible choice of kinds of overviews and a setting of priorities on such a base. What I add is essentially about varieties and liberties for this control plus a dramatic touch (sense-making) with the necessity of our kind of improvements in real management.

Robert Vallée (1995) develops an epistemo-praxeologie building upon the phases: connaissance, decision and action and stressing their necessary integration by a co-evolution = auto-construction. Vallée writes this in explicit agreement with Kant, Piaget and Heinz von Förster but in disagreement with Henri Bergson. This is the same constructivism as argues Le Moigne & Morin (1999). The perspectives grow out of practical needs.

Jean-Claude Moisdon et alliée (1997) at the Ecole des Mines de Paris elaborates modes of *making sense* quite explicitly building upon case studies with a client. They write about *how* the tools of management are used for discovery and understanding vs for advice. Do notice that their choices are really of how to *make sense*. Their stories do not end by the applications of the tools. This team makes the most complex organizations intelligible by a conscious and varied *sense-making* supplementing more conventional uses of management tools.

From the Centre de Recherche en Gestion of the Ecole Polytechnique de Paris I also collect some striking sense-makings. (Charue-Duboc 1995) The important and successful one is the logics of statistical control. Another is the ignorance; not to discard knowledge, but to leave partners in peace with their abilities and their mandates. That is the Cartesian-Taylorian division of work, not new but neatly expressed. The contextualization of general knowledge is also mentioned as a worth-while way to articulate knowledge.

Terry Griffith (1999, 2003) is quite explicit about it that *sense-making* is her research object. Her studies deal with knowledge management within groups, not with relations to a client. Still her work is very relevant for this study, first of all by recognizing the same communication problem, that methods are not easy to transfer. Then she recognizes types of *sense-making*: whether the organization reacts at all and what level of initiative is produced, also routines which may become established, proactive thinking, other changing attitudes and organizational developments. Her ways to influence the group may become an essential part of my wish to change decision-making cultures.

Dirk Baecker (2006) writes about organization as combinations of process and hierarchy. He builds an organizational model which is to free organizational theory from binding restrictions of other sciences while at the same time looking closely at the possible contribution of those, including ways to *make sense* of them! He finds references in different sciences and in established cultures for product, technology, work, organization, economy, business, society, corporate culture, individual and communication. These references are then made sense of for further management and it is within such a framing reference that you may make the distinction between an operation and its context. Sense-making for Baecker then mainly depends on the enterprise culture and its informal communications. I wish to add here that formal audit, methods compentce and personal feelings of responsibility also import.

Jean-Michel Larrasquet (2003), the promotor of a field called projectique, studies attitudes in learning and how such may be prepared. His main examples come from organizational development research

and consultancy where it is important that stakeholders in organizaional change projects *make sense* of new learnings in due time. Similar situations appear in crisis management where new situations as well as new flows of information have to be assimilated and *made sense* of. Larrasquet is one of the few in management science who focuses on receiver's and learner's ways to *make sense*.

I mention all these methodological streams because of the dialogues and the explicit interface problems going with them.

Offers from philosophy

In order to get idéas about possible interfaces in *make sense* processes I turn to philosophy first. I shall not make a general reminder of existing knowledge. Neither will it be a complete nor a systematic scanning. I shall find some instances of *sense-making*. That is the backing we shall have for my conclusions.

I start my philosophical journey with David Hume (1748) as the most striking example of courageous sense-making. In his professional texts he proves that *causes* do not exist. "We must not believe in that kind of regularities in nature." However he also has paragraphs where he admits that life would be impossible if we did not accept certain regularities of it including the concept of a *cause*. He seems after all to have been a nice and social fellow who well endured this contradiction.

Immanuel Kant explored the history of philosophy carefully, and his distinction between *understanding* and *reason* (Vernuft) is precisely what I am after (1787a). *Understanding* is a learning which has got a positive or negative correspondence to earlier cognitions. The *reason* contains also other dimensions, use, judgements of moral and epistemological qualities etc. The difference to the *understanding* is the *make sense*. Reason is specified into the famous *cathegories* out of which the *modi* are of special interest for this essay: *problematic, assertoric* and *apodictic* e g the possible, the existing and the necessary. In my milieus there has been too little thinking about the possible. I see research about the existing and about law-bound necessities being more respected. With more inquiry about the possible our settings of priority could have been more transparent, more defendable and provided with a declaration of alternatives excluded. This is a generally neglected *sense-making* in assessment which has got practically no room at present neither in research nor in real management.

