PS Agrell

Expanding Churchman's Philosophical Discourse: New Perspectives
By
Per Sigurd Agrell,
Stockholm, Sweden
<per-sigurd.agrell@ekelow.se>

Summary
Real world problems have always the duality of object and subject and as a consequence of that, their management has got a certain complexity. We have reasons to put observations in the service of analytic tools and to put our tools in the service of purposeful approaches. All this happens in a cultural context. The one, who wants to, may see beauty in this sequential contextualisation.

We need a double control of such a system. We need a *mega-structure*, visible in its organizations and authorities, which provide purposes and restrictions. We need a *meta-structure* which provides inquiring systems and their rules of logic, a *discourse* we could say in France. The mega- and meta-structures compete, but also the meta-structure is in the service of the mega-structure. It has got to. That's the order of power.

However, the mega- and meta-structures are not isomorphic and the meta-structure is not a part of the mega-structure. A meta-structure has to be a subtle and heterogeneous meta-system, with sayings of its own, which has to act on all levels of the mega-system.

Key words
Systems approach, systems theory, meta system, mega system, epistemology, guarantor, combinations of method.

Introduction

West Churchman opposed positivistic modelling as a worldview for systems

science. He emphasized the need to reconcile qualitative and qualitative methods in systems science. He introduced a large spectrum of different methodologies; he related those to ethics and to the history of philosophy. He told us about how to reconcile differing perspectives and he gave us the freedom to go ahead exploring new paradigms.[1]

It is impossible to give an account for the CWC's (C. West Churchman's) overall influence and development growing from his ideas. He created a new systems culture and I will first mention a few of the important systems thinkers from this culture that have been influential to my work. Harold Linstone[2] and Ian Mitroff[3] gave examples of differing perspectives as well as advice about how to proceed with new approaches. John P. van Gigch developed and made Churchman's guarantor concept useful and practical.[4] Mike Jackson and Amanda Gregory taught me ways to reconcile conflicting perspectives.[5]

Yehezkel Dror's distinction between *mega*[6] and *meta* policy is not only valid for high level governance. It is also transferable to lower level design and analysis issues. His *mega* dimension offers a useful simplicity not to forget in any systems analysis. Dror's specific metaconcept appears to be well in accordance with the more general one provided by John van Gigch.

Aside from the present author, other Swedish systems thinkers are also interested in the application of explicit guarantors to multi-perspective views. I mention Darek Eriksson[7] and Abdul Khakee[8].

I regret that the contacts between French and English-speaking epistemologies are relatively weak. I would have liked to see a co-operation

---

[1] Most important for me has been Churchman, West C (1971), **The Design of Inquiring Systems**, Basic Books, and (1968),The Systems Approach, Delta.
[2] Linstone, Harold A(1994), **Multiple Perspectives for Decision Making**, North Holland.
[3] Mitroff, Ian I and Linstone, Harold A (1993) **The Unbounded Mind**
[4] Van Gigch John P. (2003), **Metadecisions: Rehabilitating Epistemology**, Kluwer/Plenum, London and New York.
 and (1991), **Systems design Modelling and Metamodelling**, Plenum, also earlier books.
[5] See for example Gregory Amanda and Jackson Mike (1992), **Evaluation Methodologies: A System for Use**. In J Opl Res Soc Vol 3 no 1 and A Gregory(1996), **The Road to Integration**, in Omega Vol 24 no 3.
[6] The expression *grand policy* is also used. Dror, Yehezkel (1986), **Policymaking under Adversity,** Transaction Books.
[7] Eriksson, Darek (2003), **Identification of Normative Sources for Systems Thinking**: An Inquiry into Religious Ground-Motives for Systems Thinking Paradigms. In Systems Research and Behavioural Science No 20.
[8] Khakee, Abdul (2003), **The Emerging Gap between Evaluation Research and Practice**. In Evaluation 9:3.

between Churchman and French systems philosophers like Edgar Morin, Jean-Louis le Moigne and Michel Foucault. I try to imagine how Churchman would have resolved the Foucault paradox of *The Discourse*, that it is so powerful yet arbitrary. He would surely have had a view on how to find a guarantor system for it, though of course Foucault would not have agreed.[9] Now this short paper will be my effort to say something more precise about the possibilities for relevance and qualities in Churchman's kind of discourse, the *systems approach*.

