

LAP: 10 years in retrospect

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Abstract

A short history of ten LAP workshops is presented from a personal perspective. We start with the background of LAP in the 80's and the motivations to start the LAP workshops in the '90s. Then we have a short detour along the 10 workshops. We close with an attempt to identify retrospectively a few recurrent issues and the progress made.

1 Background

The first Int. Workshop on Communication Modelling LAP'96 was organized at July, 1-2, 1996 near Tilburg, The Netherlands, but at that time, the Language/ Action Perspective had been around already for more than 10 years. The first historical record of the term „language action“ is the visionary article of Goldkuhl and Lyytinen from the University of Stockholm in 1982 „A language action view of information systems“ that proposed a different view on the notion of information system and on information system development.

In this paper, we regard information systems as „social systems“ only technically implemented. They are formal linguistic systems for communication between people which support their actions. This change in paradigmatic assumptions has several implications for the development of information system science as an established scientific discipline. It is not just a science studying objectified events and processes Information system development should also be regarded as social practice tied to a practical interest. The purpose is then to disclose reality under a constitutive interest in the preservation and expansion of Intersubjectivity and understanding (Habermas, 1972). Accordingly, Information system science is also a discipline for studying conditions and rules for achieving intersubjectivity in understanding and effective communication.

(Goldkuhl & Lyytinen, 1982)

The term was picked up by Winograd and Flores in 1986. Winograd and Flores were not primarily interested in Information Systems: their first goal was a frontal attack on the Artificial Intelligence pretensions of those days. They argued that knowledge is not something out there just waiting to be explored in the form of expert systems or logic. The very idea that intelligence can be reduced to the smart processing of a set of explicit knowledge rules needs to be abandoned. However, in the second part of the book, they also propose new directions for design, and one of these directions is to support human communication and coordination: instead of getting the human out of the loop, as AI was heading for, it is necessary, according to the authors, to reaffirm the position and responsibility of the human decision maker in the loop.

What we propose is to make the user aware of this structure [the structure of commitments] and to provide tools for working with it explicitly. This is being done

experimentally in a computer program that we are developing called a ‘coordinator’, designed for constructing and controlling conversation networks in large-scale distributed electronic communication systems. (..) Its objective is to make the interactions transparent – to provide a ready-to-hand tool that operates in the domain of conversations for action (Winograd& Flores, 1986:159)

In fact, this new direction was already described in 1981 by Flores and Ludlow, (Doing and Speaking in the Office). As far as I know, there is no relationship in either direction between this article and the article of Goldkuhl and Lyytinen. In 1986, the two lines – European and American – come together, but it is worthwhile to recognize the differences as well (Table 1).

Before continuing with the history of the LAP workshops, I would like to draw attention to the last sentence in the citation above. The objective of the coordinator technology is to make the *interactions transparent* and to provide a *ready-to-hand tool*. The question is whether there is no tension between these two parts of the objective: interactions and commitments are often left implicit in day-to-day life – it is possible to have a tool that forces (or enables) people to make them more transparent, but can such a tool be ready-to-hand? In my opinion, this question was at the bottom of the later famous Winograd-Suchman debate, and has popped up in various forms throughout the history of LAP. I will come back to the issue in the last section.

2 The first international LAP workshop

That the first LAP workshop in 1996 was organized in the Netherlands, was not accidental, as it had its background in the Dutch LIKE project (Linguistic Instruments in Knowledge Engineering). Participants in this project included Jan Dietz (Maastricht, Delft), Frank Dignum (Eindhoven), Reind van de Riet (Amsterdam), and Hans Weigand (Tilburg). The first source of inspiration of the LIKE project was Simon Dik’s linguistic theory of Functional Grammar (Dik, 1978) that was explored from a knowledge engineering perspective in the Ph.D. thesis of Weigand (Weigand,1989). Functional Grammar, as opposed to the mainstream Formal Grammar approach by Chomsky, aimed at understanding linguistic structures by referring to the (social) functions of language. Around the same time, Jan Dietz developed the DEMO method for modelling organizations and designing information systems based on the language/action perspective (Dietz, 1994). DEMO was inspired by the Action Workflow approach (Medina-Mora et al, 1993), but also modified this approach at some crucial points.