Kants elaborations on the *ding an sich* (1781b) illustrates nicely my thesis about the adaptive *make sense* concept since he makes himself both a transcendental idealist[6] and an empiric realist[7], this at the same time and in relation to the same object. The subjects reasonings are different in the two roles in a way that can not be entirely explained by different *understandings*.

The *ding an sich* aspect of Kant's is already well known and it has had an important sequel in way of critical theory and critical praxis. The concept counts for me in a chain of transfer of information and knowledge between parties in the common situation where the interpretations of a second partner is a problem. The expression of the one becomes the *ding an sich* of the next one.

Kant's antithetic (1781b) is also worth more attention. He argues for the importance of specifying conflicts into intelligible trade-offs so as to reduce misunderstandings, to promote learning and to find useful new directions for thought. This way of thinking is not far from Hegel's dialectic and it lives in management of today as pragmatic problem formulation. Thomas Coakley (1991) is a nice and useful exponent of this. His expression is *a matter of balances*!

Our next master of perspectives and truth values will be Michel Foucault (1971) though he uses the word discourse, neither perspective nor *make sense*. He uses the word *truth value* which I interpret with him as the way to make sense. It's the processes he describes. He also describes cultures with comfort for those *within the domain of truth* and conversely discomfort, even suffering, for those outside this closed domain. He gives very striking examples of truth values and whether they last or not and in which form. Neglect of different kinds is a common truth values, in fact an essential purpose of many discourses. One of Foucault's truth values does not have anything with the subject

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[6] E g believing in something beyond our senses reach.
[7] E g believing in a good value of our senses impressions.

matter to do; it is instead a matter of how well an initial anguish is relieved by an authorized methodology.

Foucault is close to Kant in that he stresses the difference between a material reality and that which may be perceived and that is the basis for his interest in the variety of discourses. He describes a cruel world and he has a heart for excluded people and rejected ideas. He reveals the power game behind different truth concepts. He shows us that the ways to make sense are attached to culture and that they are stable within those. So, if we are to plead for conscious and deliberate sense-making in our respective milieus we are up to resistance. At the same time Foucault gives arguments to my venture. His dry neutrality of language calls for subjective sense-making, I would say, and our thick domains of inattention calls for exploration (Foucault 1966).

Paul Sartre (1943) and Simone de Beauvoir (1947) share the existentialistic idea of man's responsibility to take a stand even in cases when nothing can be done. They differ though in mood. De Beauvoir sees more of possible relations between persons and she is more specific about some different ways to *make sense* of the world. She sees characters like the underdog, the serious, the nihilist, the adventurer, the passionate, the esthetic. Those indeed *make sense* of their worlds, and of course also of their readings, in different ways and, as describes de Beauvoir so nicely, their differing *sense-making* make them act very differently. Here de Beauvoir exposes different sense-makings based upon the same factual conditions, but she also offers an example of the contrary, the same *make sense* in different situations. It is when she normatively pleads for the ethics of ambiguity: whatever your world and whatever your systems delimitations, she says, you have the obligation to take a stand, to act and to react.

Karl Popper's conjectures and refutations are different ways to *make sense* (1963). He is also the obvious example of a possibility to combine discourses based upon differing epistemologies. His combination of conjectures with tests and subsequent degrees of corroboration require subtle interfaces have given modern science a firm ground.

Jürgen Habermas (1981) claims that the parties in a dialogue must *make sense* of each-other mutually and seriously. This is also true of course for the dialogue between proponents of management science and management as well as in the dialogue between the individual actors in such relations. Unfortunately though he has no requirements specification for the stuff, which has to be made sense of. This influential philosopher is rather communications than systems oriented.

The hermeneutic movement of course has got things to say about *sense-making*. Heidegger (1927) offers the nice example that you do not understand something fully until you have lost it. Another master of this movement, Gadamer (1972), makes understanding a reciprocal affair. You understand something by understanding its influence upon yourself.

Sören Halldén (1997 and 1999), as Michel Foucault, constructs extended and varied truth concepts like humour, comfort, anguish, relief, empathy, utilitarian views, seeing the lacunas, drama, fiction, ambiguities, for competition, with different references, with and without backings. These perspectives are to be optionary, not rigid as with Foucault. In general terms Halldén worries for a superficial consensus culture coming with a new generation.

Now, let me make reference to some para-philosophical authors. Charles Morris (1946), master of semiotics, makes a taxonomy of different sense-makings based upon the two dimensions: use and mode. His modes are not the same as Kant's, nor as Aristoteles'. Morris writes: *designative*, *appraisive, prescriptive* and *formative* modes.