A taxonomy of perspectives

As many others I feel like stating my own systems paradigm though a priori such a thing is not welcome. It is to impose your own thinking onto someone else. So I had better start this venture with a very good excuse. Well, first West Churchman opens the option. "The systems approach begins when first you see the world through the eyes of another", he writes as a first conclusion by the end of his famous "The Systems Approach". So, I now offer my eyes to the courageous reader, and I promise you, for the sake of symmetry, that I regularly borrow the eyes of others, even from very remote friends. Another excuse for my initiative is that I shall try to be relatively concrete and specific. I shall try to push the systems science frontier one step further in the direction given by West Churchman and his able group of disciples.

There are more motives for drawing general systems views. Aesthetics is one, both in design and in applications. The specific qualities of systemic overviews, in contrast to pragmatic consensus, are another good reason for those. They provide explicitness so that supplementary exploration may be done in an orderly and describable way. Such overviews help to kinds of complete knowledge since they help to transcend into the unknown. A systems view makes a list of reminders without claiming any absolute truth. A systems view makes it possible to set a focus and to set priorities with an explicit reference to a context. What is excluded becomes visible. This is honest policymaking and it is different to the kinds of superficial consensus we see all too often in our political bodies all over the world, not always by conscious corruption but often by ignorance.[10]

---

[9] Foucault, Michel (1970), **L'ordre du discourse**, Collège de France, denies both the existence of an external guarantor and a true essence of a discourse.

[10] I prefer just to give a general reference to the occidental evening press.

This general plead for systems views holds with a generality which covers both subject views and object views[11], that is both for the strategy, e g the discourse or analytical process, and for the vision. Now, the structure I am to draw shall be about and for the analytical process. That is what makes it Churchman. I describe a way to express perspectives in his sense, not just an ontology for possible objects.

The start of my approach was a taxonomy of acts, first drawn and presented at local seminars around 1980, and in 1981 an embryo was presented at the EURO V. There are available publications about it in the EJOR 1982[12] and in a PhD theses from Stockholm University 1991. The start was to see the difference between the *approach* and the *tool* in analysis. This was not generally done at that time. Instead there was an obfuscation which led to a general decline and disrepute of operational research in many countries. This was before the rise of the so called soft approaches[13] and long before the Total Systems Intervention methodology[14]. Also, at that time, there was an adulation for computerized megamodels in my own defence planning environment, whereas I pleaded for pluralism and specific smaller models. All this led me to elaborate in theoretical terms the difference between the *tool* and the *approach* of a systems analysis. Out came not only the definition of two concepts but a symmetric 2x4 matrix. The elements of the matrix are acts of learning and understanding and together they form an extremely flexible pattern to describe analytic approaches. The elements are not forces and they are not tendencies. My experience is that in practice the acts may be distinguished conceptually though normally they are performed in overlap. By this rough definition we see that the levelling of the acts is simply a matter of physical and temporal inclusion. We may compare with Dror's mega-systems, and with Foucault's sets of discourses and events, but so far we have no metaphysics and no meta-system. This will be added in what follows.

Let me, without further references and without any more historic, present my taxonomy as it stands now.

---

[11] James Miller (1978), **Living Systems**, Mc Graw-Hill, is a good example of an object view. It is about surviving systems and their dynamics without being explicit about how to use this model in policy analysis or in research.

[12] Agrell, Per Sigurd and Vallée, Robert (1985), **Different Concepts of Systems Analysis**. Kybernetes Vol 12,

[13] The most celebrated summary of those is surely the Rosenhead, Jonathan(1989), **Rational Analysis for a Problematic World**, Wiley.

[14] In (1991) appeared both the **Critical Systems Thinking** and the **Creative Problem Solving**, both by Bob Flood and Mike Jackson, both with Wiley.