Table 1: Founding articles of LAP and their differences

	EUROPEAN	AMERICAN
Founding article	Goldkuhl & Lyytinen	Flores & Ludlow
Philosophical roots	Critical social theory (Habermas), social constructivism (Berger & Luckmann), neo-humanism	Phenomenology and hermeneutics (Heidegger, Gadamer, Dreyfus), biological system theory (Maturana)
Philosophical ideal	Emancipation through critical dialogue driven by the (encouraged) occurrence of communicative challenges	Evolution and adaptation through structural coupling driven by the (actual or anticipated) occurrence of breakdowns

The Enemy	“Traditional view on IS”, “fact-based approach”, “reductionism” (e.g. Van Griethuysen, 1982)	Rationalistic tradition (logical positivism) (esp. in AI - e.g. Minsky, Schank)
View of the organization	Platform of social interaction based on socially constructed rules	Network of commitments
Communication theory	Habermas (communicative action)	Searle (speech acts)
Primary application area	Information System design, change analysis	OIS, CSCW

In addition to the FG and DEMO line, I would like to mention the influence of deontic constraint approach as well. This approach originated at the VU (Amsterdam) by John-Jules Meyer, Hans Weigand, Roel Wieringa and Frank Dignum. It started as an alternative foundation of deontic logic with some interesting formal advantages over traditional approaches, but this logic was applied then to the field of Information Systems. It allowed reinterpreting integrity constraints in Conceptual Modeling as deontic constraints, that is, not as formal representations of some objective reality, but as formal representations of social rules in the organizational context. In some sense, this view was not new – you can find it in the Goldkuhl and Lyytinen article above, and notably in the fundamental “organizational semiotics” work of Ronald Stamper (Stamper, 2000) - but what was new, I would say, is that its formal underpinnings allowed us to reconcile it with (rather than oppose it to) the traditional formal approaches. This also allowed Egon Verharen in his Ph.D. Thesis to apply LAP to the rather hard-core field of Agent Technology. It is also this formal line that allowed cross-fertilization with the work of Steve Kimbrough and Scott Moore on a speech-act based Formal Language for Business Communication (Kimbrough & Moore, 1997).

So far I have described the Dutch background. However, the first international LAP workshop would not be held if Frank Dignum had not come into contact with Goran Goldkuhl at the CAISE conference in 1995. At that time, Goldkuhl had recaptured his language action views in the Business as Action game Theory (BAT). BAT bears some similarities with the Action Workflow approach (Goldkuhl, 1996), but, just like DEMO, it also had its differences (although not exactly the same differences as DEMO). Action Workflow is typically oriented at intra-organizational workflows, whereas BAT starts with the inter-organizational workflow. Hence BAT emphasizes the mutual character of the business transaction (it is an exchange), whereas the Action Workflow view is more asymmetric. When Goran Goldkuhl and Owen Eriksson joined the LAP workshop, they brought with them in fact an elaborate Swedish research network called VITS. This network has contributed significantly to the contents of the subsequent LAP workshops.

The 1st LAP workshop in Oisterwijk was a rainy and memorable event. Apart from contributions of the people already mentioned above, there was an inspiring but hard to retell invited lecture by Fernando Flores, and interesting contributions from Paul Johannesson, Yao-Hua Tan, as well as from John Bennett (a co-worker of Terry Winograd, with an invited lecture on the use of LAP in meeting design), among others.

3 Ten years of LAP

Let me briefly walk through the ten years of LAP workshops. The 2nd workshop was held in an old monastery near Eindhoven and organized by Frank Dignum. Invited speaker this time was James Taylor, from the University of Montreal, author of the inspiring “Rethinking the theory of organizational communication: how to read an organization” (Taylor, 1993). Over the years, James and Elisabeth Taylor have made a valuable contribution to the LAP workshops with his background in communication theory, and his deep insight in the philosophical developments in the social sciences of the 20th century. In the above, we described Goldkuhl’s and Flores’ views on organizations, and the importance of communication therein; but Taylor’s view can be said to be even more radical: the organization does not exist apart from communication, it *emerges* from communicative action. His favourite communication theory seemed to be neither Habermas nor Searle, but (among others) Austin, as Austin talked about language in use rather than about isolated utterances, and gave full weight to the institutional context to explain the illocutionary force of speech acts (rather than to the Speakers’ intentions). Taylor has also drawn attention to the work of Newcomb in the ‘50’s who described communicative action in terms of co-orientation (Newcomb, 1953) and has challenged the LAP community to take the role of the *object* of communication more seriously.

For the 3rd workshop, LAP moved out the Netherlands, to a small place called Steningevik, at a beautiful lake just outside Stockholm in Sweden. The invited lecture this time was given by the linguist Jens Allwood who presented a critical look at the Language Action Perspective, and particularly at Speech Act Theory. The 4th workshop LAP’99 was also organized by the VITS group, this time co-located with the ECSCW conference in Copenhagen, Denmark. Worth noting of this workshop were two papers, one by Owen Eriksson and one by Mareike Schoop, that both presented some kind of synthesis between Searle’s Speech Act Theory and Habermas’ communicative action theory, a dispute within LAP that had been going around for several years and did not come back anymore afterwards. What we can see at the 5th workshop, held in Aachen (Germany) in September, 2000, is less emphasis on communication primitives, and also on communication modelling, but more attention to the institutional context of communication as social practice. The fact that the already-mentioned Ronald Stamper was asked for the invited lecture was in line with this development, but also the contributions from Peter Bøgh Andersen, Ewa Nilsson, Stijn Hoppenbrouwers, and Goldkuhl’s critical analysis of the Habermasian notion of validity claims.