In literature research sense-making aspects becomes popular. They fall into the dynamic research area of *genres* which covers fields like worker and gender literature where the reader's *sense-making* is an issue for the author and a for a substantial research area. (Jansson, Lothe & Riikonen 2004)

In Pedagogy the strategy of how to reach the student is a standard problem for research as well as in practice. The student's desires, rejections, acceptance and interpretations are standard stuff. Their *sense-making* process consists of *cognitive*, *affective* and *behavioural* components (Triandis 1971). Antoine de La Garanderie (1987) is the famous ikon of the *gestion mentale* (management of the

brain). He studies motivation and he helps his students to make personal models of their futures. Personal construct theory is important both in design and learning. (Kelly 1955). Both Kelly and de La Garanderie work rather in an idiographic than in a nomothetic vein.

What seemed to be a tough problem at the outset finally appeared to have many solutions. It became obvious after this exploration that a *make sense* concept may very nicely be filled with meanings. So, as an intellectual challenge a large part of the problem disappeared.

Discussion

We have seen that it is easy to find kinds of sense-making. To avoid misunderstanding in communication is not all. Neither is it to search convergence by iteration. Still in management the problem is there. Figures, models and methods do not fit into management without tensions. They are not used as could be. The academic efforts to create solutions have failed, not on all logical levels but clearly in the implementation. This is a problem which has worried me for thirty years. All my professional learning up to the doctors' and professors' grades is at stake and I am not alone. This is a global cultural problem. My approach now is a cultural diagnosis and an idea of a methodology with some corroboration. It is *projective* (le Moigne & Morin 1999).

My diagnosis of occidental decision support and knowledge management is that much science and knowledge are refused because management knows too little about how to *make sense* with it even in parts of the world which wish to see themselves as democratic and efficient. I shall not argue about figures or proportions, but the phenomenon is frequent enough to bother about and we have just learned from philosophy that there are different ways to proceed in our communication and implementation problem. My experience also tells me that consensus takes over when other methods are not attractive enough. This is what makes the problem globally worth wile.

The common remedy to the superficial consensus is said to be the representative democracy. This can not be objected to, but is it sufficient? I normally suggest a complement which is to extend the democratic cogitations, at least once in the project, to the total ontological framing of the project. This framing then is to be an explicit reference: not necessarily a verified standard, metaphor or systems view, but something with an aesthetic quality or at least with a declared completeness. Personally I do not exclude that it may be a known structure with a name. It will have to be spoken about, so that everyone concerned, during and after the project, will understand what is done. Sense-making of an ontological reference will have to be different before and after choice. Before it is one *possibility* out of many. After it is some kind of a chosen intellectual/psychological *reality.* The frame is not an *apodictic* necessity of course even if a firm decision may come out in the end and that has to be controlled by conscious sense-making (Vernunft). It is not an error to think of Kant (1787) in this cogitation.

I can recognize another existing quality which may help cultural improvements. That is the well acknowledged principle that all knowledge, not only models and figures, depends on assumptions which put limits to its validity. From the Centre de Gestion Scientifique of the Ecole Polytechnique I learned the expression "contextualization of general knowledge" (Charue-Duboc 1995) . It is this contingency, I think which has to be expanded into a *make sense* ability, both on the producing sides and on the receiving ones by adding a subjective cognitive posture to the recognized assumptions. Then any problematic can be treated with new freedoms, but (!) afterwards you must understand, explain and communicate what you have done in order that all concerned may *make sense* in defendable ways. This piece of a doctrine is my learning from different disciplines about *make sense*.

Conclusion

The value of knowledge for decision can not be denied, and we also know that methods and theories represent knowledge. David Hume (1748) is the only scholar I know of who really denies this, others feel the need of them in some way. Near synonyms would be *references* as Baecker writes it (2006) or simply *perspective*.

We have also seen that there is a rift between what science offers in ways of methods and theories and what is accepted in the real decision-making processes. There are many explanations to this. See

for example Florence Charue-Duboc (1995) with a chapter of Jacques Girin among others. The explanation which I have found dominate in my experience is the inability to *make sense*, and I have tried to test this idea by the preceding pages with examples and counter examples. I have at least shown that it is an existing meaningful concept and that the need for sense-making is imperative in all decision processes and also that we have a choice. The set of possible sense-makings is huge.