> **PHENOMENA: object & subject**
>
> **TOOLS: creativity & analysis**
>
> **APPROACHES: logics & interaction**
>
> **CULTURE: myths & rites**

Phenomena[15] stand for the acts of finding information, observation we can also say, but without forgetting the phenomenological complexity. Observations are naive often enough; often we can not afford doing better. In other cases they are combined, indirect or more firmly oriented by the help of models and other *tools*. We can even say that the observations are included in the applications of the tools. The *purpose* of information may be specified by requirements of quality; e g by validity, reliability and different kinds of statistical risk-levels for example. Whether the focus is to be on the actors or on an issue expressed (object or subject focus) is another major purpose to decide. These purposes guide the actors in the phenomenological acts, though they basically belong to a set of stakeholders. So far there is still nothing metaphysical about it. However, when these purposes are to be fullfilled well, we shall need a *Guarantor* or a meta-system in John van Gigch's sense. We need sciences of observation e g statistics, psychology, sociology, ethnology, law and maybe others. J v Gigch would add guarantors of the guarantors, and of course those are needed, but I shall not repeat his teachings here. I need now his first metalevel in order to eliminate a set of common pitfalls and to show the need to consider the set of different meta-systems within the one and same systems analysis project.

Tools stand for the choice of foci and for the fusion of information. A *tool,* here and now, is more complex than the observation in the sense that it embraces the observation. This is true even if the observation also may be very complex. A tool in this our information management-sense deals with something more limited and more specific though, than what we shall call an

---

[15] The reader is invited to add Edmund Husserl's phenomenological view to this short writing about phenomena especially his thoughts about the intentionality of knowledge which is combined with care for a truth concept. He respects the integrity of our different sciences. His distinction between perceptions and facts is also essential for us here. Husserl, Edmund (1900), **Prolegomena zur reinen Logik**. Jean-louis le Moigne would be a more modern proponent of intentional phenomenology. See for example his (1995), **La modélisation des systèmes complexes**, Dunod, Paris.

approach in the following paragraph. In Drors terminology I say that the *tool is* the mega level of the *observations*. Purposes may then be to discover, to combine, to model, to arbitrate, to optimize. We may include to evaluate, e g "to find a numeric expression for", but not assess, which would be something more complex and more executive including a mix of methods and probably also a good deal of tacit knowledge and intuition. The *guarantors* we need have to deal with the right level of complexity, e g with algorithmic issues or with the creativity of the human mind. This is not the observation already focussed and not the approach of the whole project with its social and political implications. The guarantors we need fall into two classes, the one for rule-bound activities and the other for the intuitively based creativity. Mathematics, operations research and computer sciences are examples of the first cathegory. Psychology, sociology and Edward de Bono's lateral thinking methodology[16] belong to the other side, which is much too neglected in science as well as in management and policy.

Approaches stand for the complex act of a whole project normally performed by a team and a set of other stakeholders including one or more clients. It uses tools, mostly tools in combination, but all its constituent acts can not be defined as an application of a tool. This complexity makes both goal settings and epistemology so different from those on the tool level. *Approaches* becomes a mega level of the *tools* and of the *observations*. They may have purposes as design, to initiate a discussion, to give warnings, to make aware, to give a syntax or a semantic, to explain, to make intellectually tangible, to identify problems, to lay out aspects, to give arguments, to test coherence, to criticise, to invite criticism, to explore, to give frameworks, to specify conditions, to express purposes and objectives, to create consensus, to allocate responsibilities, to make agendas, to clean up a discussion, to claim excellence, to decrease an anguish. All this is approach not tool.

A nice classification of epistemologically different *purposes* comes from Steen Hildebrandt where three types of problem (decision, behaviour, system) are matched with three methodologies (thinking, communication, search-learn).[17] Nine roles are defined:

Systemizer, Communicator, Co-manager
Diagnostician, Process consultant, Learner guide

---

[16] See for example de Bono Edward (1973), **The Use of Lateral Thinking,** Harper.
[17] Hildebrandt, Steen (1980), The Changing role of Analysts in Effective Implementation of Operational Research and Management Science. In EJOR 5.

Expert, Sparring partner, Experimentalist.

What *guarantor/meta-system* we need depends not only on these purposes. It depends also on the cultural context and on the situation. As the history of philosophy shows, there is amazingly little of lasting truths about guarantors and epistemology, but we have the truths of today in academia. That is their *raison d'être*. We have departments of management science (though differing in opinion) who do their best. We have likewise departments of business administration, of sociology of modern organization, of modern history and of modern anthropology. This list would be more a definition of a need than a real guarantor. It is a description of a meta-system though.