The presence of Ronald Stamper and Kecheng Liu in Aachen must have played a role in the fact that the 6th LAP workshop went out of Europe for the first time in its history. Organized by James Taylor and Mareike Schoop in Montreal and co-located with the Organizational Semiotics Conference (IFIP WG 8.1), a distinctive feature of this workshop was the interaction between the LAP community and the Organizational Semiotics community. How successful was this collaboration? It was evident that the two communities had much in common, but that does not mean immediately that it is easy to combine the research results. But at least there have been collaboration on the level of individual papers, and substantial contributions of LAP researchers to the above-mentioned Organizational Semiotics conference. One paper that I would like to mention in which the two traditions have been brought together was the paper by Weigand and De Moor on a framework for the normative analysis of workflow loops. If communication and information processing is rooted in social norms (as social semiotics maintains), then also LAP structures such as the workflow loop are rooted in norms. A normative analysis of the workflow loop allows us to distinguish in more

detail what the loop in fact expresses, and how essential these elements are. At this time, the Action Workflow technology had lost much of its appeal, for several reasons (cf. Kethers & Schoop, 2000). This raises the question what is really essential in the workflow loop and this kind of communication modelling, and what is included but not essential. In particular, De Moor and Weigand raised the question of how to deal with delegation. As Taylor already wrote much earlier, an agent is not only an agent *for* (the custom perspective, stressed emphatically in LAP) but also an agent *of* (the delegation perspective).

The 7th workshop LAP 2002 was held in Delft, and a substantial part of this workshop dealt with the discussion about generic layers for business interaction and multi-role models. The original LAP models of the '80s did not distinguish communication levels. DEMO started to distinguish not only communicative acts but also larger units of them, the units of conversation and transaction. Weigand & Van den Heuvel tried to generalize this framework and to distinguish between *what* the aggregation level is about (what is aimed at) and *how* this aim is achieved (where in principle, several patterns could be possible). Lind & Goldkuhl picked up this idea and came up with a layered version of the BAT framework. From the discussion it became clear that it is useful to distinguish levels of communication units. Despite the differences between the frameworks, I would say this is an important step forward with respect to the first generation of communication models. Major discussion points are – in my view – (a) whether to include material actions in the models or communicative actions only, and (b) whether or not the symmetry in business transactions should be addressed explicitly or not. The question here is whether it should be attempted to resolve these points ontologically (by trying to decide which model or framework is “right”) or pragmatically (by trying to decide which model is most useful for which purpose). At least, it would be useful to distinguish (more clearly than in the past) between various functions and application areas of models (analysis or design, business or information system, intra-organizational or inter-organizational).

The other discussion topic, multi-role models, was based on the above-mentioned paper of Weigand and De Moor and an article of Goldkuhl and Rostinger at LAP99. The pizza example introduced in the former became a nice vehicle for comparing different approaches. It is recognized by all that delegation complicates the simple coordination structures of 1st generation LAP but definitely should be accounted for. But how? Roughly said, the Swedish approach is to remain close to the empirical reality of work practices, which leads to the recognition of many different roles (or possibly relevant roles), and hence the abandonment of the 1st generation 2-role models. The DEMO approach, in contrast, is to solve the complications *within* a 2-role model, which means, among other things, that the (2-role) interaction model should be seen as an abstraction. The approach of Weigand & De Moor is somewhere in between, as they want to extend the 2-role model, but with only a small set of theoretically motivated well-defined roles. I will not try to solve this issue here, but let me try to identify here what seem to be the underlying questions. One question is on the *boundaries* of communication models: what should be in a communication model, and what not; or, phrased differently, should we advocate general business models that include communication among other things, or keep communication models separate. Perhaps an even more generic question is how the communication aspect of organizations interferes and interfaces with other aspects. The other question is on the *internal complexity* of communicative acts. A communicative action, in a naïve sense, combines several things: for example, in a request, the Speaker tells the Addressee to do something (“give me a beer”), and so tells him *what* to do, *triggers* him to do it, *authorizes* him to do it, and perhaps even more. But how to describe

situations in which these different things are not in one holistic action, but distributed over several actions? And the reverse is also possible: that several communicative actions (or subacts) are performed by means of one linguistic act (cf. (Agerfalk, 2002; Goldkuhl, 2003)). In the simple (or simplified) examples of 1st generation LAP thinking, this complexity was not recognized, and the philosophical founding fathers (Searle, Habermas), did not see this complexity or did not bother about it either. I would say that it is an important step forward in the development of LAP that we have become aware of these various aspects and that we should become more precise about what our models address exactly.