What also must be stated, and I do it as a linguistic evidence, is that sense-making needs an object. Now we come to the essence of my conclusion: Management and decision-making need quality in the combination of object and sense-making. They need quality in both and they need the match between object and sense. This also means that deficiencies in the one may be compensated by adaptions in the other.

Now we can return to my original problem about the operational research in the 1970:s. What happened is that this methodology was not made sense of by management. It was perceived either as a straw-man or as a producer of truth. With the backing of this article I claim that there are other ways to see and perceive than true/false. I claim this for operational research but also for other kinds of methods and theories which are to be used or transmitted. I think that the idea of matching knowledge and sense-making in all knowledge transfer relations with a new flexibility will be useful even without a precise definition of how far this principle may be extended. Some structures will have an obvious relevance across much sense-making like the office package, simulation software or computer conference systems or even many religious texts. Other structures shall need a much more specific sense-making, like the optimization or multi-criteria methodology. Structures are neither true nor false. They are not surely better for certain objects than for others. They are just more difficult to make sense of and most managers do not want to try. Most would not be able to, but here is my point. It would be useful for managers to learn to make sense of explicit methods and theories, for themselves, for their missions and for a possible democratic participation.

The ways to *make sense* do not develop without a minimum of knowledge in philosophy of the kind that was offered in all good schools not long ago at least in England and in France. I think it is coming back in Norway in a new kind of first university year. I have shown above that there are a plenty of relevant sense-making varieties in philosophy and other academic domains for the one who wants to profit from the existing liberties. What I wish to add now is the multiplicative amplification of control variety produced by the combinations of ontological (object oriented) methods with cognitive kinds of sense-making.

You may share my view or not about the urgent need for a development in occidental governance cultures about knowledge management and decision support. It can not be denied however that what I suggest increases the variety of control, something often desired. For a suitable discussion about variety engineering you may see Espejo et al. (1996) where its basis in the Ashbys law of requisite variety is explained.

I have tried the principle most explicitly in a recent study to update a command system. All facts and a basic knowledge of the system were present before the project in an extensive documentation. What was asked for by my project was to set priorities before fielding experiments in a computerized test-bed. As an ontology we choose James Miller's Living systems, not (explicitly) Stafford Beer's Viable systems or any of the more pragmatic lists also tentatively presented. The *sense-making* became a sequence. First our ontology was seen as a hypothetical alternative, one out of many, then, after a choice and due specifications into a model, it became an agenda for deliberations about priorities for what had to be improved in the present command system. It was never considered as a normative design rule, but it could be in other cases.

I shall not go into command and control issues here more than indicating that the result of my project was to explain and advice about the balances which had to be settled in a command system with mandates, networks, robotization and security. What have to be noted for this conference-paper however are the more direct provisions for the project from our flexible and conscious way to make sense of an explicit structure.

> *A relatively complete overview*, specified by a systems structure with a name.
>
> *A framework for creative thinking*, the functionalities of the systems structure to differing degrees called for specified improvements.
>
> *A language of functionalities*, to match an immediately present terminology about staff and materiel.
>
> *A framework for the expression and the trimming of improvements*, so that the use of those will be seen in a context.
>
> *A framework for the organization of concrete facts*, names of functionalities are at the same time good head-lines for the documentation. The whole documentation could follow the same structure.
>
> *An instrument for search*, the nineteen functionalities made nice foci for attention.
>
> *An instrument for setting priorities so that both positive choice and rejection becomes visible*, we had nineteen nice headlines to organize the work.
>
> *A framework for teaching and understanding between levels in the client administration*, the initially given big set of data was given a digestible structure with both positive and negative priorities specified.
>
> *Transparency and accountability*, so that the information can be shared with other working-groups and with the audit.
>
> *A framework for assessments and for setting standards for vital functionalities*, by model based assessment.

The complete method is described in (Agrell 2004, 2005).

In other kinds of mission I dare say that the following kinds of result could also have been achieved from the same method:

> *A framework for a definition of necessary co-operation*, even a pattern for auto-control in your project,
>
> *A means to see analogies and to express hypothesis by these.*

So what is new in this presented approach?

- I try to give the *make sense* concept a face so that it can be spoken about and even taught.

- I collect examples of *make sense*.

- I give an original list of possible benefits from the combination of explicit method with flexible sense-making.

- I add the dramatic touch. Method is not just nice to have. It is a necesssity for an occidental democracy together with the transparency and the *sense-making* that should go with it.

Now it only remains to set a name to the methodology: *Flexible Sense-making*.

Thanks

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