Culture stands here for the human way of behaviour and as a context to the methods exercised. *Culture* becomes the mega-level of the other categories. The visible side of culture, even in occidental administrations, I have heard being called the rites and they have a backing in myths. The myths contain the ruling perspectives and those are not controllable as the lower complexity levels. Control goes the other way. Violations of the norm are punished, by exclusion often enough. Foucault writes about this[18] and I guess that Churchman and van Gigch could call this a kind of a cynical guarantor or meta-system for culture. The power of the culture may extend to all the other levels and there is no general rule for how this appears in different cultures.

Culture, even your own culture, is observable; it is not mere abstraction, and if you observe or challenge it, you set it on to the level of observations. We may in this way see the taxonomy as a closed a circle or a helix.

All these activities on the four complexity levels have a purpose of producing information. At the process level we may also speak about a production of knowledge, and all happens by different perspectives. Within those we have objectives, which have a relation to wider purposes. All these objectives of acts are something essentially different from the object- systems objectives which we may study as well.

We have now seen a need to give to each level its meta-system; backing or guarantor would say West Churchman. We need them both for our design and for our quality assessments. But, will the managing meta-system of a

---

[18] Foucault, Michel (1970), **L'ordre du discours,** Collège de France.

total approach be synergetic and compatible with its respective meta-systems for tools and for observations or will they create inbuilt contradictions and biases? Will it create the confusion which philosophers like Immanuel Kant[19] and Edmund Husserl[20] fear so much? Churchman is not worried about this. He refers to the eclecticism of his teacher Singer, a straight discovering pluralism. Mitroff & Linstone also advices a free and flexible effort trying what may seem to fit[21] and they might feel uneasy about the planned and structured approaches of many others. Rolfe Tomlinson[22] believes that the problem can be overcome in defendable ways as long as there is a coherent goal-setting. Steve Cropper is more pessimistic. He writes about a necessarily specific context which goes with all tools and all methods[23]. Michel Foucault would solve this high level meta-system problem by calling it a *discourse* and by stating that it is a matter of social conventions and that no true solution should be sought. Gerald Midgley[24] and Mike Jackson[25] seem to lean on him while making explicit how to match the sometimes conflicting underpinnings, e g the external conditions, of a discourse. I think that all of them are true, but remembering Kant I would like to add my view that the organisation of a purposeful project must first of all have a clear organization of its meta-systems and their respective domains.

The relations between levels and between acts are vital parts.[26] There is the important relational issue of how our acts are appreciated. How seriously are they taken? Are they given a response at all? Are the results takes as truths, conjectures, illustrations or provocations? This makes an enormous difference and it is delicate. For example, the appreciation is what may save modelling and quantification. With the right appreciation, tools of this kind may be put into a defendable methods context. Even if we rarely can take models and figures as truths they may be taken as conditional propositions of some sense. The kind of sense here may take many forms. Jean-Claude Moisdon et al gives some very worthwhile examples in their *Du mode*

---

[19] Kant, Immanuel (1787), Prolegomena to the **Kritik der reinen Fernunft**. 2nd edition..

[20] Husserl, Edmund(1900), **P**rolegomena to the **Logische Untersuchungen**.

[21] In their **The Unbounded Mind**.

[22] Tomlinson, Rolfe(1900), **Of Tools, Methods and Methodology**. In Tackling Strategic Problems, ed Eden & Radford. SAGE.

[23] Crooper, Steve(1990), **Variety, Formality and Style**. In Tackling Strategic Problems, ed Eden & Radford. SAGE.

[24] Midgley, Gerald (2000), **Systemic Intervention**, Kluwer, .

[25] Jackson Mike C (2004), **Systems Thinking.** Wiley.

[26] There is a book in honour of Niklas Luhman which is extremely clear about this: Bakken, T and Hernes, T. ed:s(2003), **Autopoietic Organization Theory**. Abstrakt forlag, Kopenhagen.

d'existence des outils de gestion.[27] This view on relations will also affect the format of allocation of human responsibilities in our projects. You will define fair and efficient responsibilities of course, but also demand from each partner that she has a tacit responsibility to understand and use his colleagues with good will and keen senses.