The 8th LAP workshop (called working conference, for the first time) was organized by Tilburg again. It had two invited speakers: Jeff Conklin, and Nancy Glock-Grueneich. Both of them talked about the relevance of LAP for human interactions in groups and communities. This area was addressed earlier in the LAP workshops (Simone, Yetim, De Moor, Aakhus, Schoop, to mention a few), but seemed to get renewed interest. It is an area that focuses less on process modelling and system design, but more on tool support. It is also an area that is closer to empirical social science research (rather than Business Engineering and Information Systems). Given the recognition that the LAP community had not grown much over the years, the question was raised whether it would not be good to strengthen the relationship with Social Science research, and whether it would be possible to attract more researchers from the US. In this respect, the LAP community was nicely served by Mark Aakhus who not only organized LAP2004 in New Jersey, but also arranged a LAP session at the Int. Communication Association (ICA) conference in New Orleans in the same week. It remains to be seen how useful the ICA platform is for LAP, and vice versa. There is interest in LAP, and the design orientation towards communication, but there are also large differences in research methodology, research culture, and research objects.

Interesting at the 9th LAP workshop (working conference) at Rutgers was also the invited talk by Kalle Lyytinen about why, after so many years, LAP is still not in the mainstream (Lyytinen, 2004). He distinguished various reasons. One feature of LAP is that it can be regarded in many ways as a “counter movement”. The main point made by Lyytinen is that LAP has “no demonstrated value of solutions that *significantly* changes the behaviours of designers or computer users at the level of tools and capabilities”. In line with that, he encouraged the community to observe real challenges and come up with solutions (e.g. e-commerce platforms) that are based on LAP although LAP is not necessarily visible at the surface of the tool. I come back to this challenge below, but would like to remark here that although several LAP tools and methods (Coordinator, Action Workflow, SAMPO, CHAOS) have not survived, there is at least one method that has been quite robust over the years: DEMO. Evidently, DEMO is a contribution to the LAP that is there to stay – whatever one may think about its limitations.

4 Some reflections

Evidently, a short detour along ten years of LAP workshops cannot do justice to all the work that has been done and all the fruitful discussions that have taken place. The following observations that I would like to make are not more than an attempt to identify some lessons that (from my own perspective) have been learned, and point out directions for future research.

- (a) *The astonishing complexity of communication.* The language/action perspective has always criticized the rather superficial “factual” view on communication in

mainstream IS, and argued strongly that communication is a form (and a very essential form) of human action. What has become clear, however, is that much more than simplified speech act theory is needed to do justice to all the subtleties and dynamics of communication. One consequence of this realization is that LAP researchers should be more explicit about what their communication models do represent and what not (and why).

(b) *The inherent dialectics of communication.* According to Winograd & Flores, the office information systems should be made more “transparent” and also “ready-to-hand”. As we said, there is a tension here. There are good reasons for making communication more transparent, and promote full human responsibility (more reasons than just managerial control, as Suchman seemed to assume). However, there are also good reasons for making communication more implicit, even invisible in daily practices – efficiency in a rational world, for example, but also the recognition that communication is always mediating, and so functions in the best way when it remains unnoticed. LAP researchers should deepen their understanding of the inherent dialectics of communication. One consequence would be, I think, that just as linguists have learned that surface form and semantic function are related but cannot be unified, so communicative form (the running practices in the organization) cannot be reduced to essential communication models – and more attention should be given to what shapes these forms.

(c) *LAP as “counter movement”.* Lyytinen remarked that what was unique in LAP at the time of its inception is that it challenged and questioned many of the widely held beliefs in Information Systems and AI. I agree, but that also raises the question whether gaining more influence *in* the mainstream is something to be pursued as long as this mainstream is dominated by the same rationalistic motives as it was 20 years ago (although it occurs to me that researchers have become less ideological and more pragmatic on this issue). Of course, this does not mean that LAP should not aim at more exposure of its ideas, and more influence *on* the mainstream. The question is whether an antithetical approach should be followed – because the ideological basis of these mainstream approaches do not allow a combination with the assumptions underlying LAP – or a synthetic approach – that is, to develop LAP as an expertise area in communication theory that should be seen as complimentary to the many other areas of research (agents, ontologies, web services etc). Very fruitful discussions have been held in the last decade *within* LAP and its adherent fields like Organizational Semiotics. But let us not neglect the issue of how to position LAP within the IS discipline as a whole.

Personally, I have enjoyed the LAP workshops and the critical discussions within the LAP community very much, and I have been able to apply LAP thinking in various fields, such as agent design, e-commerce, IS design, negotiation support, virtual communities, and interoperability. As such, the LAP workshops have been of great value to my research.

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