A test

Most of my own projects have followed the pattern described, but that proves nothing of use to the reader even if they have been rewarding, as for example the ones about military command systems.[28] What would be more interesting is if the offered pattern could be more generally applicable. Intersubjectivity may be the word. So, rather than to describe a project of my own, I choose to see how someone else's successful method would fit to my world view. Especially it will be interesting to see how the mixes of different guarantors and meta-systems may be managed. I look for the possible, for what is possible in different situations.

A first nice and relatively simple example can be the Karl Popper's *Conjectures and Refutations* methodology.[29] Here we have a totality of a process, an approach with two parts, the creative conjecture and the analytic testing. Trial and error we could also say. Here the purposes of the totality and its parts are easy enough to see: Scientific *discovery* supported by *design* and *trial*. We have also three different meta-systems with their respective epistemologies and quality criteria. The ones for trial are the most elaborate and clear mainly thanks to the nicely structured domain of probability and statistics. The other meta-systems are more fuzzy but nevertheless firmly dependent on local *discourses*. Together however they work as long as the second phase *appreciates* the first one for what it is worth. Together this Karl Popper's design is widely accepted for many kinds of situation.

Let us next illustrate by a more elaborate example: John Friends Strategic Choice Methodology.[30] His approach contains the tools of *shaping, design, comparison* and *choice*. This is both a general management method and an optionary software (STRAD) for it. The method, with or without its software,

---

[27] Moisdon, J-C.(1997), **Du mode d'existence des outils de gestion**. Seli Arslan.
[28] Agrell, Per Sigurd (1979), **Vett och vilja i värdering av ledningssystem**. FOI Stockholm.
[29] Popper, Karl (1934), **Logik der Forschung**.
[30] In Friend, J and Hickling, A.(2005), **Planning under Preassure**. Elsevier.

produces an overview of a development project. It helps in timing and in setting priorities.

The purpose of *shaping* is to discover the relevant perspectives and uncertainties and to enable different systems delimitations flexibly. It is to create an overview and to discuss relevant foci on that basis. It is to imagine.The guarantor, or metasystem, would come from the area of creativity mentioned above. It could also come from cybernetics and from the biologically inspired systems theory.[31]

The purpose of *design* is to produce coherent strategies starting with more elementary information. Options from a series of defined dimensions are combined. There is a combinatorial display problem to solve which is an algorithmic procedure. Engineering and design sciences are the guarantors.

The purpose of the *comparison* phase is to provide a ranking of suggested strategies. Quality criteria are that it shall be possible to enter assessment dimensions and that a traceable assessment calculus can be made. The extent to which values are exchangeable are to be controlled as in the French multicriteria school.[32] So, this French multicriteria school should be the guarantor of this phase.

The purpose of the last phase, the Choice, is to produce a visible overview as a basis for an executive control of the projects advances. Both the foci and the assessments are to be reconsidered here and method as well as itssoftware are flexible. The quality and guarantor would have to treat both the dialectical logics of iterations and the human matter of easy perception.

This is not all. This is only the tool level. Its acts work together, but still they have particular epistemologies and they are different. As objects of description they may be distinguished but not separated. We have also a coordinating methods level to consider, the *approach*, the one above the *observation* and *tool* levels. Its purpose, we stated it in the introduction, is to help with overviews and priorities in a development project.

The purpose of the total method is, I quote John Friend, *to offer practical support whenever you face a tangle of tough decisions which are of a*

---

[31] See for example Wiener, Norbert, (1950), The Human use of Human Beings, Miflin and Miller, James. G (1978), **Living Systems**, McGraw-Hill.
[32] Roy,Bernard (1985), **Methodologie multicritère d'aide à la decision**. Economica, Paris.

developmental nature. This is an extrovert purpose. Flexible abilities to deal with multiple uncertainties and fast moving events are also a requirement (fulfilled) as well as an ability to make a coherent and efficient synthesis of the four subroutines. What metasystem would guarantee all this? Surely not any of the preceeding tool oriented ones, and already in this observation we have something interesting. We see that not all insights translate between the methods levels. I am not ready to express the synthesizing guarantor better than to refer to John Friends book with Allen Hickling.[33]

A guarantor of the Strategic Choice *approach* , its overriding synthesis that is, would have three sources: Social Science empirics knowing real decision-making, a broad knowledge of modern operational research, even of those not included explicitly in the Strategic Choice method, and finally some real testing and experience with managers and planners.[34]

To conclude this paragraph of test I wish to point out that among the *tools* we have those specifically for *creativity* versus *analysis* and the approach has got facets both of *logics* and *interaction*. So we may recognize the general taxonomy of this article in John Friends methodology. This does not mean that he has been influenced by it. On the contrary! It is since there have been independent origins of the two methodologies that they support and acknowledge each other.

A discussion

I wish the meta-system's structure of a project to have power. It is to be considered as a group of clients in dignity comparable with the paying client. This is necessary for the honourable non-prostitute survival of the analyst professions. This is also in the interest of a serious client. He would want advice, knowledge and information with relevance, as well as defined and defendable other qualities. He would want it in all time perspectives, also for future co-operation with analyst professions.

Looking at the control aspect of a project we may feel troubled by the double heading. We have control by clients and their purposes which translate into a structure of purposes and objectives in the project. This control is always taken care of, but we have also a control of quality by a more or less explicit

---

[33] Friend, John & Hickling, Allen (2005), **Planning under Preassure**. Elsevier, .
[34] We find all this in the **Planning Under Preassure** and in a special issue of the Planning Theory, vol3 No3, November 2004.

meta-system which comes from the methods sciences. This duality is a known and inevitable conflict even if all agree in principle about defendable quality standards. I do not have the methodology for the arbitration of such conflicts, but I am convinced that even from the perspective of this dilemma the clear organization of the respective meta-systems will be an advantage. It will help the analyst for example in the rather frequent situation where he argues for a relatively costly quality standard with a client.

For many managers and even analysts this multi-perspective taxonomy will be too complicated, not digestible. This is serious objection, but on the other hand, the world is not easy, and with over-simplification we run the risk that common sense, superficial consensus or one of West's "enemies"[35] will take over the management process.

In a scientific perspective we may ask what is original with the taxonomy. First then, it came at the right moment, in the early 1980:s when soft and hard methods still had a kind of primitive fight. The Churchman/Singer eclectic message had not had much impact before Russ Ackoff 1979[36], Harold Linstone 1984,[37] Ian Mitroff in several publications shortly after that and Steve Crooper in 1990. Now, in the year 2005 it is obvious that an eclectic play with guarantors is necessary. Still the eight fields matrix may be considered as new as well as the *appreciation* concept and the distinction between meta and mega in our systems context. This is a specification out of John van Gigch's meta system theory which in its turn is a deduction out of West Churchman's guarantor concept.

Conclusion

I think now that we have seen that it may make sense to apply John P. van Gigch's concept of meta-thinking[38] to an epistemologically heterogeneous methodology, and that this is true not only for his own and for my research. We see that the meta-systems needed are really systems with some complexity and not guarantors with an easy to define essence. The reader is supposed to see that the meta dimension and the mega dimension of a project are not the same, even if some of the control comes from an

---

[35] Churchman, W. (1978), **The Systems Approach and its Enemies**. Basic Books, N Y.
[36] Ackoff, Russel, (1979), **The Future of OR is Passed.** In J Opl Res Soc 2.
[37] Linstone, Harold A.(1984), **Multiple Perspectives for Decisionmaking**. North Holland, NY, Amsterdam, Oxford.
[38] Van Gigch John P. (2003), **Metadecisions: Rehabilitating Epistemology**, Kluwer/P;enum, London and New York.

interdependence between the levels and from the interdependence of actions within these. To believe in such a confusion would be to despise the vast and deep accumulated knowledge from all the *tool* level professions. All control does not come by the organized hierarchy. All acts and *discourse events* have also their own epistemologies. To balance those is quality management and in this we have freedom to choose our objectives, our quality criteria and our guarantors and we should do this explicitly for reasons of democracy and scientific scrutiny.